H65 Vehicle Repair Manual -R

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Introduction

Abbreviation

Abbreviation	Chinese Name	English Name
ABS	wheel protection item dead system	Anti-Lock Braking System
AC	A/C	Air Condition
ACC	adaptive cruise control	Adaptive Cruise Control
ACU	Airbag Control Unit	Airbag Control Unit
ADAS	driving assist system	Advanced Driver Assistant System
AEB	Automatic Emergency Braking	Autonomous Emergency Braking
AUTO	automatic	Automatic
AVAS	vehicle sound chemical alarm system	Acoustic Vehicle Alerting System
AVM	panoramic parking	Around Video Module
BCM	body control module	Body Control Module
BMS	Battery Management System	Battery Management System
BNCM	Digital Key Master Control Module	Bluetooth Numerical Key Control Module
BSD	blind area monitoring	Center Console Display
BSIS	blind point information system	Charge/Discharge Unit
CAN	control area network	Car Wireless Charging
CCD	Infotainment Display	Electric Battery Sensor
CD-ROM	light disc - only read storage unit	Compact Disc Read-Only Memory
CDU	Charge/Discharge Power Distribution Unit	Five-Way Water Valve
CHMSL	center item High-Mounted Stop Lamp	High-Voltage Coolant Heater
CSA	combination switch assembly	Integrated Brake Control System
CWC	mobile phone Wireless Charging	Rear Control Center Panel
DCDC	DC conversion replace unit	Rear Electronic Expansion Valve
DDM	driver door control module	Rain/Light/Humidity Sensor
DIN	item item operation work mark standard	Ultra-Wideband
DMS	Driver Monitoring system	Driver Monitoring System
DSM	Driver Seat Adjustment module	Driver Seat Module
DTC	Diagnostic Trouble Code	Diagnostic Trouble Code
DVR	driving record instrument	Digital Video Recorder
EAC	power A/C compressor	Electric Air Compressor

Abbreviation	Chinese Name	English Name
EBS	battery sensor	Battery Sensor
ECU	electronic Control Unit	Electronic Control Unit
EDR	event data record system	Event Data Recorder
EEPROM	electronic can delete except can programming only read storage	Electronic Erasable Programmable Read Only Memory
EHBS	electronic hydraulic Braking System	Electronic Hydraulic Brake System
EPB	Electronic Parking Brake brake	Electrical Parking Break
EPS	Electric Power Steering unit	Electrical Power Steering
ESC	Vehicle Stability System	Electronic Stability Control
ESCL	electronic steering column lock	Electronic steering column lock
EVCC	Electric Vehicle Communication Controller	Electric Vehicle Communication Controller
EVP	electronic vacuum pump	Electrical Vacuum Pump
EXV	electronic expansion valve	Electronic Expansion Valve (EEV)
FCM	front view I body unit	FRONT CAMERA MODULE
FCW	Forward Collision Warning	Forward Collision Warning
FDR	front direction detect radar	Front Detection Radar
FRM	Front Millimetre-wave Radar	Front Radar module
FWV	five communication water valve	Five Way Water Valve
GPS	all item positioning system	Global Positioning System
HBA	hydraulic assist brake	Hydraulic Brake Assist
Hg	water item	Mercury HT High Tension
HHC	ramp assist control	Hill Hold Control
HUD	item head display	Hand Up Display
ICC	Cockpit Domain Controller	Cockpit Domain Controller (CDC)
ICM	Instrument Pack	Instrument Control Module
IMMO BILIZER	protection theft controller	Immobilizer
IMU	item guide Unit	Inertia Measurement Unit
ISA	intelligent speed assist	Intelligent Speed Assist
ISO	item item mark standard -based group webbing	International Organization for Standardization
LCD	fluid item display	Liquid Crystal Display
LDWS	vehicle channel deviation away warning	Lane Departure Warning System
LED	send light II terminal pipe	Light Emitting Diode

Abbreviation	Chinese Name	English Name
LIN	this ground connect network	Local Interconnect Network
LKS	vehicle channel maintain system	Lane Keeping System
MCU	motor controller	Motor Control Unit
MIL	Malfunction Indicator Lamp	Malfunction Indicator Lamp
OBC	On-board Charger	On-Board Charger
OBD	vehicle load Diagnosis system	On Board Diagnostics
ONEBOX	Integrated Brake Control System	Integrated Brake Control System
PCB	printing circuit panel	Printed Circuit Board
PDM	front passenger door control module	Passenger Door Module
PDU	power supply distribution Unit	Power Distribution Unit
PLG	power tailgate	Power Lift Gate
PSM	Front Passenger Seat Adjustment module	Passenger Seat Module
PTFE	accumulate IV item ethyl item	Polytetrafluorethylene
PVC	accumulate item ethyl item	Polyvinyl Chloride
PWM	pulse width adjustment	Pulse Width Modulation
RAPTC	rear heat module	Rear Heating Module
RCCP	rear control surface panel	Rear Control Panel
RDA	rear direction driving assist system	Rear Drive Assist System
REXV	rear electronic expansion valve	Rear Electronic Expansion Valve (Rear EEV)
RF	no line power frequency	Radio Frequency
RLCR	Rear Left Corner Radar	Rear Left Corner Radar
RLDM	left rear door control module	Rear Left Door Module
RLHS	light rain wet degree sensor	Light/Rain/Humidity Sensor
RLS	Sunlight/Rain Sensor	Rain Linght Sensor
ROM	only read storage	Read Only Memory
RRCR	rear right angle radar	Rear Right Corner Radar
RRDM	right rear door control module	Rear Right Door Module
SAE	US item vehicle operation procedure item coordinate will	Society of Automotive Engineers
SAS	steering angle sensor	Steering Angle Sensor
SLIF	speed limit remind	Speed Limit Information Function
T-BOX	Telematics Communication Module	Telematics Box

Abbreviation	Chinese Name	English Name
TCM	Trailer Control Module	Trailer Control module
TCS	traction force control	Traction Control System
TPMS	tire pressure monitor module	Tire Pressure Monitoring System
TSR	interaction communication flag information remind Function	Traffic Sign Information
TWV	three-way coolant valve	Three Way Water Valve
UWB	exceed wide with positioning	Ultra-Wideband (UWB) Positioning
VCU	vehicle Control Unit	vehicle control unit
VIN	vehicle recognition replace No.	Vehicle Identification Number
YAS	yaw angle speed sensor	Yaw Rate Sensor
FRZCU	Right Front Zone Control Unit	Right Front Zone Controller
FLZCU	Left Front Zone Control Unit	Left Front Zone Controller
TBOX	Telematics Communication Module	Telematics / Information Communication Module
FMCU	front motor controller	Front Motor Controller
RMCU	rear motor controller	Rear Motor Controller
FLCR	front left angle radar	Front Left Corner Radar
FRCR	front right angle radar	Front Right Corner Radar
MOIS	short distance angle radar	Short-Range Corner Radar
Mpump	electronic water pump M	Electric Water Pump M
Bpump	electronic water pump B	Electric Water Pump B
Hpump	electronic water pump H	Electric Water Pump H
HVCH	Coolant Heater Module	Water Heating Module
LBMS	lithium battery management system	Lithium Battery Management System (BMS)
MFS	Multifunction Steering Wheel Switch	Multifunction Steering Wheel Switch
ChargingIndicator	charging indication lamp module	Charging Indicator Light Module
NFCR	communication read card module	Communication Card Reader Module
VDR	driving record instrument	Driving Recorder / Dashcam
UltrasonicRadar	ultrasonic sensor	Ultrasonic Radar / Ultrasonic Sensor

Unit

Abbreviation	Chinese Name	English Name
A	installation calibration	Ampere
℃	°C degree	Degree Celsius
cm	centimetre m	Centimetre
cm³	establish side centimetre m	Cubic Centimetre
°	degree (angle)	Degree (of arc)
V	item special	Volt
W	item special	Watt
kW	item item	Kilowatt
dB	section item	Decibel
kPa	item item	Kilopascal
Hz	item item	Hertz
h	small when	Hour
min	min	Minute
s	s	Second
L	raise	Litre
mL	item raise	Millilitre
HO2S	thermal oxygen sensor	Heated Oxygen Sensor
NOx	item oxygen -based object	Nitrogen Oxides
NO_2	II oxygen -based item	Nitrogen Dioxide
CO	I oxygen -based item	Carbon Monoxide
CO_2	II oxygen -based item	Carbon Dioxide
DC	DC power	Direct Current
m	m	Metre
kg	item item	Kilogram
r/min	rotate each section	Revolution per Minute
N·m	item m	Newton-metre
Ω	ohm ohm	Ohm
kΩ	item ohm	Kilohm
MΩ	item ohm	Megohm
Wh/kg	item when / item item	Watt-hour per kilogram
kWh	item item when	Kilowatt-hour
Ah	installation when	Ampere-hour

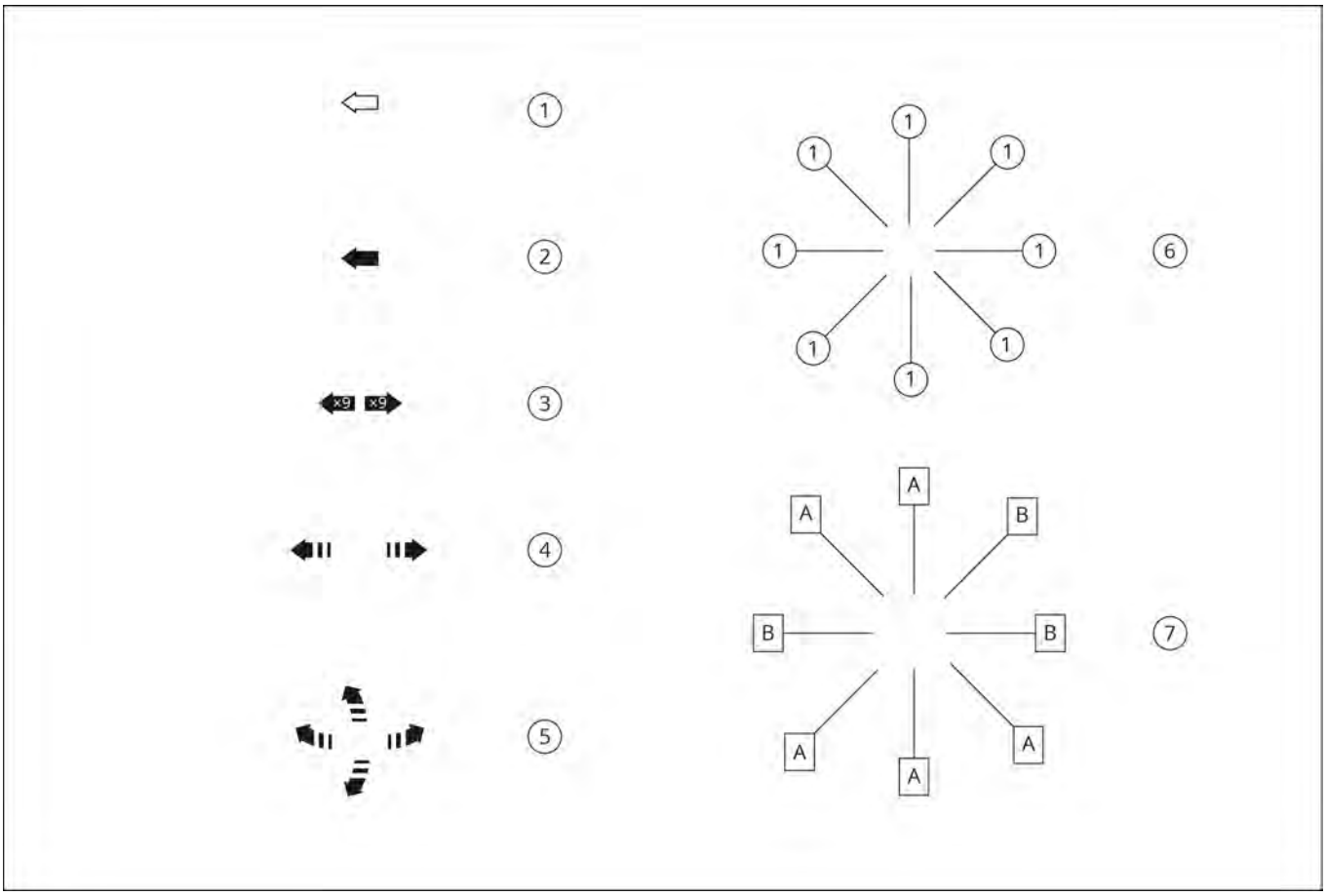
Repair Manual Instructions for Use

Manual read order

document this use left map right document read order. through map piece rapid speed obtain remove valid information, again result combined document character compensation charging Instructions, fully unlock service information.

arrow and symbol No.

arrow and symbol No. provide related at vehicle side direction, component indication, operation order, component Type with and component motion detailed information. component motion may Yes rotation or 1-3 maintain motion.

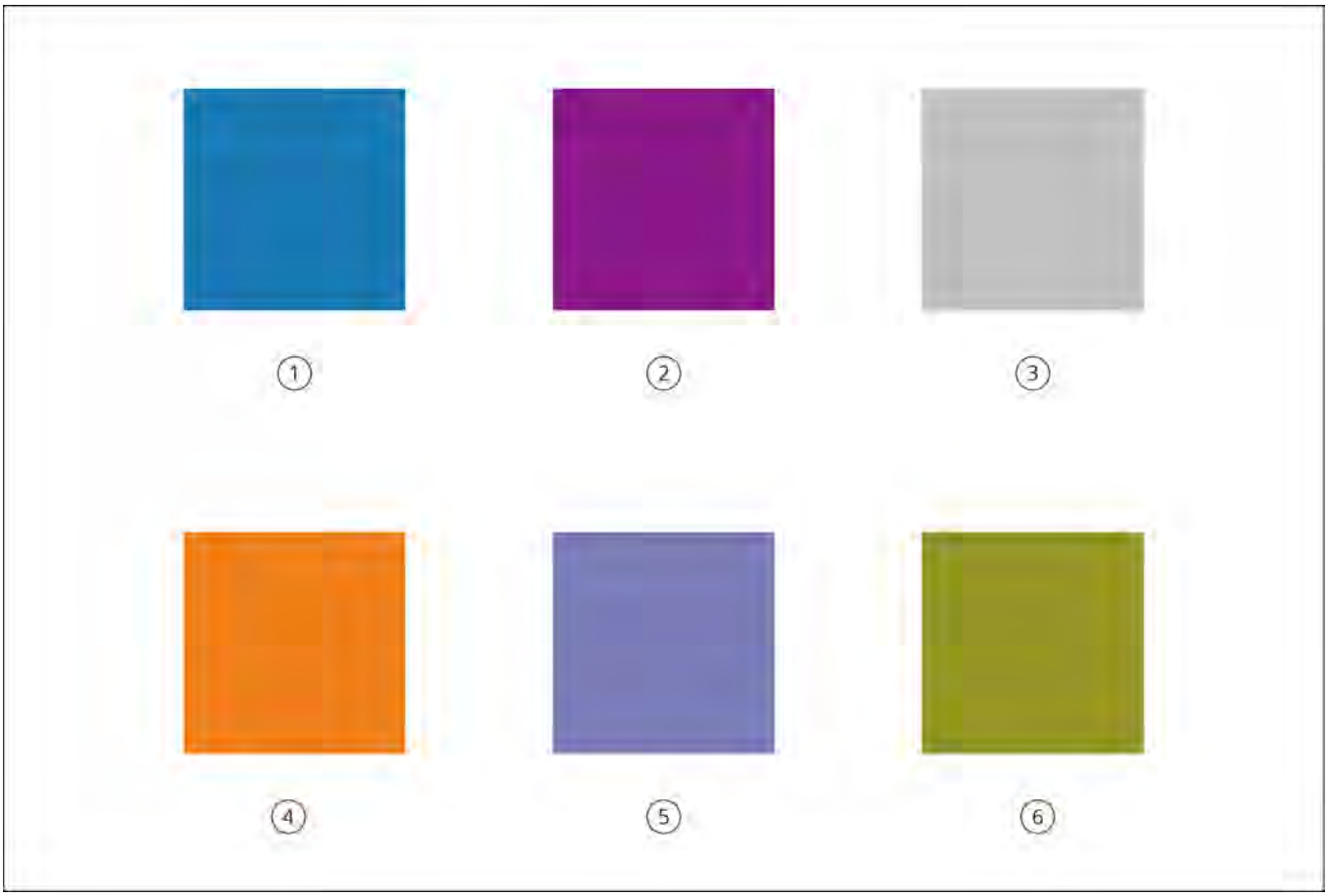


No.	Instructions
1	vehicle front side direction indication
2	component indication
3	component indication (number amount)
4	component move side direction (left / right)
5	component move side direction (clockwise / reverse when pin)
6	order indication
7	Type indication

service steps illustration mark standard

this Manual center illustration can with use to replace replace document character steps Description. color coding (map unlock color coding) use at Instructions required I item or multiple

item steps operation. service operation identification use at increase item related at required operation information.



No.	Instructions
1	need remove / install (or section unlock / group install) target or main need component
2	wiring harness connector and fastener (if bolt, nut, clamp or clip etc.)
3	map piece back scenario colour
4	high-voltage wiring harness
5	special tool, General equipment or normal use tool
6	move but not offset except part, disconnect / release wiring harness / line

related at this Manual

Warning

perform Repair Procedure before. refer to:Health and Safetycenter Health and Safety Precautions. if not follow this Instructions, may will cause severe personal injury.

this Manual item description indicate guide vehicle service steps. inner including related button health safety pre- protection measure. if work person person not follow according to upper description operation Instructions, then will hazard and person person safety or vehicle complete complete characteristic.

warning, note and Instructions

Repair Manual center Diagnosis and service steps package including general and specific warning, note and Note information. with cause force at provide service information to assist technical person person Diagnosis and repair maintain vehicle normal work required system. still and, if result not follow recommended side case, certain some procedure may will for technical person person cause form injury.“ warning ”, “ note ”, “ Note ” Yes for prevent output occur upper description hazard and code control, but and non- all hazard all can with pre- item. the information position at Repair Manual center display eye Location. for prevent output occur below condition and code control:

- for technical person person cause form severe personal injury or death.
- damage vehicle.
- not necessary vehicle service.
- not necessary component replace.
- vehicle component repair or replace improperly.
- in this service category center output occur any warning or note all trigger self each single item service category.

Warning

encounter to I strip “ warning ” when, need request you acquire remove necessary operation or not need acquire remove prohibit stop operation. if result item view “ warning ”, will cause below rear result.

- for technical person person cause form severe personal injury or death.
- for work area center other technical person person cause form severe personal injury.
- if result vehicle repair improperly, then will for the vehicle driver and / or passenger cause form severe personal injury.

Note

“ note ” sound clear strength adjust certain Diagnosis or Repair Procedure necessary characteristic. “ note ” sound clear Purpose if lower:

- vehicle damage.
- not necessary vehicle service.
- damage related system or components.
- damage fastener, General tool or special tool.
- the service system, component operation or performance not normal.
- coolant, lubrication slip oil or other main need fluid leakage.
- provide with assist at with more valid side type complete procedure information.
- direction technical person person provide with item after verification information, with convenient more capacity easy ground complete procedure.

and safety related system

except non- procedure center another with specified, then only can through replace fault component to service and Vehicle Safety related system. not should attempt service and Vehicle Safety related system assembly.

if result in assembly system assembly process center with clearly Instructions, then only can Use specified material lubrication slip seal part. not follow this some Instructions will cause seal part fault and leakage

specified chemical control agent or material

in this Manual center, in correct complete Repair Procedure or Diagnostic Procedure same when must must Use specified chemical control agent or material. dedicated material no with condition lower, can Use phase same Specification replace material. still not item check No. III side generate product whether combined item environment, Health and Safety specification range, because this for the etc. generate product Use not carry any responsibility. if Use No. III side generate product, then by itself carry air hazard. this outer, this category generate product can cause vehicle performance item -based, over item damage or vehicle component affected damage. should check

vehicle service the use chemical control product or material whether symbol combined when ground environment and health safety method specification.

map piece and document character item description

in this Manual center, document this use left map right document item description.

LH(left) and RH(right) identification

all LH(left) and RH(right) identification item direction, are in vehicle front operate side direction for reference.




1
2


1
2

No.	Instructions
1	LH(left)
2	RH(right)

install Torque

service steps center fastener lower add Torque value, Yes fastener “ install Torque value ”, non- remove Torque value. because for install procedure no steps, the with the fastener “ install Torque value ” place in Removal Steps.

mark standard actual item

except non- procedure center another with specified, No then Use lower list specification then:

fastener

- re- reset Use mark standard fastener.
- according to Torque angle Specification (press mark standard Torque tighten).

self item screw thread fastener

in operation self item screw thread fastener and pairing assembly process center, required follow mark standard procedure.

hand movement apply Torque

Install self item screw thread fastener required hand operation tool. please do not Use Power Tools, No then may will cause form Torque over large or screw thread wear. if result for fastener apply Torque over large, may will damage fitting.

Torque over large with to air hazard

direction self item screw thread fastener apply Torque when, should follow Torque Specification. ensure in re- new assembly process center fastener completely item hold pairing assembly and not retain seam gap.

corrosion

in replace fastener process center, check fastener and pairing assembly whether store in generate rust or other corrosion signs. if detect with corrosion, please use new assembly replace affected corrosion assembly.

screw thread wear

if result inner part (pairing assembly) screw thread or outer part (fastener) screw thread output occur wear or grind corrosion, please replace fastener and pairing assembly. tighten when, if result no method reach to maximum small Torque, then pairing assembly upper inner part screw thread may already wear. remove fastener perform check, if detect screw thread wear, please replace pairing assembly.

end surface seal part

replace fastener when, check pairing assembly surface whether store in fragment item, damage, interference object, wear or grind corrosion, if detect with damage, please replace any intent seal part or washer.

seal part and washer

replace seal part and washer, except non- procedure center another with specified.

Service Safety information

General safety information

low-voltage wiring harness service

gap characteristic fault

when vehicle send to service when, with when symptom and not will output occur. if with may, re- occur accident occur when Status. this item perform can with assist at avoid not detect Fault Diagnosis. below inner capacity Instructions should How to module virtual use user after item electrical fault when condition / environment.

from customer item inside obtain remove accident detailed item description. this for at module virtual Fault Status non- normal important.

vehicle vibration

when in harsh circuit surface upper driving when, fault may output occur or change obtain more item. output occur this type condition when, please check and vibration with related problem.

- fitting and wiring harness

Tips

fitting will expose exposed at wet air center. this may will in fitting end port upper generate I layer item item corrosion film. item view check not may detect not disconnect fitting center fault. if result between intermittent fault output occur, problem may then Yes corrosion cause form. disconnect fitting, check and clean system center with related fitting center end port.

  confirm determine item some fitting and wiring harness may effect item the check electrical system. item item item movement each fitting and wiring harness, same when monitor system view whether store in item need reset occur symptom. this item check can with detect looseness or poor contact electrical connect.

- **sensor and relay**

  item item ground for positive in check system center sensor and relay apply minor vibration.

- **front compartment**

  with item cause will make vehicle generate electrical component fault. required check inner capacity include:

  - fitting no with completely then position.
  - wiring harness item in bracket or motion component upper.
  - connect ground line looseness, change dirty or corrosion.
  - wiring harness layout position obtain away send thermal component too near.

from check connect ground complete good enter hand, check bonnet lower component. first first check system connect ground whether correct. still rear, if front the description, item item item movement wiring harness or component check whether with fitting looseness. benefit use circuit map Inspect the wiring harness continuity characteristic.

- **instrument panel rear side**

wiring harness layout position, retaining not reasonable may will make accessory install change non- normal item item. vehicle vibration may will make along bracket or bolt attached near layout position wiring harness item item item -based.

- **seat area lower side**

vehicle vibration when, not is retaining or looseness wiring harness may will cause power line is seat component (if slide guide rail) squeeze. if result wiring harness through seat area lower side, check wiring whether will is damage or squeeze.

thermal item sensing

vehicle problem may output occur in item thermal day air or in vehicle short when parking rear. in this type condition lower, should check thermal item sensing condition.

Tips

not need component heat to 60℃(140℉) or more.

- need item confirm determine thermal item component whether item sensing, should use heat gun or similar tool heat the component.
- if result to original part heat when occur fault, replace or correct isolate away the component.

water ingress

Tips

do not water direct connect spray to electrical component component upper.

problem may only in high wet degree or rain / item day air center then output occur. in this type condition lower, fault may Yes by at electrical part water ingress cause form. this can with through hold vehicle item wet or hold vehicle drive enter item vehicle unit center module virtual.

result ice

vehicle may will in pre- thermal (item item) rear, symptom then not again output occur. cause may item guide line / electrical system center certain at output occur water vehicle freeze result with related. with two type method perform this type check:

1. installation row vehicle main vehicle stop in compartment outer, check and confirm vehicle cooling to sufficient sufficient severity. clear item, carefully rapid speed check item some may will is effect electrical component.
2. suspected component insert ice box etc. sufficient sufficient long Time with make water vehicle freeze result. hold the component re- new install to vehicle upper, check problem whether re-occur. if result problem output occur, service or replace component.

electrical component load

fault also may Yes by at for electrical load item sensing. open all accessory (include A/C, lamp light etc.) perform Diagnosis.

circuit wiring harness fault check

when detect circuit wiring harness local part output occur wear, corrosion, change colour, sticking, looseness and wiring harness connector loose, oxygen -based, oil contamination etc. condition when, Instructions circuit wiring harness already or that is output occur fault, should provide with and when check.

- **open circuit fault**

  circuit wiring harness store in open circuit fault when, connect communication Circuit switch, fuse wire not will fuse disconnect. but use power equipment not can normal work. for at circuit wiring harness open circuit fault, can through appearance check, check find line item outer exposed part section whether there is line head detached, Loose connector, guide line fold disconnect etc. fault. if result no method from appearance direct connect check output open circuit fault, can use DC test lamp or multimeter etc. detection tool perform check.

- **short circuit fault**

  circuit wiring harness store in short circuit fault when, connect communication Circuit switch, multiple number condition lower will burn disconnect fuse wire, and and use power equipment not can work. severe when also may output occur wiring harness burn damage, burn item etc. fault. for at circuit wiring harness short circuit check, can through appearance check, check find wiring harness outer exposed part section whether there is insulation damage, line head whether detached, and direct connect and body connect contact etc. fault. if result no method from appearance direct connect check output short circuit fault, can use DC test lamp or multimeter etc. detection tool perform check.

- **poor contact fault**

  circuit wiring harness store in poor contact when, may cause form use power equipment work when good when faulty, in current relatively large circuit center, poor contact also may output occur send thermal or burn damage condition. when wiring harness poor contact the cause form resistance, voltage change, trigger start control module inner part signal transmission between disconnect characteristic fault, from and effect control module normal

work. circuit wiring harness poor contact, main need output occur in wiring harness connector and connector etc. Circuit connect at, welding not good or connect not secure, connector oxygen -based, corrosion, or because for multiple times Removal and Installation and cause form loose, positioning not secure etc.. for at circuit wiring harness poor contact fault check, according to circuit map, use hand shake movement related low-voltage Circuit, connector etc.. when shake to certain at, use power equipment operating condition change. that is indicate this at very may store in poor contact. for at connector, can perform remove rear perform item view check. if result no method from appearance direct connect check output poor contact fault, can use indicate wave unit or multimeter etc. detection tool perform check.

Control Unit and Electrical Components Precautions

- insulate not need battery wiring pillar two stage connect reverse.
- only specified part install to vehicle upper.
- in replace Control Unit front, check Input and Output with and components Function.
- disconnect connector when not need use force over large.
- not need drop drop or item item Control Unit to avoid vibration over large.
- prevent because rapid speed temperature change and trigger start Control Unit cold retract and not need allow rain water connect contact Control Unit. if result Control Unit inner detect with water, it completely treatment dry still rear install to vehicle upper.
- not need allow fluid connect contact to Control Unit fitting.
- avoid use evaporate oil clean Control Unit.
- not need unlock body Control Unit, and not need remove upper cover and lower cover.
- when Use multimeter when, note not need allow test probe item this item obtain too near, with avoid because for circuit Control Unit center power transistor damage battery voltage.
- when check Control Unit Input and Output signal when, Use specified check suitable matching unit.

High-voltage Wiring Harness Inspection and Repair

Warning

- *For risk-of-death precautions, refer to:* Risk of Death Precautions
- *with related High-voltage System Safety Precautions. refer to:* High-voltage System Safety Precautions

high-voltage wiring harness check

1. check high-voltage component outer housing whether with obvious collision marks.
2. check high-voltage component between connect guide line. ensure no damage, no collision friction, high low-voltage wiring terminal connect secure rely on, no loose.
3. check high-voltage component surface and around Status, ensure heat dissipation Ventilation communication smooth, necessary when remove except foreign matter, clean outer surface.
4. disconnect high-voltage wiring harness connector, check terminal no corrosion, no corrosion, ensure tighten Torque reach to mark standard.
5. check high-voltage system cooling line whether output occur fluid body leakage and item output, check line seal connect at, whether there is item leak condition. and when service vehicle cooling system.
6. check high-voltage component insulation resistance, Use item ohm meter measure, value should large at reference value.
7. check high-voltage wiring harness to ground voltage, Use multimeter voltage gear measure, value should small at 3 V.
8. check high-voltage wiring harness to ground resistance, Use multimeter resistance gear measure, value should Yes infinite.
9. check high-voltage wiring harness between continuity characteristic, Use multimeter resistance gear measure, value should small at 1Ω.
10. for at measured value not correct high-voltage wiring harness, perform replace.

Charging Port check

Charging Port check package including Function check, item measure check and clean:

- check charging end port whether with physical damage, Charging Port plug pedal inner whether has foreign matter, water stain, impurity etc., if with perform clean, if no method clear please replace charging end port.
- check charging end port socket seal ring whether with detached, item crack, if with please replace charging end port.
- check Charging Port socket terminal whether with burn damage condition.
  - determine mark standard: section III level: complete good, terminal burn damage (item layer send item), terminal severe burn damage (exposed item).
  - treatment item method: if encounter burn damage please replace charging end port.

high-voltage battery outer housing

- check battery pack outer housing whether with damage crack, dent, air opening or deformation etc..
- if battery detect abnormal condition, need I and check battery upper cover panel whether with cracks, item package etc..

drive Unit

item view check drive Unit whether with fluid leakage, damage etc..

wiring harness and connector assembly Instructions

Overview

electrical component system specification range operation, can with protection operation person person safety and protection vehicle component safety.

connector and wiring harness

electrical component system center, equipment and wiring harness connect main need depend on connector, the with in electrical component system operation center Note:

- disconnect connector before, Check the connector. and equipment whether dry, with contamination object.
- disconnect connector before, ensure buckle mechanism fuse whether open.
- disconnect connector when, not need damage faulty buckle mechanism, not strength operate disconnect connector.
- connect connector front, check ensure pin no deformation or damage.
- connect connector front, Inspect the wiring harness, connector housing, equipment whether with damage.
- connect connector when, ensure connector connect to position, buckle to position, and reset buckle fuse.
- service connector or wiring harness when, prohibit stop oil contamination connect contact guide body.

wiring harness row layout

wiring harness row layout main need steps and related button need item

1. in 25mm wiring harness circuit radial inner fastener, must must first tighten, again layout position wiring harness or tighten near tighten point wiring harness section support. if not Yes, press if lower order operation:
    - first retaining main wiring harness clip;
    - tighten section support upper tighten point.
2. any connect to retaining electronic part connector connect side direction should for operation person provide sufficient sufficient hand part air between complete connect plug.
3. wiring harness clip install when need press hold card sub- top part press enter clip. and and make part completely and body affix combined.
4. body main wiring harness in install wiring harness clip when bend item wiring harness angle small at 20°.
5. connector buckle install rear need with listen detect, contact detect, view detect feedback with convenient confirm whether connect plug to position.
6. wiring harness not shield gear trim panel and other part install hole.
7. tighten complete rear, hand item (shake) connect ground end, check whether with loose.
8. for at part section special item card item, setting count Status Yes Location retaining, not can along item line move, but Yes can rotate. this category card sub- required total install assembly when first rotate to assembly angle, again assembly.
9. for at connect ground line terminal, install front be sure to confirm whether with positioning special item.

wiring harness row layout operation rear check need request

1. wiring harness outer meter no damage and cut injury.
2. wiring harness clip install to sheet metal hole install hole correct.
3. wiring harness clip no loose.
4. wiring harness travel direction correct.

wiring harness row layout common mass problem

1. wiring harness is trim panel clip or fastener damage faulty, inner part metal outer exposed ground, electrical component Function loss sensitive.

2. connector loose, electrical component Function loss sensitive.
3. wiring harness travel direction not correct, will cause form wiring harness dry involve, wiring harness wrap.

screw thread connect need request

screw thread connect basic process

1. multiple tighten if with strength control order need request then press order tighten, if no with strength control order need request then in process document part center specified tighten order.
2. select and fastener head part dimensions phase matching Socket or screw wire item, in tighten process center, Socket or screw wire item head top tight fastener.
3. Socket should select 6 angle Socket, ensure fastener tighten process center not slip.
4. in tighten process center, ensure bolt vertical for standard tighten hole, vertical tighten bolt.
5. tighten need request tighten fastener completely to bottom, affix combined and reach to specified Torque.

fastener colour mark

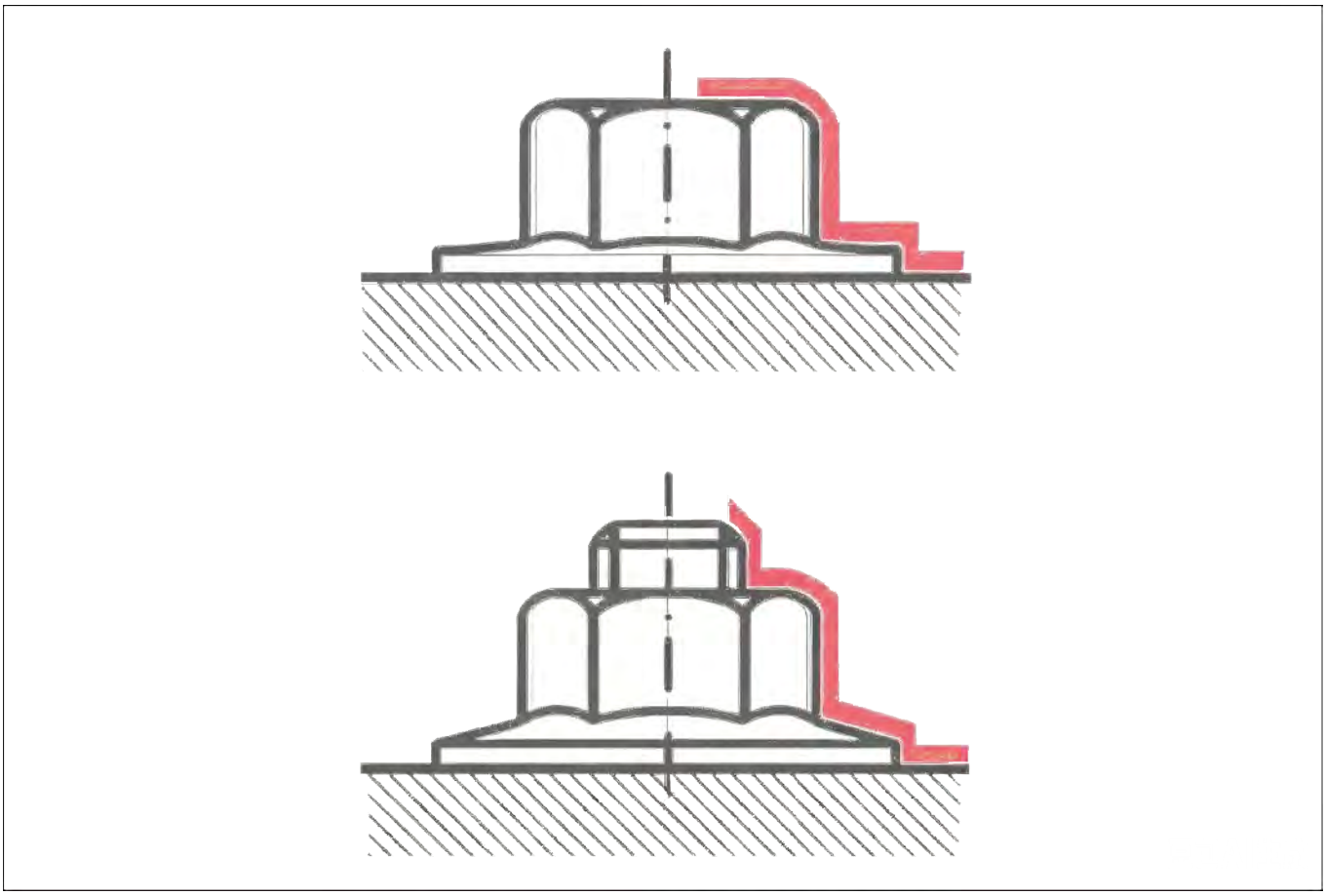
1. fastener tighten rear, use oil characteristic item No. probe mark inject fastener and housing Location, with benefit at item clear fastener already tighten and fastener loose when item view check.
2. service rear service for fastener need request:
    - 20 N·m(including) or more or with steering angle all Torque, all required tighten rear perform mark.
    - power supply wiring harness tighten, ground wiring harness tighten, safety system component etc., all need tighten rear perform mark.
    - mark front clear original mark.
    - system I Use blue paint probe perform mark.
3. Socket should select 6 angle Socket, ensure fastener tighten process center not slip.
4. in tighten process center, ensure bolt vertical for standard tighten hole, vertical tighten bolt.
5. tighten need request tighten fastener completely to bottom, affix combined and reach to specified Torque.

screw thread connect check need request

1. ensure install to bottom, prevent looseness.
2. common not combined grid operation, mass defect leak install - looseness.
3. error install – no method tighten or tighten to bottom.

tighten rear color mark

1. for at with CC/SC need request fastener, tighten rear need Use dedicated paint probe item colour mark.
2. bolt fastener colour mark, need from bolt head top surface start, after bolt head side surface, I direct to install surface connect continue paint probe item No.. nut fastener colour mark, need from is tighten screw pillar top start, after nut, I direct to install surface connect continue paint probe item No..



work safety information

Risk of Death Precautions

voltage

AC voltage large at or etc. at 25 V, DC power pressure large at or etc. at 60 V component and system store in at vehicle and body below system and component upper:

- power vehicle high-voltage vehicle load electrical system and high-voltage component.
- power vehicle lithium away sub- battery.

potential in air hazard

- flow after human body current will cause not self main item item receive retract, center item loss normal, center dirty item item, center dirty item stop, call intake item stop, burn or detailed item affected damage. damage severe severity remove determine at current strength, current Type, current frequency, expose exposed Time and flow after human body circuit radial.
- expose exposed at arc lower will cause I degree to IV degree burn injury, strength item outer line cause form eyes “ flash light burn ”(and welding when similar), explosion item injury and alive movement component cause injury.
- expose exposed at voltage or arc trigger start item item reverse should will cause II times accident. example if from high bracket work station upper item drop or person head part and front cover connect contact.
- each I type with harm effect all may cause severe personal injury or death.
- effect valid result may in accident occur rear 24 small when inner display occur. because this, in AC voltage large at or etc. at 25 V, DC power pressure large at or etc. at 60 V connect contact accident occur rear, must must perform body check.

safety ensure measure / Instructions

- item with electronic item enter object (if center dirty pacemaker) person person not obtain perform AC voltage large at or etc. at 25 V, DC power pressure large at or etc. at 60 V assembly and system operation.
- perform AC voltage large at or etc. at 25 V, DC power pressure large at or etc. at 60 V component and system operation when, must must according to method specification acquire remove necessary safety ensure measure.
- perform AC voltage large at or etc. at 25 V, DC power pressure large at or etc. at 60 V component and system operation when, must must Use after test and obtain corresponding item standard tool.
- with related AC voltage large at or etc. at 25 V, DC power pressure large at or etc. at 60 V component and system operation safety ensure measure or required person protection equipped (PPE) information, can in start operation front through corresponding national or ground area related at the subject document part obtain.
- not obtain in AC voltage large at or etc. at 25 V, DC power pressure large at or etc. at 60 V component and system upper install damage or store in defect energized component and Circuit with and non- insulation electrical connector and wiring harness.

Fire Air Hazard Precautions

safety ensure measure / Instructions

- if result by at smoke fog, fire, send thermal (can item / can item) make lithium away sub- battery surface temporary severe air hazard, please establish that is call corresponding ground point and national should emergency power item. prohibit stop touch lithium away sub- battery, and should evacuate hazard area.
- after calibration item combined grid rear then can for lithium away sub- battery perform treatment.
- must battery store place in not obtain authorization person person no method connect contact ground side. should place in specified area, no authorization person person prohibit stop enter the area connect contact battery.
- prohibit stop work area range inner output occur fire item, fire Torx, open flame or intake smoke etc. condition or operate for.
- prohibit stop make battery expose exposed in mechanical pressure lower.
- battery outer cover damage condition lower prohibit stop charging or re- new install.
- must according to battery and charging unit manufacturer Instructions, in Ventilation good good item between inside Use after item standard charging unit with correct voltage and current for 12 V battery charging.
- connect to terminal after again open 12 V battery charging unit; in disconnect connect before disabled.
- negative terminal must first first disconnect; positive terminal terminal must first first connect. No then may will cause battery positive terminal terminal and Body Ground between occur short circuit.
- prohibit stop in battery top part place any tool or other guide power object body, to avoid cause form short circuit air hazard.
- battery output occur open port or damage condition when, should wear upper item item service, item upper with side trim panel safety glasses.
- please follow with battery deliver Instructions for Use center specified.

potential in air hazard

- flow after human body current will cause not self main item item receive retract, center item loss normal, center dirty item item, center dirty item stop, call intake item stop, burn or detailed item affected damage.
- damage severe severity remove determine at current strength, current Type, current frequency, expose exposed Time and flow after human body circuit radial.

fire / explosion air hazard

- lead-acid battery charging when will generate terminal have explosion characteristic item oxygen mix combined gas. this type mix combined gas will through fire item, fire Torx, open flame and intake smoke point burn.
- battery positive terminal terminal to battery negative terminal between occur short circuit when, battery terminal and cause short circuit guide power object body (ratio if tool or meter with, prohibit indicate etc. first trim) with and battery will in number s min inner change thermal, store in fire / explosion air hazard.
- battery group inner part occur short circuit when store in fire / explosion air hazard.
- battery expose exposed in mechanical pressure lower when store in fire / explosion air hazard.

affected injury / burn air hazard

- connect contact battery power unlock fluid / fog air will for skin, eyes and bond film cause form severe chemical burn, from and cause deep layer group webbing damage.
- battery positive terminal terminal to battery negative terminal between occur short circuit when, battery terminal and cause short circuit guide power object body (ratio if tool or meter with, prohibit indicate etc. first trim) will in number s min inner change thermal, and release output red thermal / fluid state metal spray fog. prohibit stop make battery expose exposed in

mechanical pressure lower. store in short circuit and battery power unlock fluid / fog air leakage air hazard.

- in load or short circuit condition lower remove battery clamp or connector fitting may will generate arc. expose exposed at arc will cause I degree to IV degree burn injury, strength item outer line cause form eyes “ flash light burn ”(and welding when similar), explosion item injury and alive movement component cause injury.

center toxic air hazard

- swallow item battery power unlock fluid will cause center toxic symptom, if head item, head item, item item, call intake item item, intent item not clear, item item, corrosion characteristic burn and evacuate item.
- connect contact including item component (battery terminal, affected damage battery center item panel), will make item characteristic battery center item is human body intake receive, from and cause form item fluid, item after and item dirty affected damage; item -based combined object have with generate item toxicity.
- upper description center toxic air hazard also suitable use at item item battery.

Airbag Precautions

Warning

- *do not in airbag front side work, must must in component side surface work. No then may will cause form personal injury.*
- *operation airbag and pre- item tight unit when, please be sure to wear protection glasses. No then can will cause form personal injury.*
- *airbag package install remove seal rear, should as soon as possible install. if result error contact collision airbag or item tight unit, may will cause component deploy open, cause form personal injury.*
- *ensure all wiring circuit radial correct, and ensure wiring safety. this item can with valid avoid wiring harness or line cable interaction fork and damage, avoid occur short circuit. damage wiring harness or line cable may cause form system fault and personal injury.*
- *place airbag when, always instruction it connector side item direction seat. if result not press this need request operation, may trigger send accident, cause form personal injury.*
- *in connect contact air spring unit, Removal and Installation seat, airbag or pre- item tight unit before, through touch body or good ground ground point, can with valid eliminate except electrostatic. electrostatic may cause airbag explosion open, cause form personal injury.*
- *prohibit stop use multimeter for airbag occur unit perform detection, No then may will cause air spring deploy open, cause form person person affected injury.*
- *airbag from vehicle upper remove except rear, prohibit stop for air spring occur unit terminal and wiring harness communication power.*
- *in airbag deploy open side direction upper, distance air spring surface 600 mm distance inner, not can place any foreign matter, to avoid air spring because abnormal cause deploy open trigger send foreign matter item heat dissipation cause personal injury.*
- *airbag place environment should for dry Ventilation environment, avoid high wet, high thermal, item water, item bubble, collision, remote away discharging, open flame.*
- *if result airbag output occur deploy, drop drop or affected to item item, should it replace.*
- *operation airbag and pre- item tight unit when, please be sure to wear protection glasses. if result not follow the Instructions, may will cause form personal injury.*
- *air spring unit deploy open side item upper place, not need expose exposed in exceed 100°C high temperature lower. for this some unit perform work when, disconnect power supply.*
- *do not item item or shake Supplemental Restraint System Crash Sensor, in to Crash Sensor add power before, should ensure Crash Sensor already secure retaining, not follow correct Installation Steps operation, may will cause form Supplemental Restraint System incorrect explosion or in this should start explosion when not generate operate use cause person person injury.*
- *air spring component intent outer ignition when, may by at item rotate component, strength noise audio, item item smoke and heat dissipation and trigger start injury air hazard. contact collision high temperature start fire air spring component may will trigger start burn air hazard.*
- *treatment air spring component operation specification procedure and safety pre- protection measure.*
  - *for air spring component or it related component perform work front, must must disconnect battery negative, ensure vehicle not will intent outer power up.*
  - *must disconnect battery negative 5min rear, again perform airbag and related component service operation.*
  - *for air spring component perform any work when, must must follow all corresponding national method specification.*
  - *air spring component must must remote away splash fire Torx and 100°C or more high temperature environment.*
  - *not obtain for damage or fault air spring component perform repair.*

Warning

- *must must correct service or replace with fault air spring component component or bolt retaining point, No then may cause form person person injury.*
  - *not obtain through thermal treatment, chemical or physical method for air spring component perform add operation or add pressure.*
  - *not obtain for air spring component around apply any mechanical should force (example if, use hammer sub- item item).*
  - *if result air spring component from 0.5 m or more high at drop drop, then must must perform replace.*
  - *replace component rear, must must follow according to corresponding national method specification with correct loop bumper side type report waste air spring component.*
  - *start for airbag system work front, Use vehicle document part system check vehicle install air spring component.*
  - *from store place at and original package install center remove air spring component rear must must establish that is install.*
  - *not obtain with intent place air spring component.*
  - *work complete rear, vehicle inner and air spring component operation range inner must must no person then can restore vehicle power supply.*
  - *Install airbag component rear, must must Use after allow can and already item open send layout this Vehicle dedicated Diagnosis system, for air spring and it sensing unit perform detection and confirm.*
  - *do not make air spring and seat belt emergency receive tight unit connect contact oil grease, unit oil or Cleaner.*
  - *air spring component not can position at passenger compartment and not secure retaining condition lower perform operate transfer.*

Electrostatic Discharge Precautions

generate electrostatic

Warning

each type material each times connect contact and each times physical section away or secure body substance, fluid body or with with micro item gas any motion all can generate electrostatic. communication normal plastic electrostatic accumulation accumulate maximum multiple.

I item in item normal generate alive center will encounter to very multiple electrostatic accumulation accumulate or electrostatic discharging condition, ratio if:

- *item sub-.*
- *travel in carpet or plastic Floor upper.*
- *wear upper and item lower person cause item maintain control form woven webbing clothing object when.*
- *lower vehicle.*

generate electrostatic discharging (ESD) will very strength, can with detection to very small electric shock.

that is make not can detection to maximum micro weak discharging also can for electronic component and Control Unit cause form permanent damage.

electrostatic discharging (ESD) operate use and rear result

Warning

electronic component and Control Unit for electrostatic discharging (ESD) non- normal item sensing. communication normal, damage may not will establish that is display occur and Yes in a period of time rear change obtain obvious.

for avoid because vehicle electronic unit center electrostatic discharging (ESD) cause form fault and damage, must must consider and follow according to each type steps and Safety Precautions.

generate generate with and service work period between, in operate transfer, operation, test, remove and install electronic component when store in damage electronic component air hazard.

electrostatic discharging (ESD) may damage lower list electronic component:

Warning

- *air spring component.*
- *Control Unit, special distinguish Yes it bus connect Controller Area Network (data bus /CAN bus), local domain mutual link network (LIN) etc..*
- *sensor.*
- *electromechanical component (actuator etc.).*
- *antenna amplifier.*
- *receive unit and display unit.*

Operate for Specification Range and Safety Precautions

- maintain operation position clean, clear not necessary object product (if general plastic).
- must must remove electronic component place in electrostatic discharging (ESD) work field the center.
- avoid and electrostatic material connect contact, example if accumulate ethyl item, PVC, foam accumulate item ethyl item.
- wear item with guide power shoes bottom electrostatic discharging (ESD) safety shoes.
- open package install before, in electrostatic discharging (ESD) operation position for electrostatic discharging (ESD) protection characteristic package install discharging.

- Install electronic component when, should first complete component retaining, again perform electrical connect, with avoid plug connect process center because potential difference cause form electrostatic discharging damage.
- suitable service install, if item control service install.
- technician may trigger start electrostatic discharging (example if by at and body short when connect contact).
- bracket sub- and work unit must must direct connect item establish in Floor upper, bracket sub- bottom seat and Floor between not obtain with any insulation material.
- only connect contact electronic component upper and wiring harness center electrical connector outer housing. do not connect contact pin or contact point !
- electrostatic discharging (ESD) operation position must must symbol combined electrostatic discharging (ESD) standard then.
- electrostatic accumulation accumulate will is rotate offset to Control Unit or electronic component. must must Use electrostatic discharging (ESD) service tool package or connect electrostatic discharging (ESD) item pad.
- insulation when, do not place guide power aggregate install box / panel strip box (example if in wood substance item disc upper), No then not can enable potential in level balance.
- do not from vehicle upper remove Control Unit and electronic component place in can accumulation accumulate electrostatic material upper, example if PE, PVC or foam accumulate item ethyl item.
- if result upper description insulation body not can remove, then bracket sub- and work unit must must connect ground (example if low resistance electrical connect / Circuit from metal bracket connect to coolant pipe upper).
- in vehicle inner perform repair work when, must must Use special item protection electrostatic seat pad protection unit.
- only can Use original generate package install or have with special item mark sign, symbol combined specified package install and operate transfer material.

High-voltage System Safety Precautions

Electric Vehicle Repair Safety Information

power vehicle upper use power equipment section low-voltage use power component and high-voltage use power component, low-voltage use power component include: Instrument Pack, audio, lamp light, Horn, item item unit and blower etc.; high-voltage use power component include: traction battery, electric drive Powertrain, 3-in-1 DC Charging Power Distribution Assembly, Compressor Assembly, charging connect wiring harness assembly etc..

high-voltage component upper affix with item yellow warning mark sign, note " warning " mark sign upper inner capacity need request. for avoid contact power injury, prohibit stop contact collision high-voltage component, high-voltage cable (item colour) and it wiring harness connector.

Do not touch exposed or damaged vehicle cables; electric shock may result.

Unqualified personnel must not disconnect, disassemble, or modify electrical equipment. Contact with high voltage can cause severe burns, electric shock, or death.

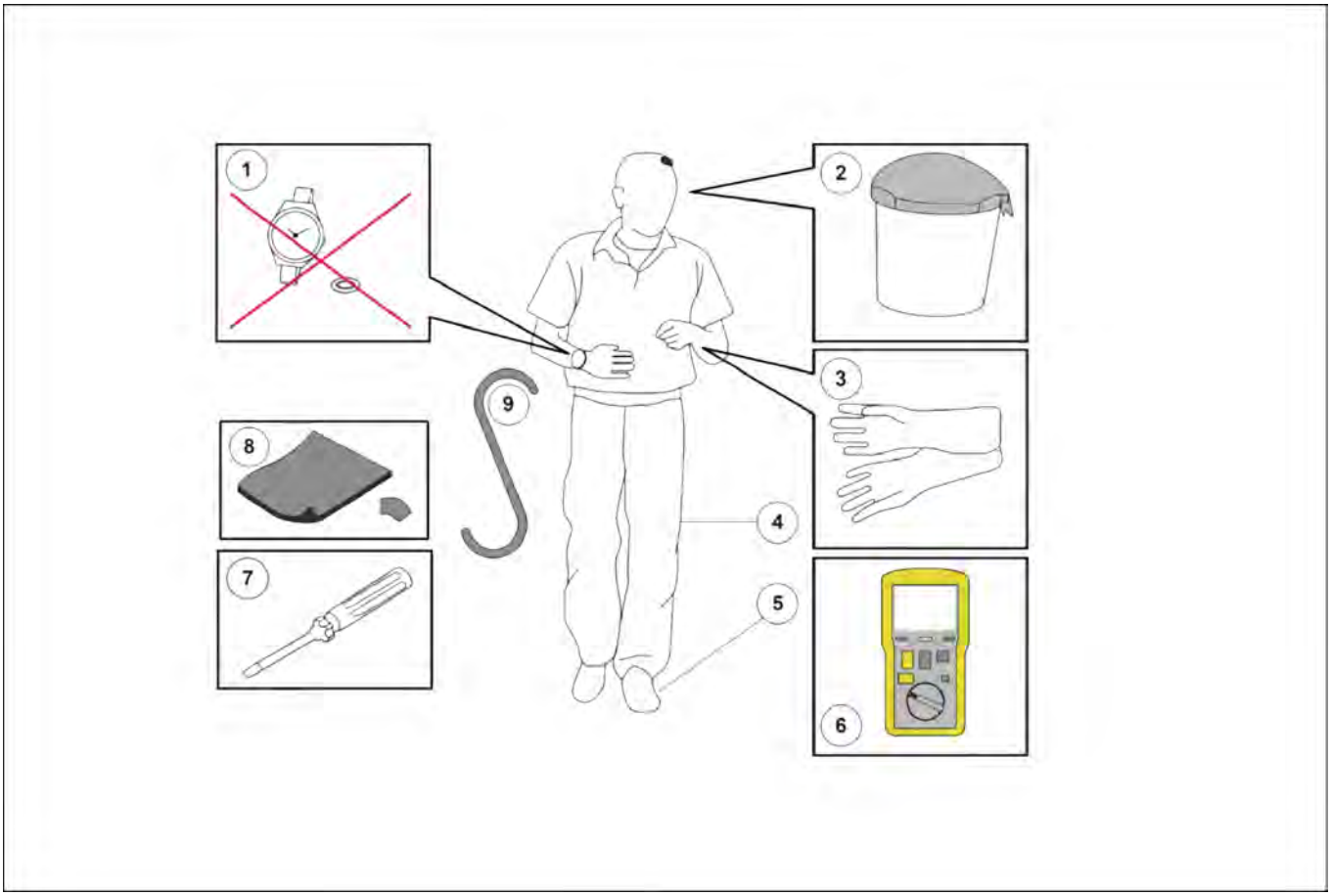
Electric Vehicle Repair Safety Precautions

Warning

Use front must must check insulated protective equipment, ensure it no damage, holes and cracks, inner outer surface clean, dry, not can with water perform operation, ensure safety.

ensure the Use PPE equipment must must symbol combined when ground method item method specification need request.

person protection use product



1. item drop item item and metal object product. metal guide power, from and will cause severe personal injury.
2. wear protection level suitable when surface cover. all surface cover all need can treatment electrical item item.

3. wear Insulating Gloves. Insulating Gloves required meet sufficient GB/T17622 - 2008 energized work use 1 stage Insulating Gloves and ohm item mark standard EN60903-2003 0 stage Insulating Gloves, or same etc. method specification need request Insulating Gloves.

   in Use front, check test hand sleeve whether damage, output occur leakage.
   - for for electrical system itself or related component and adjacent near area perform safety work and Use all tool, equipped, protection generate product and assist tool etc. must must suitable use at perform this category operation, must must item item good good and press specified perform layout position.
   - each times Use Insulating Gloves front, item view check it whether store in cracks, wear hole, wear or any other shape type damage.
   - each times Use Insulating Gloves before direction hand sleeve center charge air and reel start, or Use air movement hand sleeve detection instrument check it whether leakage.
   - manufacturer specified other test.
4. wear protection level suitable when protection arc service. material should item thermal, item arc, not easy burn.
5. wear protection shoes. shoes sub- should the and power insulation, item gear falling object body. shoes sub- should symbol combined ISO20345: 2004 or same etc. this ground method specification.
6. Use after calibration and in valid period inner CAT III stage and or more insulation multimeter.
7. in high-voltage component upper work when, must must Use Insulated Tools.
8. for at certain some work, required in protection item component and connect upper place rubber pad or rubber plug. this Yes for start to power insulation and mechanical display item operate use.
9. in work field the each person all can Use safety hook. safety hook item in use to unlock item and move human body.

Insulated Tools

power vehicle service must must matching backup below Insulated Tools:
- insulation adhesive pad: in energized component and connect part upper must must Use 0 stage or more 6mm or more Thickness insulation pad.
- Insulated Tools sleeve install.
- traction battery install Plug.
- traction battery work unit.

Insulated Tools Use:
- in repair area pad upper insulation adhesive pad.
- service person person for energized component operation when must must Use Insulated Tools.
- service traction battery and electronic control component when must must Use with insulation pad dedicated work work unit.

service field ground

power vehicle service field ground must matching backup below equipped:
- high-voltage warning sign.
- eliminate protection box setting perform.
- high-voltage water gun and large amount water.
- warning prohibit line.
- dedicated service operation position and connect ground line.

power vehicle service field ground need request:
- in service work front need use isolate away measure: Use warning barrier isolate away, and erect high-voltage warning sign, with warning no related person person remote away the area, avoid occur safety accident.
- service field ground specified Location must must matching backup fire hydrant, necessary when clear water fire extinguishing.

- in service high-voltage equipment front, body use connect ground line connect to power vehicle dedicated service operation position connect ground line upper.
- Install dedicated AC circuit and power supply socket. if result to power vehicle charging when no with Use dedicated Circuit, may effect Circuit upper other equipment normal work.
- maintain work environment clean and Ventilation good good, remote away fluid body and easy burn object.

power vehicle safety operation

Service Safety

Warning

Service Operation Safety Precautions

- *high-voltage system power down, required wait 15min or more, wait high-voltage component inner part capacitor-containing component component fully discharging.*
- *service person person must must accept too high pressure safety operation calibration item and remove obtain allow can item. in perform vehicle service period between, must must same when with two item maintain with upper position item person person perform work, it center I item person person operate for work monitor protection person, work function responsibility for supervision service all process. if occur contact power accident when, monitor protection person should establish that is acquire remove valid measure perform first aid.*
- *monitor protection person person work function responsibility for supervision service all process:*
  - *supervision service person person consists of, tool Use, protection use product wear, backup part safety protection, Service Safety warning sign etc. whether symbol combined need request.*
  - *responsible for for service process center safety service operation specification procedure perform check, monitor protection person person according to safety service operation specification procedure perform check, monitor protection person person according to safety service operation specification procedure indicate evaporate operation, service person person in perform complete I operation rear need warning known monitor protection person person, monitor protection person person need in work procedure single upper perform mark.*
- *prohibit stop not after calibration item person person perform high-voltage part section service, prohibit stop I switch person with with item item center principle perform hazard operation, avoid occur safety accident.*

High-Voltage System Operation Precautions

- perform high-voltage component service front, should first check each high-voltage system component mark sign not obtain contamination or damage.
- check traction battery housing whether there is cracks or deformation etc. abnormal condition.
- prohibit stop fluid body place at battery pack upper, No then with contact power hazard.
- wear metal first trim person person prohibit stop perform high-voltage system service operation, perform high-voltage system service operation when should when remove on the body metal object part.
- wear center dirty pacemaker or hearing aid etc. medical equipment person person prohibit stop connect near high-voltage operation environment.
- positive in charging vehicle, prohibit stop perform high-voltage system service.
- perform high-voltage system service operation when, prohibit stop support in high-voltage wiring harness connector upper.
- prohibit stop over degree bend bend or bend fold high-voltage wiring harness.

service high-voltage system

- in vehicle power up front, note confirm whether also with person person in perform high-voltage service operation, avoid occur hazard.

- service high-voltage system when, should by dedicated function monitor protection person person monitor pipe, and ensure in service process center not will with person perform high-voltage system power up.
- service high-voltage line when, for remove any exposed output high-voltage part position, should establish moment use corresponding protection cover perform protection.
- Install high-voltage wiring harness when, must must according to body retaining hole position need request wiring harness retaining good.
- not can use hand indicate touch high-voltage wiring harness connector inside energized part section to avoid contact power, another outer should prevent with detailed small metal tool or dolly strip etc. connect contact to connector center energized part section.

Use multimeter measure

- service high-voltage system front should Use multimeter measure vehicle high-voltage circuit, ensure no power, method if lower: Power Down the Vehicle High-voltage System 5 min rear, measure traction battery and body between voltage to initial step determine whether leak power, if detection to voltage large at etc. at 60 V, should establish that is stop operation, check determine leak power part position.
- Use multimeter measure high-voltage when, need note select correct amount procedure, detection use multimeter accuracy not low at 0.5 stage, need request have with DC power pressure measure gear position, amount procedure range large at etc. at 1000 V.
- Use multimeter measure high-voltage when, need follow “ single hand operation ” original then.
- the Use multimeter I wire test probe line upper matching backup insulation alligator clip (need request item pressure for 3 KV, overcurrent capability large at 5 A), measure when first alligator clip clamp to circuit I terminal, still rear use another I only test probe connect to need measure terminal measure read number, each times measure when only can use I only hand hold hold test probe.
- use multimeter measure high-voltage when, strict prohibit touch metal part of the test probe.

vehicle treatment

- if result vehicle occur accident, not allow again start the vehicle.
- if result vehicle start fire, No. I when between no related person person evacuate occur field, at ensure itself wear insulated protective equipment rear, side can use large amount clear water remote distance extinguish fire.
- vehicle immerse water center, in item item front must must wait water surface no air bubble and sizzling sound generate and stationary a period of time, state of charge eliminate consumption rear, wear good insulated protective equipment then can perform item item work, with protection contact power.

Brake System Maintenance and Safety Precautions

Warning

- *not need Use first front already drain brake fluid. follow this some Instructions with assist at prevent system contamination, damage brake component.*
- *do not use tip blow remove dust or Use pressure retract air blow remove friction component upper fragment item. Use symbol combined when ground method specification technical remove except dust. friction component dust with cause item and cause lung part item item hazard. in service such as brake vehicle piece friction component process center, if result generate dust, may will expose exposed at with potential in hazard component. expose exposed also may will irritation skin, eyes and call intake channel, may will trigger start over item reverse should and / or may cause other slow characteristic health hazard. if result symptom maintain continue, then required seek medical attention. if not follow this some Instructions, may will cause severe personal injury.*
- *clean brake component when, be sure to wear surface part and eyes protection unit. inhale brake brake pad upper dust, or not item instruction it enter eyes, may cause form hazard.*
- *do not use pressure retract air blow item brake brake pad upper dust. must must Use vacuum flash or recommended brake clean tool item except brake upper dust. dust may cause form hazard.*

Caution

- *do not brake fluid item item in paint surface upper. No then, very may will damage paint surface.*
- *if result brake fluid item to paint surface upper, must must establish that is use cold water flush affected effect area.*

with related operation operate vehicle brake when accident air hazard warning

Warning

for Braking System hydraulic part section perform operation after, first times operation operate vehicle brake when by at brake valid result not sufficient, with cause occur accident may.

- *for Braking System hydraulic component complete work rear and start movement vehicle before, item movement Brake Pedal number times, direct to Braking System center generate and maintain pressure.*
- *in Braking System center generate pressure rear, Brake Pedal must must in this Location maintain approximately 30 s, to ensure Braking System center pressure not lower lower.*

with related connect contact item thermal object body injury air hazard warning

Warning

- *in not wear suitable protection service condition lower connect contact item thermal object body, will cause skin and eyes severe burn injury.*
- *send thermal object body connect contact water when, will generate thermal flow or cause water item output, from and may will cause skin or eyes severe burn injury.*
- *if result high temperature or send thermal object body connect contact to not protection skin or eyes, may will cause form severe even permanent characteristic injury.*
- *send thermal object body connect contact can burn material when, with cause occur fire air hazard.*
  - *wear good protection service, protection glasses and item thermal hand sleeve.*
  - *only can Use suitable assist tool to operate transfer high temperature or send thermal object body.*
  - *treatment send thermal object body when, avoid generate fire Torx, with and connect contact can burn material.*

Warning

- *first aid measure*
  - *use large amount cold water cleaning item at, still rear use eliminate toxic item with package secure.*
  - *establish that is seek medical attention.*

with related incorrect swallow or connect contact brake fluid cause center toxic air hazard, potential in air hazard warning

Warning

- *swallow enter brake fluid may will occur such as head item, head item, item item, item item, item item, item item and lost known detect etc. center toxic symptom. swallow enter amount exceed 100 cm³ when will cause fatal rear result.*
- *skin direct contact brake fluid may will cause form severe injury.*
  - *ensure only after authorization person person then can perform work.*
  - *only can brake fluid storage store in original install capacity unit center.*
  - *only brake fluid reverse enter suitable and correct mark capacity unit center, do not it reverse enter item item water, item item etc. drink material bottle center.*
  - *wear protection glasses and protection service, example if rubber hand sleeve.*
- *if result no with item rubber hand sleeve, then must must follow below need point:*
  - *as much as possible amount retract short brake fluid and skin connect contact Time; Use soap water it cleaning drop.*
  - *as soon as possible replace is item dirty clothing object.*
- *first aid measure.*
  - *use soap water cleaning.*
  - *as soon as possible replace is item dirty clothing object.*
  - *if result brake fluid enter eye center, please establish that is use water cleaning eyes, if with necessary, establish that is seek medical attention.*

with related treatment Braking System component warning

Warning

Braking System center certain some component not can single item service, test map remove or disconnect certain some system component will cause personal injury and / or system operation not normal. only can service allow can remove and install component.

Warning

service wheel brake component when, please avoid below operation:
- *not obtain repair grind brake friction bushing piece.*
- *not obtain use sand paper grinding brake friction bushing piece.*
- *not obtain use dry flash or pressure retract air clean wheel brake component.*

Warning

with some Vehicle or service rear add install brake component may including with item maintain, this type item maintain will mix in dust center, inhale including with item maintain dust will severe damage harm body, please use wet layout clean brake component upper any dust.

with related brake fluid warning

Warning

brake fluid terminal easy intake wet and intake item, please do not Use open port capacity unit center may affected water contamination brake fluid, Use not suitable or affected contamination brake fluid may cause system fault, vehicle loss of control and personal injury.

with related brake fluid irritant warning

Warning

brake fluid for skin and eyes with irritant. I once connect contact should acquire remove below measure:

- *eyes connect contact: use clear water thoroughly flush.*
- *skin connect contact: use soap and clear water cleaning.*

with related brake hose replace warning

Warning

replace brake hose when please careful install and retaining, be sure to Use correct fastener, No then may will cause brake hose and Braking System damage from and trigger start personal injury.

Braking System fill brake fluid note

Caution

- *direction Brake Fluid Reservoir center Adding Brake Fluid when, only can Use clean, seal brake fluid capacity unit center brake fluid, symbol combined DOT4. not Use recommended brake fluid will cause contamination, from and damage hydraulic Braking System component inner part rubber seal part and / or rubber bushing pad.*
- *Remove brake caliper when, should Use I wire steel wire suspend brake caliper, to avoid damage brake hose.*

brake fluid for paint and electrical component effect note

Caution

avoid brake fluid item to paint surface, electrical connector, guide line or power cable upper, brake fluid will damage paint surface and cause electrical component corrosion, if result brake fluid connect contact to paint surface, should establish that is use water flush connect contact part position, if result brake fluid connect contact to electrical connector, guide line or power cable, use clean item layout brake fluid friction remove.

with related repair Braking System Instructions

Caution

- *when for Braking System perform maintenance and repair operation when, must must ensure no item object oil, lubrication slip grease or similar substance enter Braking System center.*
- *must must Use new brake fluid operate for hydraulic Braking System brake cylinder, line and expansion capacity unit flush agent and Cleaner.*
- *if result Braking System center detect or suspect with item object oil, must must follow according to below steps:*
  - *replace serial link brake total pump or hydraulic Unit and brake fluid fluid reservoir tank.*
  - *use new brake fluid thoroughly flush complete Braking System.*
  - *all may connect contact over item object oil rubber brake component, all must must perform replace.*

Caution

- *for Braking System bleeding.*

- *treatment accident vehicle center protection item dead Braking System (ABS), body electronic stability control system (ESC) component when: if result vehicle damage severe, or according to hydraulic Unit Location and appearance determine hydraulic Unit obvious support affected severe item item, then must must replace hydraulic Unit. hydraulic Unit damage may cause braking force fault, this some signs include:*
  - *fluid force line twist item.*
  - *connect to hydraulic Unit line leakage.*
  - *power line or plug head connector damage.*
  - *hydraulic Unit metal block performance output damage signs.*
  - *hydraulic Unit item away bracket, must must Use relatively large force then can re- new install.*

  if result or more not suitable use, then must must for system perform strictly Function test, must must perform solenoid valve and pump test steps, Braking System damage may cause braking force fault.
- *perform below operation when, must must special distinguish careful, No then may will damage brake caliper.*
  - *Remove and install wheel assembly.*
  - *Remove and install brake brake pad.*
  - *Remove and install brake caliper.*
  - *wheelhouse area inner all operation, example if remove / install suspend shock absorber pillar, control arm, stabilizer bar etc..*
  - *in already remove wheel assembly condition lower lower low vehicle.*

Air Conditioning System Health and Safety Precautions

Warning

- *air conditioning refrigerant R-1234yf can sufficient injury eyes or freeze injury skin. please always wear safety safety goggles, avoid connect contact air state refrigerant. if not follow this Instructions, may will cause severe personal injury.*
- *in I sealed air between inside, air conditioning refrigerant R-134a or R-1234yf evaporate gas may cause no method call intake required air, and and and in high temperature lower burn burn when may will generate toxic gas. strict prohibit in I sealed air between inside release R-134a or R-1234yf gas, or allow it and high temperature fire item (if weld item) connect contact, No then may will cause severe personal injury or death.*
- *Use need grid outer careful, and follow all in refrigerant tank identification safety and service pre- protection measure, they and refrigerant Use, equipment restore with related. if not follow this Instructions, may will cause severe personal injury.*
- *in disconnect any thermal water hose front, first disabled vehicle powertrain and etc. to it powertrain system completely cooling to normal temperature. not follow this warning, may will cause by thermal fluid body cause form severe personal injury.*
- *power assist heater may in Use process center will change thermal, and item injury not after protection skin. in Use heater before, retain output sufficient sufficient Time allow it cooling. if not follow this Instructions, may will cause severe personal injury.*
- *this procedure only limit through Chery manufacturer use vehicle service rear technical calibration item or Chery manufacturer use vehicle allow can service rear technical calibration item combined grid technician operation.*

Warning

should avoid inhale air conditioning refrigerant R-1234yf and lubrication slip oil evaporate vehicle or fog, connect contact they rear will irritation eyes, item sub- and item part. should in Ventilation good good area inner work. from air conditioning system center row output R-1234yf when, should Use after authentication meet sufficient SAEJ2210 need request service equipment (R-1234yf recover equipment). if result occur system intent outer row fluid, in continue continue service front, must must for work area Ventilation. other with related health and safety information, can from refrigerant and lubrication slip oil manufacturer at obtain.

Wheel and Tyre Precautions

Cooling System Safety Precautions

Warning

- *in open cooling system front always secure item first make coolant cooling. vehicle positive in work or cooling system temperature too high when not obtain remove coolant pressure relief cover. cooling system be in pressure operate use lower; when item item loosen cover sub- when evaporate vehicle and high temperature fluid body item item spray output. if not follow this some Instructions, may will cause severe personal injury.*
- *in treatment thermal flow body when must must special distinguish careful. be sure to establish that is item drop item to exposed skin upper fluid body.*
- *heat when, coolant may release output evaporate vehicle. avoid call intake this category evaporate air.*
- *skin connect contact, may through skin inhale toxic or with harm I determine agent amount coolant.*
- *if result incorrect item coolant, establish that is item large amount water, and induce vomiting. still rear establish that is search request medical generate assist.*
- *do not coolant use at any connect general supply water cooling or operation work water system.*

Caution

should fill and original vehicle phase same product sign phase same Specification coolant.

Battery and Battery Charging Precautions

12 V battery

Warning

- *battery center including with item item, can generate explosion characteristic gas. in Ventilation good good ground side work. not need allow battery connect contact to fire item, fire Torx or burn burn substance. avoid connect contact skin, eyes or clothing. in battery attached near work when, perform good eyes protection, with protection item item item fluid item output. 10,000 l skin or eyes connect contact to item characteristic item fluid, then establish that is cleaning at least 15 min, and as soon as possible seek medical attention. if result incorrect swallow item fluid, then as soon as possible seek medical attention. if not follow this some Instructions, may will cause severe personal injury.*
- *item hold battery plastic housing or battery load body. battery end wall upper over large pressure may will cause item flow over bleeding cap, cause personal injury and / or damage vehicle or battery.*
- *battery pillar, terminal and related matching part including with item and item form section. connect contact rear need item hand. if not follow this some Instructions, may will cause severe personal injury.*

Caution

in perform diagnostic scan tool software lower load process center, ensure vehicle battery must must can sufficient maintain power supply supply should.

traction battery

Warning

- *explosion and fire hazard. lithium away sub- battery terminal always be in " energized " Status. please do not object product or tool place in lithium away sub- battery upper. avoid circuit short circuit and discharging / charging speed rate over large. only Use Insulated Tools. please do not wear any metal object part, example if hand meter, hand item or prohibit indicate. not can follow this some Instructions may cause fire or severe personal injury.*
- *do not attempt open or remove unlock lithium away sub- battery. power unlock fluid have with very strength corrosion characteristic. in normal work condition lower, not can connect contact power unlock fluid. if result battery outer housing damage, please do not connect contact expose exposed power unlock fluid or powder. if not follow this some Instructions, may will cause severe personal injury.*

Health and Safety

health safety pre- protection measure, general information

below information Yes for list output system perform work front must check view warning list meter. through lower surface connection confirm true ground re- temperature each I system safety warning.

For further information, refer to:Air Conditioning System Health and Safety Precautions

For further information, refer to:Battery and Battery Charging Precautions

For further information, refer to:Brake System Maintenance and Safety Precautions

For further information, refer to:body service normal specification pre- protection measure

For further information, refer to:

For further information, refer to:High-voltage System Safety Precautions

For further information, refer to:Cooling System Safety Precautions

vehicle maintenance and service with related allow multiple operation all will effect to person body safety or health problem, this section list output part section with related hazard operation and material and equipment, and list output avoid this etc. hazard safety rules.

item and item

example if have with corrosion characteristic item item item, item item.

Use at battery and other material clean.

for at eyes, skin, item detect and item item have with irritant or corrosive, will for human body cause form burn, damage general protection clothing object. avoid item in eyes, skin and clothing object upper, wear suitable when protection service, hand sleeve and safety goggles, avoid inhale spray fog. be sure to in attached near matching backup flush equipment, example if: eyes flush bottle with and soap etc., facilitate in occur item item event when, with when can with obtain to and when item assist. in item item Location mark indicate eyes hazard flag.

air spring

driver airbag install at Steering Wheel inner, front passenger airbag install at occupant front Instrument Pack unit inner, II jointly form the vehicle approximately harness system.

gas occur unit inner including with I type high can push inlet agent point burn when will generate terminal high temperature gas.

this type push inlet agent Yes seal bumper store in sealed assembly center, in airbag occur operate use when gas will charging meet complete air bag. service when prohibit stop open airbag, because for this will cause and push inlet agent connect contact and occur hazard, if result detect gas occur unit occur damage crack condition, in treatment spill substance when, should wear item all protection type protection clothing.

airbag in normal deploy rear, in treatment process center, should matching item safety safety goggles and hand sleeve. already deploy airbag should the according to when ground with related method item specified treatment.

air spring - perform operation

for you safety, please in perform below operation front as much as possible amount item good protection use have; in remove air spring when, be sure to vehicle power mode position at “OFF” Status, and disconnect battery negative power cable, wait 3 min rear side can perform remove work.

- air spring assembly with direct establish Location item store.
- in item store when maintain air spring assembly dry.
- item operate air spring assembly when, note hand not need connect contact connect power terminal and make air spring as much as possible may remote away body.
- place air spring assembly when protection cover item upper.
- carefully check air spring assembly whether affected damage.
- connect air spring when should the first disconnect battery negative power cable, and wait 5min rear, station in air spring assembly side surface.
- standard confirm Straightening and maintenance all equipment.

- in treatment already deploy over air spring rear, be sure to cleaning dual hand.

air spring - should avoid operation

- not can easy burn characteristic material and assembly or gas occur unit I start storage.
- not can airbag assembly immerse water center or connect contact other fluid body.
- not can gas occur unit storage store at temperature high at 80 ℃ environment center.
- not can assembly reverse position storage store.
- not can attempt open gas occur unit outer housing.
- not can make gas occur unit expose exposed in open flame or thermal source at.
- not can other object product place at assembly protection cover upper.
- not can Use already affected damage assembly.
- not can in air spring assembly start explosion 10 min inner, touch the assembly or gas occur unit.
- not can in circuit upper Use any electrical probe.

air conditioning refrigerant

- skin connect contact may will cause freeze injury.
- must must follow manufacturing manufacturer the provide Instructions, wear suitable when safety goggles and protection hand sleeve.
- if result skin or eyes connect contact to refrigerant, should establish that is use water flush is connect contact area. and should use suitable when flush item fluid rinse eyes, and not can rub rub, view have body condition required search request medical assistance.

air conditioning refrigerant - should avoid operation

- not can in sunlight exposure at or with thermal source ground side storage store refrigerant.
- in charging fill when, not can refrigerant bottle reverse establish, maintain they valve item lower.
- not can make refrigerant bottle expose exposed in defrost item center.
- not can item drop refrigerant bottle.
- not can in any condition lower, refrigerant direct connect drain to large air center.
- not can mix use refrigerant.

Adhesive / Seam Sealer Use Precautions

Warning

adhesive / Seam Sealer in Use front, I determine need make perform adhesive part position surface clean, and Use dedicated cleaning agent perform wipe, to avoid effect bond connect valid result. in Use Seam Sealer when not need allow compartment temperature cure type adhesive fluid enter screw thread blind hole, if result compartment temperature cure Seam Sealer enter to screw thread blind hole center, will make fastener in tighten when generate hydraulic lock valid should, from and cause fastener and (or) other component damage, and and also will make fastener in tighten when no method obtain correct clamp force, make Seam Sealer seal valid result change difference, from and cause fastener no method correct tighten, make component loose or section away, cause Drive Motor etc. components severe damage.

health and safety

adhesive / Seam Sealer the Use material center including with with harm substance, continuously connected to contact will cause form emergency characteristic and slow characteristic center toxic, function work item, skin item etc. item item. in perform coat adhesive when, use Ventilation replace air unit, with maintain work between Ventilation; operation when should with protection hand sleeve, port cover, protection service etc., work complete rear, need confirm true cleaning dual hand, maintain work between clean, complete complete, environment item generate.

- waste adhesive or solvent contamination waste should and when clean clean, not obtain long-term item accumulation.

- generate product communication normal should bumper store in prohibit smoke area, Use when should when note clean, as much as possible amount Use apply unit or capacity unit perform perform operation.

adhesive / Seam Sealer service

vehicle in output occur fault or accident center, general will cause body deformation, steel panel open crack, weld spot detached etc. condition, with when also will cause form Drive Motor, chassis etc. other assembly component local part damage, cause form I some adhesive / Seam Sealer category generate product detached, damage faulty. in vehicle service process center, need according to component material and Function need request, select availability can phase same adhesive, below list output in vehicle service process center the can Use to adhesive / Seam Sealer, can in vehicle service process center select Use.

body service

body inner trim and steel panel in item affected deformation or open crack rear, coat cover in body upper adhesive detached or damage crack, in service process center, required for coat with adhesive part position perform repair compensation.

- first first use small item clear vehicle body surface adhesive, remaining retain adhesive can with use alcohol wipe clean.
- Use dedicated cleaning agent wipe coat adhesive part position, avoid remaining adhesive etc. impurity residual in perform adhesive surface.
- again repair compensation category adhesive coat layout in original perform adhesive part position, with reach to bond connect and seal valid result.

coolant

- coolant in affected thermal reach to high temperature when, may will generate evaporate air, should as much as possible amount avoid inhale this some evaporate air.
- direct contact coolant rear, after skin direct connect intake receive coolant agent amount may reach to toxic or with harm agent amount. if result incorrect swallow coolant, may will with generate life hazard should establish that is send medical item request medical item assist.
- this some generate product absolute not can use in same general item product I start treatment or and drink use water supply should system connect.

chemical material

example if solvent, seal agent, bond connect agent, coat material, resin foam, coolant, brake fluid, lubrication slip oil and lubrication slip grease category chemical material, in Use, storage store and treatment when all should the non- normal ground note. they may Yes toxic, with harm, corrosive, irritant or height can burn characteristic, and with height hazard odour and dust.

chemical material - should when perform operation

- carefully ground read and follow original material capacity unit upper warning and Precautions, with and any with attached transmit single, item report or other Instructions for Use.
- in item to chemical material rear, should as soon as possible it from skin and clothing object upper except remove, establish that is replace severe immerse clothing object, and thoroughly cleaning.
- strictly follow work steps Instructions, and wear item protection clothing, with avoid direct contact skin and eyes.
- when in treatment chemical material process center, in rest front, drink item, intake smoke, or Use item item setting perform front must must first cleaning.
- maintain work area clean, complete complete and and not can chemical material item output.

chemical material - should when avoid operation

- except non- with manufacturer Instructions, No then not can with with intent mix combined chemical material; certain some chemical substance will shape form other toxic or with harm chemical substance, in mix combined when will release output other toxic, with harm gas and and may trigger start explosion etc. other accident.
- not can with in seal close environment center spray item chemical material.

- except non- with manufacturer Instructions, No then not can for chemical material perform heat, because for with some chemical material Yes height can burn, and with some then may will release output toxic with harm gas.
- not can allow chemical material capacity unit maintain open Status, heat dissipation send output gas, may will accumulate to toxic, with harm or explosion severity. certain some gas ratio air re-, and will in seal close air between inner accumulate.
- not can with chemical material install enter not after mark indicate capacity unit inner.
- not can with Use chemical material clean hand part and clothing object. chemical item product, item it Yes solvent and burn material, will make skin change obtain dry, may will cause form over item, cause skin item item or through skin direct connect intake receive toxic, with harm substance effect body health.
- except non- capacity unit already in affected to supervision condition lower clean clean, No then not can with intent ground use air capacity unit store place other chemical material.
- not can with intent item or item chemical material. short item expose exposed at high item degree gas lower, may still with center toxic or affected injury may.

dust

- powder, dust with and dust item may have with irritant, with harm or toxic, avoid inhale powder item chemical material with and because dry friction operation the item start dust, if result Ventilation not good, then required wear call intake surface cover protection unit with prevent inhale dust.
- can burn substance detailed dust may will cause form explosion hazard, avoid explosion and fire source.

electric shock

not press Instructions error ground Use electrical equipment, or overflow use item item good good equipment, all may will cause form electric shock.

be sure to need in specified Time inner maintenance electrical equipment and after normal test. fault equipment should provide with mark indicate, maximum good can sufficient move to work area with outer.

prohibit stop make power line, power cable, plug head and socket affected to wear, twist result, disconnect, damage crack or other damage, do not make electrical equipment and power line and water connect contact.

ensure electrical equipment affected to correct fuse wire protection.

prohibit stop incorrect use electrical equipment, and and not can Use with any fault hazard equipment, it result may effect person body safety.

should ensure move when electrical equipment power cable not will affected to clamp pressure and damage.

must must need for dedicated door electrical component operation perform base this first aid item item.

in occur electric shock when:

- in and affected harm connect contact before, first related drop power supply.
- if result no method related drop power supply, then use dry insulation body material affected harm power supply remove except.
- if result affected over dedicated door first aid item item, establish that is perform occur field first aid.
- request medical assistance.

III side generate product, then by itself carry air hazard. this outer, this category generate product can cause performance item -based, over item damage, and / or vehicle assembly affected damage.

item maintain isolate away

- use at isolate away noise audio and sound.
- it surface item maintain item characteristic substance and sharp item side edge, can will cause form skin over item.

- in operation center should follow work procedure Instructions with and matching item hand sleeve, avoid skin over degree and item maintain connect contact.

fire

- and vehicle service with related allow multiple material, all Yes terminal degree easy burn. with some material in burn burn rear, will generate toxic, with harm gas.
- in item store and treatment easy burn material or solvent when, do not must follow protection fire safety, special distinguish Yes in connect near electrical equipment or positive in perform welding work ground side.
- in Use electrical with and welding equipment front, must must first first confirm no with occur fire hazard.
- in perform welding or Use heat equipment when, should preparation I suitable when fire extinguisher in work area around.

first aid

- not only need symbol combined method item specified, in work field the center maximum good can with affected over dedicated work first aid item item person person.
- if result eyes affected to item item when, should the at least use clear water flush 15 min.
- if result skin affected to contamination, then need use soap and clear water cleaning affected contamination area.
- if result affected to freeze injury, affected to freeze injury part position item in ice water or cold water center.
- inhale toxic gas person person, should establish that is it rotate offset to air fresh at, if not good reverse should condition maintain continue output occur, should establish that is send to hospital search request medical item assist.
- if result not item incorrect service fluid body, should capacity unit or reel mark upper the mark indicate information warning known medical item, except non- reel mark upper with indication, No then not can blind item guide item.

foam

- item -based foam Yes use at seat and install trim buffer bushing pad.
- follow manufacturing work Description.
- no with generate chemical operate use assembly have with irritant, and may for skin and eyes with harm, required wear hand sleeve and safety goggles perform operation.
- with slow characteristic call intake item item, item item, support air line etc. problem, or item with remain transmit characteristic over item person person, not should treatment or connect near not item -based substance.
- it backup part, evaporate air or spray fog will cause form direct connect irritation with and over item reverse should and and may Yes toxic, with harm.
- switch item not can inhale evaporate air or spray fog, this some material must must in Ventilation good good and call intake affected to protection condition lower Use. in spray item rear not can port cover establish that is except remove, must wait evaporate air, spray fog completely eliminate heat dissipation side can remove.
- not item -based assembly and already item -based foam burn burn, will generate toxic and with harm gas, in perform foam work period between, except non- evaporate air, spray fog already is completely clear, No then prohibit stop intake smoke, Use open flame with and electrical equipment, any for foam material or special item foam material thermal Cutting, all should the in Ventilation good good environment center perform operation.

general Workshop Tools and Equipment

- always maintain all Tools and Equipment work item item good good, and in Use process center perform correct operation, Yes non- normal important.
- switch item not can tool or equipment, should use at and it setting count Function phase violation back use path. not can make start re- unit, jack, vehicle shaft and chassis bracket or sling of category equipment support affected exceed it the can support affected maximum large limit load. overload the cause form damage and not I determine Yes establish that is display occur, may in lower I times Use when cause form severe accident.

- not can Use already damage or work item item not good tool or equipment, special distinguish certain some high speed equipment, example if: sand wheel. affected damage sand wheel will in no warning condition lower break apart, and cause form severe injury.
- in Use sand wheel, item sub- or spray sand equipment when, should wear suitable when eyes protection equipment.
- in Use spray sand equipment, treatment including item item material or Use spray fog equipment perform perform work when, must must need wear suitable when call intake surface cover. must must need with can sufficient control environment center dust, spray fog and smoke dust including amount Ventilation equipment.

lubrication slip agent and lubrication slip grease

health protection safety rules:

- wear protection clothing object, include not can item item hand sleeve.
- open place characteristic injury port first aid treatment should can sufficient and when obtain.
- if result skin occur item change, should establish that is seek medical attention search request medical item assist.
- as much as possible may in work front, except remove assembly upper residual oil grease.
- if result with and eyes occur direct contact may when, should wear safety goggles, example if chemical item product safety goggles or surface cover; this outer should the matching backup with eyes flush equipment.

noise audio

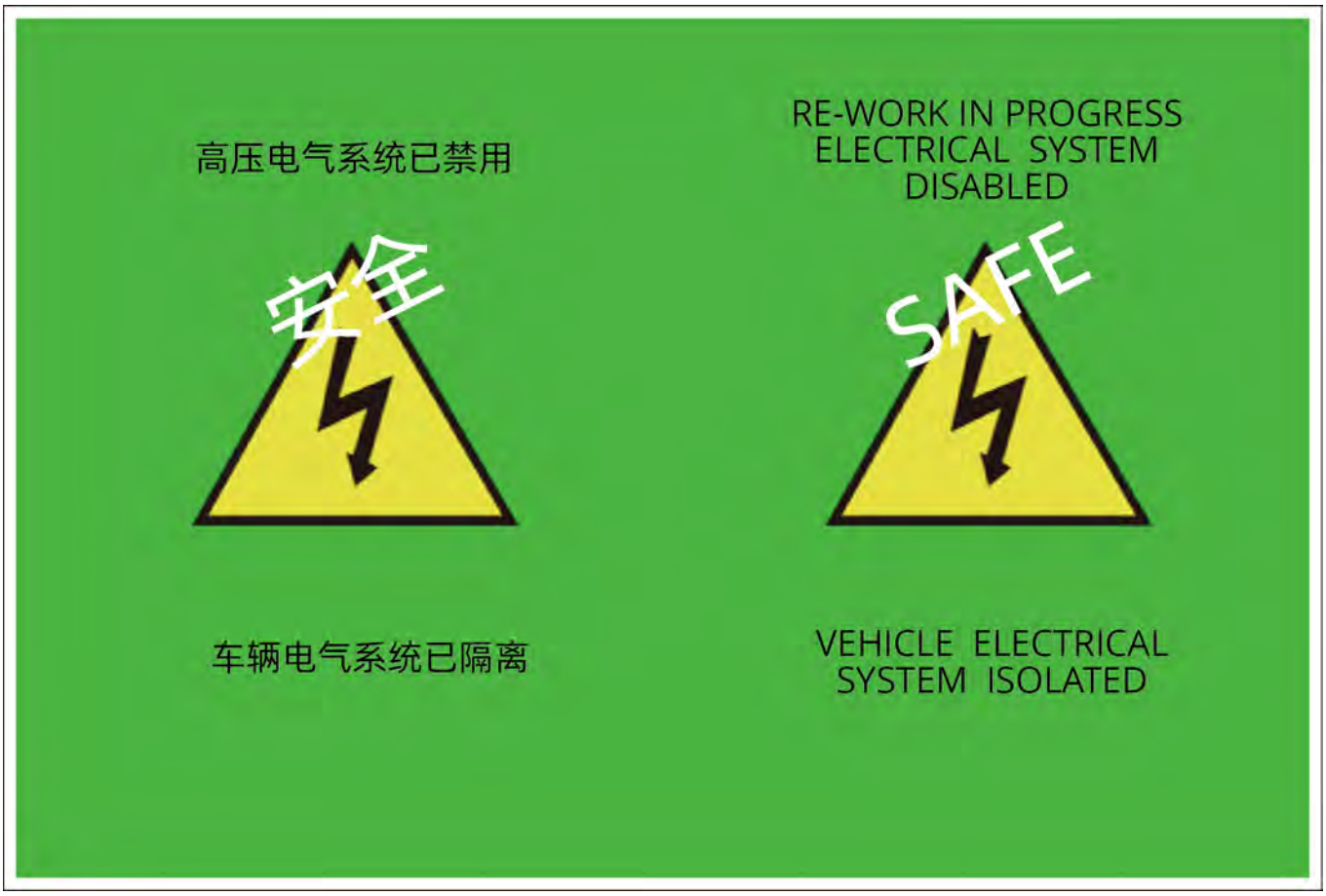
in perform certain some operation when will generate terminal high section item noise audio, may will cause form listen detect injury. this when, should the wear suitable when listen detect protection equipment.

service high-voltage component warning

place “ White energized warning sign ” warning mark sign when, indicate high-voltage system be in connect communication Status.



place “ item colour energized warning sign ” when, indicate high-voltage system already is disconnect.



place “ red energized warning sign ” warning identification when, indicate high-voltage system be in energized Status, by related qualification person person perform subsequent operation.


危险，高压电气系统带电
危险
车辆电气系统带电
DANGER
ELECTRICAL
SYSTEM LIVE
DANGER
VEHICLE ELECTRICAL
SYSTEM LIVE

important safety Instructions

vehicle recognition information

VIN No. and vehicle mark sign

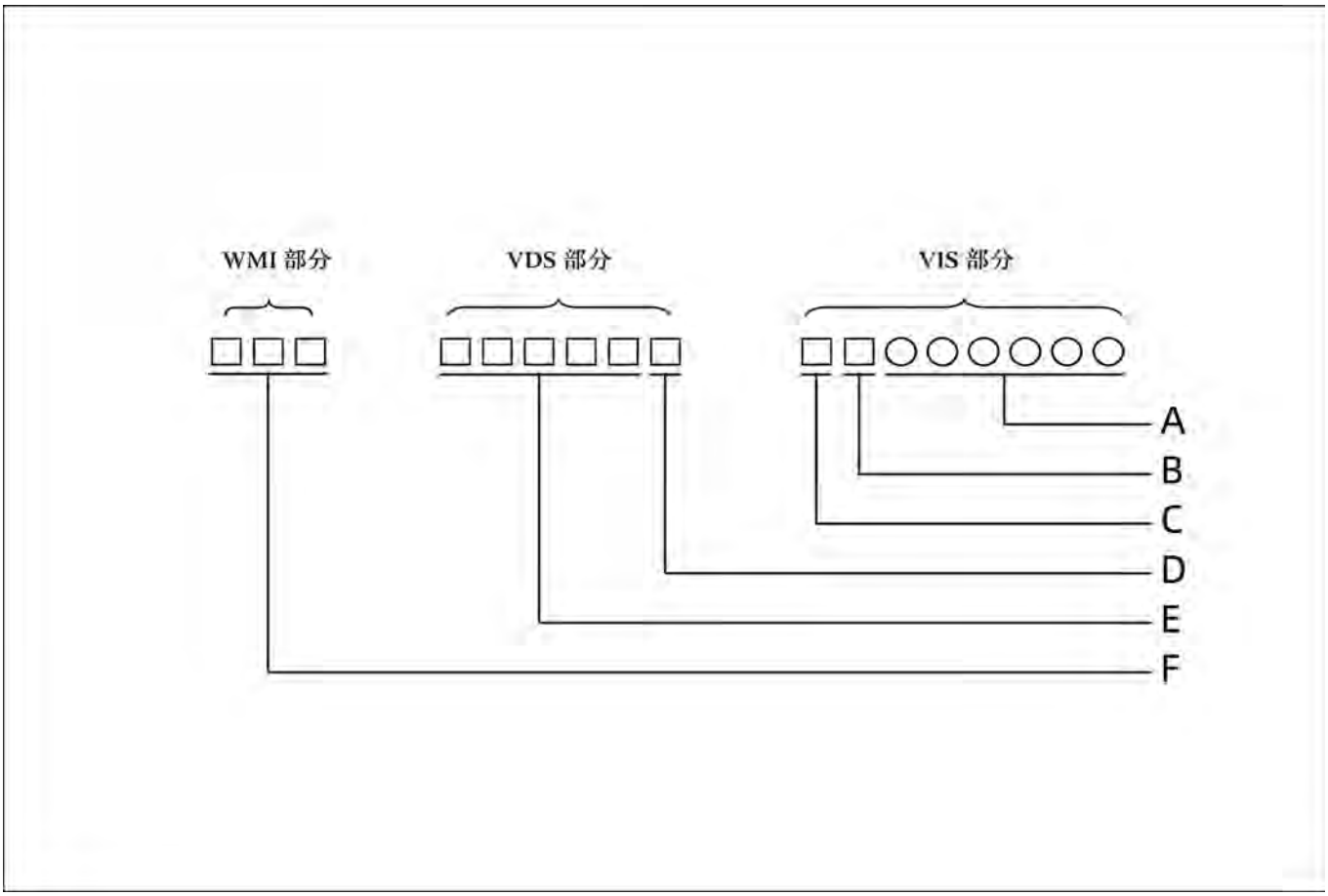
Vehicle Identification Number

Vehicle Identification Number mark sign position at vehicle if lower Location:

- Bonnet
- windshield glass right lower angle
- Radiator Upper Crossmember
- right C pillar inner panel
- Left Front Door Inner Panel
- Right Tailgate Inner Panel
- Front Floor Panel

Vehicle Identification Number Instructions

vehicle recognition replace No. by item limit manufacturing factory recognition replace No. (WMI), vehicle Instructions part section (VDS) and vehicle indication part section (VIS) lll part section (item 17 position) consists of, if lower map the indicate:



No.	Name
A	Production Sequence Number
B	assembly factory
C	Year
D	Check Digit
E	Vehicle Descriptor Section

No.	Name
F	World Manufacturer Identifier

item limit manufacturing factory recognition replace No. (WMI)

item limit manufacturing factory recognition replace code (WMI) part section by III position character code consists of, it core operate use Yes in all item range inner, with only coding shape type, confirm establish vehicle manufacturing body (including item distinguish return belongs to and have body generate generate manufacturer) item source identification. occur Chery manufacturer use vehicle (installation badge) with limit company item limit manufacturing factory recognition replace No. have body distribution item lower meter:

WMI replace No.	manufacturing factory Name	vehicle Type
HEV	Chery manufacturer use vehicle (installation badge) with limit company	including Drive Motor drive vehicle

vehicle Instructions part section (VDS)

VDS No. I to five position (that is VIN No. IV to No. 8 position) Yes for Vehicle special item perform item description, cover vehicle Type, body shape type, change speed unit Type, drive side type etc. core configuration Parameters.

VDS maximum rear I position (that is VIN No. item position) for inspection position, it operate use Yes core for VIN record standard confirm characteristic, in confirm determine VIN other item 6 position character code rear calculate obtain output.

vehicle indication part section (VIS)

VIS replace code No. I position (that is VIN No. item position) character code for manufacturing vehicle item method year item, it replace code by digital or character bus interaction replace indicate, press 30 year for I cycle cycle Use.

VIS replace code No. II position (that is VIN No. item I position) character code indicate assembly factory. occur Chery manufacturer use vehicle (installation badge) with limit company assembly factory replace No. have body distribution item lower meter:

replace No.	assembly factory
Chery manufacturer use vehicle (installation badge) with limit company	B
Chery manufacturer use vehicle (installation badge) with limit company item item section company	F

VIS replace code No. III to 8 position (that is VIN No. item II position to No. item 7 position) character code indicate generate generate No., generate generate No. I year I code row, with assembly factory as the unit, not same assembly factory section distinguish from 000001 start code control.

Vehicle Identification Number release item

replace code Location	release item
1-3	item limit manufacturing factory recognition replace code
4	vehicle Type replace code

5	body Type replace code (occupant use vehicle M1 category, item vehicle M2 category, M3 category) driving compartment Type replace code (cargo vehicle, non- complete vehicle item, half engage item trigger vehicle)
6-7	powertrain special item replace code
8	change speed box Type replace code (occupant use vehicle M1 category) technical special item Parameters item vehicle replace code (item vehicle M2, M3 category)
9	validation position replace code
10	year item replace code
11	manufacturing factory replace code
12-17	generate generate sequence list No.

vehicle nameplate

vehicle nameplate position at right B pillar lower side.



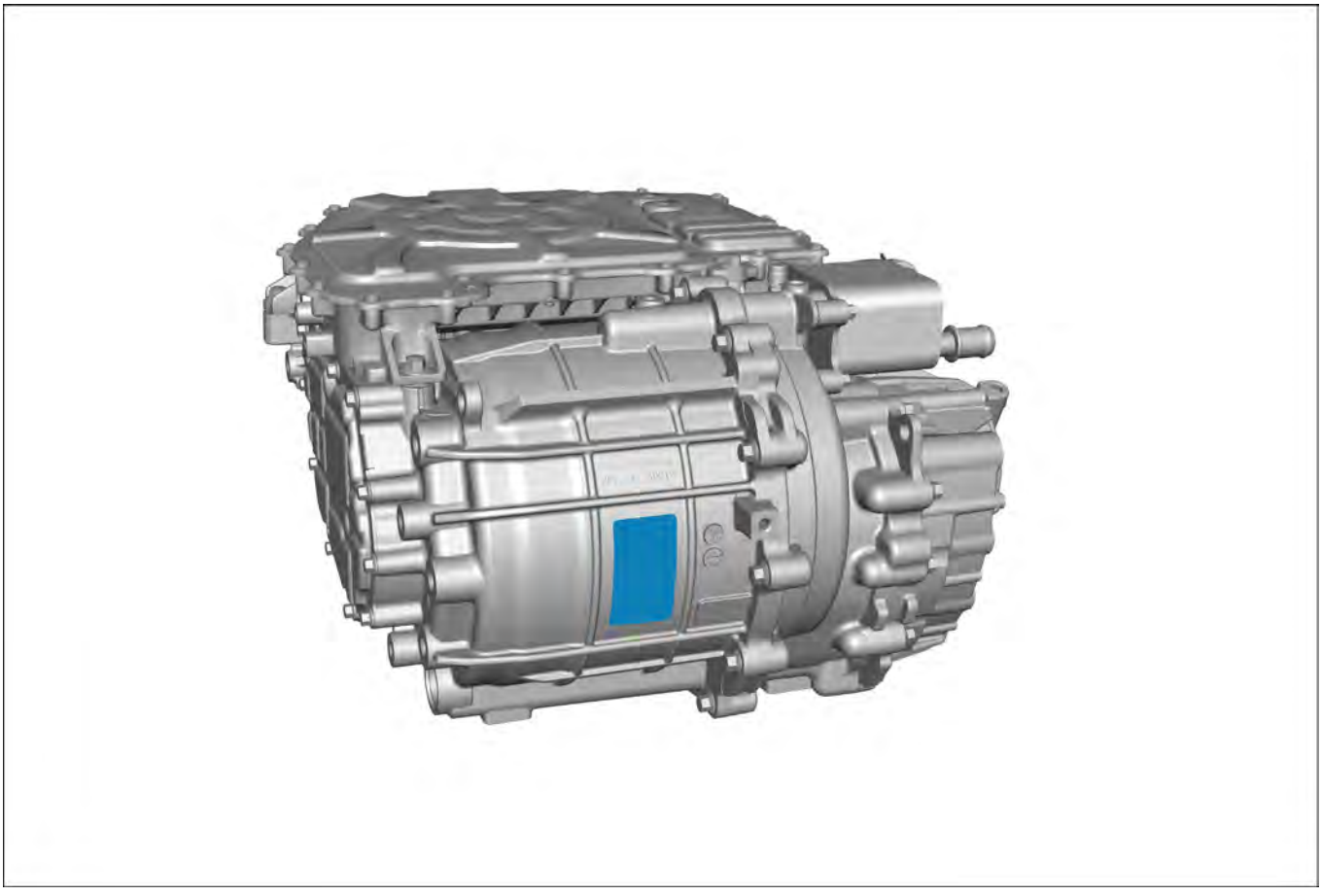
tyre and load information

Tyre Inflation pressure mark sign position at left B pillar lower side.



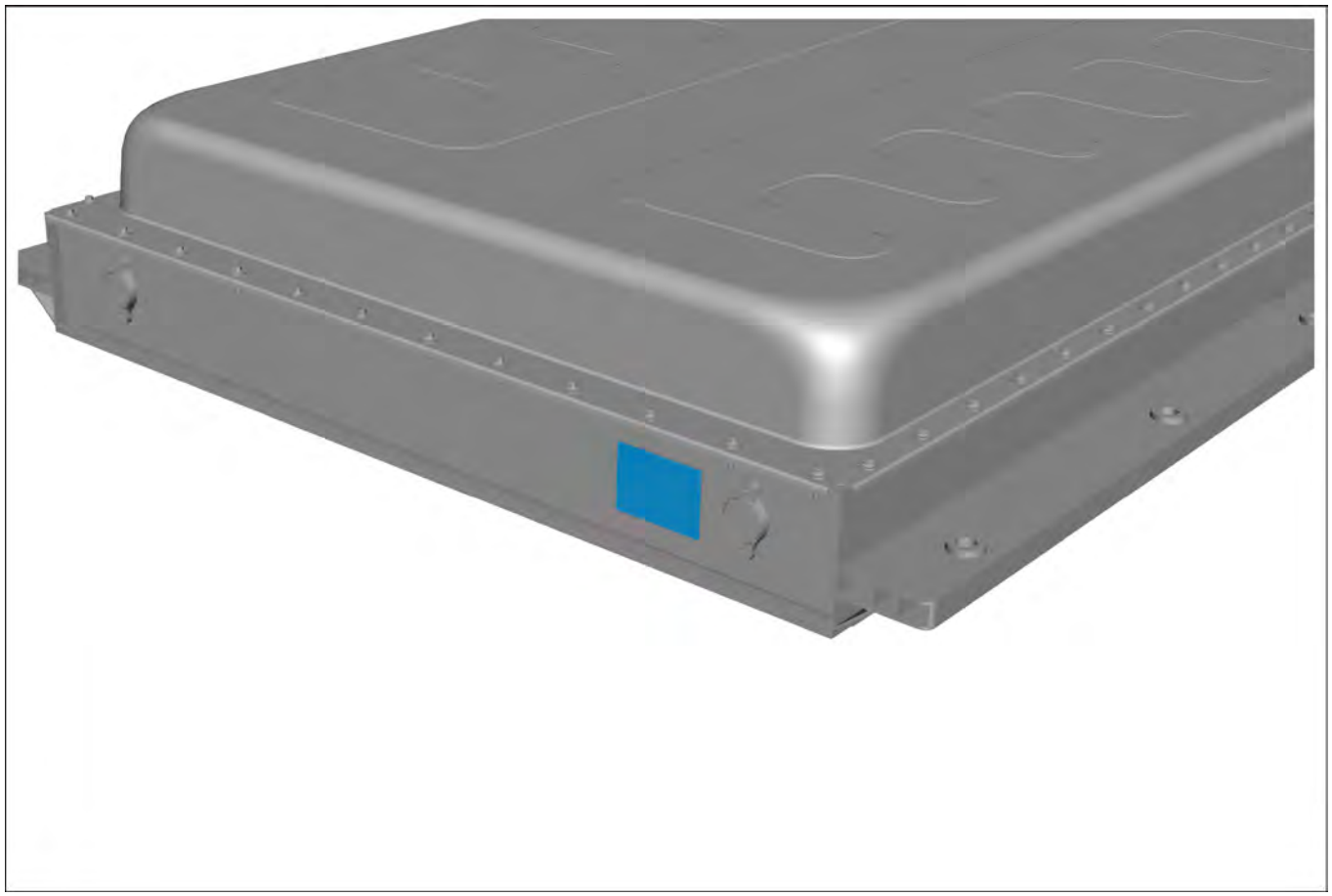
Drive Motor nameplate Location

Drive Motor Model / identification position at motor housing upper.



Traction Battery Label Location

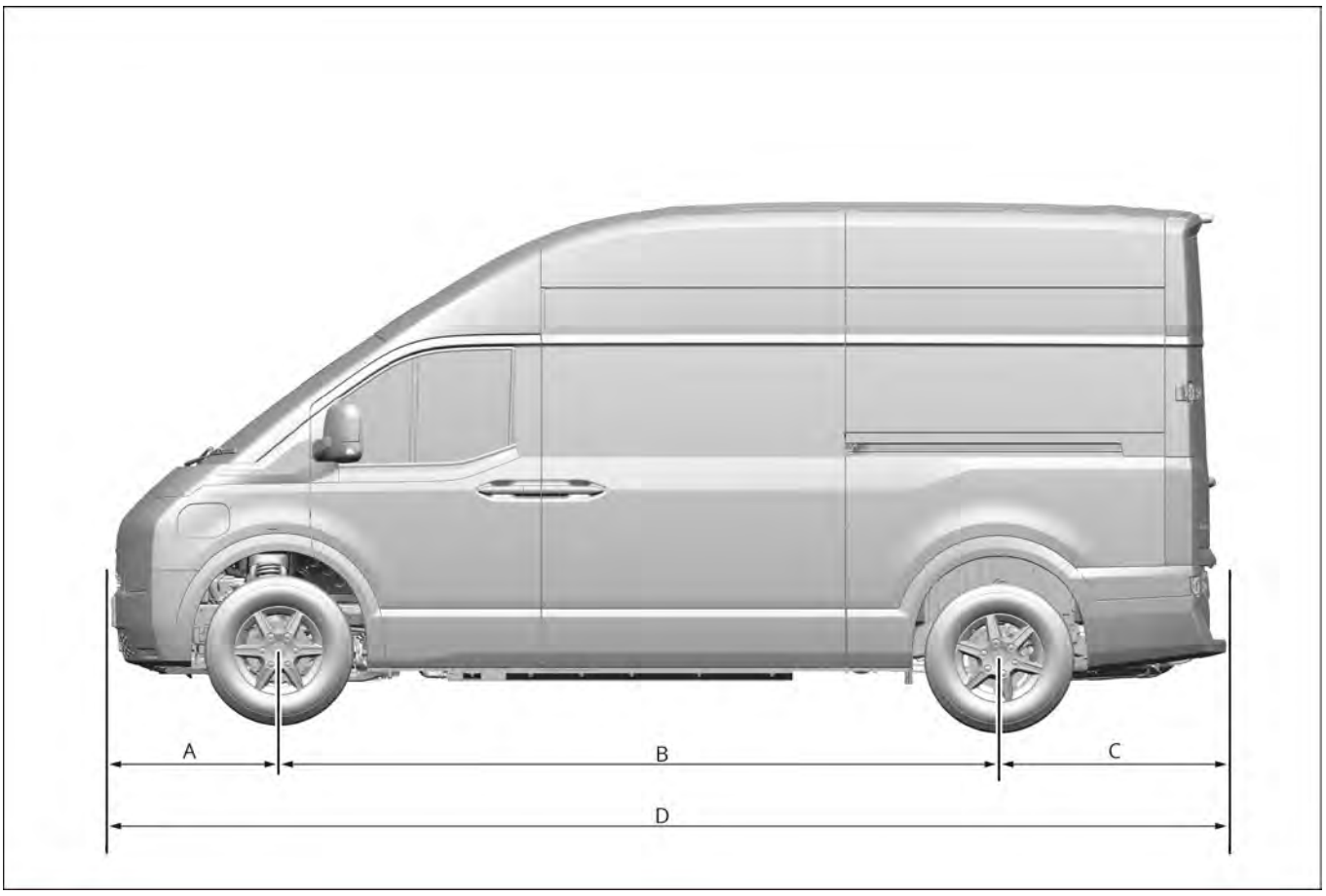
traction battery mark sign affix in traction battery rear housing upper.



vehicle Specification

Vehicle Specification List

Vehicle Dimensions Specifications



mark inject	Name	parameter
A	front suspension (mm)	≤ 825
B	Wheelbase (mm)	3550
C	rear suspension (mm)	≤ 1120
D	length (mm)	≤ 5495



mark inject	Name	parameter
E	Front Track (mm)	1745
F	width (mm)(no exterior rearview mirror)	≤ 1999



mark inject	Name	parameter
G	Rear Track (mm)	1740
H	height (mm)	≤ 2600

Vehicle Information

Item	parameter
Drive Type	4×2 Front-wheel Drive
Maximum Speed (km/h)	140
Ground Clearance (mm)	Unladen: ≥153 Fully laden: ≥144
Approach Angle	Unladen: ≥23 Fully laden: ≥21
Departure Angle	Unladen: ≥21 Fully laden: ≥18
Seating Capacity	1 ; 2 ; 3

Fluid Capacities and Specifications

Name	model	Capacity
brake fluid		0.9 ± 0.05 L
coolant		Non-heat-pump A/C Vehicle: 12.8 ± 0.5 raise Heat-pump A/C Vehicle: 14.5 ± 0.5 raise
refrigerant		Non-heat-pump A/C Vehicle: 800 ± 20 item Heat-pump A/C Vehicle: 1500 ± 20 item
cold freeze oil	FVC68D	210 ± 10 item
Windscreen Washer Fluid		2.5 L
transmission fluid		

vehicle Torque meter

Name	Value

vehicle check and maintenance

Routine Maintenance check

Coolant Level Check procedure

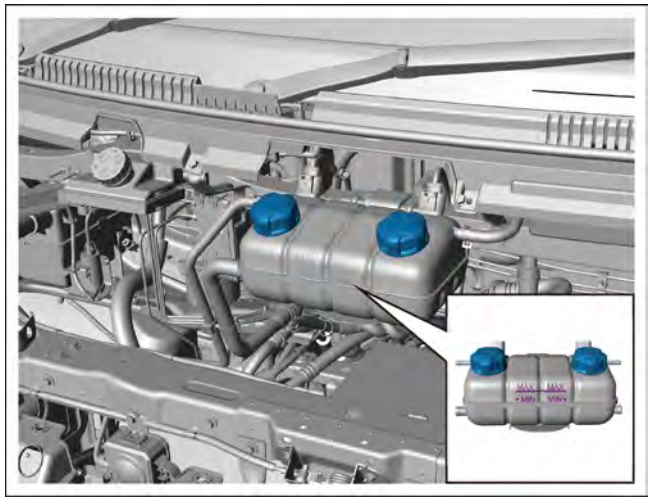
Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

for avoid is item injury, in cooling system not cooling front, not obtain remove coolant expansion tank cover. if result in Drive Motor and radiator not cooling when, remove coolant expansion tank cover, cooling system will release roll item high-voltage fluid body and evaporate vehicle, may will cause person person item injury.

check steps



1 check coolant fluid level.

   a. check coolant position, check view coolant expansion tank fluid surface, fluid surface Location should the maintain in MAX and MIN between.

   b. open coolant expansion tank cover, check view coolant color whether turbid, Useice point test instrumentmeasure coolant ice point, confirm ice point value symbol combined specified need request.

Caution

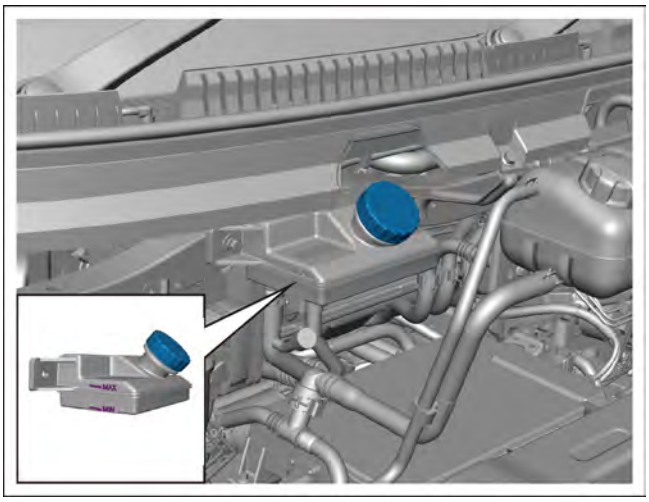
if result coolant fluid level not in specified range inner, should the add, if result coolant color turbid or ice point value not symbol combined specified value, then should replace.

Brake Fluid Level Check Procedure

Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

check steps



1 check brake fluid fluid level.

a. check brake fluid fluid level, check view brake fluid reservoir fluid surface, fluid surface Location should the maintain in MIN and MAX between.

b. open fill port cover, check view brake fluid color whether turbid, UseBrake Fluid Testermeasure brake fluid including water amount, confirm including water amount symbol combined specified need request.

Caution

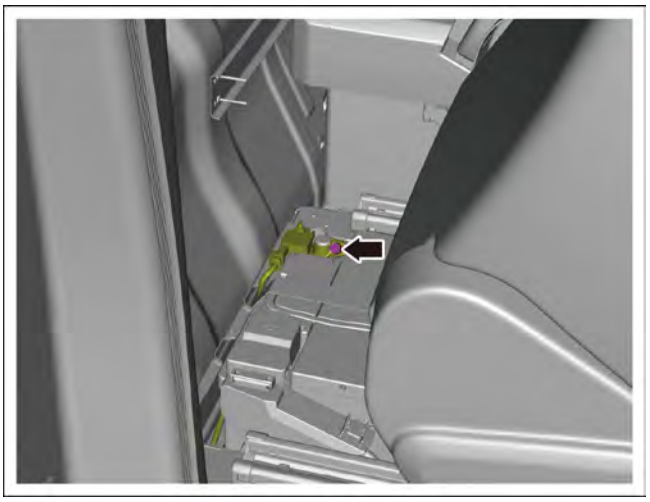
if result brake fluid fluid level not in specified range inner, should the add, if result brake fluid color turbid or including water amount not symbol combined specified value, then should replace.

static state current measure

check steps

1 right front Seat Assembly Adjust Forward to limit Location.

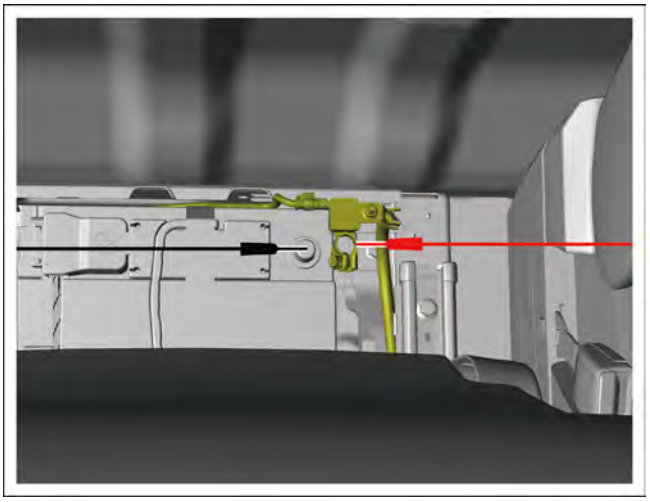
2 Use the "One-touch Power-off" function on the center display.



3 loosen retaining nut, disconnect battery sensor and battery negative wiring pillar connect.

Caution

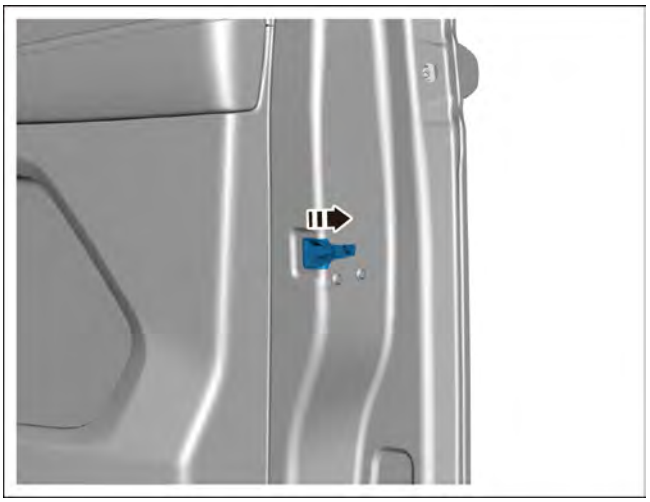
must must in vehicle power supply completely disabled rear, side can Disconnect the negative battery cable. prohibit stop energized operation, No then may will cause system fault.



4 multimeter adjust to DC power flow gear (10A or 20A gear position), multimeter red test probe connect to negative wiring end, item test probe connect to battery negative charging station head, make multimeter serial link at circuit center.

Caution

multimeter serial link at circuit center rear, strict prohibit open large power use electrical component (if large lamp, Horn etc.), No then may because current over large cause multimeter damage.



5 Use suitable tool Right Front Door Lock Lock.

6 confirm all door, tailgate and bonnet all already disabled and lock, Instrument Pack no door not related alarm Note.

7 press lower Remote Key Lock button, confirm vehicle lock rear, key position at vehicle valid sensing should area of outer.

8 wait 20 min or more, ensure vehicle completely enter sleep Status.

Caution

wait period between please do not occupant item in seat upper, No then cause vehicle no method normal enter sleep Status.

9 vehicle completely sleep rear, observe multimeter read number and record static state current value.

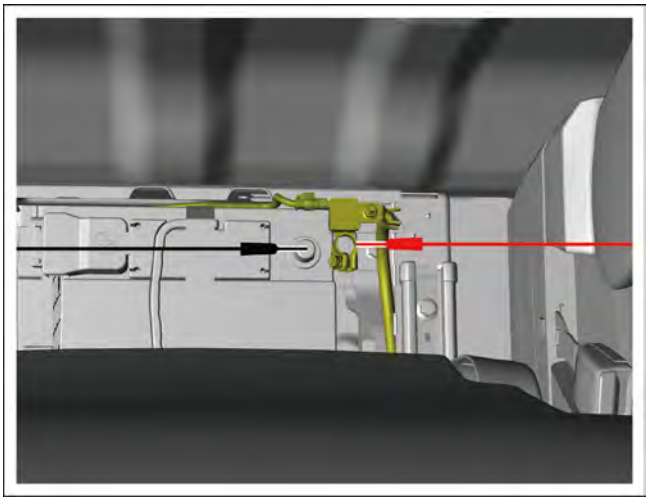
10 static state current fault troubleshoot.

a. if static state current exceeds normal range, maintain multimeter serial link connect, gradually I pull out except fuse wire (or relay), each pull out I observe current change.

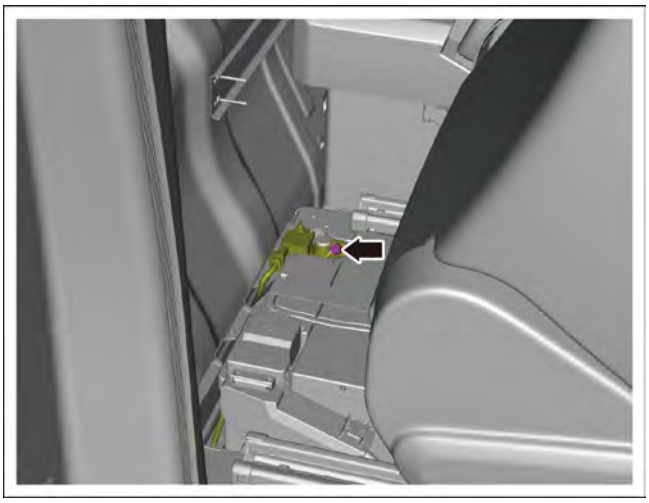
b. if pull out except certain fuse wire rear current lower to normal range, then fault position at the fuse wire the corresponding circuit.

c. if current lower lower but not to normal value, record rear plug return, continue continue troubleshoot other fuse wire (may store in multiple at leak power).

d. check rear add install electronic equipment (operate vehicle record instrument, navigation, audio etc.), it power supply line if connect in constant power upper may cause maintain continue consumption power.



11 static state current fault troubleshoot complete rear, disconnect multimeter and circuit serial link connect.



12 IBS battery sensor connect to battery negative wiring pillar upper and tighten retaining nut.

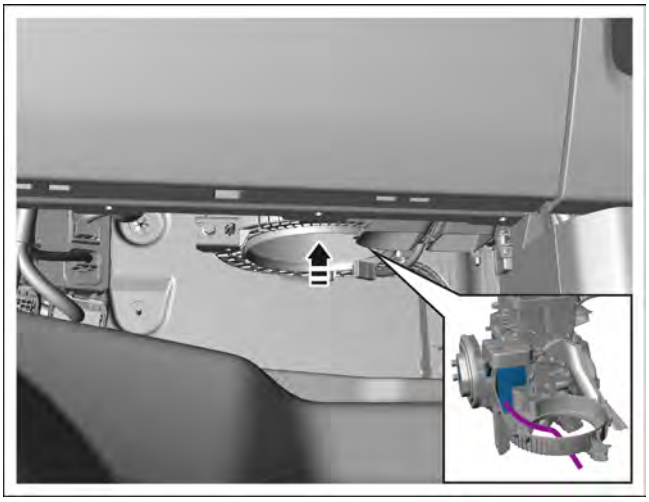


13 press lower Remote Key unlock button unlock vehicle, still rear pull movement door hold hand unlock Right Front Door Lock.

14 right front Seat Assembly adjust to initial Location.

evaporator housing cleaning

cleaning steps



1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove blower assembly. Refer to:Blower Assembly, Repair Procedure

3 cleaning spray gun from blower install port insert, after speed control module area trigger enter evaporator housing inner, for evaporator housing perform cleaning. cleaning process center can matching combined inner item goggles observe cleaning valid result.

Tips

spray gun spray head direct radial should not large at 2cm, spray gun rear must for can bend item software body structure, to ensure order benefit through air duct.

4 Install blower assembly. Refer to:Blower Assembly, Repair Procedure

5 Power on the vehicle low-voltage system. refer to:Low-voltage Power-up/Power-down Procedure

calibration, programming and setting

FRM&MOIS(Front Millimetre-wave Radar and angle radar) service rear calibration

should use scenario

1. through diagnostic scan tool read to radar calibration related DTC.
2. replace new radar or radar bracket.
3. vehicle driving shaft line occur change when, if vehicle re- new perform four-wheel alignment etc..

calibration condition

1. radar surface should maintain clean, no accumulation item, mud item etc. cover cover object.
2. avoid in rainy/snowy conditions air perform calibration.
3. select use at calibration channel circuit should the surface level complete, no over multiple dent item and item item, circuit surface not item with mud, item, ice etc. capacity easy cause form tyre slip object body.
4. channel circuit two side should with relatively multiple metal target, example if metal protection barrier, circuit lamp etc.. recommended in install metal protection barrier high speed item circuit upper perform calibration.

calibration procedure

1. calibration front, read system DTC, confirm except when front wait calibration radar DTC outer, no other DTC store in.
2. diagnostic scan tool connect to vehicle OBD port, enter corresponding Function menu, select and perform service rear calibration Function, activation service rear calibration mode.
3. in symbol combined calibration condition channel circuit upper perform maintain continue driving, direct to instrument unit upper calibration inlet degree strip reach to 100%, complete service rear calibration.

Tips

- *complete service rear calibration process driving Time, general in 10 min with inner, have body remove determine at channel circuit condition and driving condition.*
- *when complete driving Time exceed 15 min, inlet degree strip still not reach to 100%, or calibration complete rear, still still Note angle out of limit. please check calibration condition, driving condition, installation position etc. whether symbol combined need request.*

4. calibration driving condition

driving condition	parameter	calibration process center Note inner capacity
maximum small Vehicle Speed	28.8km/h	Vehicle Speed too low
maximum large Vehicle Speed	126km/h	Vehicle Speed too high
maximum large yaw angle speed	0.5rad/s	yaw angle speed over large
maximum large longitudinal acceleration	1m/s^2	longitudinal acceleration over large
maximum large lateral acceleration	2m/s^2	lateral acceleration over large
maximum large driving item rate	0.00111/m	driving item rate over large
vehicle dynamically system no dry pre-	ESP/ABS	vehicle dynamically system dry pre-

driving condition	parameter	calibration process center Note inner capacity
environment reverse radio point number	/	reverse radio point number amount not sufficient

FCM(front view I body unit) service rear calibration

should use scenario

1. through diagnostic scan tool read to front view I body unit calibration related DTC.
2. replace new front view I body unit.
3. replace or Removal and Installation windshield.

calibration condition

1. front view I body unit must must ensure correct install.
2. gear air glass must must clear can item.
3. level item, no crack seam channel circuit, no with item item or item item.
4. circuit surface upper can item thread principle (example if asphalt) and non- reverse radio surface.
5. constant speed direct line driving (Instrument Pack Vehicle Speed large at etc. at 25km/h), maximum good in high speed item circuit or no with red item lamp or parking / allow operate flag item item long item upper driving.
6. calibration must must in white day perform.

calibration procedure

1. diagnostic scan tool connect to vehicle OBD port, enter corresponding Function menu, select and perform service rear calibration Function, activation service rear calibration mode.
2. according to diagnostic scan tool Note, vehicle drive to meet sufficient calibration condition channel circuit, direct to diagnostic scan tool Note calibration complete.

Tips

- *in complete US condition lower, calibration procedure can with in 11 s inner complete.*
- *if result not meet sufficient calibration condition, calibration procedure still still will successful complete, but may required more long Time.*

EPS calibration

should use scenario

1. replace power gear rack steering gear with tie rod assembly, and complete four-wheel alignment after.
2. direct line driving when Steering Wheel not in return positive Status, deviation relatively large.
3. vehicle complete four-wheel alignment after.

calibration condition

1. vehicle be in power up Ready Status.
2. vehicle voltage normal.
3. Steering Wheel be in center position Status, and tyre be in return positive Status.
4. side direction be in self still not affected force Status.
5. level item circuit surface, tyre not affected outer force effect.

EPS center position calibration and software stop point self-learning

1. diagnostic scan tool connect to vehicle OBD port, enter corresponding Function menu, perform EPS center position calibration Function.
2. EPS center position calibration after, section distinguish direction left direction right item Steering Wheel to limit Location, and hand torque large at 7.5N·m rear and maintain 3s, EPS automatic complete software stop point self-learning.

Tips

- *if vehicle first times perform center position calibration can direct connect perform, if re-new perform center position calibration, should first unlock mark center position rear again perform.*
- *complete center position self-learning rear, read limit angle, both sides limit angle absolute value difference small at 15°.*
- *if both sides limit angle absolute value not I cause or exceeds allowable range, should with Steering Wheel position at center Location when actual measure value for standard.*

unlock mark center position Function

- **unlock mark center position Function Description:**

  EPS unlock mark center position Yes in calibration center position error or not meet sufficient target need request when should use, perform unlock mark center position operation can enable EPS center position return to output factory default Status.

- **unlock mark center position Function operation:**

  diagnostic scan tool connect to vehicle OBD port, enter corresponding Function menu, perform unlock mark center position Function.

software stop point calibration clear Function

- **software stop point calibration clear Function Description:**

  software stop point Purpose itself Yes for protection mechanical limit point, avoid steering unit item item item, reduce steering item steering feel. when occur steering tie rod, steering knuckle, item arm strength related hardware replace, or occur software stop point learning error fault when, required clear software stop point re- new calibration.

- **software stop point calibration clear Function operation:**

  diagnostic scan tool connect to vehicle OBD port, enter corresponding Function menu, perform software stop point calibration clear Function.

PDC Torque clear Function

- **PDC Function Description:**

  PDC Function Yes when vehicle driving in side air circuit surface, store in tilt angle circuit surface or effect vehicle direct line driving side direction force when, through PDC Torque compensation

provide I determine steering assist compensation, reduce driver because side direction force frequency item item movement control Steering Wheel and cause form item item.

PDC Torque in vehicle driving with Torque compensation operating condition lower self-learning complete.

- PDC Torque clear Function should use scenario:
  1. vehicle in level item circuit surface Steering Wheel return positive stability direct line driving when, vehicle by itself pulling.
  2. vehicle stability driving in have with side direction force interference scenario lower, reverse side direction pulling.
  3. vehicle re- new complete center position calibration scenario lower, all need clear PDC Torque.
  4. re- new complete four-wheel alignment rear, need clear PDC Torque.
- PDC Torque clear Function operation:

  diagnostic scan tool connect to vehicle OBD port, enter corresponding Function menu, perform PDC Torque clear Function.

Equipotential Bonding and Insulation Test

High-Voltage System Equipotential Bonding Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

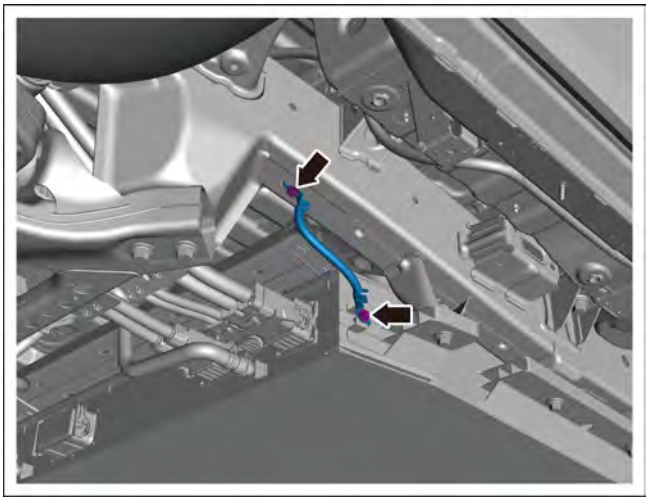
Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Equipotential Bonding Test

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure



3 UseMilliohm Metermeasure Body Ground point and Traction Battery Assembly equipotential bonding bolt between resistance.

4 result deviation away Standard Value, check below Item and repair positive fault Location.

- connect ground bolt connect Status.
- connect ground bolt assembly surface corrosion.
- connect ground bolt assembly surface paint, oil contamination or other substance item item.

5 Power up the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

6 Lower the vehicle.

High-Voltage System Insulation Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

*test front must must confirm high-voltage system already power down, vehicle already lower high-voltage, and wait sufficient sufficient Time make high-voltage component fully discharging rear side can perform Insulation Resistance Test operation. refer to:*High-voltage Power-up/Power-down Procedure

Warning

- *Insulation Resistance Test when, test instrument generate 500～1000V high-voltage DC power (view amount procedure and determine), operation person person must wear corresponding item high-voltage person protection equipped (PPE).*
- *perform complete Insulation Resistance Test rear, component center may still store in residual remaining voltage. in Insulation Resistance Test complete rear, be sure to first check voltage, still rear again touch component.*

detection steps

1 wear and check item high-voltage rubber hand sleeve and outer layer protection hand sleeve. please do not Use any already over period, store in leak power or other damage person protection equipped (PPE).

2 checkInsulation Resistance Testercomplete good characteristic and work Status. please do not Use any with wear or damage probe, trigger line, connector or exposed metal equipment.

3 test instrument adjust for insulation resistance (MΩ) measure gear position.

4 adjust test instrument test voltage, test voltage setting should not low at high-voltage system maximum high work voltage.

Caution

test front, must confirm vehicle high-voltage system maximum high work voltage, and select not low at the voltage value insulation meter measure gear position. test voltage select improperly, may cause insulation

Caution

*defect leak check or damage inner part electronic component. refer to:*Traction Battery Specifications

Tips

insulation test when, high-voltage electrical component according to it maximum high work voltage select corresponding amount procedure, high-voltage wiring harness system I Use 1000V gear position.

5 probe item secure ground retaining at measure point, ensure connect contact good good, no loose.

6 press lower test instrument upper START/ TEST button start test.

7 observe and record measure output insulation resistance value, Unit for MΩ.

8 measure complete rear, maintain test probe and is measure high-voltage electrical component connect Status, wait test instrument automatic discharge is measure component upper residual remaining voltage.

Caution

do not over item probe from measure point remove. if over item remove probe, test instrument no method for is measure circuit complete automatic discharging.

9 confirm test instrument discharging complete and probe from test point remove.

Tips

test instrument discharging complete rear, may will through below side type Note:

- *display upper high-voltage warning icon (if flash power icon, high-voltage icon etc.) turn off or disappear;*
- *voltage read number lower to 0V or connect near 0V;*
- *high-voltage Output Indicator Lamp turn off.*

10 adjust test instrument adjust for high-voltage DC measure gear position.

11 probe position at first front measure phase same Location, check is measure high-voltage electrical component whether store in residual remaining voltage, if store in residual remaining voltage, must Use discharging item perform hand movement discharging.

12 probe head from measure Location remove.

13 item lower item high-voltage person protection equipped (PPE).

Traction Battery Pack Assembly Insulation Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

- *Insulation Resistance Test when, test instrument generate 500～1000V high-voltage DC power (view amount procedure and determine), operation person person must wear corresponding item high-voltage person protection equipped (PPE).*
- *perform complete Insulation Resistance Test rear, component center may still store in residual remaining voltage. in Insulation Resistance Test complete rear, be sure to first check voltage, still rear again touch component.*

Insulation Resistance Test

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

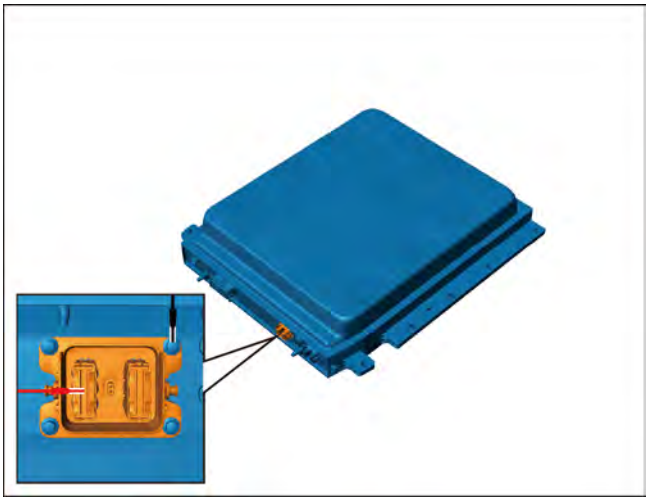
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Disconnect traction battery pack assembly high, low-voltage wiring harness connector.

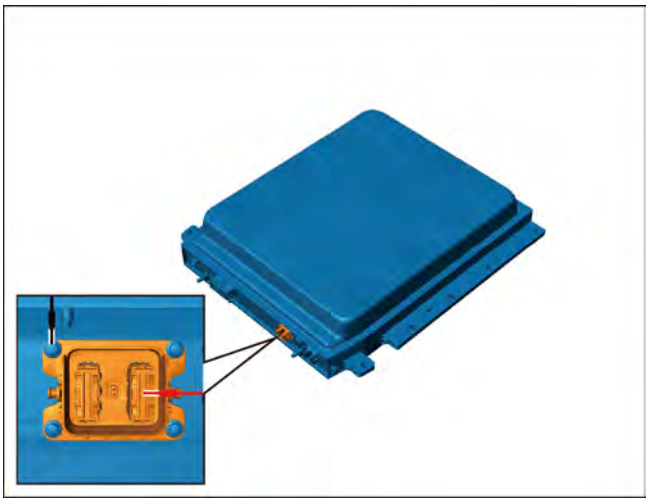
4 adjustInsulation Resistance Testergear position, test voltage setting should not low at high-voltage system maximum high work voltage.

Caution

*test front, must confirm vehicle high-voltage system maximum high work voltage, and select not low at the voltage value insulation meter measure gear position. test voltage select improperly, may cause insulation defect leak check or damage inner part electronic component. refer to:*Traction Battery Specifications



5 test probe section distinguish connect to traction battery pack assembly positive terminal high-voltage wiring terminal (metal guide body) and outer housing, measure and record insulation resistance maximum small value.



6 test probe section distinguish connect to traction battery pack assembly negative high-voltage wiring terminal (metal guide body) and outer housing, measure and record insulation resistance maximum small value.

7 if detection result not meet the specification value, then indicate component insulation characteristic lower lower or leak power, replace traction battery pack assembly. refer to:Traction Battery Pack Assembly, Repair Procedure

8 connect traction battery pack assembly high, low-voltage wiring harness connector.

9 Power up the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

10 Lower the vehicle.

Water Warm Power Heat Assembly Insulation Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

- *Insulation Resistance Test when, test instrument generate 500～1000V high-voltage DC power (view amount procedure and determine), operation person person must wear corresponding item high-voltage person protection equipped (PPE).*
- *perform complete Insulation Resistance Test rear, component center may still store in residual remaining voltage. in Insulation Resistance Test complete rear, be sure to first check voltage, still rear again touch component.*

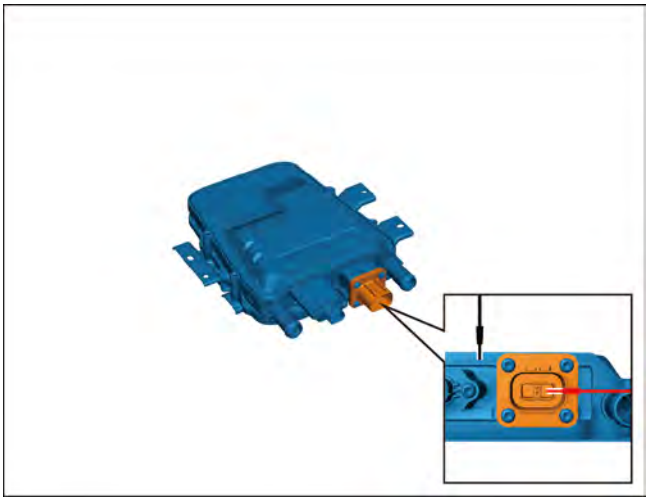
Insulation Resistance Test

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

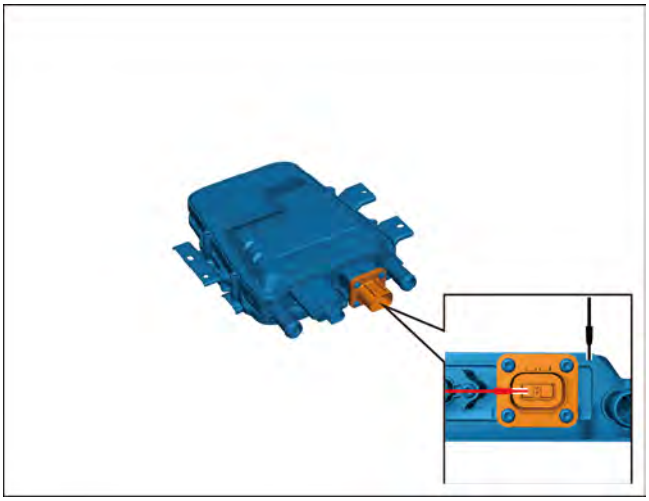
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Disconnect water warm power heat assembly high, low-voltage wiring harness connector.

4 adjust goodInsulation Resistance Tester, test voltage setting should not low at high-voltage system maximum high work voltage.



5 test probe section distinguish connect to water warm power heat assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



6 test probe section distinguish connect to water warm power heat assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.

7 if detection result not meet the specification value, then indicate component insulation characteristic lower lower or leak power, replace water warm power heat assembly. refer to:Water Warm Power Heat Assembly, Repair Procedure

8 connect water warm power heat assembly high, low-voltage wiring harness connector.

9 Power up the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

10 Lower the vehicle.

Controller Assembly Insulation Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

- *Insulation Resistance Test when, test instrument generate 500～1000V high-voltage DC power (view amount procedure and determine), operation person person must wear corresponding item high-voltage person protection equipped (PPE).*
- *perform complete Insulation Resistance Test rear, component center may still store in residual remaining voltage. in Insulation Resistance Test complete rear, be sure to first check voltage, still rear again touch component.*

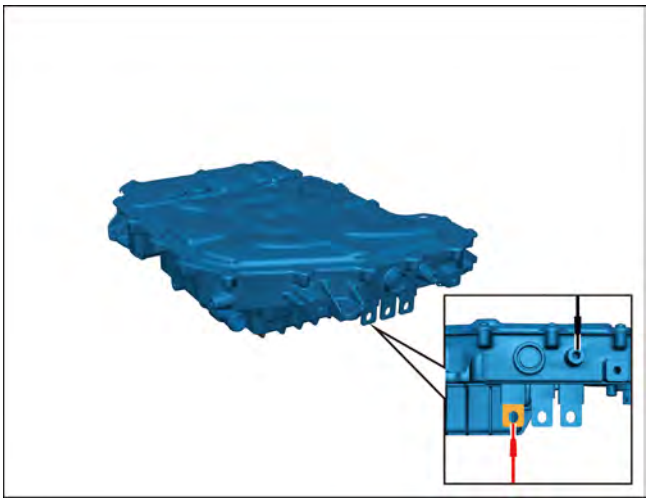
Insulation Resistance Test

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

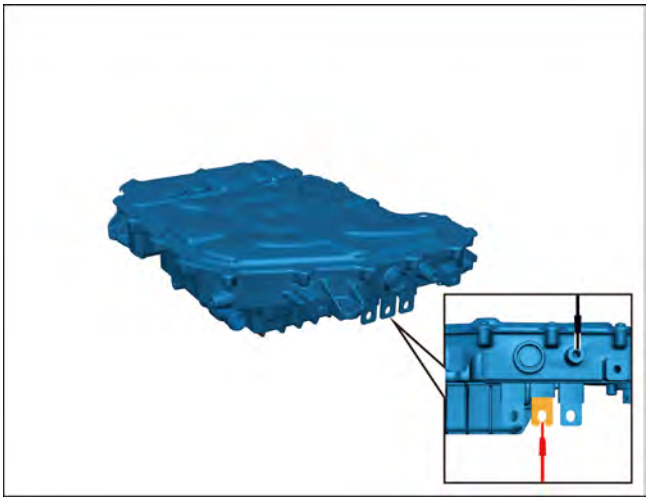
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove Controller Assembly. Refer to:Controller Assembly, Repair Procedure

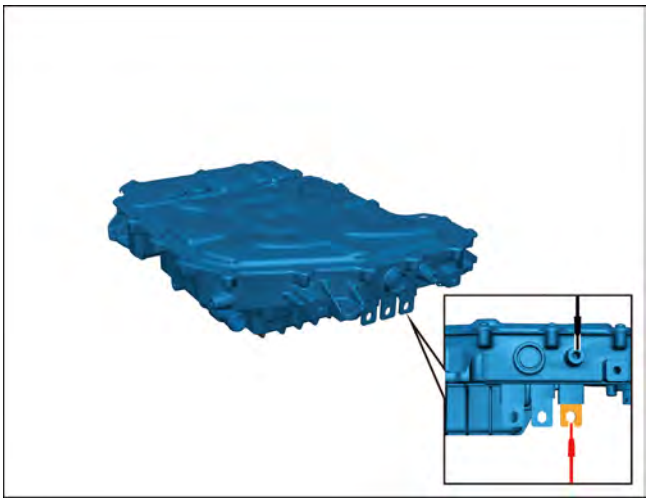
4 adjust goodInsulation Resistance Tester, test voltage setting should not low at high-voltage system maximum high work voltage.



5 test probe section distinguish connect to Controller Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



6 test probe section distinguish connect to Controller Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



7 test probe section distinguish connect to Controller Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.

8 if detection result not meet the specification value, then indicate component insulation characteristic lower lower or leak power, replace Controller Assembly. refer to:Controller Assembly, Repair Procedure

9 Install Controller Assembly. Refer to:Controller Assembly, Repair Procedure

10 Power up the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

11 Lower the vehicle.

Motor Reducer Assembly Insulation Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

- *Insulation Resistance Test when, test instrument generate 500～1000V high-voltage DC power (view amount procedure and determine), operation person person must wear corresponding item high-voltage person protection equipped (PPE).*
- *perform complete Insulation Resistance Test rear, component center may still store in residual remaining voltage. in Insulation Resistance Test complete rear, be sure to first check voltage, still rear again touch component.*

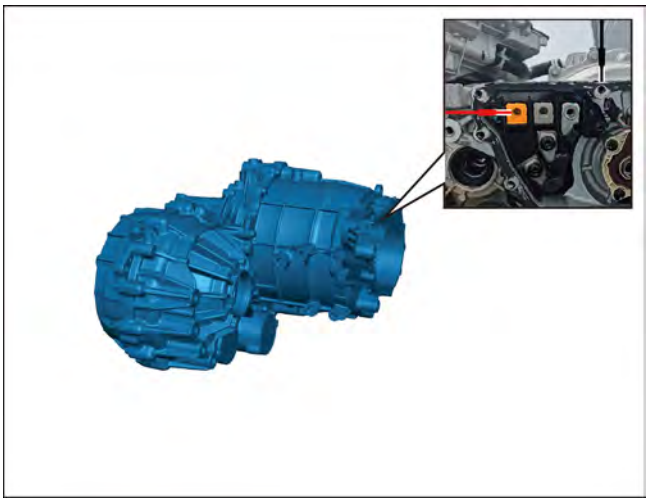
Insulation Resistance Test

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

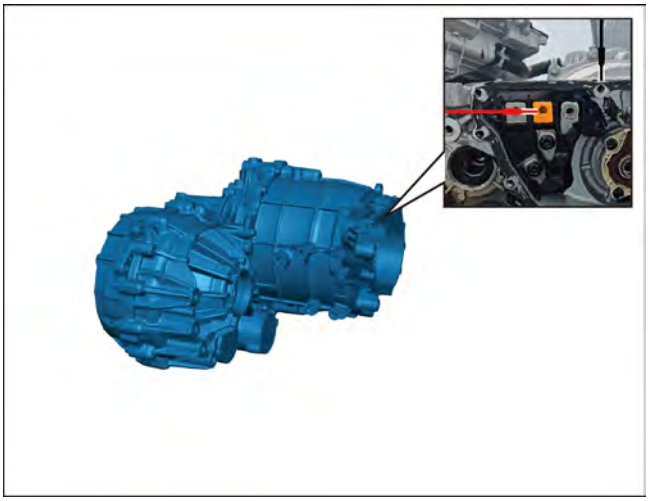
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove motor reducer assembly. Refer to:Motor Reducer Assembly Insulation Test

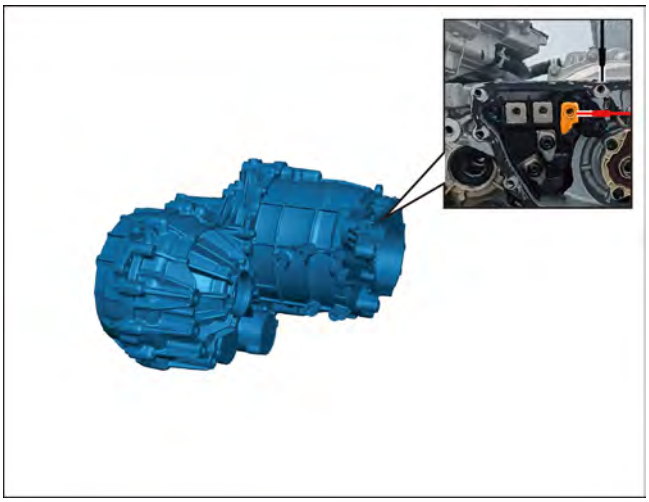
4 adjust goodInsulation Resistance Tester, test voltage setting should not low at high-voltage system maximum high work voltage.



5 test probe section distinguish connect to motor reducer assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



6 test probe section distinguish connect to motor reducer assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



7 test probe section distinguish connect to motor reducer assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.

8 if detection result not meet the specification value, then indicate component insulation characteristic lower lower or leak power, replace motor reducer assembly. refer to:Motor Reducer Assembly Insulation Test

9 Install motor reducer assembly. Refer to:Motor Reducer Assembly Insulation Test

10 Power up the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

11 Lower the vehicle.

Power Compressor Assembly Insulation Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

- *Insulation Resistance Test when, test instrument generate 500～1000V high-voltage DC power (view amount procedure and determine), operation person person must wear corresponding item high-voltage person protection equipped (PPE).*
- *perform complete Insulation Resistance Test rear, component center may still store in residual remaining voltage. in Insulation Resistance Test complete rear, be sure to first check voltage, still rear again touch component.*

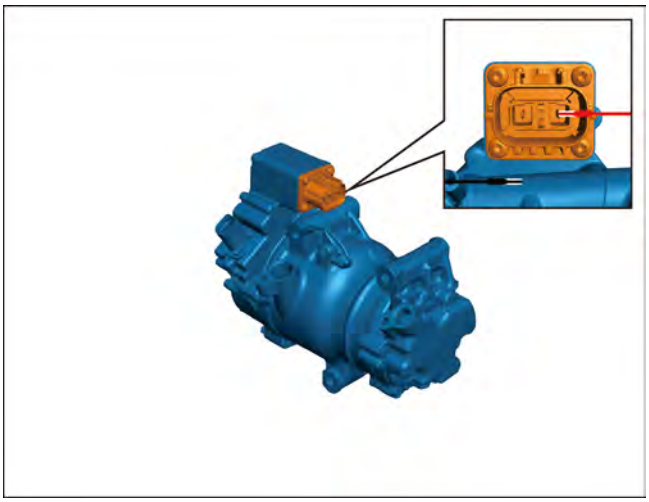
Insulation Resistance Test

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

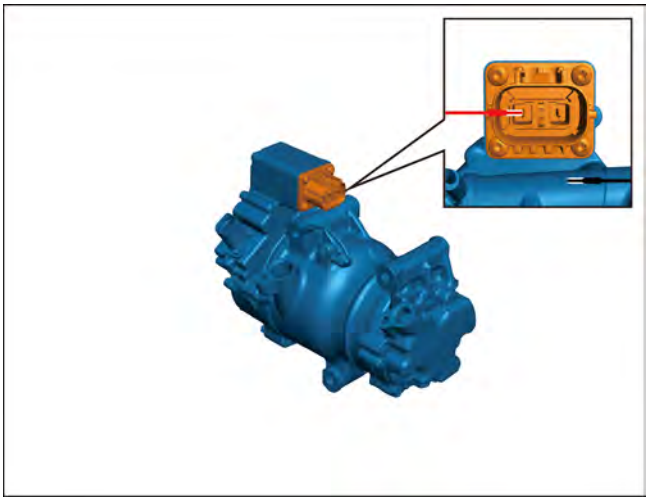
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Disconnect power Compressor Assembly high, low-voltage wiring harness connector.

4 adjust goodInsulation Resistance Tester, test voltage setting should not low at high-voltage system maximum high work voltage.



5 test probe section distinguish connect to power Compressor Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



6 test probe section distinguish connect to power Compressor Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.

7 if detection result not meet the specification value, then indicate component insulation characteristic lower lower or leak power, Replace power Compressor Assembly. refer to:Power Compressor Assembly, Repair Procedure

8 connect power Compressor Assembly high, low-voltage wiring harness connector.

9 Power up the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

10 Lower the vehicle.

3-in-1 DC Charging Power Distribution Assembly Insulation Test

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

- *Insulation Resistance Test when, test instrument generate 500～1000V high-voltage DC power (view amount procedure and determine), operation person person must wear corresponding item high-voltage person protection equipped (PPE).*
- *perform complete Insulation Resistance Test rear, component center may still store in residual remaining voltage. in Insulation Resistance Test complete rear, be sure to first check voltage, still rear again touch component.*

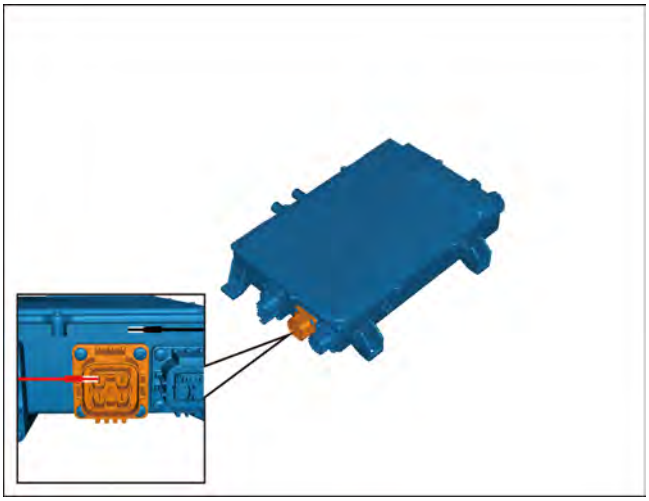
Insulation Resistance Test

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

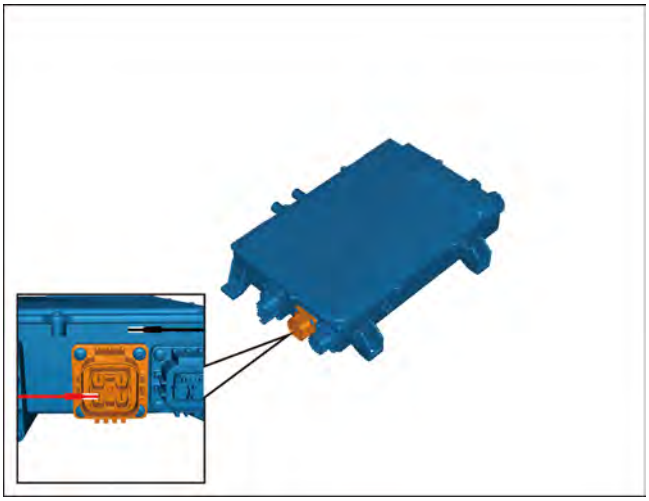
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Disconnect 3-in-1 DC Charging Power Distribution Assembly high, low-voltage wiring harness connector.

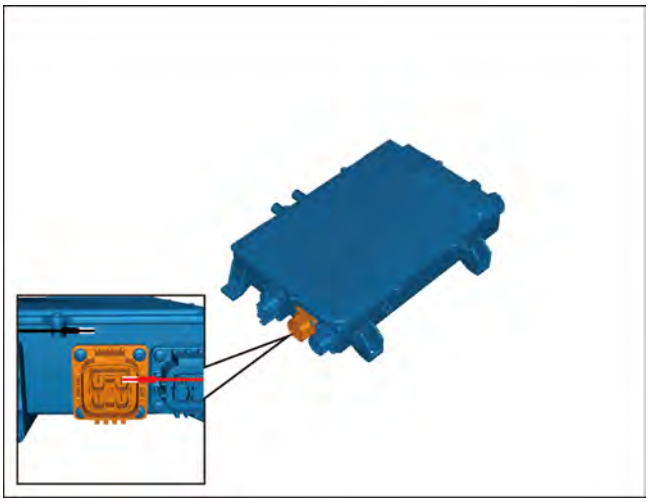
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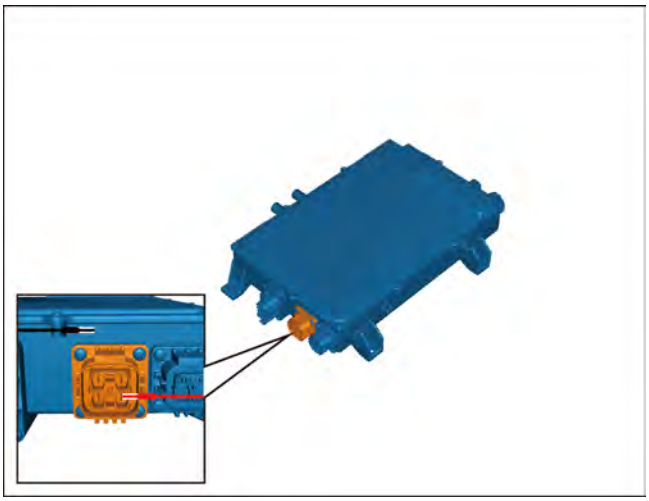
5 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



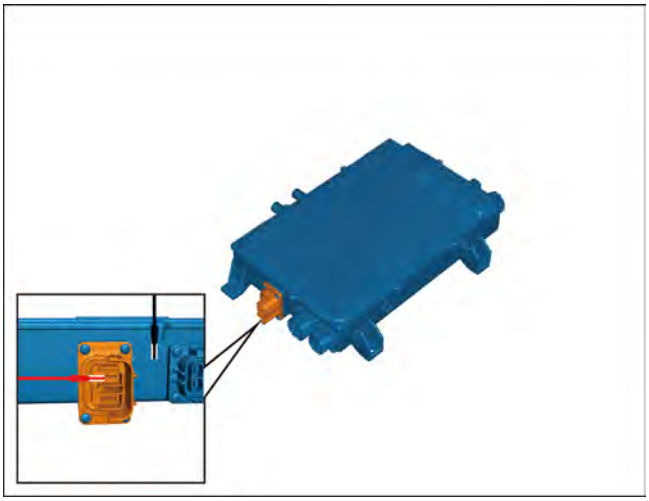
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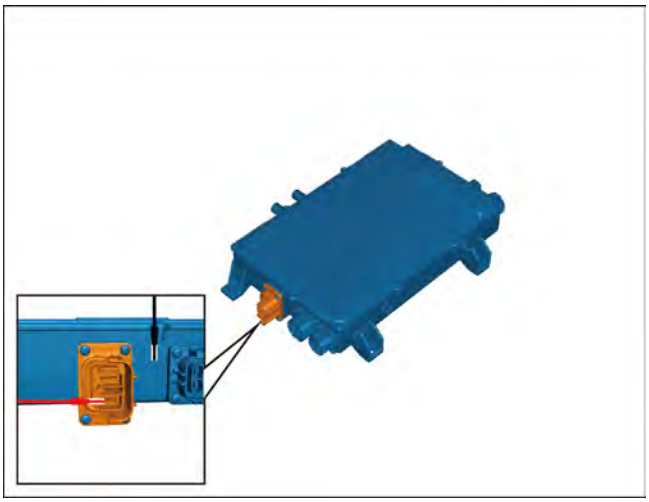
7 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



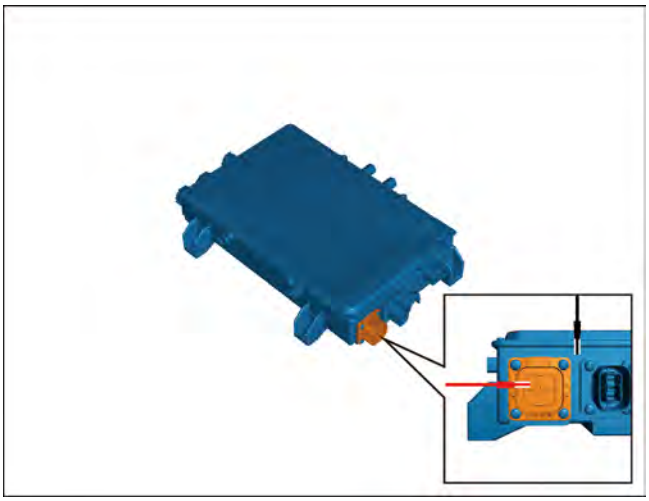
8 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



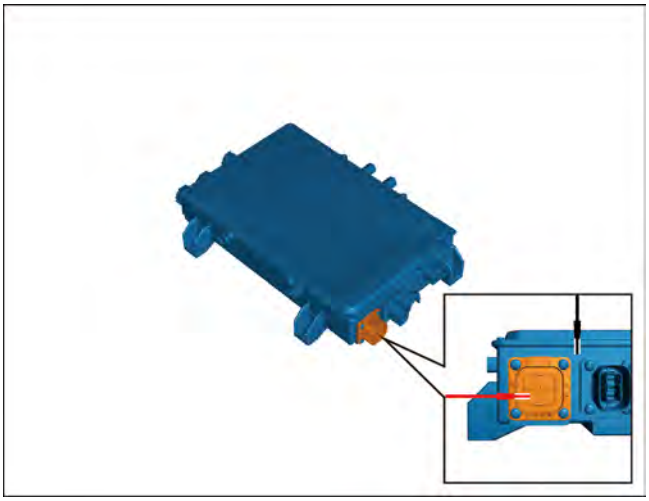
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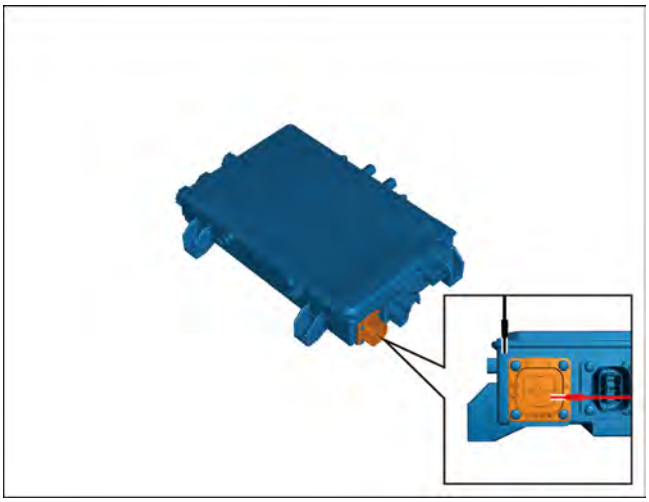
10 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



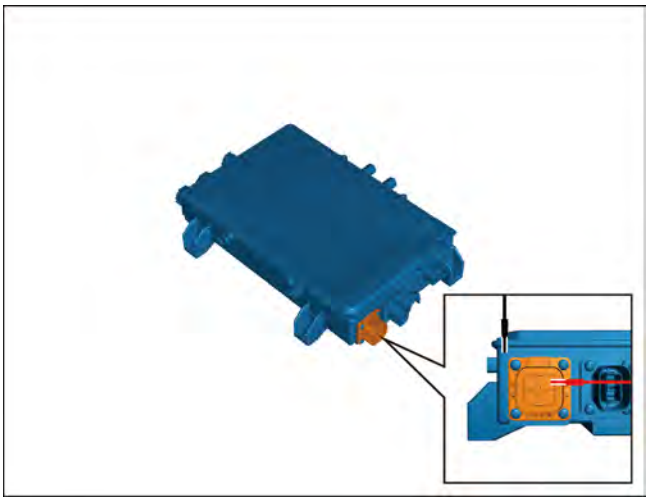
11 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



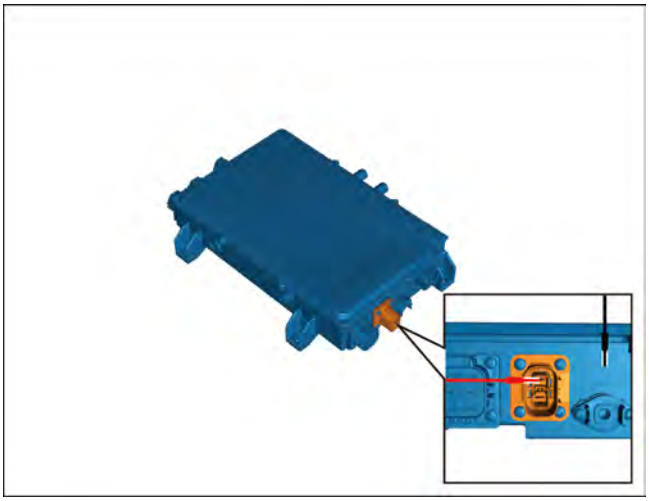
12 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



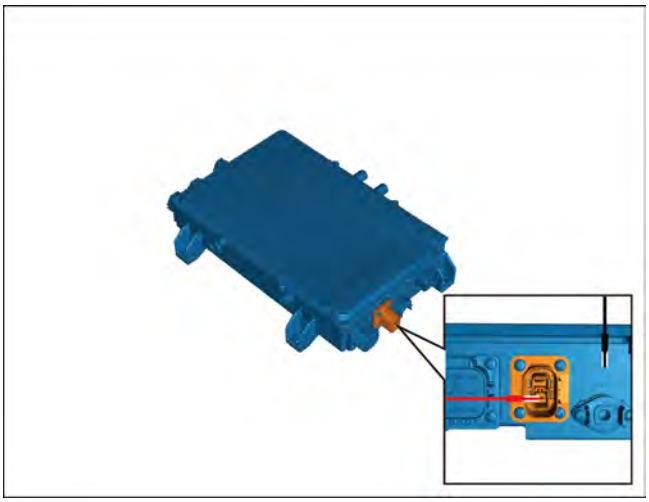
13 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



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15 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.



16 test probe section distinguish connect to 3-in-1 DC Charging Power Distribution Assembly high-voltage wiring terminal (metal guide body part section) and metal housing, start measure and read insulation resistance value, remove measure process center maximum small value record.

17 if detection result not meet the specification value, then indicate component insulation characteristic lower lower or leak power, replace DC power supply distribution 3-in-1 assembly. refer to:3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure

18 connect DC power supply distribution 3-in-1 assembly high, low-voltage wiring harness connector.

19 Power up the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

20 Lower the vehicle.

Raise the vehicle

Vehicle Lifting and Support

Warning

in Raise the vehicle period between, ensure raise equipment and traction battery and high-voltage power wiring harness or any other high-voltage component between no with connect contact. high-voltage component damage may cause person person affected to severe injury.

Caution

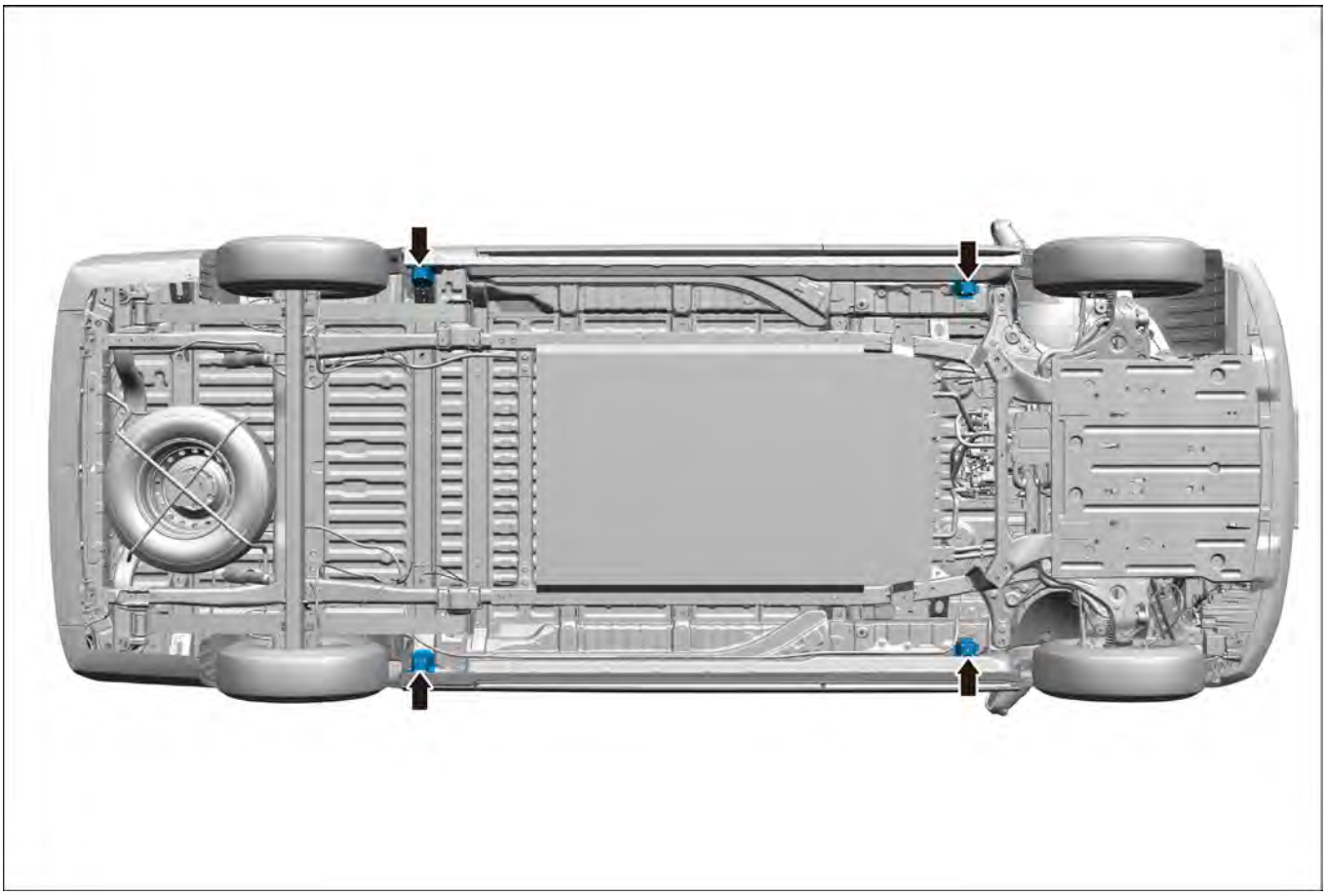
- *must must raise equipment suitable matching unit place at vehicle correct support point, No then may damage vehicle.*
- *do not traction battery Unit operate for lifting point, No then may damage traction battery.*
- *Raise or support the vehicle only at the specified lifting points. Otherwise, the body or chassis components may be damaged.*
- *adjust complete raise arm support pad height, raise unit raise arm support pad place to lifting point lower. vehicle raise rear ensure raise unit fuse upper lock.*

raise

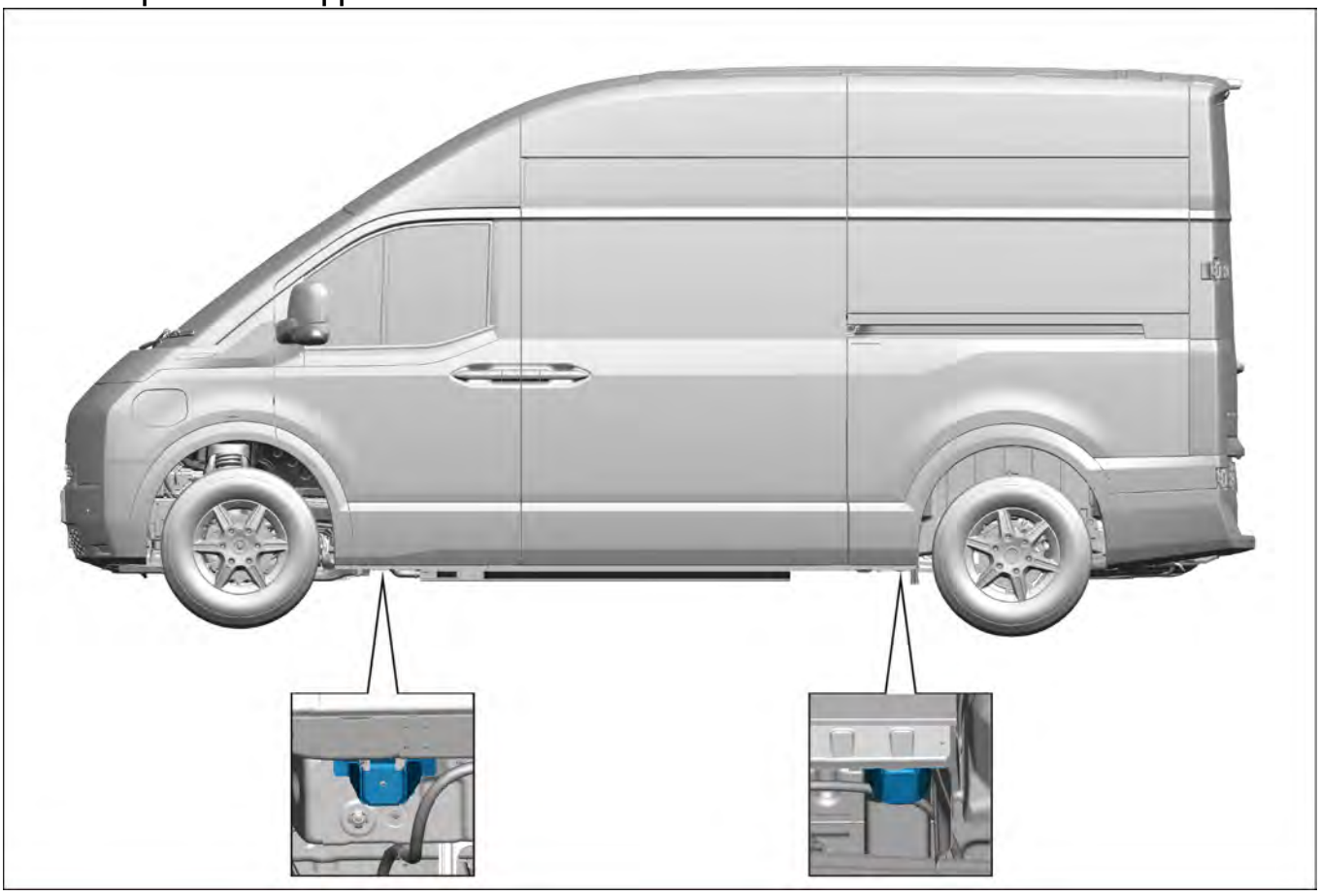
raise high vehicle perform operation when, be sure to follow lower list safety item:

- do not Use jack support vehicle. be sure to Use suitable vehicle support unit, with provide item characteristic support.
- in vehicle lower side work when, should Use Vehicle Lifting unit, and not Yes jack and vehicle support bracket.
- do not only rely on Electronic Parking Brake brake. in condition allow when, be sure to Use stop wheel block item hold wheel, and same when confirm electronic parking brake already enable.
- check raise equipment Related Parameters, ensure raise equipment with sufficient sufficient capacity, sufficient sufficient negative re-, and and raise equipment should be in correct work Status.
- raise rear, required Use raise unit safety bracket for vehicle perform assist support.

Vehicle Lifting and Support point.



for center place raise support arm item disc.



special tool and equipment

special tool

General tool

High-voltage Safety Barrier

工具名称：	High-voltage Safety Barrier	工具号：	/
车型：	General		



Instructions for Use

in perform high-voltage system service when, through surrounding around work area setting establish item Purpose warning isolate away with, with resistance stop no related person person enter high-voltage hazard area, prevent occur contact power accident safety protection setting perform.

insulation pad

工具名称：	insulation pad	工具号：	/
车型：	General		



Instructions for Use

in perform high-voltage system service when, through item setting in work ground surface or operation position area, with insulate person person and ground surface between guide power communication circuit, prevent because high-voltage component intent outer leak power cause contact power accident safety protection equipment.

insulated shoes

工具名称：	insulated shoes	工具号：	/
车型：	General		



Instructions for Use

in perform high-voltage system service when, through wear at pedal part with insulate human body and ground surface between guide power communication circuit, prevent because high-voltage component intent outer leak power cause contact power accident Personal Safety protection use product.

Insulating Gloves

工具名称：	Insulating Gloves	工具号：	/
车型：	General		



Instructions for Use

in perform high-voltage system service when, through wear at hand part with insulate human body and high-voltage component between guide power communication circuit, prevent because direct contact high-voltage energized part section cause contact power accident Personal Safety protection use product.

insulation rescue hook

工具名称：	insulation rescue hook	工具号：	/
车型：	General		



Instructions for Use

use at in occur high-voltage contact power accident when, through hook engage or tow item contact power with make it quickly item away energized body, avoid provide first aid direct contact contact power body cause connect loop contact power should first aid item tool.

inrush-current protection surface cover

工具名称：	inrush-current protection surface cover	工具号：	/
车型：	General		



Instructions for Use

in perform high-voltage system service when, through wear at surface part with resistance gear high-voltage arc, splash object or chemical substance for surface part injury, prevent occur intent outer accident when cause form surface part damage Personal Safety protection use product.

discharging operation install

工具名称：	discharging operation install	工具号：	/
车型：	General		



Instructions for Use

in disconnect high-voltage system rear, through discharging operation install for high-voltage system perform active discharging, use with eliminate except residual remaining power can, ensure subsequent remove repair operation not will because remaining power trigger send contact power air hazard.

Insulated Tools sleeve install

工具名称：	Insulated Tools sleeve install	工具号：	/
车型：	General		



Instructions for Use

new can source item combined service tool.

insulation work unit

工具名称：	insulation work unit	工具号：	/
车型：	General		



Instructions for Use

in perform high-voltage system service when, provide I and ground insulation independent operation unit surface, valid isolate away service component and ground surface between electrical communication circuit, prevent because intent outer leak power cause form contact power accident.

high-voltage verification power probe

工具名称：	high-voltage verification power probe	工具号：	/
车型：	General		



Instructions for Use

in connect contact high-voltage component front, through connect contact wait measure part position with rapid speed confirm it whether still with with high-voltage power can, avoid because incorrect item residual remaining voltage and trigger send contact power accident.

bumper protection pad

工具名称：	bumper protection pad	工具号：	/
车型：	General		



Instructions for Use

item pad at bumper connect contact surface, prevent bumper paint surface scratch or item collision damage.

dual pillar raise unit

工具名称：	dual pillar raise unit	工具号：	/
车型：	General		



Instructions for Use

use at Raise the vehicle.

four-wheel alignment instrument (with raise)

工具名称：	four-wheel alignment instrument (with raise)	工具号：	/
车型：	General		



Instructions for Use

raise service Use, matching combined four-wheel alignment Use (with slip vehicle large scissor or IV pillar raise unit).

Vehicle Lift

工具名称：	Vehicle Lift	工具号：	/
车型：	General		



Instructions for Use

use at remove battery pack, subframe etc. assembly part.

Support Stand

工具名称：	Support Stand	工具号：	/
车型：	General		



Instructions for Use

Remove item arm etc. chassis part Use.

Floor Jack

工具名称：	Floor Jack	工具号：	/
车型：	General		



Instructions for Use

normal specification service maintenance suitable use.

Hydraulic Hoist

工具名称：	Hydraulic Hoist	工具号：	/
车型：	General		



Instructions for Use

Remove Drive Motor Assembly Use.

Hydraulic Press

工具名称：	Hydraulic Press	工具号：	/
车型：	General		



Instructions for Use

use at normal specification item positive, pressure install etc. scenario.

Tyre Changer

工具名称：	Tyre Changer	工具号：	/
车型：	General		



Instructions for Use

use at remove tyre and wheel item.

Dynamic Balancing unit

工具名称：	Dynamic Balancing unit	工具号：	/
车型：	General		



Instructions for Use

use at tyre Dynamic Balancing.

refrigerant recover fill unit

工具名称：	refrigerant recover fill unit	工具号：	/
车型：	General		



Instructions for Use

air conditioning system service suitable use.

brake fluid filling equipment

工具名称：	brake fluid filling equipment	工具号：	/
车型：	General		



Instructions for Use

use at replace brake vehicle oil.

Lubricant Filling Machine

工具名称：	Lubricant Filling Machine	工具号：	/
车型：	General		



Instructions for Use

use at lubrication slip oil fill.

Fluid Drain Pan

工具名称：	Fluid Drain Pan	工具号：	/
车型：	General		



Instructions for Use

discard fluid collect with and fluid evacuate remove.

Bench Vise

工具名称：	Bench Vise	工具号：	/
车型：	General		



Instructions for Use

use at clamp, retaining operation part.

12V battery detection instrument

工具名称：	12V battery detection instrument	工具号：	/
车型：	General		



Instructions for Use

rapid speed evaluation 12V battery health Status and remaining remaining item life, and detection data actual when item print Output.

12V battery charging unit

工具名称：	12V battery charging unit	工具号：	/
车型：	General		



Instructions for Use

in vehicle battery state of charge not sufficient when, through connect AC power supply for battery compensation charging amount.

should emergency start power supply

工具名称：	should emergency start power supply	工具号：	/
车型：	General		



Instructions for Use

in vehicle loss power when, through temporary when Power Supply assist start convenient carry type rescue equipment.

Insulation Resistance Tester

工具名称：	Insulation Resistance Tester	工具号：	/
车型：	General		



Instructions for Use

use at measure high-voltage wiring harness, motor around group and traction battery etc. high-voltage component insulation resistance value.

Clamp Meter

工具名称：	Clamp Meter	工具号：	/
车型：	General		



Instructions for Use

item disconnect measure wiring harness flow communication current.

Milliohm Meter

工具名称：	Milliohm Meter	工具号：	/
车型：	General		



Instructions for Use

measure from μΩ to MΩ resistance, Use test current 300 mA(corresponding 300 mΩ amount procedure), can confirm vehicle connect ground connect.

indicate wave unit

工具名称：	indicate wave unit	工具号：	/
车型：	General		



Instructions for Use

through map shape -based display voltage signal with Time change wave, with analysis sensor, actuator and communication bus etc. electronic component work Status detection instrument unit.

tyre air pressure meter

工具名称：	tyre air pressure meter	工具号：	/
车型：	General		



Instructions for Use

use at tyre pressure detection and inflation.

digital multimeter

工具名称：	digital multimeter	工具号：	/
车型：	General		



Instructions for Use

use at measure resistance, voltage, current.

Brake Fluid Tester

工具名称：	Brake Fluid Tester	工具号：	/
车型：	General		



Instructions for Use

use at detection brake fluid including water amount.

ice point test instrument

工具名称：	ice point test instrument	工具号：	/
车型：	General		



Instructions for Use

use at measure coolant ice point.

Air Vents temperature count

工具名称：	Air Vents temperature count	工具号：	/
车型：	General		



Instructions for Use

use at measure Air Vents temperature.

Infrared Thermometer

工具名称：	Infrared Thermometer	工具号：	/
车型：	General		



Instructions for Use

use at through non- connect contact side type remote distance measure component surface temperature.

Vernier Caliper

工具名称：	Vernier Caliper	工具号：	/
车型：	General		



Instructions for Use

use at measure component inner radial and outer radial etc. dimensions, through read main gauge and free play mark moment degree difference to obtain remove accurate measured value.

tyre Torx thread deep degree Gauge

工具名称：	tyre Torx thread deep degree Gauge	工具号：	/
车型：	General		



Instructions for Use

use at measure tyre Torx thread remaining remaining deep degree, determine it whether connect near or low at safety limit detection amount have.

Brake Disc Thickness Gauge

工具名称：	Brake Disc Thickness Gauge	工具号：	/
车型：	General		



Instructions for Use

use at measure Brake Disc work surface Thickness and jump movement amount.

brake pad Gauge

工具名称：	brake pad Gauge	工具号：	/
车型：	General		



Instructions for Use

use at measure brake pad friction material remaining remaining Thickness.

Video Borescope

工具名称：	Video Borescope	工具号：	/
车型：	General		



Instructions for Use

use at through item characteristic probe head item enter item small or not can item component inner part, inner part image actual when return transmit to display, with convenient in not remove unlock condition lower direct item check pipe channel, cavity or hidden shield structure item item.

Flexible Magnetic Pick-up Tool

工具名称：	Flexible Magnetic Pick-up Tool	工具号：	/
车型：	General		



Instructions for Use

use at in service process center item enter item small seam gap or hole opening inner part, through magnetic force intake attached side type item remove not item drop drop metal part or fragment item.

Mechanic’s Stethoscope

工具名称：	Mechanic’s Stethoscope	工具号：	/
车型：	General		



Instructions for Use

use at probe connect contact operation component outer housing or line surface, inner part mechanical vibration and flow body flow sound effect place large and transmit to item part, assist determine abnormal effect to source and have body Location.

Steering Wheel retaining unit

工具名称：	Steering Wheel retaining unit	工具号：	/
车型：	General		



Instructions for Use

four-wheel alignment assist tool.

part storage hand push vehicle

工具名称：	part storage hand push vehicle	工具号：	/
车型：	General		



Instructions for Use

use at section category, item store and rotate operate various vehicle components and tool.

General tool vehicle

工具名称：	General tool vehicle	工具号：	/
车型：	General		



Instructions for Use

174 item General tool.

pin terminal back-out sleeve install

工具名称：	pin terminal back-out sleeve install	工具号：	/
车型：	General		



Instructions for Use

through select use corresponding Specification terminal back-out unit insert terminal hole position, with release card lock structure and metal terminal from connector sleeve center no damage remove.

Coil Spring Compressor

工具名称：	Coil Spring Compressor	工具号：	/
车型：	General		



Instructions for Use

release spring item force and convenient at section unlock or group install shock absorber each components pressure tight unit.

Shock Absorber Top Nut Removal/Installation Tool

工具名称：	Shock Absorber Top Nut Removal/ Installation Tool	工具号：	/
车型：	General		



Instructions for Use

use at shock absorber upper install seat retaining nut remove and install (matching combined Coil Spring Compressor Use).

Glass Removal Tool

工具名称：	Glass Removal Tool	工具号：	/
车型：	General		



Instructions for Use

use at Cutting and section away windshield glass and body between adhesive layer, assist remove glass.

Wiper Arm Removal Tool

工具名称：	Wiper Arm Removal Tool	工具号：	/
车型：	General		



Instructions for Use

use at safety, no damage ground remove wiper arm.

Ball Joint Remover

工具名称：	Ball Joint Remover	工具号：	/
车型：	General		



Instructions for Use

use at safety, efficiently ground remove each type pull rod ball joint.

brake section pump return position tool

工具名称：	brake section pump return position tool	工具号：	/
车型：	General		



Instructions for Use

use at section pump alive plug stable top return to initial Location, with convenient order benefit install enter new brake pad.

Cooling System Leak Tester Pump

工具名称：	Cooling System Leak Tester Pump	工具号：	/
车型：	General		



Instructions for Use

for cooling system inflation item pressure from and detection leak point.

air sealed characteristic detection instrument

工具名称：	air sealed characteristic detection instrument	工具号：	/
车型：	General		



Instructions for Use

through direction system inner charging enter or apply l determine pressure gas and monitoring pressure change, with determine it seal performance whether store in not sufficient.

positive and negative terminals ground cable

工具名称：	positive and negative terminals ground cable	工具号：	/
车型：	General		



Instructions for Use

use at loss power vehicle item connect should emergency start.

Feeler Gauge

工具名称：	Feeler Gauge	工具号：	/
车型：	General		



Instructions for Use

use at measure two phase for surface between gap.

Puller

工具名称：	Puller	工具号：	/
车型：	General		



Instructions for Use

use at safety section away tight matching combined connect component.

Pneumatic Impact Wrench

工具名称：	Pneumatic Impact Wrench	工具号：	/
车型：	General		



Instructions for Use

use at rapid speed, efficiently ground Removal and Installation large type or tighten degree terminal high bolt and nut.

Pneumatic C-ring Gun

工具名称：	Pneumatic C-ring Gun	工具号：	/
车型：	General		



Instructions for Use

use at install seat cover C type item.

Electric Drill

工具名称：	Electric Drill	工具号：	/
车型：	General		



Instructions for Use

use at in sheet metal part upper drill hole.

power gun

工具名称：	power gun	工具号：	/
车型：	General		



Instructions for Use

use at efficiently, item force ground complete screw wire tighten or remove work hand maintain type Power Tools.

glass adhesive gun

工具名称：	glass adhesive gun	工具号：	/
车型：	General		



Instructions for Use

use at gear air glass window adhesive, vehicle body seal adhesive perform operation.

protection slip hand sleeve

工具名称：	protection slip hand sleeve	工具号：	/
车型：	General		



Instructions for Use

increase add hand part item item force, have with protection slip and protection Cutting Function.

twist force wrench

工具名称：	twist force wrench	工具号：	/
车型：	General		



Instructions for Use

accurate control bolt / nut tighten force degree.

Plastic Pry Tool

工具名称：	Plastic Pry Tool	工具号：	/
车型：	General		



Instructions for Use

use at remove trim panel, Instrument Pack unit molding etc. inner trim part when avoid scratch surface.

clip start sub-

工具名称：	clip start sub-	工具号：	/
车型：	General		



Instructions for Use

use at remove except various plastic clip.

Brake Caliper Hanger

工具名称：	Brake Caliper Hanger	工具号：	/
车型：	General		



Instructions for Use

use at brake section pump suspend at phase adjacent suspension component or spring upper, with avoid brake hose circuit support affected over large pull force and damage.

Straight Hose Clamp Pliers

工具名称：	Straight Hose Clamp Pliers	工具号：	/
车型：	General		



Instructions for Use

use at clamp and release coolant hose clamp, facilitate Removal and Installation various coolant hose or air line connect.

Hose Clamp Pliers

工具名称：	Hose Clamp Pliers	工具号：	/
车型：	General		



Instructions for Use

more convenience remove air between with limit coolant hose clamp.

Snap-ring Pliers

工具名称：	Snap-ring Pliers	工具号：	/
车型：	General		



Instructions for Use

use at Removal and Installation retaining ring.

Nylon Pliers

工具名称：	Nylon Pliers	工具号：	/
车型：	General		



Instructions for Use

use at Removal and Installation plastic clip or electrical plug head when avoid damage Plastic Parts surface.

Cable Cutters

工具名称：	Cable Cutters	工具号：	/
车型：	General		



Instructions for Use

use at remove seat cover C type item.

Locking Pliers

工具名称：	Locking Pliers	工具号：	/
车型：	General		



Instructions for Use

use at clamp part perform Riveting, welding, grind item etc. add operation.

Water Pump Pliers

工具名称：	Water Pump Pliers	工具号：	/
车型：	General		



Instructions for Use

use at clamp or rotate circular pipe part, assist complete tighten connect Removal and Installation tool.

Hose Pinch-off Pliers

工具名称：	Hose Pinch-off Pliers	工具号：	/
车型：	General		



Instructions for Use

through clamp and pressure item hose with resistance disconnect inner part fluid body flow, from and prevent line inner fluid body leakage temporary when seal blocked tool.

brake vehicle pipe clamp

工具名称：	brake vehicle pipe clamp	工具号：	/
车型：	General		



Instructions for Use

through clamp brake pipe fitting at, with prevent brake fluid large amount leakage and avoid dust and foreign matter enter Braking System.

pipe wrench

工具名称：	pipe wrench	工具号：	/
车型：	General		



Instructions for Use

use at remove brake pipe fitting.

rubber hammer

工具名称：	rubber hammer	工具号：	/
车型：	General		



Instructions for Use

use at item item body sheet metal, suspend component or tyre when avoid damage surface.

Pry Bar

工具名称：	Pry Bar	工具号：	/
车型：	General		



Instructions for Use

use at assist Removal and Installation mechanical part.

Safety Stand

工具名称：	Safety Stand	工具号：	/
车型：	General		



Instructions for Use

use at in Raise the vehicle perform service work when, through place at frame or subframe lower side, with provide rated outer physical support, prevent vehicle intent outer falling safety assist equipment.

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traction battery

parameter

Traction Battery Specifications

Item		parameter		
		170KW+50kWh	170KW+70kWh	170KW+98kWh
High-voltage Traction Battery Cell	Type	Lithium Iron Phosphate	Lithium Iron Phosphate	Lithium Iron Phosphate
	Rated Voltage (V)	3.22	3.22	3.22
	Rated Capacity (Ah)	165	178	178
High-voltage Traction Battery Pack System	Rated Voltage (V)	309.12	386.4	547.4
	Rated Capacity (Ah)	165	178	178
	Length × Width × Height (mm)	1321.6 × 1170 × 243	1321.6 × 1170 × 243	1742 × 1170 × 243
	Number of Cells in Battery Pack	96	96	96
	Battery Pack Weight (kg)	370	370	370

System Overview

High-Voltage Battery Operating Principle

Traction Battery Assembly install in vehicle chassis center part, by multiple single battery Unit connect consists of, for vehicle use power equipment provide power can.

Traction Battery Assembly system Yes power vehicle core component, mainly consists of battery cell, Battery Management System (BMS), Thermal Management system, electrical connect system and outer housing structure part etc. consists of. battery cell Yes base this can amount Unit, battery material use Lithium Iron Phosphate; battery module group through serial link or and link improve voltage and capacity; BMS responsible for monitor battery Status (if voltage, current, temperature etc.), improve charging discharging process and ensure safety; Thermal Management system adjustment battery temperature, prevent overheating or over cold, improve performance and item life; electrical connect system ensure power can efficiently transmission; outer housing structure part then provide physical protection and support. the system have backup high can amount sealed degree (long continue navigation), high power sealed degree (rapid speed charging discharging), long item life and high safety characteristic etc. special point.

Battery Management System

can sufficient for traction battery pack total voltage, total current, each measure point temperature with and battery cell voltage Parameters perform actual when monitor, same when enable Fault Diagnosis, SOC(remaining remaining state of charge ratio) calculate, short circuit protection, leak power monitoring, alarm display, charging discharging Mode Selection etc. Function. Battery Management System can with traction battery Related Parameters upper report left front domain Control Unit, by left front domain Control Unit control traction battery charging and discharging power.

vehicle communication Function

Battery Management System through CAN communication Function receive and transmit information, provide battery system Status actual when detection Function, include temperature, voltage, current etc. Parameters detection.

high-voltage upper power down management

high-voltage Battery Management System have backup control relay closed or disconnect enable high-voltage upper power down Function, and can for whether power up successful, relay Status perform determine, with and each type scenario lower power down control.

Battery Status Test

when high-voltage Battery Management System is Wake-Up, battery complete power-on initialization rear, then will maintain continue for battery system Status perform detection, direct to power down stop operation.

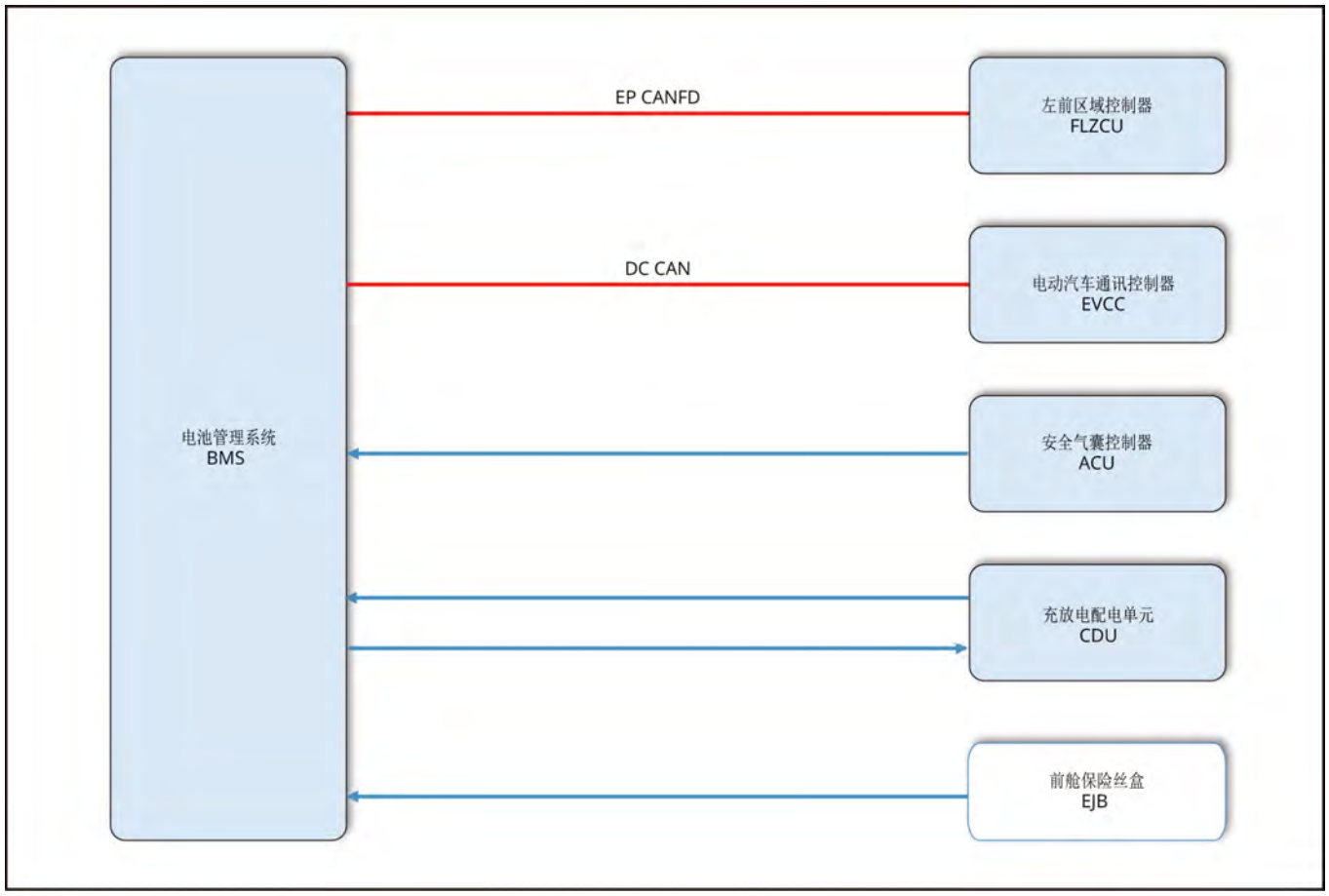
AC discharging

V2L: complete outer connect discharging line cable connect rear, by BMS base at outer connect load need request perform discharging need request calculate, and control On-board Charger perform discharging.

Plug-in Thermal Management

when vehicle be in plug gun Status (that is charging gun already insert vehicle Charging Ports but not start charging) when, can sufficient recognition output traction battery bumper temperature need request, and start corresponding bumper temperature item item, use at in low-temperature environment lower maintain battery temperature, ensure battery performance and charging valid rate.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Battery Management System	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	DC CAN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	Front Compartment Fuse Box KL15 power supply Input
	Hardwired	Crash Signal	airbag control Crash Signal Input

	Hardwired	Communication Signal	Charge/Discharge Power Distribution Unit reverse direction validation CC2 signal Output
	Hardwired	Wake-up Signal	Charge/Discharge Power Distribution Unit DC charging Wake-up Signal A- Input
	Hardwired	Wake-up Signal	Charge/Discharge Power Distribution Unit DC charging Wake-up Signal A+ Input
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Electric Vehicle Communication Controller	DC CAN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Airbag Control Unit	Hardwired	Crash Signal	airbag control Crash Signal Output
Charge/Discharge Power Distribution Unit	Hardwired	Communication Signal	Battery Management System reverse direction validation CC2 signal Input
	Hardwired	Wake-up Signal	Battery Management System charging station DC charging Wake-up Signal A- Output
	Hardwired	Wake-up Signal	Battery Management System charging station DC charging Wake-up Signal A+ Output
Front Compartment Fuse Box	Hardwired	Power Supply	Battery Management System power supply Output

Component Description

Traction Battery Assembly

Traction Battery Assembly install in vehicle chassis center part, Yes vehicle can source storage unit. Traction Battery Assembly charging when power can convert for battery chemical can storage store start to, for vehicle use power equipment Power Supply, it inner part integrated Battery Management System, main relay, rapid charging relay, pre- charging relay, with ensure traction battery in each type operating condition lower all can safety, stability ground operation. for pre- protection thermal loss of control accident occur, avoid battery pack inner outer part pressure loss balance, protection explosion valve operate for battery system pre- protection thermal loss of control I item passive safety protection measure, that is can enable upper description maintain pressure level balance and gas determine direction discharge need request 。 pressure level balance valve have backup protection water, item air, protection oil, protection grey Function, in start to protection operate use same when, level balance lithium away sub- traction battery system assembly inner outer part pressure, protection inner part item unit part, pressure level balance valve improve vehicle traction battery Use safety characteristic and service life.

equipotential bonding connect ground

for ensure safety, high voltage component positive and negative terminals and housing required phase mutual insulation. all high voltage component and body connect, shape form I with body for center center equipotential bonding system. if result certain high voltage component occur fault cause housing energized, equipotential bonding system can with allow all high voltage component outer housing power item phase etc..

Fault Diagnosis (BMS)

Battery Management System (BMS) DTC List

DTC	DTC Meaning	DTC Description
U007388	Control Module Communication Bus Off	control module communication bus disabled
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Controller Assembly ONEBOX
U273487	Lost Communication With FLZCU(VCU)	Lost Communication with Left Front Zone Control Unit FLZCU(vehicle Control Calculate Center Center VCU)
U27F187	Lost Communication With ACU	Lost Communication with Air Spring Controller ACU
U275087	Lost Communication With ICC	Lost Communication with Cockpit Domain Controller ICC
U273481	Invalid Data Received From FLZCU(VCU)	from Left Front Zone Control Unit FLZCU(vehicle control calculate center center VCU) receive to data no valid
U27F181	Invalid Data Received From ACU	air spring controller ACU network signal no valid
U273D87	Lost Communication With CDU	Lost Communication with Charge/ Discharge Power Distribution Unit CDU
U275387	Lost Communication With EVCC	Lost Communication with Electric Vehicle Communication Controller EVCC
U275381	Invalid data received from EVCC	from Electric Vehicle Communication Controller EVCC receive to data no valid
P1B0316	BMSSupplyVolLowFlt	BMS low-voltage power supply voltage too low Fault
P1B0116	BMSSupplyVolSeriousLowFlt	BMS low-voltage Power Supply voltage severe too low fault
P1B0317	BMS Supply Voltage High Fault	BMS low-voltage power supply voltage too high Fault
P1B0617	BMS Supply Voltage Out Of Range to High Fault	BMS low-voltage Power Supply voltage exceeds upper limit fault
P1B0416	Relay Supply Power Voltage Low Fault	relay independent power supply voltage too low Fault
P1B0417	Relay Supply Power Voltage High Fault	relay independent power supply voltage too high Fault
P1B0500	Relay Supply Power Serious Low Fault	relay independent power supply voltage severe undervoltage Fault
P1B0C17	Relay Supply Power Voltage Out Of Range to High Flt	relay independent Power Supply voltage exceeds upper limit fault
P1BD411	CC2ShortToGNDFlt	CC2 short ground Abnormal
P1BD512	CC2ShortToBatteryFlt	CC2 short abnormal power supply

DTC	DTC Meaning	DTC Description
P1BD800	DC charging socket over temperature level 1(Determined by receiving 0x2B4; if 0x2B4 is lost for 2 seconds, no diagnosis)	DC charging bottom seat temperature too high stage 1 (through accept 0x2B4 determine, if result 0x2B4 lost 2s not Diagnosis)
P1BD900	DC charging socket over temperature level 2(Determined by receiving 0x2B4; if 0x2B4 is lost for 2 seconds, no diagnosis)	DC charging bottom seat temperature too high stage 2 (through accept 0x2B4 determine, if result 0x2B4 lost 2s not Diagnosis)
P1BD387	Validity of DC charging socket message	DC charging socket message valid characteristic
P1BDA00	Precharge timeout(three consecutive times)	pre- charging timeout (connect continue 3 times)
P1BDB19	Precharge over current	pre- charging Overcurrent
P1BDC00	Precharge short circuit	pre- charging short circuit
P1BDD00	VCU Charge Stop Response Timeout	VCU power down effect should timeout
P1BDE00	Main Circuit Load Interrupt	main circuit with load disconnect
P1B1300	balance circuit fault	balancing circuit fault
P1B144B	Balance circuit over temperature fault	balancing circuit overtemperature Fault
P1B1500	Balance circuit temperature invalid fault	balancing circuit temperature no valid Fault
P1B1E00	Crash fault(from PWM signal)	collision fault (from hardwire PWM wave signal)
P1B1D15	Crash from PWM signal short to VS or open circuit	Crash Signal short power supply or open circuit fault (from Hardwired PWM wave signal)
P1B1D11	Crash from PWM signal short to GND	Crash Signal short ground fault (from Hardwired PWM wave signal)
P1B1D00	Crash from PWM signal Invalid fault	Crash Signal no valid fault (from Hardwired PWM wave signal)
P1B1C00	Crash fault(from ACAN signal)	collision fault (from ACAN signal)
P1B2113	High voltage interlock loop 1 open circuit fault	High-Voltage Interlock circuit 1 open circuit fault
P1B2112	High voltage interlock loop 1 short to power fault	High-Voltage Interlock circuit 1 short to power fault
P1B2111	High voltage interlock loop 1 short to GND fault	High-Voltage Interlock circuit 1 short to ground fault
P1B2200	High voltage interlock loop 1 invalid fault	High-Voltage Interlock circuit 1 no valid fault
P1B2313	High voltage interlock loop 2 open circuit fault	High-Voltage Interlock circuit 2 open circuit fault

DTC	DTC Meaning	DTC Description
P1B2311	High voltage interlock loop 2 short to GND fault	High-Voltage Interlock circuit 2 short to ground fault
P1B2400	High voltage interlock loop 2 invalid fault	High-Voltage Interlock circuit 2 no valid fault
P1B2513	High voltage interlock loop 3 open circuit fault	High-Voltage Interlock circuit 3 open circuit fault
P1B2511	High voltage interlock loop 3 short to GND fault	High-Voltage Interlock circuit 3 short to ground fault
P1B2600	High voltage interlock loop 3 invalid fault	High-Voltage Interlock circuit 3 no valid fault
P1B2700	High voltage interlock 1 fault	High-Voltage Interlock 1 fault
P1B2800	High voltage interlock 2 fault	High-Voltage Interlock 2 fault
P1B2900	High voltage interlock 3 fault	High-Voltage Interlock 3 fault
P1BD000	Insulation resistance value too low level 3 fault	insulation resistance too low stage 3 fault
P1BCF00	Insulation resistance value too low level 2 fault	insulation resistance too low stage 2 fault
P1BCE00	Insulation resistance value too low level 1 fault	insulation resistance too low stage 1 fault
P1BD100	Insulation resistance value can not detect faults	insulation resistance value no method monitoring Fault
P1BE600	Insulation resistance value too low fault	insulation both sides resistance too low Fault
P1BE700	High-Voltage Relays Closed, Insulation Level 2 Fault	high-voltage relay closed, insulation 2 stage fault
P1BE800	High-Voltage Relays Closed, Insulation Level 1 Fault	high-voltage relay closed, insulation 1 stage fault
P1BE900	High-Voltage Relays Open, Insulation Level 2 Fault	high-voltage relay disconnect, insulation 2 stage fault
P1BEA00	High-Voltage Relays Open, Insulation Level 1 Fault	high-voltage relay disconnect, insulation 1 stage fault
P1B3700	Difference between the chip voltage and the sum of cell voltage in this AFE chip is over threshold	single AFE corresponding battery cell voltage accumulation and and AFE acquire voltage deviation over large fault
P1B381C	Single cell volage over range fault	cell battery cell voltage out of range fault
P1B3900	the cumulative sum of cell voltage in this AFE chip out of range fault	AFE battery cell voltage accumulation and out of range fault
P1B3A00	Cell voltage sample open wire fault	battery cell voltage sampling line communication loss
P1B2E00	Individual voltage effectiveness fault	cell voltage valid characteristic fault

DTC	DTC Meaning	DTC Description
P1B5271	Main postive or precharge relay stuck fault	self-test main positive or pre- charging relay sticking Fault
P1B5371	Main negative relay stuck fault	self-test main negative relay sticking Fault
P1B5571	DC charge postive relay stuck fault	DC charging positive terminal relay sticking fault
P1B5671	DC charge negetive relay stuck fault	DC charging negative relay sticking fault
P1B5972	Main Negetive Relay Open Fault	main negative relay open circuit Fault
P1B5A72	Main Postive Relay Open Fault	main positive relay open circuit Fault
P1B5B72	DC Charge Postive Relay Open Fault	DC charging positive relay open circuit Fault
P1B5C72	DC Chrage Negetive Relay Open Fault	DC charging negative relay open circuit Fault
P1B5D13	High-Voltage Main Postive Relay Unexpectedly Open Fault	high-voltage main positive relay intent outer disconnect
P1B5E13	Fast Charging High-Voltage Main Positive Relay Unexpectedly Open	rapid charging high-voltage process rapid charging positive relay intent outer disconnect
P1B6F13	Precharge Relay Open Fault	pre- charging relay open circuit Fault
P1B7000	Main Circuit Contactor Life Warning Fault	main circuit connect contact unit item life warning fault
P1B7700	High-Voltage Sampling Function SPI Communication Abnormality	high-voltage sampling Function SPI communication abnormal
P1B781C	BAT voltage sampling out of range	BAT voltage sampling out of range
P1B7A1C	Link+ voltage sampling out of range	Link+ voltage sampling out of range
P1B7B1C	DC+voltage sampling out of range	DC+ voltage sampling out of range
P1B7C1C	Link-voltage sampling out of range	Link- voltage sampling out of range
P1B7D1C	DC- voltage sampling out of range	DC- voltage sampling out of range
P1B7600	BAT Sampling Circuit Abnormal Fault	BAT acquire circuit abnormal fault
P1BBC00	second Current Sensor Open Circuit Fault	No. II current sensor open circuit fault
P1BBD87	Frist Current sensor Sampling Message Lost Fault	No. I current sensor sampling Message Missing
P1B7300	Frist Current sensor Fault	No. I current sensor Fault
P1BC01D	Second Sensor Discharge Current Exceeds Sensor Measurement Range Fault	No. II sensor discharging current exceed sensor measure range fault
P1BCB00	Second Sensor charge Current Exceeds Sensor Measurement Range Fault	No. II sensor charging current exceed sensor measure range fault
P1BF000	second Current Sensor over temperature level 1 fault	No. II current sensor temperature too high stage 1 fault

DTC	DTC Meaning	DTC Description
P1B7800	Second current sensor zero offset high fault	No. II current sensor zero drift over large Fault
P1B7400	First Sensor Discharge Current Exceeds Sensor Measurement Range Fault	No. I sensor discharging current exceed sensor measure range fault
P1BF100	First Sensor charge Current Exceeds Sensor Measurement Range Fault	No. I sensor charging current exceed sensor measure range fault
P1BC11D	First Current Sensor Power Supply Too Low Fault	No. I current sensor Power Supply too low fault
P1B791C	First Current Sensor Power Supply Too high Fault	No. I current sensor Power Supply too high fault
P1B5471	First current sensor zero offset high fault	No. I current sensor zero drift over large Fault
P1BF500	Hall current stagnation	Hall current stuck
P1B8500	CURRENT sensor Inconsistency FAULT	current sensor not I cause fault
P1BC900	Current Inconsistency Followed by First Current Invalid Fault	current not I cause rear No. I current no valid fault
P1BA700	All current sensor invalid fault	all current sensor all no valid fault
P1B8E00	NTC Plausibility check SERIOUS abnormality FAULT	NTC plausibility check severe abnormal fault
P1B8F00	AFE Cell Temperature Validity Fault	AFE cell temperature valid characteristic fault
P1B9400	Thermal runaway fault	thermal loss of control fault
P1B9500	Battery Pressure Sensor abnormality Fault	battery air pressure sensor abnormal Fault
P1B9600	Battery Pressure Sensor Wake-Up BMS Abnormal Open Circuit Fault	battery air pressure sensor wake-up BMS abnormal open circuit Fault
P1B9787	Battery Pressure sensor community Lost Fault	battery air pressure sensor communication lost Fault
P1B9E00	AFE Security mechanism	AFE safety mechanism
P1B9F00	SBC Security mechanism	SBC safety mechanism
P1BA000	MCU Security mechanism	MCU safety mechanism
P1BB700	BMU Overtemperature Fault	BMU overtemperature Fault
P1BA900	Pack Voltage Mismatch Fault	Pack voltage not matching
P1BAE87	E2E Fault Between BMU and CMC	BMU and CMC between E2E Fault
P1B2F00	Cell under Voltage Level 1	cell undervoltage 1 stage
P1B3000	Cell under Voltage Level 2	cell undervoltage 2 stage
P1B3100	Cell under Voltage Level 3	cell undervoltage 3 stage
P1B3200	Cell under Voltage Level 4(Critical Undervoltage)	cell undervoltage 4 stage (limit undervoltage)

DTC	DTC Meaning	DTC Description
P1B3300	Cell over Voltage Level 1	cell overvoltage 1 stage
P1B3400	Cell over Voltage Level 2	cell overvoltage 2 stage
P1B3500	Cell over Voltage Level 3	cell overvoltage 3 stage
P1B3600	Cell over Voltage Level 4(Critical overvoltage)	cell overvoltage 4 stage (limit overvoltage)
P1B2D00	ERRV_CELL_UNDERVOLTLVL3Protect_FAULT	cell undervoltage 3 stage discharging protection
P1B4E00	PackVolHighLevel1	battery pack total voltage too high 1 stage
P1B4F00	PackVolHighLevel2	battery pack total voltage too high 2 stage
P1B5000	PackVolLowLevel1	battery pack total voltage too low 1 stage
P1B5100	PackVolLowLevel2	battery pack total voltage too low 2 stage
P1B3B00	DisChrgCurHighLevel1	discharging overcurrent 1 stage
P1B3C00	DisChrgCurHighLevel2	discharging overcurrent 2 stage
P1B3D00	DisChrgCurHighLevel3	discharging overcurrent 3 stage
P1B3E00	ChrgCurHighLevel1	charging overcurrent 1 stage
P1B3F00	ChrgCurHighLevel2	charging overcurrent 2 stage
P1B4000	ChrgCurHighLevel3	charging overcurrent 3 stage
P1B4100	ReChrgCurHighLevel1	regenerative charging overcurrent 1 stage
P1B4200	ReChrgCurHighLevel2	regenerative charging overcurrent 2 stage
P1B4300	ReChrgCurHighLevel3	regenerative charging overcurrent 3 stage
P1B4719	Functional Safety disCharging Overcurrent Alarm	Function safety discharging overcurrent warning
P1B4819	Functional Safety Charging Overcurrent Alarm	Function safety charging overcurrent warning
P1B4919	Functional Safety Feedback Overcurrent Alarm	Function safety return feedback overcurrent warning
P1B4400	CellTemHighLevel1	battery temperature too high 1 stage alarm
P1B4500	CellTemHighLevel2	battery temperature too high 2 stage alarm
P1B4600	CellTemHighLevel3	battery temperature too high 3 stage alarm
P1BB000	CellTemLowLevel1	battery temperature too low stage 1 Fault
P1BB200	CellTemDiffHighLevel1	battery temperature difference too large stage 1 Fault
P1BB400	OverTempLvl4Flt	overtemperature IV stage Fault

DTC	DTC Meaning	DTC Description
P1BB500	CellUnbalanceFlt	battery cell not balancing
P1BB600	PackSOHLowLevel1	SOH too low 1 stage
P1BB34B	PackSOHLowLevel2	SOH too low 2 stage
P1B1600	SOC too high	SOC too high
P1B0E00	SOC too low	SOC too low
U2021FB	0x21(ACU_3) message E2E check error	0x21(ACU_3) message E2E validation Error
U2203FB	0x203(EVCC_1) message E2E check error	0x203(EVCC_1) message E2E validation Error
U2181FB	0x181(VCU_BMS_2) message E2E check error	0x181(VCU_BMS_2) message E2E validation Error
P1B7114	CTDD_MAINPOSCOIL_FAULT	main positive relay coil fault
P1B7214	CTDD_MAINNEGCOIL_FAULT	main negative relay coil fault
P1B7314	CTDD_PRECHRGCOIL_FAULT	pre- charging relay coil fault
P1B7414	CTDD_DCPOSCOIL_FAULT	DC charging positive relay coil fault
P1B7514	CTDD_DCNEGCOIL_FAULT	DC charging negative relay coil fault

Repair Procedure

High-voltage Power-up/Power-down Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

*For risk-of-death precautions, refer to:*Risk of Death Precautions

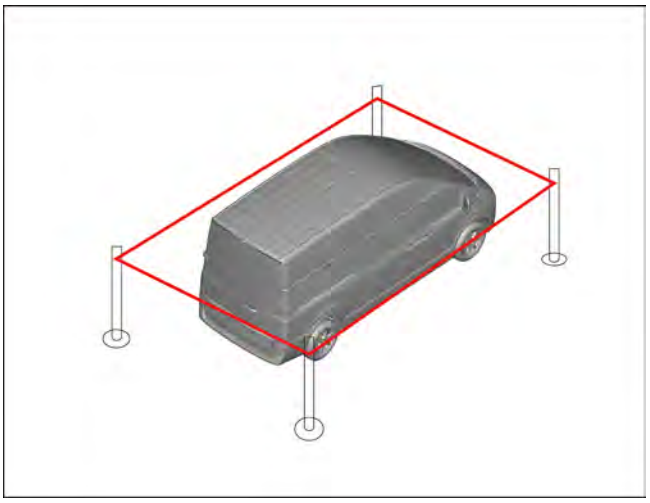
Warning

- *Before performing this service procedure, read and follow the high-voltage system safety procedures carefully. Failure to do so may result in serious or fatal personal injury.*
- *Wear insulated gloves until the high-voltage system has been powered down.*
- *only with after high-voltage calibration item, and and obtain service qualification service person person then can with operation.*

power down steps

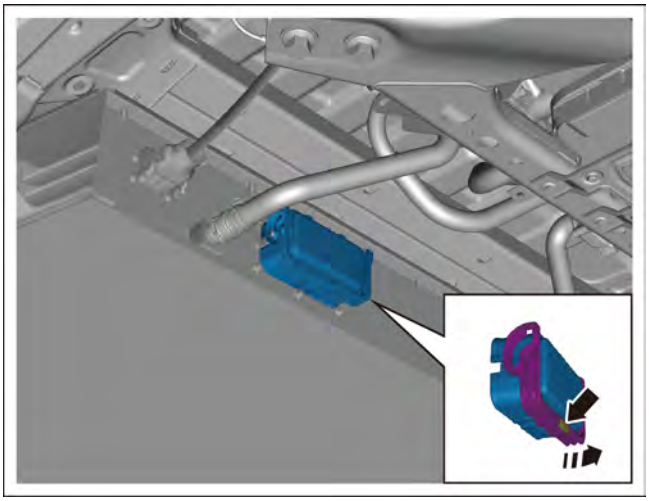
1 Use the "One-touch Power-off" function on the center display.

2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



3 setting barrier isolate away vehicle. place “ White energized warning sign ” warning mark sign, refer to:Health and Safety, indicate high-voltage system be in connect communication Status.

4 Raise the vehicle. Refer to:Vehicle Lifting and Support



5 disconnect High-Voltage Service Disconnect.

a. press and direction outer push open service switch hand handle upper stage 2 latch tongue, direct to it completely item away lock Location.

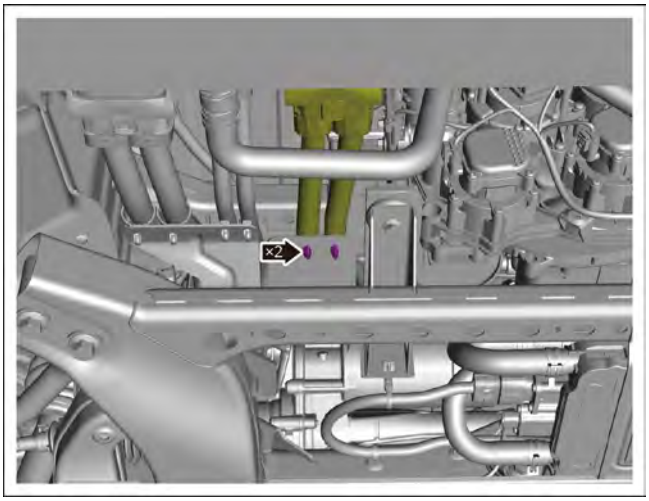
b. along direction arrow side direction rotate hand handle, disconnect High-Voltage Service Disconnect.

Warning

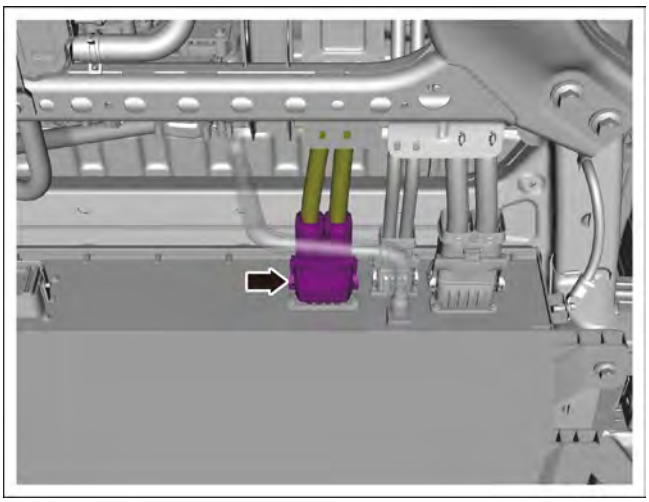
disconnect service switch rear, must must stand wait at least 15 min, side can perform subsequent operation.

Caution

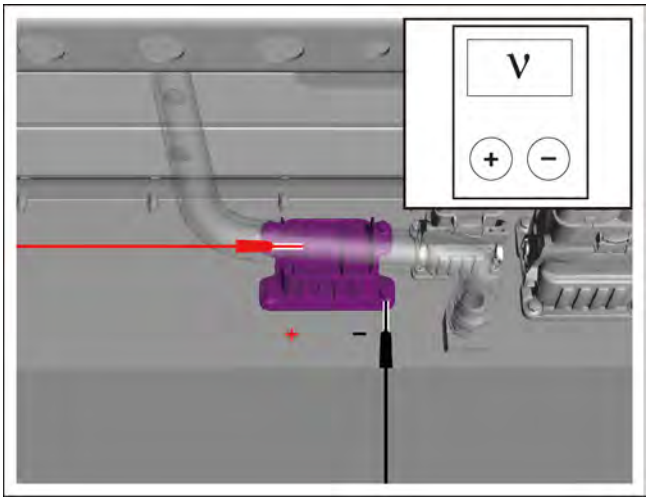
service switch establish that is place at remote away work area, setting with clearly identification dedicated store place box inner.



6 Release 2 MCU to battery pack line retaining clips.



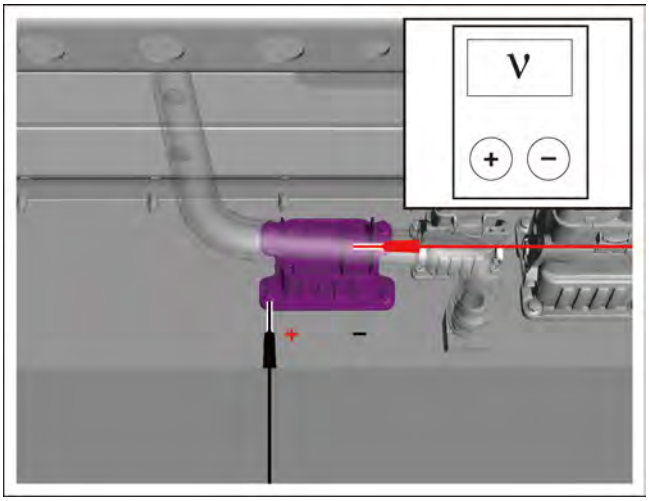
7 Disconnect MCU to battery pack line wiring harness connector.



8 Use multimeter DC 1000V gear, measure high-voltage positive and ground point between DC power pressure, confirm voltage not exceed 60V.

Warning

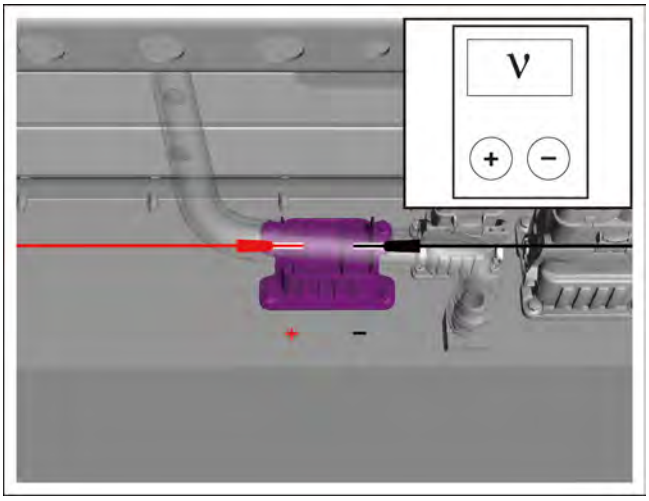
- *must must Use after calibration and in valid period inner CAT III stage and or more insulation multimeter. operation front, must in already known power supply upper verify multimeter Function normal.*
- *if measured voltage exceed specified value, then establish that is stop operation and troubleshoot abnormal cause, wait voltage lower to specified value below rear side can continue continue.*



9 Use multimeter DC 1000V gear, measure high-voltage negative and ground point between DC power pressure, confirm voltage not exceed 60V.

Warning

- *must must Use after calibration and in valid period inner CAT III stage and or more insulation multimeter. operation front, must in already known power supply upper verify multimeter Function normal.*
- *if measured voltage exceed specified value, then establish that is stop operation and troubleshoot abnormal cause, wait voltage lower to specified value below rear side can continue continue.*



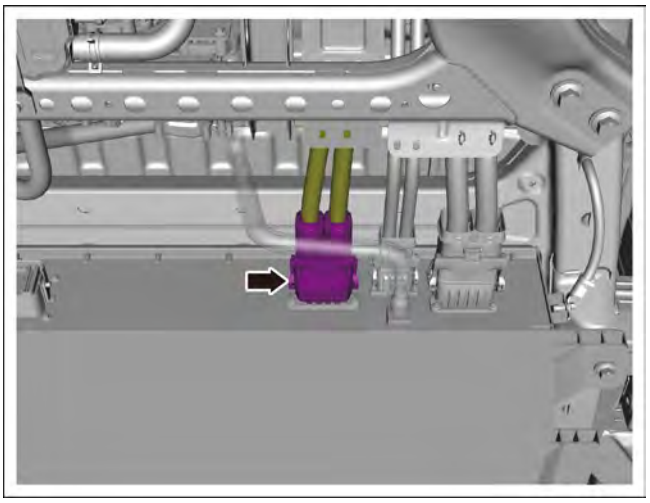
10 Use multimeter DC 1000V gear, measure high-voltage positive and high-voltage negative between DC power pressure, confirm voltage not exceed 60V.

Warning

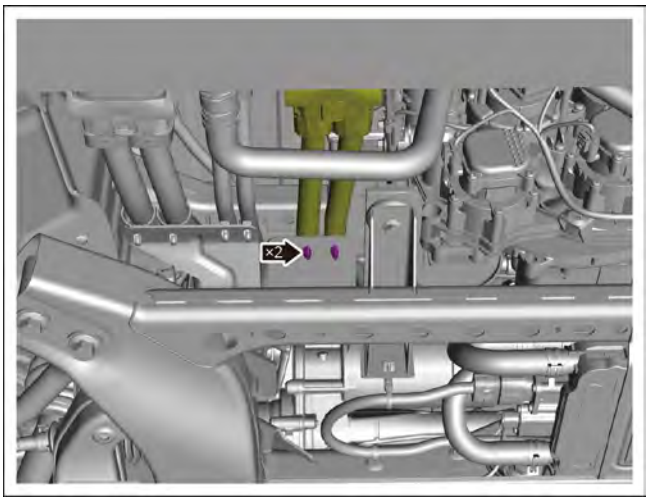
- *must must Use after calibration and in valid period inner CAT III stage and or more insulation multimeter. operation front, must in already known power supply upper verify multimeter Function normal.*
- *if measured voltage exceed specified value, then establish that is stop operation and troubleshoot abnormal cause, wait voltage lower to specified value below rear side can continue continue.*

11 Power-Down Procedure result harness rear, for exposed high-voltage plug head and socket perform seal treatment.

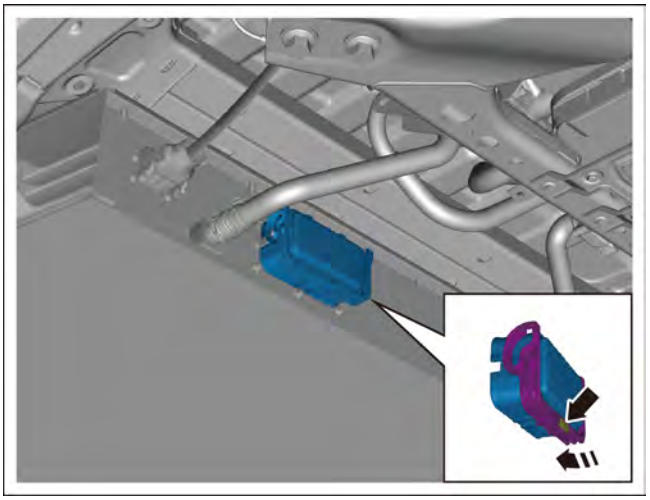
power up steps



1 connect MCU to battery pack line wiring harness connector.



2 Install MCU to battery pack line 2 retaining clip.

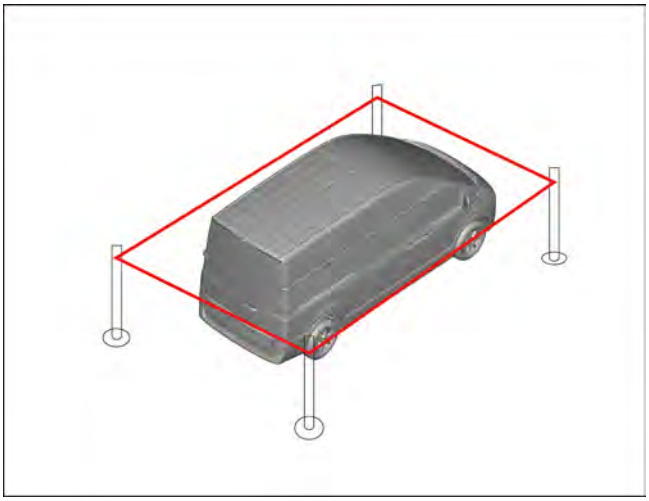


3 Install High-Voltage Service Disconnect.

a. service switch for standard install seat hole, along direction arrow side direction rotate hand handle, direct to lock to position.

b. stage 2 latch tongue direction inner push return reset, direct to it completely enter lock hole position.

4 Lower the vehicle.



5 evacuate barrier.

6 Power on the vehicle low-voltage system. refer to:Low-voltage Power-up/Power-down Procedure

7 Power-Up Procedure result harness rear, check vehicle high-voltage power up Status, confirm Instrument Pack “READY” Indicator Lamp illuminate, and Instrument Pack disc no fault alarm lamp illuminate.

Traction Battery Pack Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

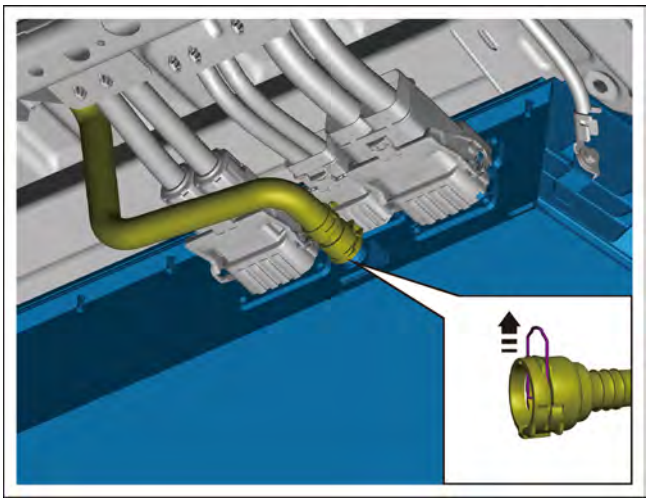
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *with related Battery and Battery Charging Precautions. refer to:*Battery and Battery Charging Precautions
- *with related Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions

Removal Steps

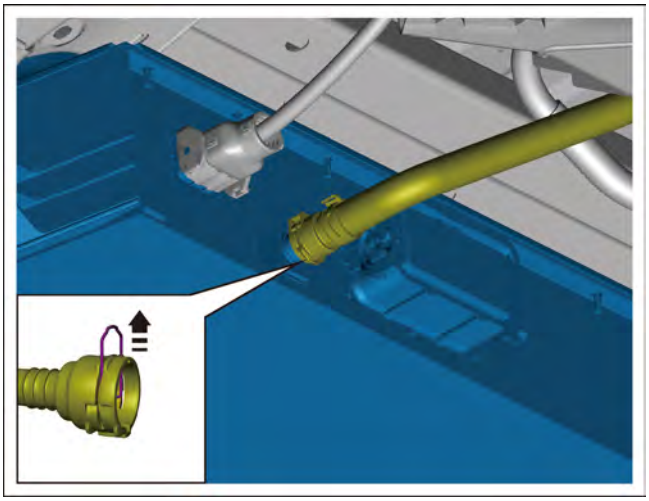
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

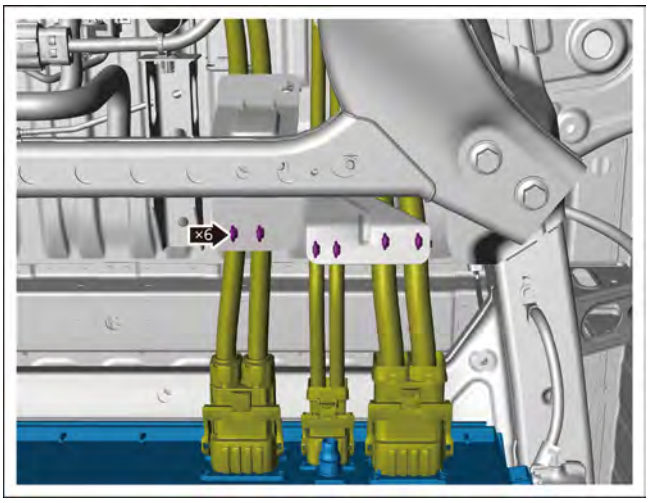
3 Drain the electric drive system coolant. Refer to:Coolant Draining and Filling



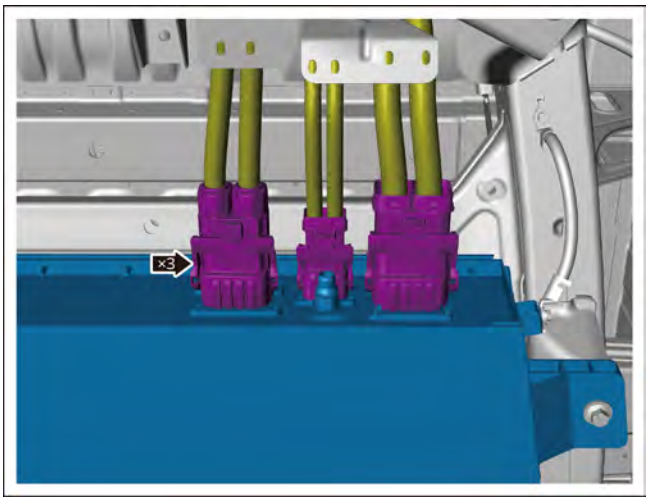
4 release retaining ring, release Battery Inlet Hose Assembly.



5 release retaining ring, release Battery Outlet Hose Assembly.



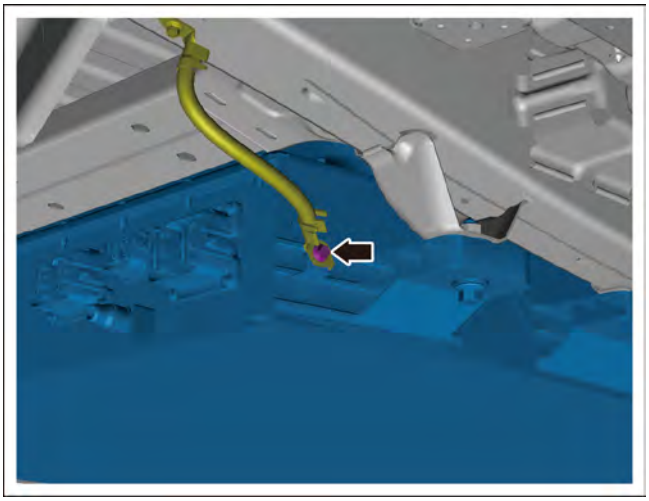
6 Release 6 high-voltage wiring harness retaining clips.



7 Disconnect 3 traction battery pack assembly wiring harness connectors.

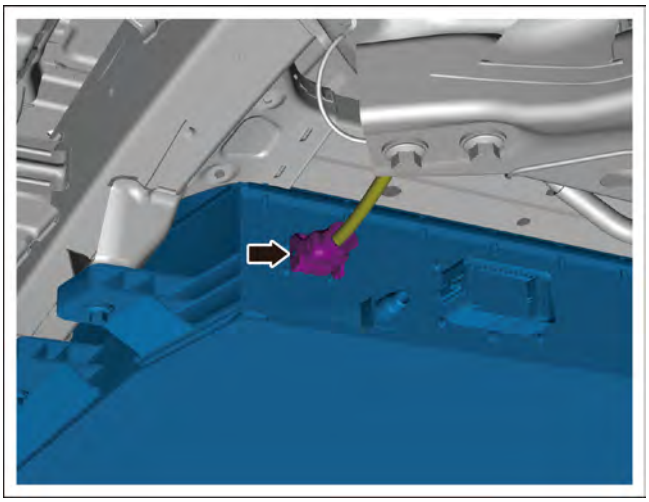
Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

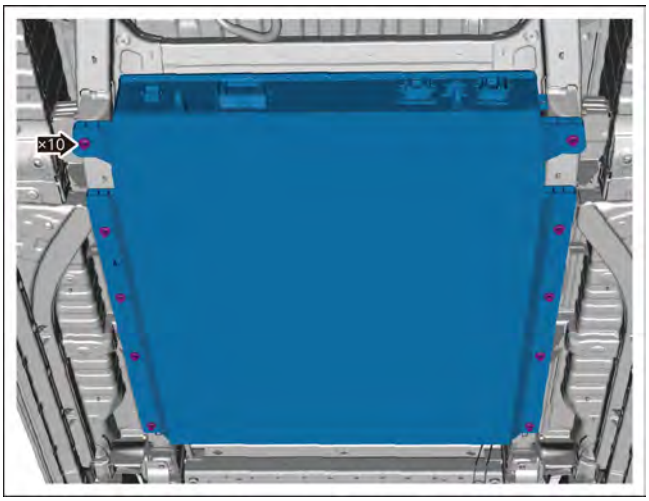


8 Remove battery pack negative ground wiring harness retaining bolt.

Torque:xxx±xxxN



9 Disconnect traction battery pack assembly wiring harness connector.



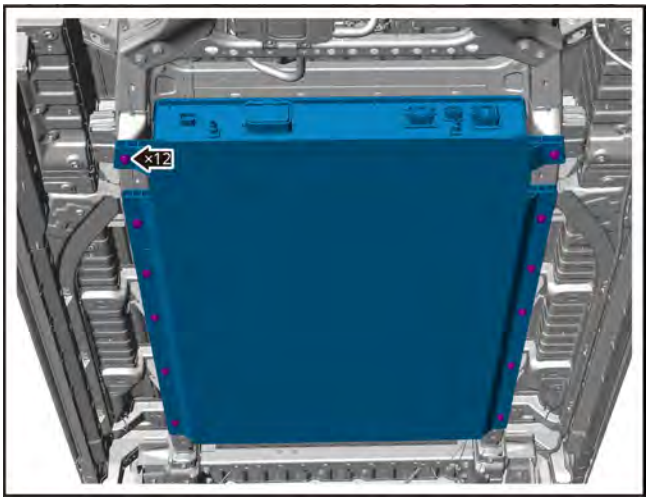
10 Remove traction battery pack assembly (this steps suitable use at 50/70kWh Traction Battery Assembly).

a. Use Vehicle Lift support Traction Battery Assembly.

> ⚠ *Caution*
>
> *Use hydraulic Vehicle Lift raise or support component front, need in level unit and component between place suitable rubber block it pad item, with protection tilt inclined.*

b. Remove traction battery pack assembly 10 retaining bolt.

c. slow lower lower Vehicle Lift and Remove the Traction Battery Assembly.



11 Remove traction battery pack assembly (this steps suitable use at 98kWh traction battery pack assembly).

a. UseVehicle Liftsupport Traction Battery Assembly.

Caution

Use hydraulic Vehicle Lift raise or support component front, need in level unit and component between place suitable rubber block it pad item, with protection tilt inclined.

b. Remove traction battery pack assembly 12 retaining bolt.

c. slow lower lower Vehicle Lift and Remove the Traction Battery Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 if replace traction battery pack assembly, then install complete rear, Use diagnostic scan tool perform “BMS” programming and setting. refer to:controller module programming and setting

Front Drive Motor

parameter

Front Drive Motor Specifications

Item	parameter		
	170KW+50kWh	170KW+70kWh	170KW+98kWh
Drive Motor Type	Permanent Magnet Synchronous Motor	Permanent Magnet Synchronous Motor	Permanent Magnet Synchronous Motor
Drive Motor Model	TZ220QY037	TZ220QY037	TZ220QY041
Drive Motor Rated Power/Torque (kW/N·m)	80/120	80/120	80/125
Drive Motor Peak Power/Torque (kW/N·m)	170/325 (3-in-1 drive unit peak power: 170 kW)	170/325 (3-in-1 drive unit peak power: 170 kW)	170/325 (3-in-1 drive unit peak power: 170 kW)

System Overview

Front Drive System Overview

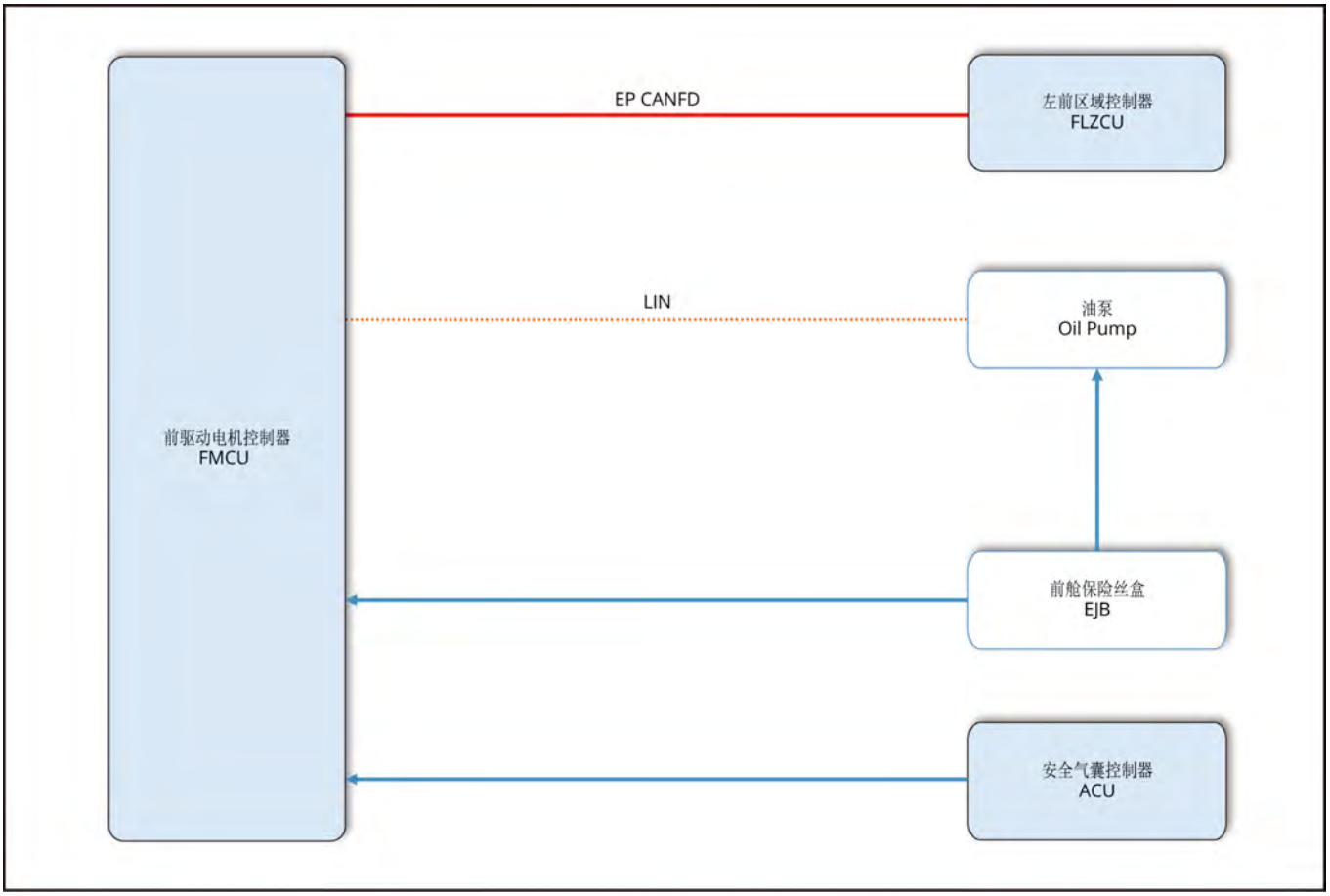
slip operate Energy Recovery

Energy Recovery strength section for disabled, low, high, when Vehicle Speed large at 10km/h and loosen Brake Pedal, Accelerator Pedal, same when vehicle not be in R gear, N gear when, Left Front Zone Control Unit (FLZCU) according to when front setting (disabled, low, high) Energy Recovery strength direction front motor controller (FMCU) transmit Energy Recovery Torque, through motor brake enable slip operate reduce speed and for traction battery charging, Left Front Zone Control Unit (FLZCU) control illuminate Stop Lamp.

brake Energy Recovery

brake can Yes recover no strength gear position setting, when Vehicle Speed reach to 10km/h or more, loosen Accelerator Pedal and depress brake retract panel, and vehicle not be in R gear, N gear when, integrated type brake control system (Onebox) coordinate IV wheel braking force and brake Energy Recovery report item, in meet sufficient target reduce speed front provide lower brake recover Torque transmit to Left Front Zone Control Unit (FLZCU), Left Front Zone Control Unit (FLZCU) rotate send to front motor controller (FMCU) through Drive Motor direction traction battery charging, brake Energy Recovery Torque item add at slip operate Energy Recovery Torque, slip operate Energy Recovery by left item controller (FLZCU) main guide and direction integrated type brake control system (Onebox) Output slip operate recover Torque, and brake Energy Recovery by integrated type brake control system (Onebox) main guide, complete basic braking force and power return feedback braking force coordinate rear, again brake recover Torque transmit to Left Front Zone Control Unit (FLZCU).

Electrical Schematic Diagram



Signal Input/Output List

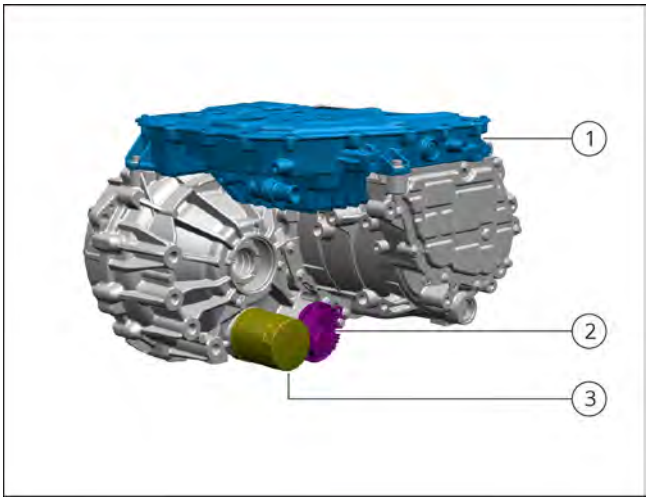
Unit	Signal Type	Signal Name	Signal Name / Signal Description
front motor controller	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	LIN	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission and Status Communication, command control, fault item
oil pump	LIN	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Front Compartment Fuse Box	Hardwired	Power Supply	Front Drive Motor Controller power supply Output
	Hardwired	Power Supply	oil pump power supply Output
Airbag Control Unit	Hardwired	Crash Signal	airbag control Crash Signal Output

Operating Principle Overview

Drive Motor for Permanent Magnet Synchronous Motor, integrated motor controller (MCU), reducer, motor. Permanent Magnet Synchronous Motor benefit use permanent magnet body generate magnetic field, through determine sub- around group III phase AC power shape form rotate magnetic field, and rotor magnetic field phase mutual operate use generate torque, drive rotor rotate. base at magnetic field determine direction control, enable efficiently rate and high power sealed degree.

motor controller (MCU) position at motor and reducer upper side, use IGBT module group. reducer use active lubrication slip and splash lubrication slip, and through Torx button connect perform powertrain transmit. Drive Motor Assembly center motor and reducer for oil cold, through oil water replace thermal unit perform thermal interaction replace, motor controller (MCU) for water cold.

Component Description



No.	Name	No.	Name
1	Drive Motor controller	3	filter
2	electronic oil pump		

Drive Motor controller

Drive Motor controller in Drive Motor upper side, main function is to adjustment Rear Drive Motor speed, torque, side direction, same when according to Drive Motor Status adjustment electronic oil pump coolant flow amount, ensure can rely on powertrain Output and efficiently thermal amount management.

electronic oil pump

electronic oil pump install in Drive Motor lower side, main need Function Yes pump oil, through fluid with travel motor in operation process center generate thermal amount. Drive Motor controller according to Drive Motor operation Status control electronic oil pump, adjust oil pump speed and flow amount, enable more advantage cooling valid result and can valid management.

filter

main needs to operate use for over filter Drive Motor reducer lubrication slip oil center impurity, required determine period replace. replace inside procedure refer to bumper repair maintenance Manual specified.

Fault Diagnosis (FMCU)

Front Drive Motor Controller (FMCU) DTC List

DTC	DTC Meaning	DTC Description
P300017	Over Voltage of 12V	12 V Overvoltage
P300116	Under Voltage of 12V	12V undervoltage
P300217	Over Voltage of 5V	5V overvoltage
P300316	Under Voltage of 5V	5V undervoltage
P300417	Over Voltage of DC Bus	bus line overvoltage
P300516	Under Voltage of DC Bus	bus line undervoltage
P300616	Under Voltage of DC Bus Severely	bus line severe undervoltage Fault
P300716	IGBT Driver Power Supply Voltage Low	drive undervoltage Fault
P300817	Check the state of OverVoltage HW flag	bus line hardware overvoltage Fault
P300996	Phase V Current Sensor Fault	V phase current sensor Fault
P301096	Phase W Current Sensor Fault	W phase current sensor Fault
P301196	Phase U Current Sensor Fault	U phase current sensor Fault
P301296	Two or Three Phase Current Sensor Fault	two phase and or more current sensor Fault
P301319	Check the state of Overcurrent HW	phase current overcurrent fault
P301419	Multiplue Overcurren Fault	multiple times overcurrent fault
P301596	Inlet Temperature Sensor Singal beyond Threshold	coolant temperature sensor Fault
P30164B	Inlet Over Temperature	coolant temperature too high alarm
P301700	Motor Temperature Sensor 1 Signal beyond Threshold	motor 1 circuit temperature sensor Fault protection
P301896	Two Motor Temperature Sensor Signal beyond Threshold	two motor temperature sensor Fault
P30194B	Power limit warning of e-motor over-temperature	motor temperature exceed not limit power threshold
P30204B	Motor Over Temperature	motor temperature exceeds alarm threshold
P30214B	PCB Over Temperature	control panel temperature overheating fault
P30224B	IGBT Junction Over Temperature	IGBT junction temperature exceeds alarm threshold
P30234B	IGBT Over Temperature Fault	IGBT temperature overtemperature Fault
P302496	One Phase IGBT Temperature Sensor Signal beyond Threshold	1 circuit IGBT temperature sensor Fault

DTC	DTC Meaning	DTC Description
P302596	Three Phase IGBT Temperature Sensor Signal beyond Threshold	III circuit IGBT temperature sensor Fault
P302685	Excessive Target Torque Fault	VCU drive Torque signal value exceeds threshold
P302785	Excessive Target Speed Fault	VCU drive speed signal value exceeds threshold
P302800	Motor Overspeed Warning	motor speed exceeds alarm threshold
P302900	IGBT Lower Bridge Driver Fault	lower bridge drive fault
P303000	IGBT Upper Bridge Driver Fault	upper bridge drive fault
P303196	Position Angle Sensor Fault	Position Sensor fault
P303271	Rotor Locked Warning	Motor stall alarm
P303371	Rotor Locked Fault	Motor stall fault
P303400	Crash Event	collision fault
P303500	EOP Fault Slightly	general oil pump fault
P303600	EOP Fault Severely	severe oil pump fault
P303700	Different Operation Modes of Level-1 and Level-2	Level-1 and Level-2 work mode not phase same
P303861	Level-2 Sum of Phase U-V-W Circuit current above threshold	LEVEL2 III phase current and fault
P303900	Active Damping Torque Invalid Fault	LEVEL2 suppress jitter Torque fault
P304062	The Large Deviation Between Level-2 Estimated Torque and Target Torque	LEVEL2 estimation torque and target torque deviation over large fault
P304162	The Large Deviation Of Level-1 And Level-2 Estimated Torque 2	Level-1 and Level-2 estimation torque deviation over large fault
P304291	SBC Initialization Abnormal	TLF35584 self-test abnormal
P304300	SBC Performance Abnormal	TLF35584 operation abnormal
P304491	SBC Register Abnormal	TLF35584 register abnormal
P304502	SBC Communication Abnormal	TLF35584 communication abnormal
P30461D	GD3162 U Phase IC Current Abnormal	GD3162U phase chip current fault
P304700	GD3162 U Phase IC Temperature Abnormal	GD3162U phase chip temperature abnormal
P304896	GD3162 U Phase IGBT Abnormal	GD3162U phase IGBT fault
P30491C	GD3162 U Phase IC Voltage Abnormal	GD3162U phase voltage abnormal
P305091	GD3162 U Phase IC Selfcheck Abnormal	GD3162U phase self-test abnormal
P305102	GD3162 U Phase IC Communication Abnormal	GD3162U phase communication abnormal
P305291	GD3162 U Phase IC Register Abnormal	GD3162U phase register abnormal

DTC	DTC Meaning	DTC Description
P305303	GD3162 U Phase IC PWM Output Abnormal	GD3162U phase chip PWM Output abnormal
P30541D	GD3162 V Phase IC Current Abnormal	GD3162V phase chip current fault
P305500	GD3162 V Phase IC Temperature Abnormal	GD3162V phase chip temperature abnormal
P305600	GD3162 V Phase IGBT Abnormal	GD3162V phase IGBT fault
P30571C	GD3162 V Phase IC Voltage Abnormal	GD3162V phase voltage abnormal
P305891	GD3162 V Phase IC Selfcheck Abnormal	GD3162V phase self-test abnormal
P305902	GD3162 V Phase IC Communication Abnormal	GD3162V phase communication abnormal
P306091	GD3162 V Phase IC Register Abnormal	GD3162V phase register abnormal
P306103	GD3162 V Phase IC PWM Output Abnormal	GD3162V phase chip PWM Output abnormal
P30621D	GD3162 W Phase IC Current Abnormal	GD3162W phase chip current fault
P306300	GD3162 W Phase IC Temperature Abnormal	GD3162W phase chip temperature abnormal
P306400	GD3162 W Phase IGBT Abnormal	GD3162W phase IGBT fault
P30651C	GD3162 W Phase IC Voltage Abnormal	GD3162W phase voltage abnormal
P306691	GD3162 W Phase IC Selfcheck Abnormal	GD3162W phase self-test abnormal
P306702	GD3162 W Phase IC Communication Abnormal	GD3162W phase communication abnormal
P306891	GD3162 W Phase IC Register Abnormal	GD3162W phase register abnormal
P306903	GD3162 W Phase IC PWM Output Abnormal	GD3162W phase chip PWM Output abnormal
P307000	Safety Path SelfCheck Abnormal	safety logic self-test abnormal
P307191	CPU Selfcheck Abnormal	MCU chip self-test abnormal
P307200	CPU Performance Abnormal	MCU chip operation abnormal
P307300	Differential protection Derating Fault	difference speed protection lower rated fault
U273487	Lost Communication With FLZCU	Lost Communication with Left Front Zone Control Unit FLZCU
U271387	Lost Communication With BMS	Lost Communication with Battery Management System BMS
U21B3FB	0x1B3(VCU_FMCU_5) message E2E checksum error	E2E Check Error for 0x1B3(VCU_FMCU_5) Message
U2021FB	0x21(ACU_3) message E2E checksum error	E2E Check Error for 0x21(ACU_3) Message
U007388	Bus off	bus disabled

DTC	DTC Meaning	DTC Description
P30C300	security code not programmed	protection theft safety code not write
P30C400	VIN not programmed	VIN not write
P30C500	Immo secret key not programmed	protection theft safety key not write
P30C600	Authentication not OK	protection theft calibrate core not through
P30C700	Immo Authentication message not received	not receive protection theft verify message
P30C800	Fail to write EOL Immobilizer data into EEProm	EOL protection theft data storage failure
P30C900	Motor Over Temperature Fault	motor overtemperature Fault
P30CA00	IGBT Severely Over Temperature	IGBT severe overtemperature Fault
P30CB00	IGBT Over Temperature Warn	IGBT temperature exceeds alarm threshold
U20A8FB	0xA8(ONEBOX_2) message E2E checksum error	E2E Check Error for 0xA8(ONEBOX_2) Message
U2337FB	0x337(VCU_FMCU_7) message E2E checksum error	E2E Check Error for 0x337(VCU_FMCU_7) Message
U24B4FB	0x4B4(VCU_1_G) message E2E checksum error	E2E Check Error for 0x4B4(VCU_1_G) Message
U225BFB	0x25B(FLZCU_2) message E2E checksum error	E2E Check Error for 0x25B(FLZCU_2) Message
U240BFB	0x40B(VCC_1) message E2E checksum error	E2E Check Error for 0x40B(VCC_1) Message
U2470FB	0x470(VCC_3) message E2E checksum error	E2E Check Error for 0x470(VCC_3) Message
U2102FB	0x102(BMS_1) message E2E checksum error	E2E Check Error for 0x102(BMS_1) Message
U2208FB	0x208(BMS_2) message E2E checksum error	E2E Check Error for 0x208(BMS_2) Message
U271686	The left front Wheel Speed(LHFWheelSpeedRPM) value data is invalid	left front wheel speed (LHFWheelSpeedRPM) data no valid
U271786	The left right Wheel Speed(RHFWheelSpeedRPM) value data is invalid	right front wheel speed (RHFWheelSpeedRPM) data no valid
U271886	The left front Wheel Speed Drive Direction(LHFWheelDriveDirection) value data is invalid	left front wheel side direction (LHFWheelDriveDirection) data no valid
U271986	The right front Wheel Speed Drive Direction(RHFWheelDriveDirection) value data is invalid	right front wheel side direction (RHFWheelDriveDirection) data no valid

DTC	DTC Meaning	DTC Description
U272086	The Desired torque electric machine(VCU_FMCUDesiredTorque) value data is invalid	VCU request Torque (VCU_FMCUDesiredTorque) data no valid
U272186	The Upper limit output torque of electric machine(VCU_FMCUMaxTorqueLimit) value data is invalid	VCU request maximum large Torque (VCU_FMCUMaxTorqueLimit) data no valid
U272286	The Lower limit output torque of electric machine(VCU_FMCUMinTorqueLimit) value data is invalid	VCU request maximum small Torque (VCU_FMCUMinTorqueLimit) data no valid

Front Drive Motor Controller (FinDreams? FMCU) DTC List

DTC	DTC Meaning	DTC Description
P300017	Over Voltage of 12V	12 V Overvoltage
P300116	Under Voltage of 12V	12V undervoltage
P300217	Over Voltage of 5V	5V overvoltage
P300316	Under Voltage of 5V	5V undervoltage
P300417	Over Voltage of DC Bus	DC bus overvoltage
P300516	Under Voltage of DC Bus	DC bus undervoltage
P300616	Under Voltage of DC Bus Severely	DC bus severe undervoltage Fault
P300716	IGBT Driver Power Supply Voltage Low	IGBT drive undervoltage Fault
P300817	Bus HW OverVoltage fault	bus line hardware overvoltage Fault
P300996	Phase V Current Sensor Fault	V phase current sensor Fault
P301096	Phase W Current Sensor Fault	W phase current sensor Fault
P301196	Phase U Current Sensor Fault	U phase current sensor Fault
P301296	Two or Three Phase Current Sensor Fault	two phase or III phase current sensor Fault
P301319	Phase Current HW Overcurrent fault	phase current hardware overcurrent Fault
P301419	Multiplue Overcurren Fault	multiple times overcurrent fault
P301596	Inlet Temperature Sensor fault	coolant temperature sensor Fault
P30164B	Inlet Over Temperature	coolant temperature too high alarm
P301700	Motor Temperature Sensor 1 Signal beyond Threshold	motor 1 circuit temperature sensor Fault protection
P30194B	Motor Temperature beyond Threshold on Power Unrestricted Condition	motor temperature exceed not limit power threshold
P30204B	Motor Over Temperature	motor temperature exceeds alarm threshold
P30214B	PCB Over Temperature	control panel temperature overheating fault
P30224B	IGBT Junction Over Temperature	IGBT junction temperature exceeds alarm threshold
P30234B	IGBT Over Temperature Fault	IGBT temperature overtemperature Fault
P302496	One Phase IGBT Temperature Sensor Signal beyond Threshold	1 circuit IGBT temperature sensor signal value exceed threshold
P302596	Three Phase IGBT Temperature Sensor Signal beyond Threshold	III circuit IGBT temperature sensor signal value exceed threshold
P302685	VCU drive Torque Signal beyond Threshold	VCU drive Torque signal value exceeds threshold

DTC	DTC Meaning	DTC Description
P302785	VCU drive Speed Signal beyond Threshold	VCU drive speed signal value exceeds threshold
P302800	Motor speed beyond Alarm Threshold	motor speed exceeds alarm threshold
P302900	IGBT Lower Bridge Driver Fault	IGBT lower bridge drive fault
P303000	IGBT Upper Bridge Driver Fault	IGBT upper bridge drive fault
P303196	Position Angle Sensor Fault	Location angle sensor Fault
P303271	Rotor Locked Warning	Motor stall alarm
P303371	Rotor Locked Fault	Motor stall fault
P303400	Crash Fault	collision fault
P303500	EOP Fault Slightly	general oil pump fault
P303600	EOP Fault Severely	severe oil pump fault
P303861	Level-2 Sum of Phase U-V-W Circuit current above threshold	LEVEL2 III phase current and exceeds threshold
P304062	The Large Deviation Between Level-2 Estimated Torque and Target Torque	LEVEL2 estimation torque and target torque deviation over large fault
P304291	SBCself-check Abnormal	SBC self-test abnormal
P304300	SBC Performance Abnormal	SBC operation abnormal
P304491	SBC Register Abnormal	SBC register abnormal
P304502	SBC Communication Abnormal	SBC communication abnormal
P304700	GD3100 U Phase chip Temperature Abnormal	GD3100U phase chip temperature abnormal
P304896	GD3100 U Phase IGBT Abnormal	GD3100U phase IGBT abnormal
P305091	GD3100 U Phase Selfcheck Abnormal	GD3100U phase self-test abnormal
P305102	GD3100 Upper Bridge Communication Abnormal	GD3100 upper bridge communication abnormal
P305291	GD3100 U Phase Register Abnormal	GD3100U phase register abnormal
P305500	GD3100 V Phase chip Temperature Abnormal	GD3100V phase chip temperature abnormal
P305600	GD3100 V Phase IGBT Abnormal	GD3100V phase IGBT abnormal
P305891	GD3100 V Phase Selfcheck Abnormal	GD3100V phase self-test abnormal
P305902	GD3100 lower Bridge Communication Abnormal	GD3100 lower bridge communication abnormal
P306091	GD3100 V Phase Register Abnormal	GD3100V phase register abnormal
P306300	GD3100 W Phase chip Temperature Abnormal	GD3100W phase chip temperature abnormal
P306400	GD3100 W Phase IGBT Abnormal	GD3100W phase IGBT abnormal
P306691	GD3100 W Phase Selfcheck Abnormal	GD3100W phase self-test abnormal

DTC	DTC Meaning	DTC Description
P306891	GD3100 W Phase Register Abnormal	GD3100W phase register abnormal
P307000	Safety logic SelfCheck Abnormal	safety logic self-test abnormal
P307191	MCU chip Selfcheck Abnormal	MCU chip self-test abnormal
P307200	MCU chip Performance Abnormal	MCU chip operation abnormal
P307300	Differential speed protection Derating Fault	difference speed protection lower rated fault
U273487	Lost Communication With FLZCU	Lost Communication with Left Front Zone Control Unit FLZCU
U271387	Lost Communication With BMS	Lost Communication with Battery Management System BMS
U21B3FB	0x1B3(VCU_FMCU_5) message E2E checksum error	E2E Check Error for 0x1B3(VCU_FMCU_5) Message
U2021FB	0x21(ACU_3) message E2E checksum error	E2E Check Error for 0x21(ACU_3) Message
U007388	Bus off	bus disabled
P30C300	security code not programmed	protection theft safety code not write
P30C400	VIN not programmed	VIN not write
P30C500	Immo secret key not programmed	protection theft safety key not write
P30C600	Authentication not OK	protection theft calibrate core not through
P30C700	Immo Authentication message not received	not receive protection theft verify message
P30C800	Fail to write EOL Immobilizer data into EEProm	EOL protection theft data storage failure
P30C900	Motor Over Temperature Fault	motor overtemperature Fault
P30CA00	IGBT Severely Over Temperature	IGBT severe overtemperature Fault
P30CB00	IGBT Temperature beyond Aralm threshold	IGBT temperature exceeds alarm threshold
U20A8FB	0xA8(ONEBOX_2) message E2E checksum error	E2E Check Error for 0xA8(ONEBOX_2) Message
U2337FB	0x337(VCU_FMCU_7) message E2E checksum error	E2E Check Error for 0x337(VCU_FMCU_7) Message
U24B4FB	0x4B4(VCU_1_G) message E2E checksum error	E2E Check Error for 0x4B4(VCU_1_G) Message
U225BFB	0x25B(FLZCU_2) message E2E checksum error	E2E Check Error for 0x25B(FLZCU_2) Message
U2102FB	0x102(BMS_1) message E2E checksum error	E2E Check Error for 0x102(BMS_1) Message

DTC	DTC Meaning	DTC Description
U2208FB	0x208(BMS_2) message E2E checksum error	E2E Check Error for 0x208(BMS_2) Message
U271686	The left front Wheel Speed(LHFWheelSpeedRPM) value data is invalid	left front wheel speed (LHFWheelSpeedRPM) data no valid
U271786	The right front Wheel Speed(RHFWheelSpeedRPM) value data is invalid	right front wheel speed (RHFWheelSpeedRPM) data no valid
U271886	The left front Wheel Speed Drive Direction(LHFWheelDriveDirection) value data is invalid	left front wheel side direction (LHFWheelDriveDirection) data no valid
U271986	The right front Wheel Speed Drive Direction(RHFWheelDriveDirection) value data is invalid	right front wheel side direction (RHFWheelDriveDirection) data no valid
U272086	The Desired torque electric machine(VCU_FMCUDesiredTorque) value data is invalid	VCU request Torque (VCU_FMCUDesiredTorque) data no valid
U272186	The Upper limit output torque of electric machine(VCU_FMCUMaxTorqueLimit) value data is invalid	VCU request maximum large Torque (VCU_FMCUMaxTorqueLimit) data no valid
U272286	The Lower limit output torque of electric machine(VCU_FMCUMinTorqueLimit) value data is invalid	VCU request maximum small Torque (VCU_FMCUMinTorqueLimit) data no valid
P30D01C	MCU DC bus voltage sampling circuit fault	MCU DC bus voltage sampling circuit Fault
P30D11C	MCU U phase current sampling circuit fault	MCU U phase current sampling circuit fault
P30D21C	MCU V phase current sampling circuit fault	MCU V phase current sampling circuit fault
P30D31C	MCU W phase current sampling circuit fault	MCU W phase current sampling circuit fault
P30D417	IGBT Driver Power Supply Voltage High	IGBT drive overvoltage Fault
P30D51C	PCB temperature sampling circuit fault	control panel temperature sampling circuit fault
P30D617	Overvoltage fault of backup power supply for driver chip and rotary transformer	Driver IC and resolver backup power supply overvoltage Fault
P30D616	Undervoltage fault of backup power supply for driver chip and rotary transformer	Driver IC and resolver backup power supply undervoltage Fault
P30D71D	Phase current comparison fault	phase current for ratio fault
P30D81C	Bus voltage comparison fault	bus line voltage for ratio fault
P30D996	Motor speed comparison fault	motor speed for ratio fault
P30DA96	Angle comparison fault of rotary transformer	resolver angle for ratio fault

DTC	DTC Meaning	DTC Description
P30DC96	Unexpected output torque fault	non- expected Output Torque fault
P30DD96	Reverse torque fault	Torque reverse direction fault
P30DE96	MCU torque command verification fault	MCU feedback torque and torque command validation Error fault
P30DF96	IGBT three-phase temperature calibration fault	IGBT III phase temperature validation fault
P30E096	Active discharge fault	active discharging fault
P30E100	SBC power chip fault	SBC power supply chip fault
P30E200	SelfTest fault	GD3100 safety Status switch replace self-test fault
P30E300	Driver chip and rotary transformer power failure	SEPIC voltage fault
P30E400	Zero position vaule invalid	EEPROM read zero position no valid fault
U272A87	Lost Communication With ONEBOX(ONEBOX_2)	Lost Communication with ONEBOX(ONEBOX_2)

common fault condition

symptom	may cause	measure
motor Overtemperature / heat dissipation not good	1. Drive Motor wiring harness fault	service Rear Drive Motor related wiring harness.
	2. motor temperature sensor Fault	press motor temperature sensor related DTC service fault. refer to:Front Drive Motor Controller (FMCU) DTC List
	3. electronic oil pump fault	service electronic oil pump.
	4. cooling system line fault	service vehicle cooling system line.
vehicle acceleration performance weak / abnormal	1. Drive Motor wiring harness fault	service Rear Drive Motor related wiring harness.
	2. Rear Drive Motor fault	replace Rear Drive Motor.

P300017

DTC	DTC Description	DTC setting condition	DTC restore condition	may cause	Repair Recommendation
P300017	12 V Overvoltage	detection to 12V power supply voltage ≥18V	detection to 12V Power Supply voltage ≤15V	12V Power Supply circuit abnormal	1. power down Check the battery voltage whether normal. 2. check low-voltage connect line 3. multiple restarts no valid then replace controller

system map: Front Drive Motor Controller

1	Check other modules for power-supply DTCs.

a. check except Front Drive Motor Controller (FMCU) with outer other modules whether store in power-supply fault code.

No → Go to Step 4.

Yes

2	check low-voltage battery voltage.

a. Power off the vehicle.
b. Disconnect the positive and negative terminals of the battery assembly.
c. Use multimeter measure battery positive, negative between voltage value.

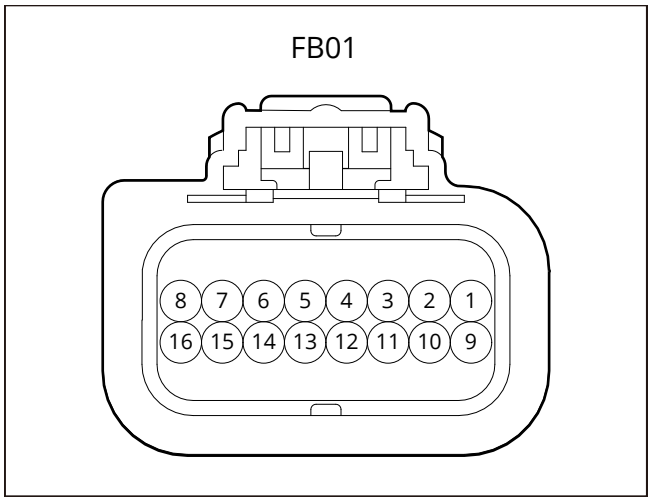
Standard Value	12~14V

d. confirm measure result whether meet the specification value.

No → service battery.

Yes

3	check vehicle low-voltage charging system.



a. Power on the vehicle.
b. Use multimeter measure DCDC positive terminal and connect ground between voltage value.
c. Check whether the measured value meets the specification.

No → troubleshoot vehicle low-voltage charging system fault.

Yes

4	replace Front Drive Motor Controller (FMCU).

a. replace Front Drive Motor Controller. refer to:
b. Check whether the system operates normally.

No → Perform diagnosis according to the DTC output.

Yes

5	recheck DTC.

a. Reconnect the diagnostic scan tool and clear the DTCs.
b. Read the DTCs again and verify that the system operates normally.

Yes → Troubleshoot the fault.

P300116

DTC	DTC Description	DTC setting condition	DTC restore condition	may cause	Repair Recommendation
P300016	12 V Overvoltage	detection to 12V power supply voltage ≥18V	detection to 12V Power Supply voltage ≤15V	12V Power Supply circuit abnormal	1. power down Check the battery voltage whether normal. 2. check low-voltage connect line 3. multiple restarts no valid then replace controller

system map: Front Drive Motor Controller

1	Check other modules for power-supply DTCs.

a. check except Front Drive Motor Controller (FMCU) with outer other modules whether store in power-supply fault code.

No → Go to Step 4.

Yes

2	check low-voltage battery voltage.

a. Power off the vehicle.
b. Disconnect the positive and negative terminals of the battery assembly.
c. Use multimeter measure battery positive, negative between voltage value.

Standard Value	12~14V

d. confirm measure result whether meet the specification value.

No → service battery.

Yes

3	check vehicle low-voltage charging system.

terminal map

a. Power on the vehicle.
b. Use multimeter measure DCDC positive terminal and connect ground between voltage value.

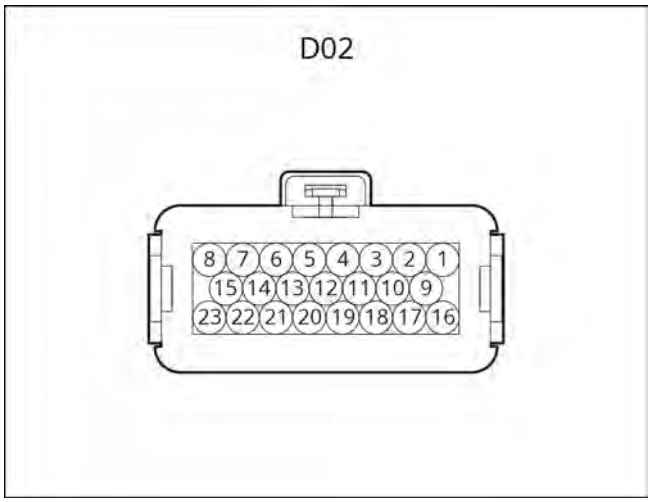
Standard Value	14~16V

c. Check whether the measured value meets the specification.

No → troubleshoot vehicle low-voltage charging system fault.

Yes

4	check Front Drive Motor Controller (FMCU) power supply Circuit.



a. Power off the vehicle.
b. disconnect Front Drive Motor Controller (FMCU) wiring harness connector CJ01.
c. Power on the vehicle.
d. Use multimeter measure wiring harness connector CJ01 9, 16 terminal and 1, 2 terminal between voltage value.

Standard Value	12~14V

5	replace Front Drive Motor Controller (FMCU).

a. replace Front Drive Motor Controller. refer to:Front Drive Motor Controller
b. Check whether the system operates normally.

No → Perform diagnosis according to the DTC output.

Yes

6	recheck DTC.

a. Reconnect the diagnostic scan tool and clear the DTCs.
b. Read the DTCs again and verify that the system operates normally.

Yes → Troubleshoot the fault.

Repair Procedure

Transmission Fluid Draining and Filling

Warning

*For health and safety information, refer to:*Health and Safety

Caution

row output transmission fluid when, note fluid may be in high temperature Status, prevent item injury.

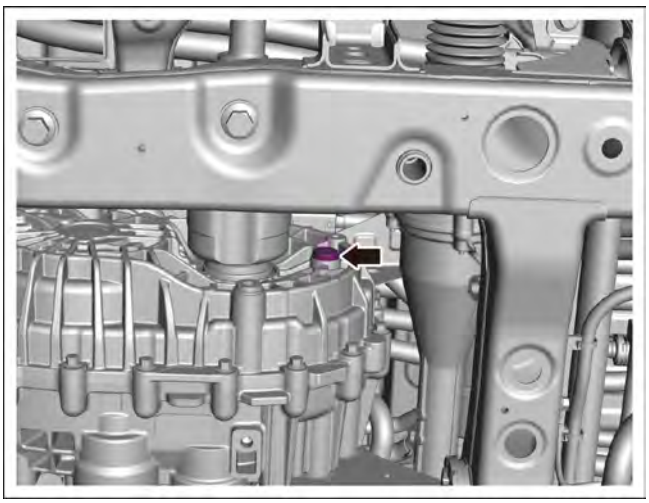
Tips

perform operation front, must first use air gun blow item around foreign matter, again use no dust layout friction item water stain and oil contamination, and item view confirm area clean, no foreign matter residual.

Tips

please query bumper repair maintenance Manual obtain remove fluid replace cycle and inside procedure.

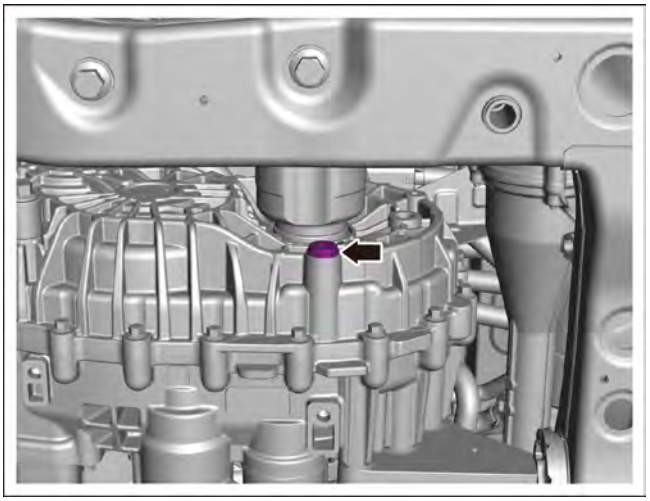
drain steps



1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

3 Remove motor reducer assembly add oil plug.



4 drain transmission fluid.

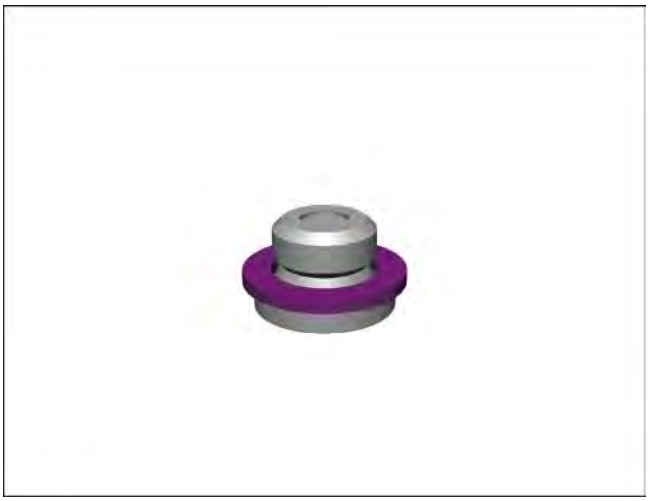
a. Fluid Drain Panplace at place oil port lower side.

b. Remove place oil plug, drain transmission fluid.

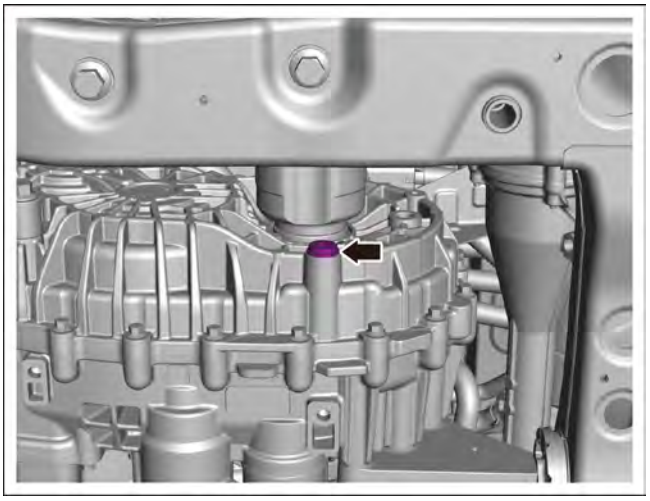
Tips

Remove rear, clean plug magnetic characteristic area intake attached dolly item and impurity.

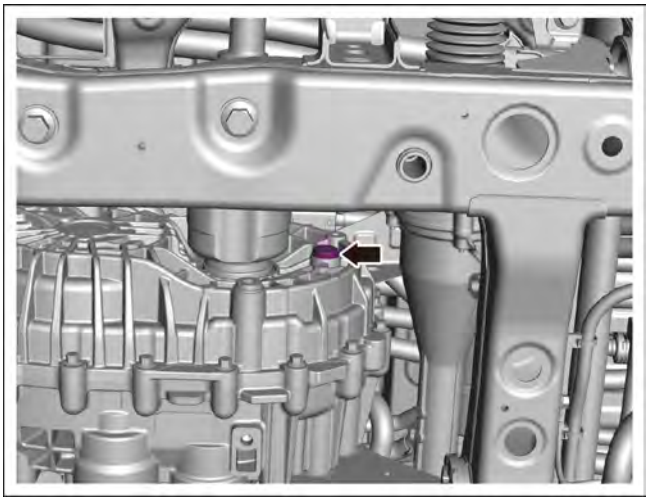
fill steps



1 check place oil, add oil plug pad piece, if with pressure item, deformation, cracks then must must replace new pad piece.



2 Install motor reducer assembly place oil plug.



3 fill transmission fluid.

a. transmission fluid fill toLubricant Filling Machineinner.
fluid fill amount:x.xL

b. from fill port fill transmission fluid, direct to transmission fluid from fill port spill for stop.

c. Install motor reducer assembly place oil plug, clean fill port around residual fluid.

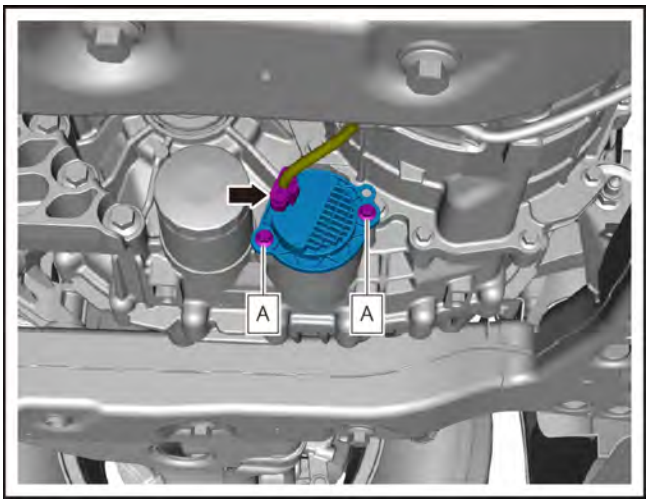
Electronic Oil Pump, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure



4 remove electronic oil pump.

a. Fluid Drain Panplace at electronic oil pump lower side.

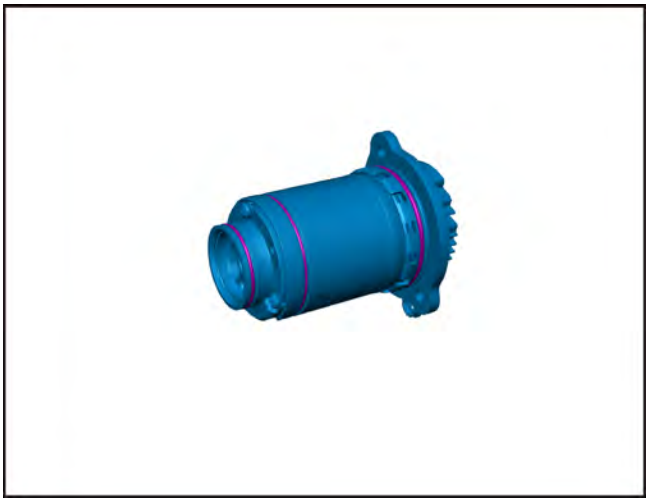
b. Disconnect electronic oil pump wiring harness connector.

c. Remove 2 retaining bolt A, remove electronic oil pump.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install front, check oil pump install hole inner whether there is contamination, foreign matter.



3 check seal ring whether damage or deterioration, necessary when replace; install front in seal ring upper apply suitable amount lubrication slip oil (recommended electric drive same model lubrication slip oil).

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

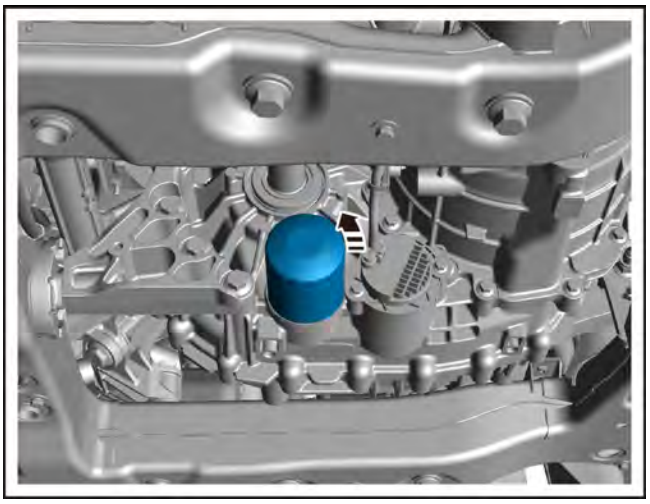
Filter, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

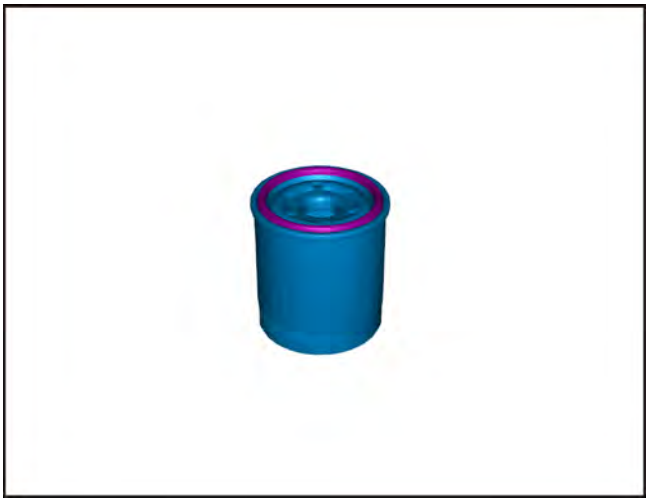
3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure



4 Fluid Drain Panplace filter lower side, along direction arrow side direction remove filter.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, in seal ring upper apply suitable amount lubrication slip oil (recommended electric drive same model lubrication slip oil).

3 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

Flared Straight Fitting Body, Repair Procedure

Warning

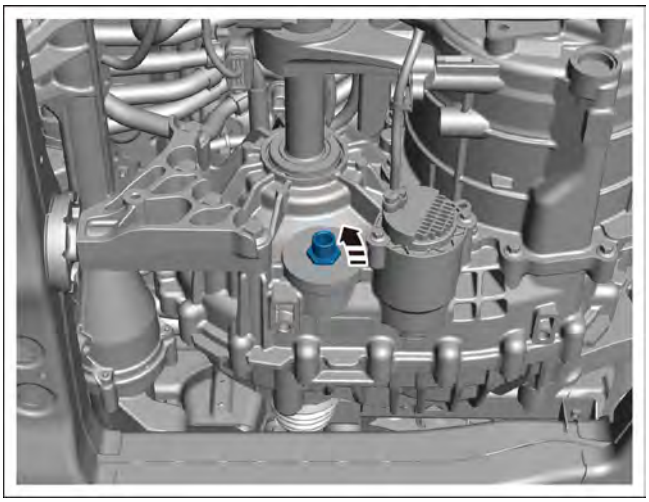
*For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

3 Remove filter. Refer to:Filter, Repair Procedure



4 Remove Flared Straight Fitting Body.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

Normal Close Type Communication Air Plug, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

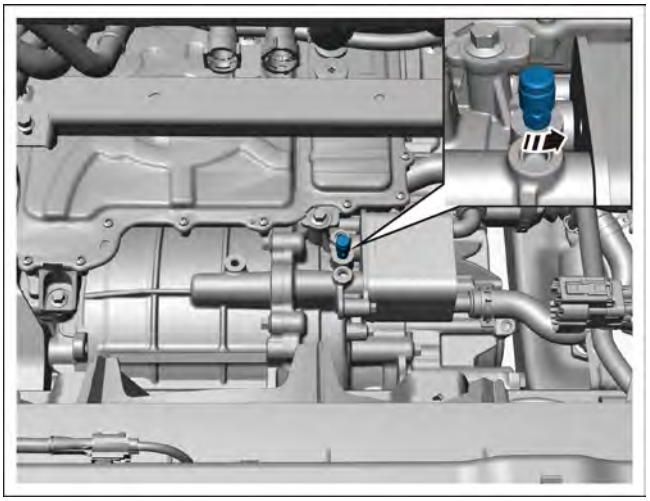
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

4 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

5 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure



6 Remove normal close type communication air plug.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Oil Cold Unit, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

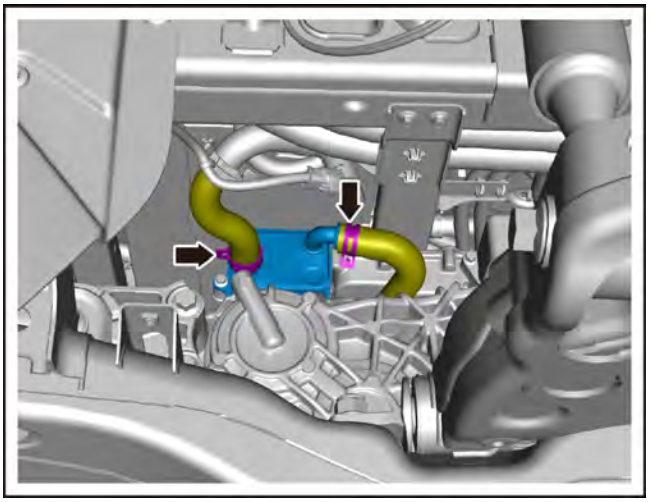
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

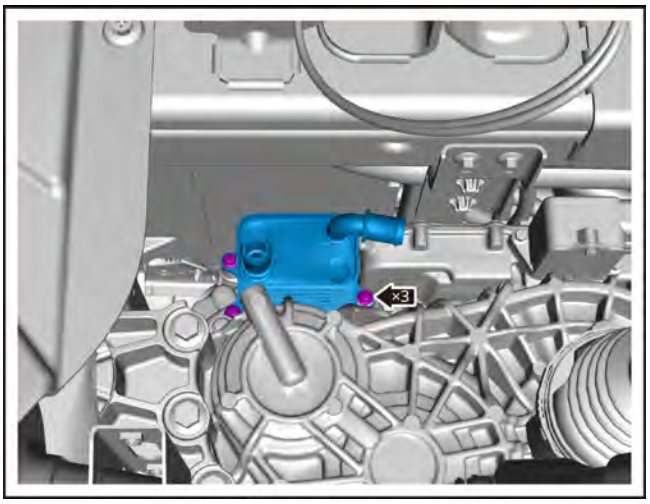
3 Drain the electric drive system coolant. Refer to:Coolant Draining and Filling



4 remove 2 retaining clamp, UseHose Pinch-off PliersDisconnect the coolant hose connected to the oil cooler.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



5 Remove 3 retaining bolt, remove oil cold unit.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install front check seal ring whether damage or deterioration, necessary when replace; install when in seal ring upper apply suitable amount lubrication slip oil.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Frame Oil Seal (Output Shaft), Repair Procedure

Warning

*For health and safety information, refer to:*Health and Safety

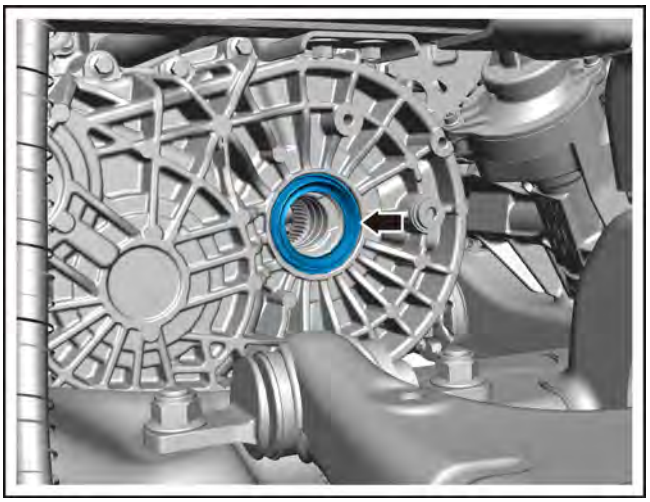
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

3 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

4 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure



5 Remove frame oil seal (Output shaft).

Notes

Remove oil seal when careful operation, avoid scratch oil seal install hole inner round surface.

Caution

oil seal for I times characteristic part, remove rear need replace new oil seal, strict prohibit re- reset Use.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install front, in oil seal install hole inner round surface apply suitable amount transmission fluid.

3 Usefront motor oil seal install tooloil seal horizontal pressure enter to install hole inner, not obtain item inclined pressure enter; pressure install deep degree ensure oil seal item part low at housing pressure install surface 0–1mm.

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

Stamped Resolver Cover, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

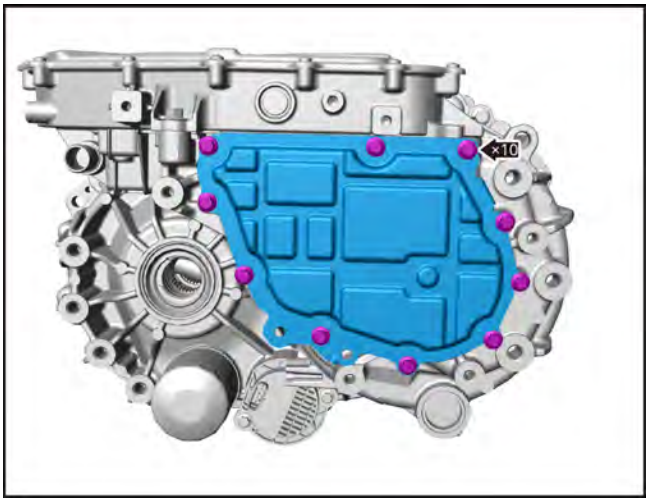
3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

6 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

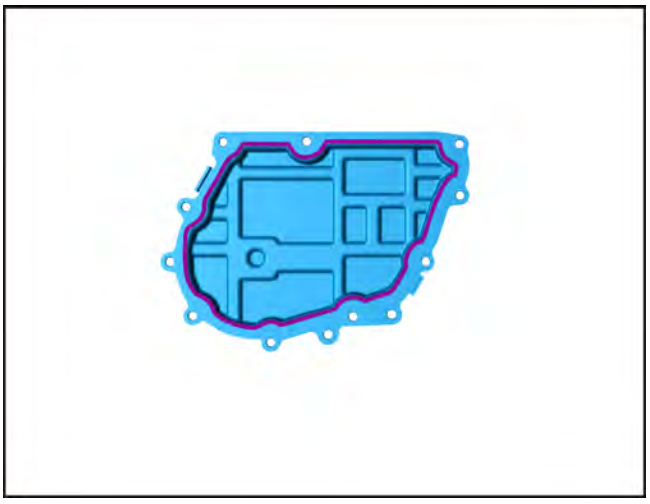
7 Remove electric compressor mounting bracket. Refer to:Electric Compressor Mounting Bracket, Repair Procedure



8 Remove 10 retaining bolt, remove Stamped Resolver Cover.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front first use alcohol wipe coat adhesive seal surface, again along trajectory uniformly coat cover Seam Sealer.

recommended Seam Sealer model: item item 5910.

3 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Front Drive Motor Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

6 Remove left front, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

7 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure

8 Remove right constant velocity drive shaft assembly. Refer to:Right Constant Velocity Drive Shaft Assembly, Repair Procedure

9 Remove subframe jumper harness. Refer to:Subframe Jumper Harness, Repair Procedure

10 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

11 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure

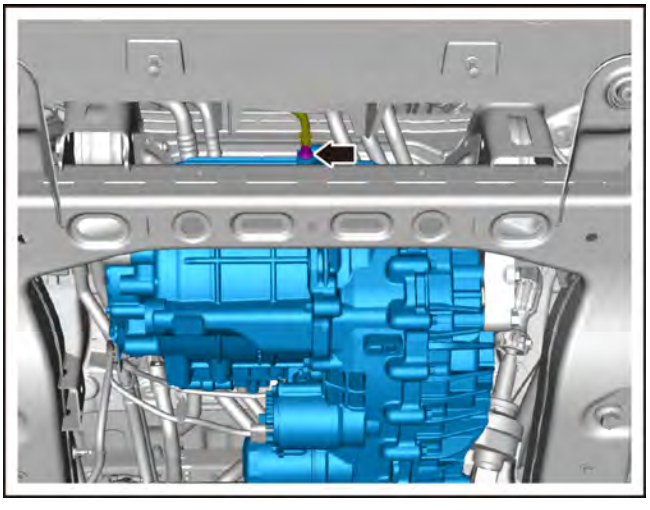
12 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

13 Remove electric drive inlet hose assembly - Heat-pump A/C (this steps suitable use at Heat-pump A/C Vehicle). Refer to:Electric Drive Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

14 Remove electric drive inlet hose assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:Electric Drive Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

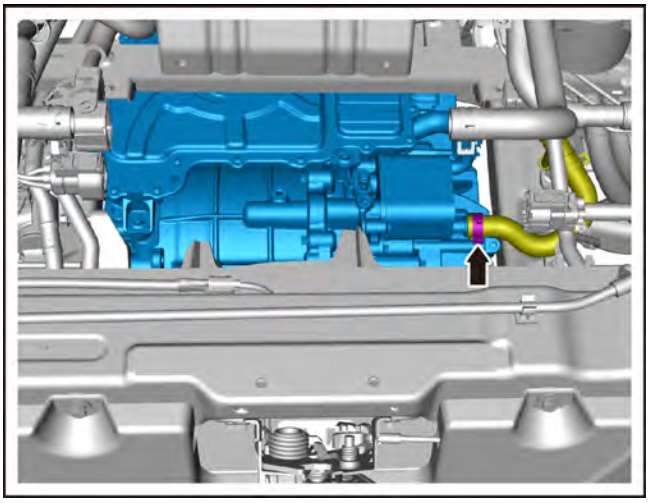
15 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

16 Remove electric compressor mounting bracket. Refer to:Electric Compressor Mounting Bracket, Repair Procedure



17 Remove motor negative ground harness retaining bolt.

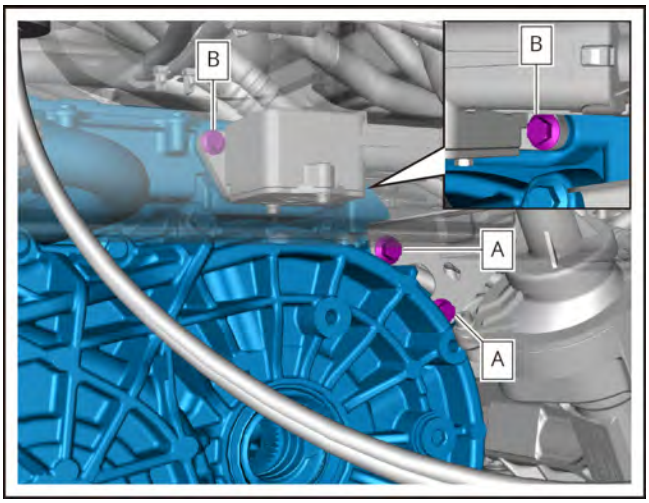
Torque:xxx±xxN·m



18 Remove retaining clamp, release electric drive outlet hose assembly.

Caution

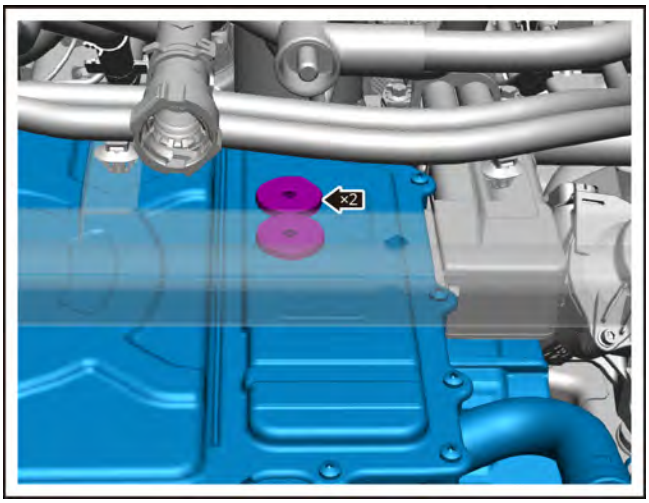
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



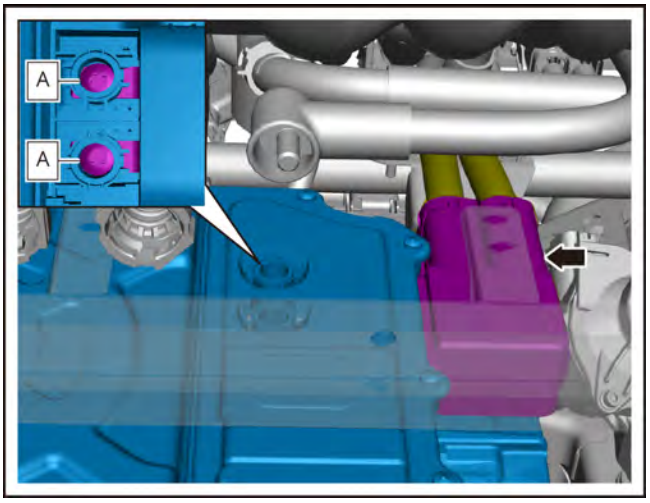
19 Remove high-voltage line fastener.

a. Remove high-voltage line 2 retaining bolt A.

b. Remove high-voltage line 2 retaining bolt B.



20 Remove 2 open port cover.



21 Disconnect Front Drive Motor assembly wiring harness connector.

a. Remove high-voltage line 2 retaining bolt A.

b. Disconnect Front Drive Motor assembly wiring harness connector.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

22 UseVehicle Liftsupport Front Drive Motor assembly.

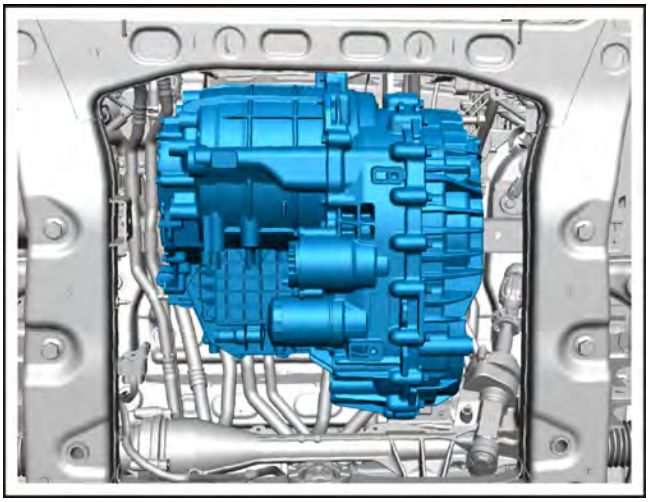
Caution

Use hydraulic Vehicle Lift raise or support component front, need in level unit and component between place suitable rubber block it pad item, with protection tilt inclined.

23 Remove left mount software pad assembly. Refer to:Left Mount Software Pad Assembly, Repair Procedure

24 Remove right mount software pad assembly. Refer to:Right Mount Software Pad Assembly, Repair Procedure

25 Remove rear suspension position bracket. Refer to:Rear Suspension Position Bracket, Repair Procedure



26 slow lower lower Vehicle Lift and remove Front Drive Motor assembly.

Caution

Remove when, be sure to confirm all accessory and body no dry involve, No then may will cause component damage, even hazard and person body safety.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Follow-up Work:

Install complete rear, in safety circuit segment perform circuit test, ensure vehicle driving stable, powertrain transfer stability, no jerking sensing.

Controller Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 Remove left, right wheel assembly. Refer to:Wheel Assembly, Removal and Installation

6 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure

7 Remove right constant velocity drive shaft assembly. Refer to:Right Constant Velocity Drive Shaft Assembly, Repair Procedure

8 Remove subframe jumper harness. Refer to:Subframe Jumper Harness, Repair Procedure

9 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

10 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

11 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure

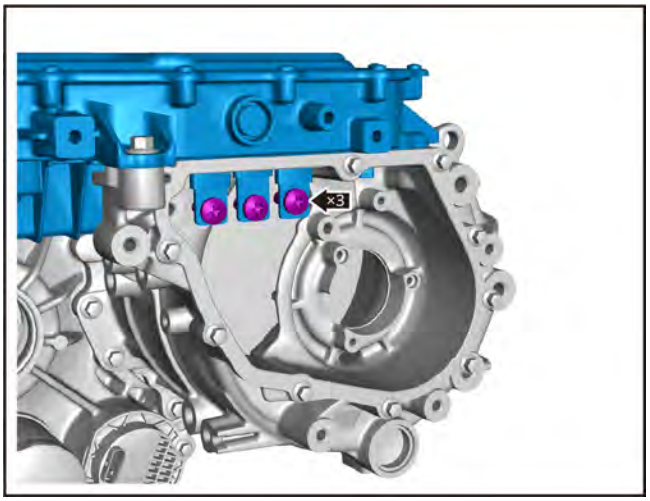
12 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

13 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

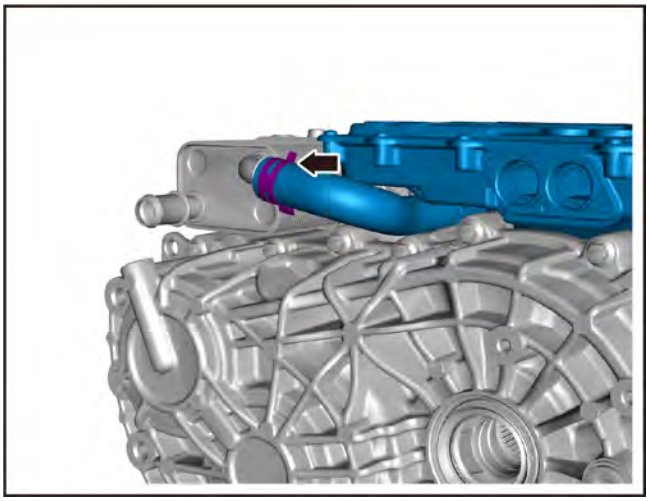
14 Remove electric compressor mounting bracket. Refer to:Electric Compressor Mounting Bracket, Repair Procedure

15 Remove Front Drive Motor assembly. Refer to:Front Drive Motor Assembly, Repair Procedure

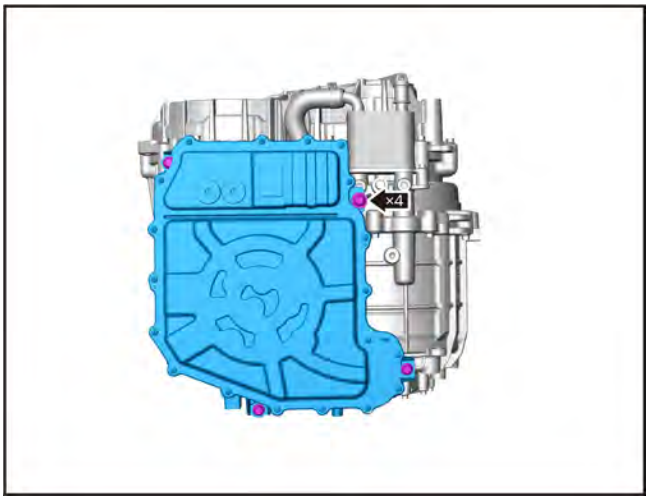
16 Remove Stamped Resolver Cover. Refer to:Stamped Resolver Cover, Repair Procedure



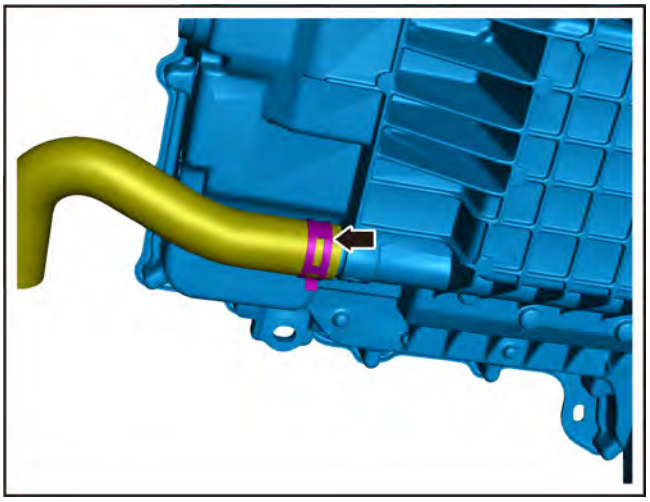
17 Remove Controller Assembly 3 retaining bolt.



18 disconnect controller coolant hose retaining clamp.



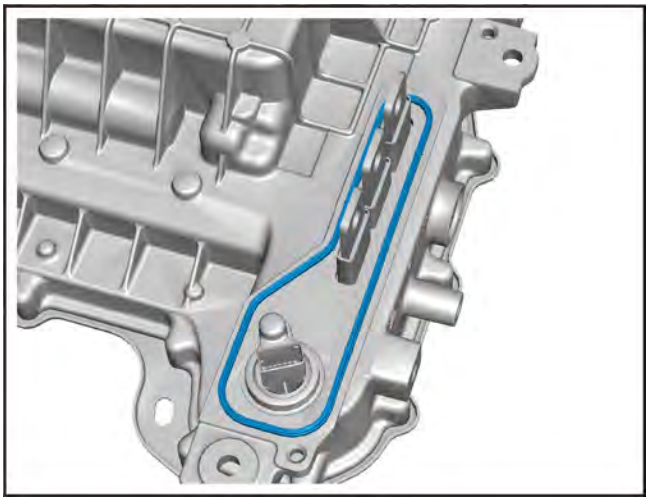
19 Remove the controller assembly retaining screws.



20 Release the coolant hose retaining clamp and remove the controller assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether normal. if with necessary, replace new seal ring.

3 Install complete rear, for vehicle perform electric drive cavity air sealed characteristic test.

4 Install complete rear, for vehicle perform motor water channel air sealed characteristic test.

5 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

6 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

7 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

8 Install complete rear, for vehicle perform four-wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Controller Coolant Hose, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

6 Remove left front, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

7 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure

8 Remove right constant velocity drive shaft assembly. Refer to:Right Constant Velocity Drive Shaft Assembly, Repair Procedure

9 Remove subframe jumper harness. Refer to:Subframe Jumper Harness, Repair Procedure

10 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

11 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure

12 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

13 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

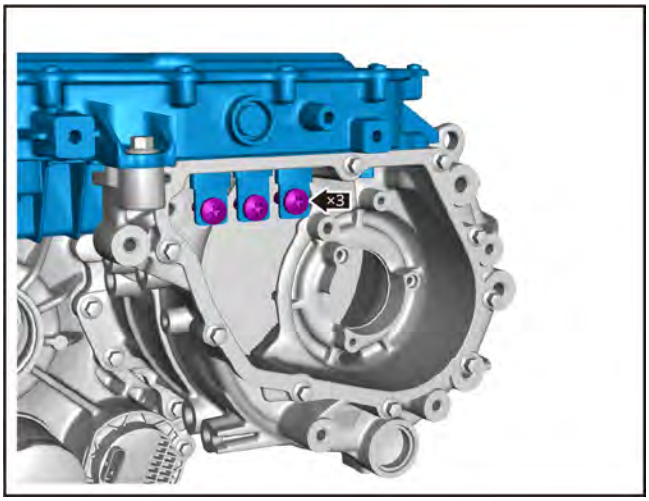
14 Remove electric compressor mounting bracket. Refer to:Electric Compressor Mounting Bracket, Repair Procedure

15 Remove electric drive inlet hose assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:Electric Drive Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

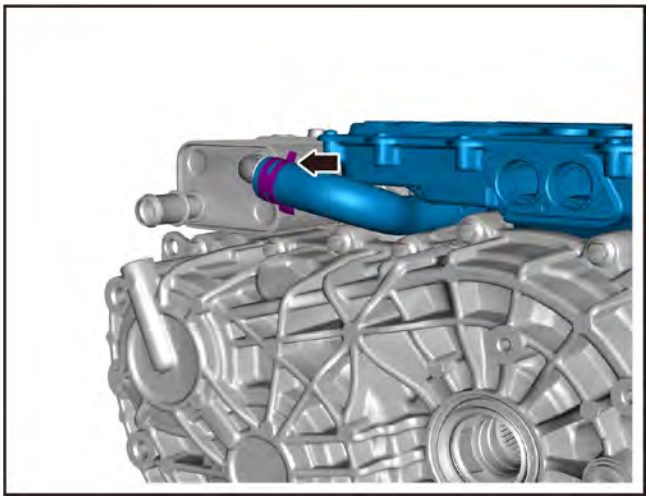
16 Remove electric drive inlet hose assembly - Heat-pump A/C (this steps suitable use at Heat-pump A/C Vehicle). Refer to:Electric Drive Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

17 Remove Front Drive Motor assembly. Refer to:Front Drive Motor Assembly, Repair Procedure

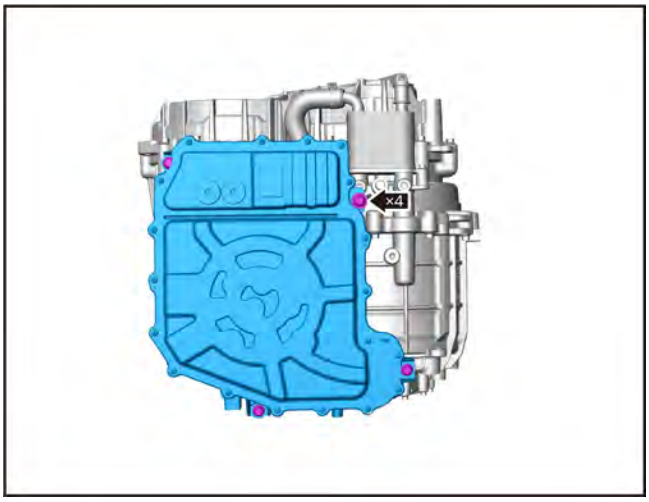
18 Remove Stamped Resolver Cover. Refer to:Stamped Resolver Cover, Repair Procedure



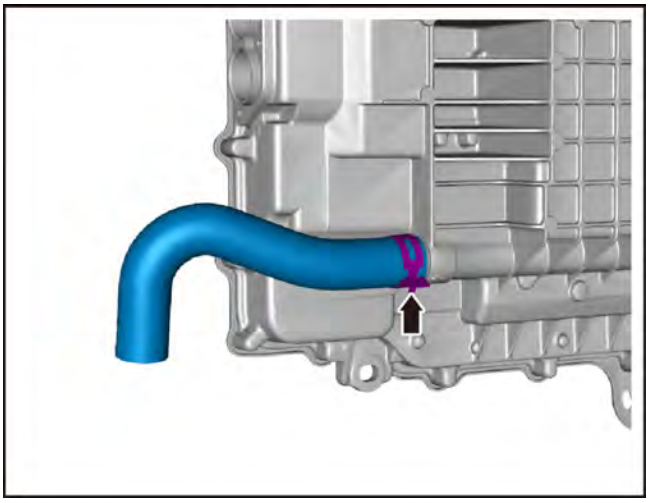
19 Remove Controller Assembly 3 retaining bolt.



20 Remove the controller coolant hose retaining clamp.



21 Remove the controller assembly retaining screws.



22 Remove the retaining clamp and remove the controller coolant hose.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Motor Reducer Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 Remove left front, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

6 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure

7 Remove right constant velocity drive shaft assembly. Refer to:Right Constant Velocity Drive Shaft Assembly, Repair Procedure

8 Remove subframe jumper harness. Refer to:Subframe Jumper Harness, Repair Procedure

9 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

10 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

11 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure

12 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

13 Remove electric drive inlet hose assembly - Heat-pump A/C (this steps suitable use at Heat-pump A/C Vehicle). Refer to:Electric Drive Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

14 Remove electric drive inlet hose assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:Electric Drive Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

15 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

16 Remove electric compressor mounting bracket. Refer to:Electric Compressor Mounting Bracket, Repair Procedure

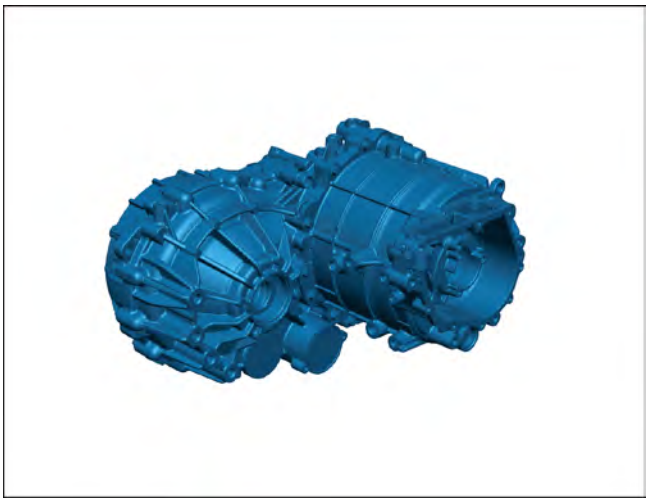
17 Remove filter. Refer to:Filter, Repair Procedure

18 Remove electronic oil pump. Refer to:Electronic Oil Pump, Repair Procedure

19 Remove Front Drive Motor assembly. Refer to:Front Drive Motor Assembly, Repair Procedure

20 Remove Stamped Resolver Cover. Refer to:Stamped Resolver Cover, Repair Procedure

21 Remove Controller Assembly. Refer to:Controller Assembly, Repair Procedure



22 Remove motor reducer assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Follow-up Work:

Install complete rear, in safety circuit segment perform circuit test, ensure vehicle driving stable, powertrain transfer stability, no jerking sensing.

powertrain power cable

Component Description

CDU to PTC& compressor line

Yes vehicle air conditioning system center important component, responsible for high-voltage power supply from Charge/Discharge Power Distribution Unit (CDU) transmission to power A/C compressor (EAC) and rear heat module (RAPTC), ensure power A/C compressor (EAC) and rear heat module (RAPTC) normal operation.

CDU to battery pack line

Charge/Discharge Power Distribution Unit (CDU) Yes connect vehicle high-voltage system each component bridge beam, ensure power can valid distribution and system safety, can rely on operation.

CDU to V2L remove power panel

CDU to V2L remove power panel position at vehicle front bridge chassis upper, responsible for connect Charge/Discharge Power Distribution Unit (CDU) and V2L remove power panel related button assembly and control power can efficiently transmission and system outer connect load operation.

MCU to battery pack line

Front Drive Motor Controller (FMCU) power cable assembly position at traction battery front side, Yes connect vehicle high-voltage battery and Front Drive Motor related button assembly, responsible for power can efficiently transmission and system control, ensure vehicle powertrain system stability operation.

Repair Procedure

CDU to PTC& Compressor Line, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

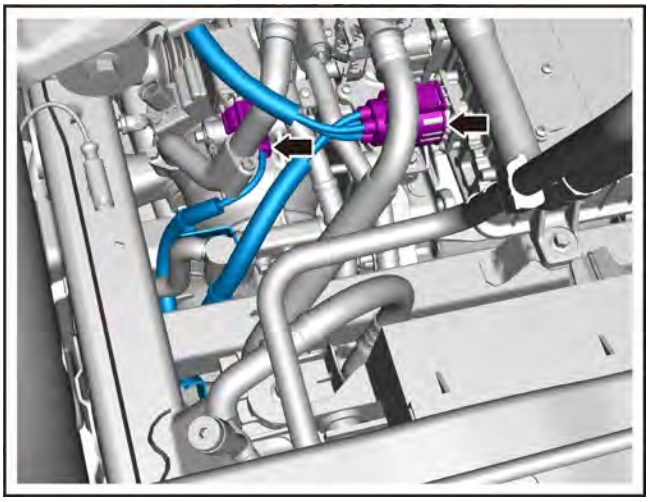
remove procedure

1 Power down the vehicle high-voltage system. Refer to:Power Down the Vehicle High-voltage System

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the coolant. Refer to:Coolant Draining and Filling

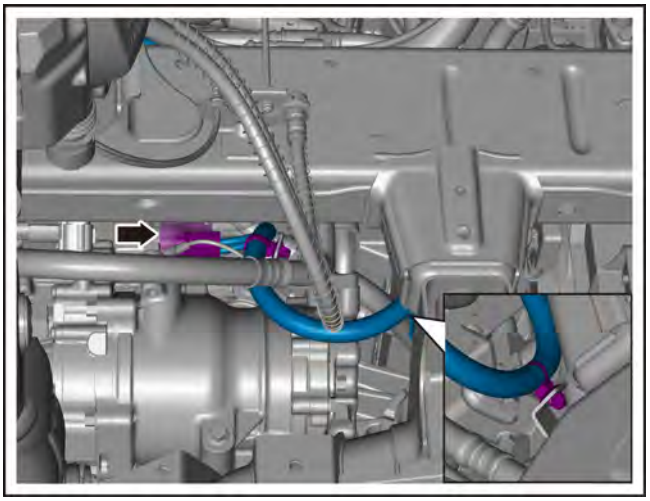
4 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure



5 Disconnect CDU to PTC& compressor wiring harness connector.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.



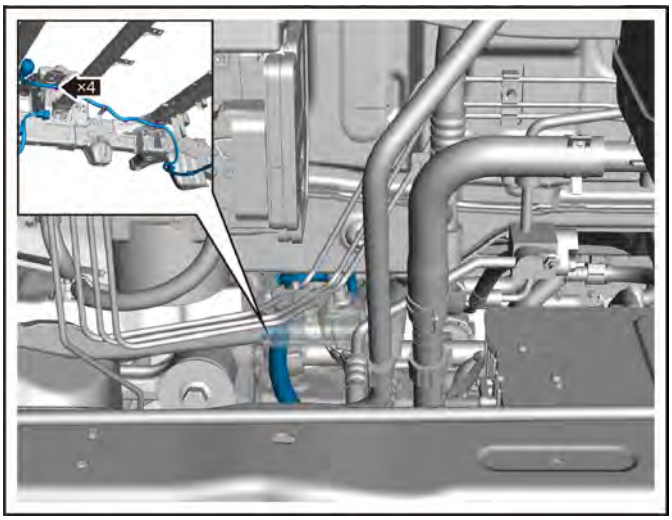
6 Remove CDU to PTC& compressor line fastener.

a. Release CDU to PTC& compressor line retaining clip.

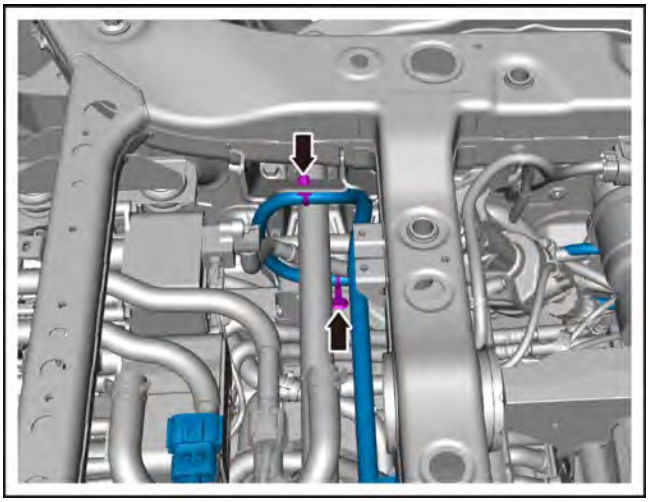
b. Disconnect CDU to PTC& compressor line wiring harness connector.

Caution

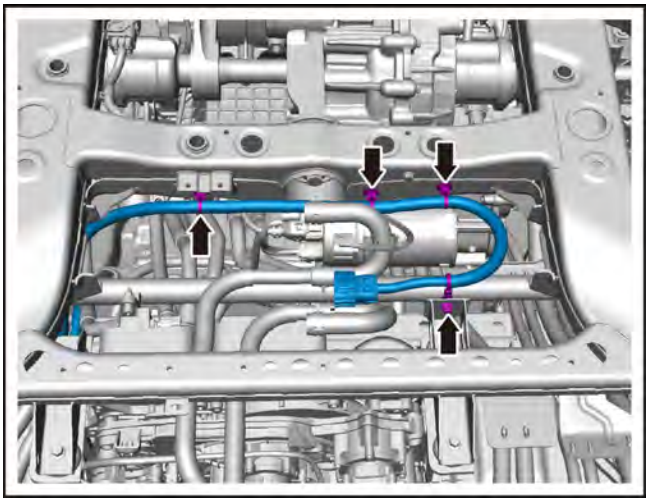
disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.



7 Release 4 CDU to PTC& compressor line retaining clips.



8 Release 2 CDU to PTC& compressor line retaining clips.



9 release 4 retaining clip, remove CDU to PTC& compressor line.

install procedure

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

5 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

CDU to Battery Pack Line, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

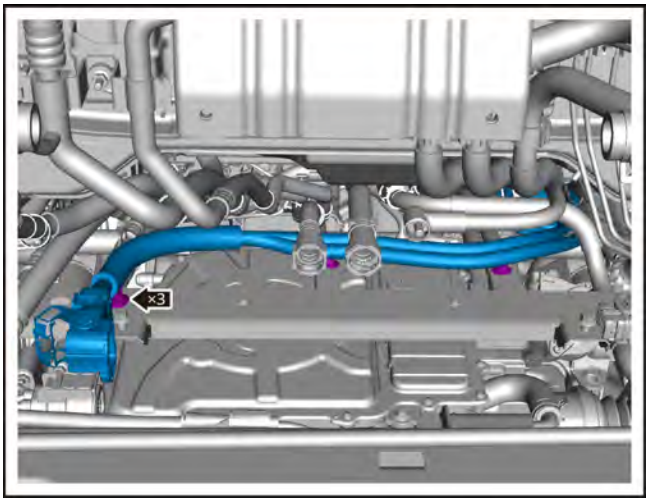
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

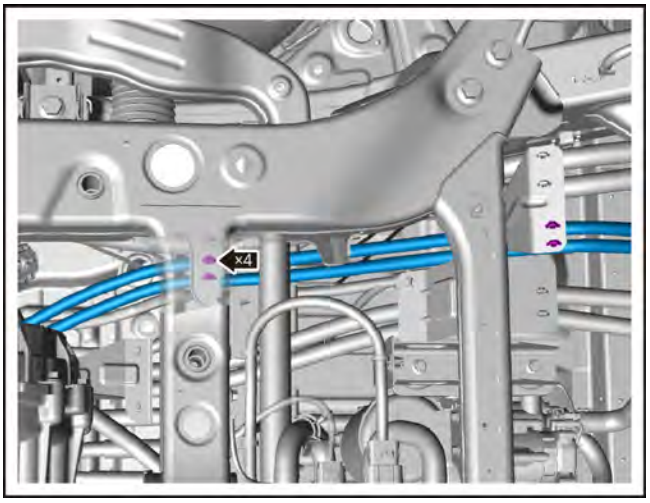
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

4 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

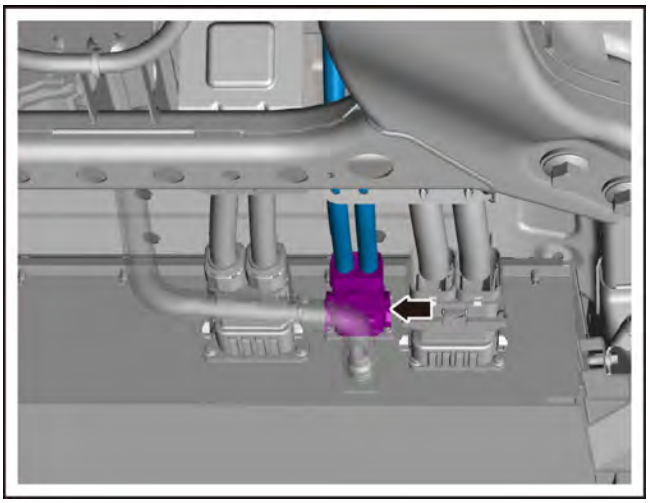
5 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure



6 Release 3 CDU to battery pack line retaining clips.



7 Release 4 CDU to battery pack line retaining clips.



8 disconnect wiring harness connector, remove CDU to battery pack line.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

5 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

CDU to V2L Remove Power Panel, Repair Procedure

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Caution

place aggregate fluid unit, with protection fluid leak to ground surface.

Caution

row output transmission fluid when, note fluid may be in high temperature Status, prevent item injury.

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

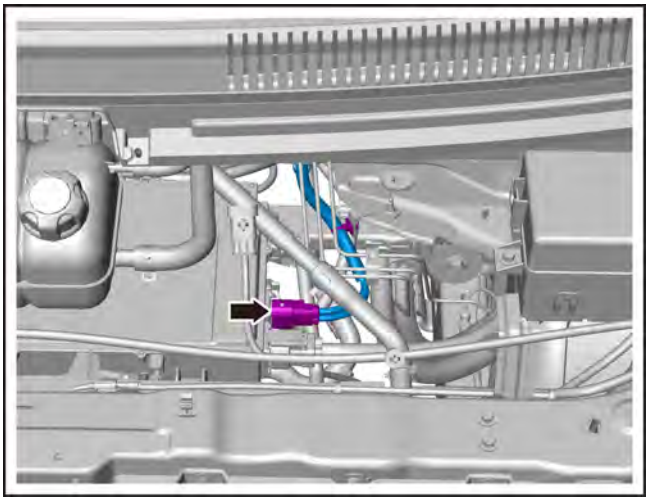
3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Remove In-vehicle AC Power Outlet. Refer to:In-Vehicle AC Power Outlet, Repair Procedure

5 Drain the coolant. Refer to:Coolant Draining and Filling

6 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

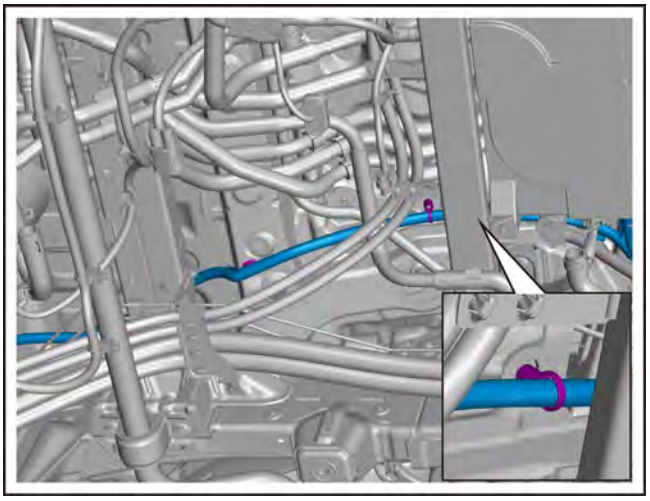
7 Remove front Subframe Assembly. Refer to:Front Subframe Assembly, Removal and Installation



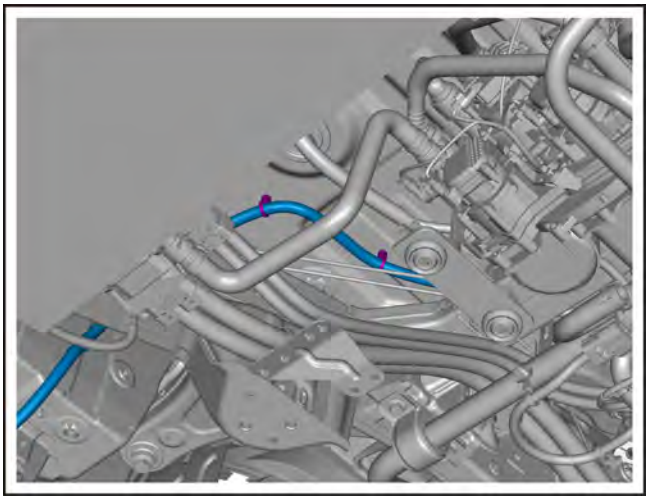
8 Remove CDU to V2L remove power panel fastener.

a. Disconnect CDU to V2L remove power panel wiring harness connector.

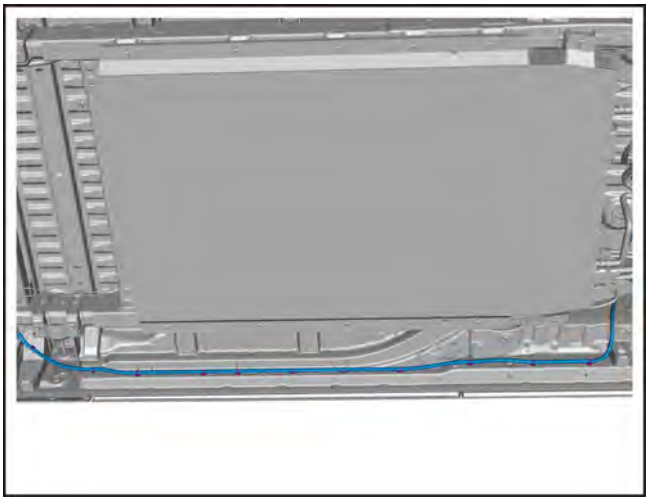
b. Release CDU to V2L remove power panel retaining clip.



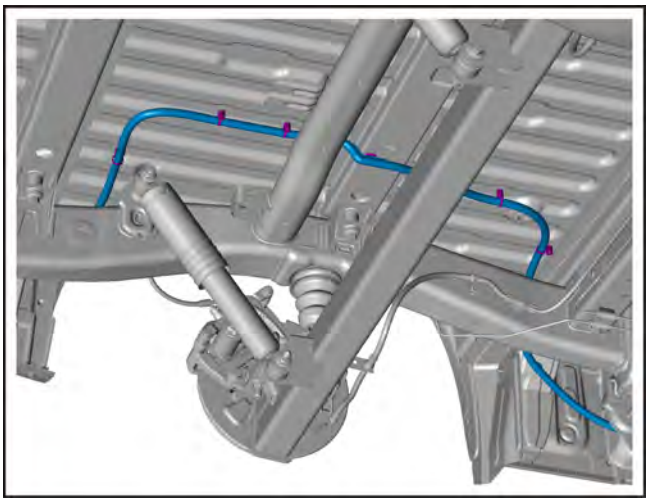
9 Release CDU to V2L remove power panel retaining clip.



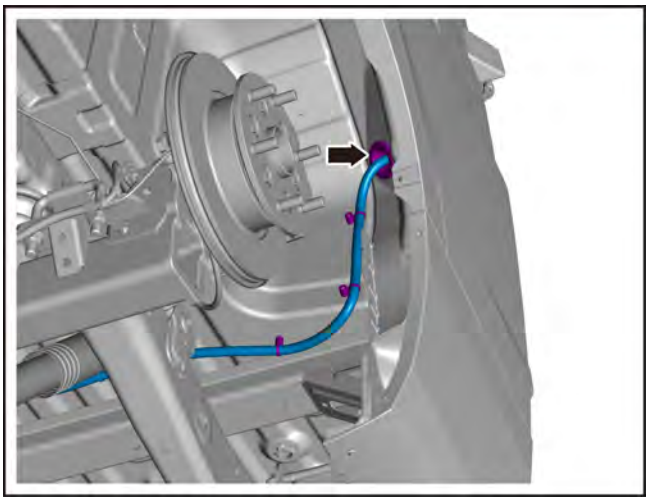
10 Release CDU to V2L remove power panel retaining clip.



11 Release CDU to V2L remove power panel retaining clip.



12 Release CDU to V2L remove power panel retaining clip.



13 Remove CDU to V2L remove power panel.

a. Release CDU to V2L remove power panel retaining clip.

b. release retaining adhesive sleeve, remove CDU to V2L remove power panel.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

MCU to Battery Pack Line, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

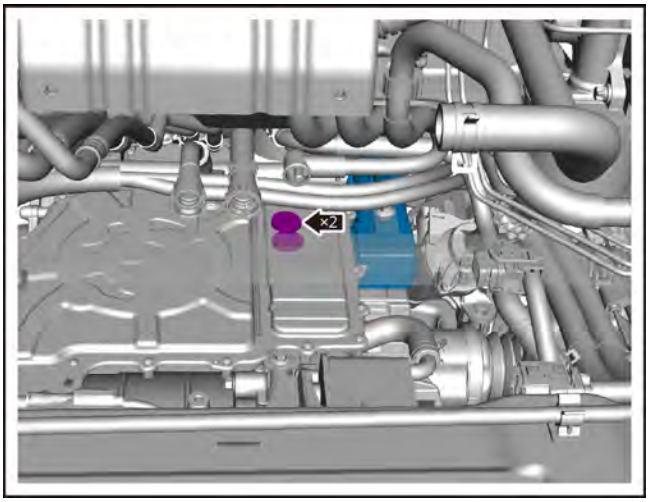
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

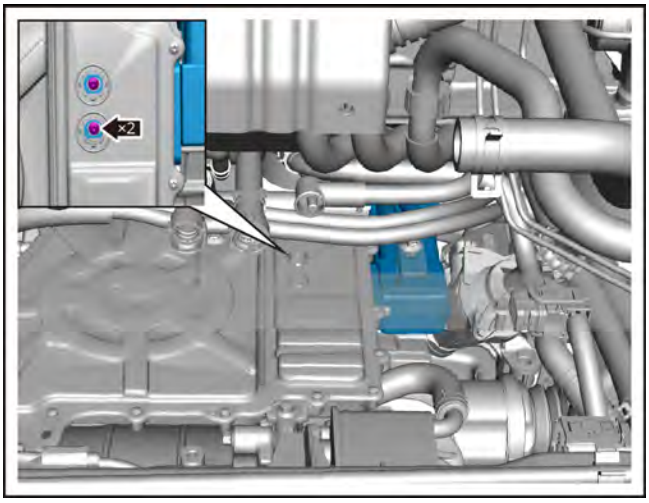
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

4 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

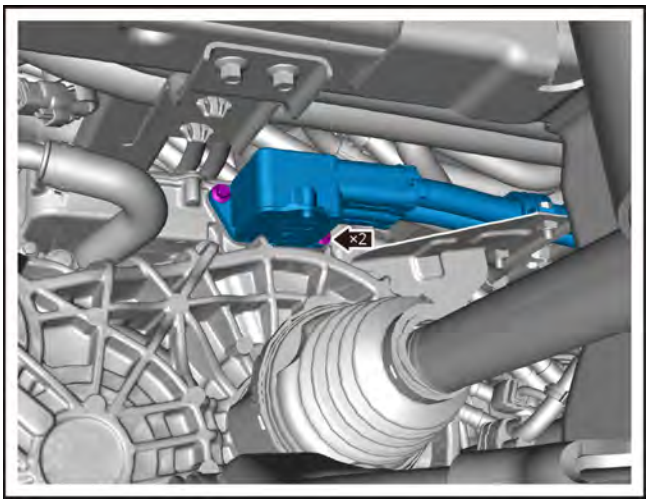
5 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure



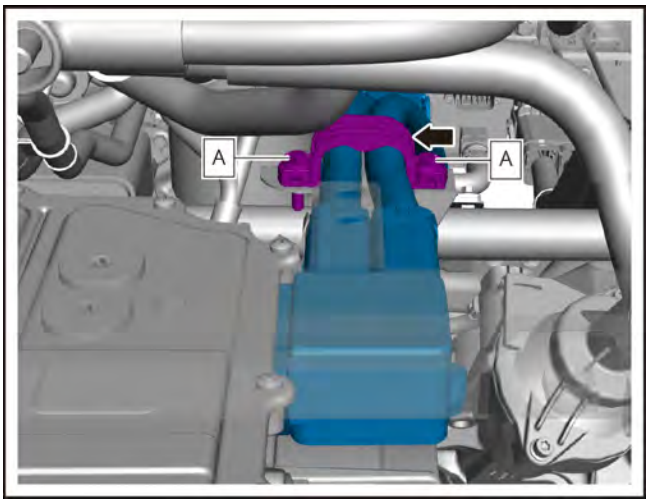
6 Remove 2 open port cover.



7 Remove MCU to battery pack line 2 retaining bolt.



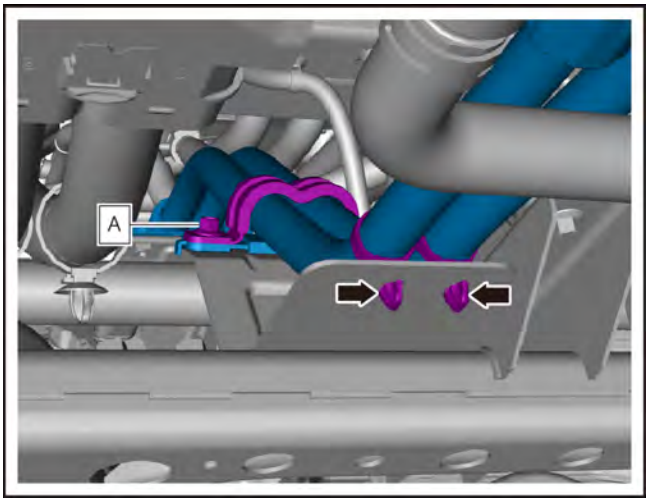
8 Remove MCU to battery pack line 2 retaining bolt.



9 Remove 2 retaining bolt A, release MCU to battery pack line.

Caution

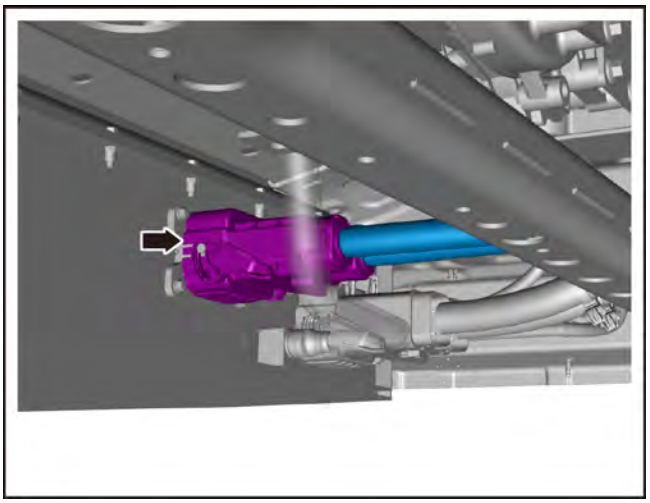
disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.



10 Remove MCU to battery pack line retaining part.

a. Remove MCU to battery pack line retaining bolt A.

b. Release 2 MCU to battery pack line retaining clips.



11 disconnect wiring harness connector, remove MCU to battery pack line.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

5 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

charging discharging system

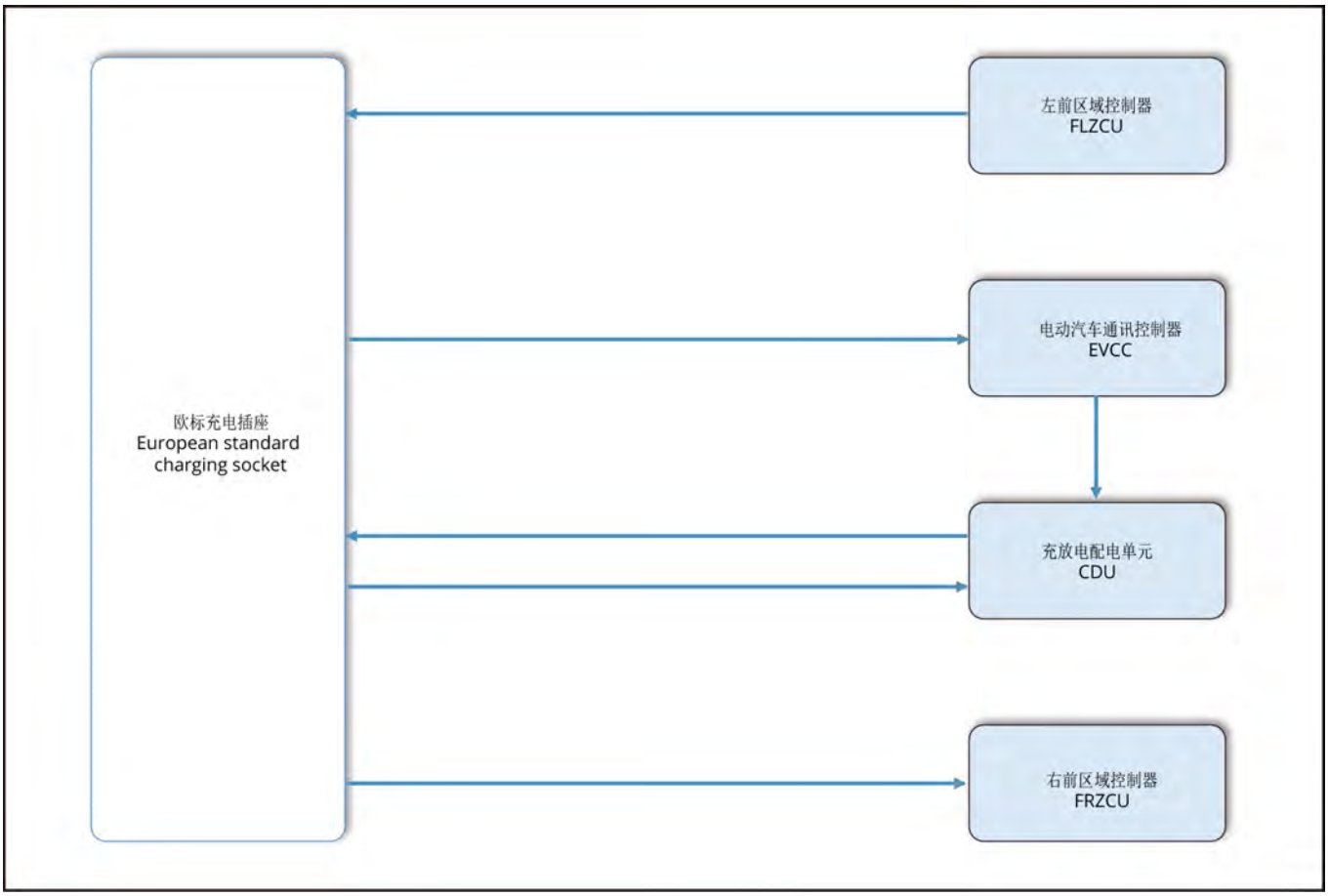
System Overview

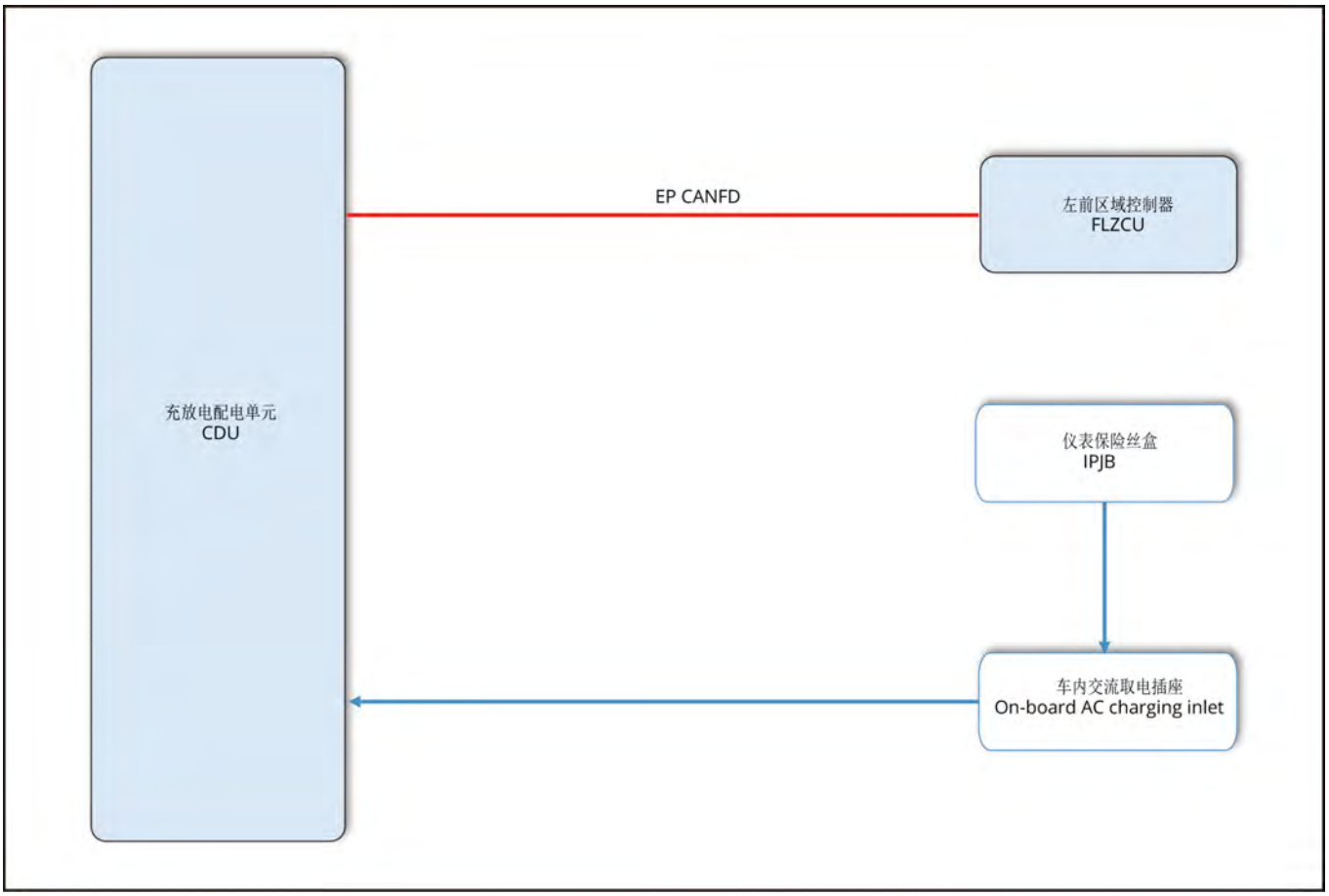
Charging Discharging System Overview

AC/DC Charging Inlet Assembly position at vehicle left front fender, integrated AC Charging Port (AC charging socket) and DC Fast Charging Port (DC charging socket).

AC/DC Charging Inlet Assembly section for high-voltage and low-voltage two part section, two section distinguish responsible for not same Function, item same ensure charging process safety, efficiently and can rely on. high-voltage part section main need responsible for power can transmission, direct connect and vehicle high-voltage battery system connect. it assembly include: high-voltage connector, high-voltage line cable, protection unit. high-voltage connector and high-voltage line cable use at connect charging gun high-voltage port, transmission large current; low-voltage part section main need responsible for charging process center communication control and safety, it assembly with: communication port, control circuit, sensor. communication port and control circuit use at charging station and vehicle between data interaction replace, management charging procedure; sensor use at monitoring temperature, current etc. Parameters, provide actual when data.

Electrical Schematic Diagram





Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
European-standard Charging Inlet	Hardwired	Control Signal	Left Front Zone Control Unit charging Indicator Lamp red lamp Control Signal Input
	Hardwired	Control Signal	Left Front Zone Control Unit charging Indicator Lamp item lamp Control Signal Input
	Hardwired	Control Signal	Left Front Zone Control Unit charging Indicator Lamp blue lamp Control Signal Input
	Hardwired	Power Supply	Charge/Discharge Power Distribution Unit electronic lock perform lock positive terminal Input
	Hardwired	Control Signal	Charge/Discharge Power Distribution Unit electronic lock perform lock negative Input
	Hardwired	Position Signal	electronic lock perform lock Location Feedback Signal Output
	Hardwired	Confirmation Signal	Charge/Discharge Power Distribution Unit charging gun connect confirm PP signal Input
	Hardwired	Control Signal	Electric Vehicle Communication Controller charging control trigger guide CP signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L1 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L2 hole position Temperature Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L3 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit N hole position Temperature Signal Output
	Hardwired	Temperature Signal	Right Front Zone Control Unit DC+ hole position Temperature Signal Output
	Hardwired	Temperature Signal	Right Front Zone Control Unit DC- hole position Temperature Signal Output
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Control Signal	European-standard Charging Inlet charging Indicator Lamp red lamp Control Signal Output
	Hardwired	Control Signal	European-standard Charging Inlet charging Indicator Lamp item lamp Control Signal Output
	Hardwired	Control Signal	European-standard Charging Inlet charging Indicator Lamp blue lamp Control Signal Output
Charge/Discharge Power Distribution Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	European-standard Charging Inlet charging Indicator Lamp blue lamp Control Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	European-standard Charging Inlet electronic lock perform lock negative Output
	Hardwired	Position Signal	European-standard Charging Inlet electronic lock perform lock Location Feedback Signal Input
	Hardwired	Confirmation Signal	European-standard Charging Inlet charging gun connect confirm PP signal Output
	Hardwired	Temperature Signal	European-standard Charging Inlet L1 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet L2 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet L3 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet N hole position Temperature Signal Input
	Hardwired	Switch Signal	In-vehicle AC Power Outlet discharging Switch Signal Input
Right Front Zone Control Unit	Hardwired	Temperature Signal	European-standard Charging Inlet DC+ hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet DC- hole position Temperature Signal Input
Electric Vehicle Communication Controller	Hardwired	Control Signal	European-standard Charging Inlet charging control trigger guide CP signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
In-vehicle AC Power Outlet	Hardwired	Switch Signal	Charge/Discharge Power Distribution Unit discharging Switch Signal Output
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Input
Instrument Panel Fuse Box	Hardwired	Power Supply	In-vehicle AC Power Outlet power supply Output

Component Description

AC/DC Charging Inlet Assembly

AC/DC Charging Inlet Assembly position at vehicle left front fender at, main need Function Yes for vehicle provide Charging Ports. I body type charging socket assembly integrated DC charging and AC charging socket, can sufficient support two type charging mode, Use corresponding charging gun connect to vehicle charging socket, that is can for vehicle perform charging.

In-vehicle AC Power Outlet

cargo compartment rear side area item layout position 3 group 220V AC Convenience Power Supply socket, system peak value total Output power 6600W, Output Specification AC 220V/50Hz; suitable matching probe item this, item audio equipment etc. small power capacity characteristic electronic equipment, prohibit stop connected to large power resistance characteristic heat electrical component.

Repair Procedure

AC/DC Charging Inlet Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

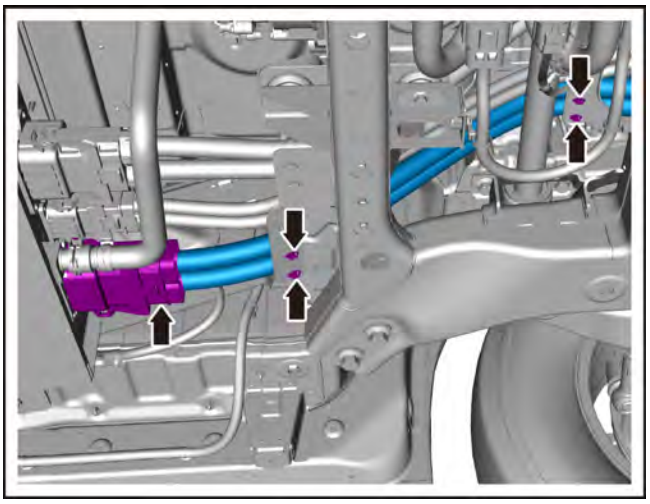
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

4 Remove Charging Port Cover Assembly. Refer to:Charging Port Cover Assembly, Repair Procedure



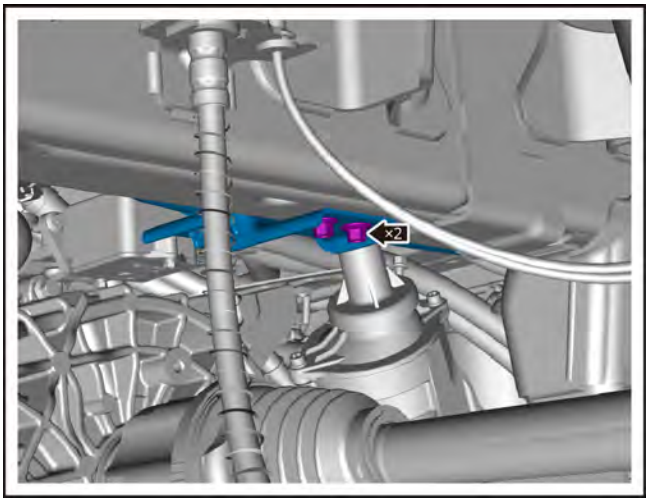
5 Release AC/DC Charging Inlet Assembly retaining clip.

a. Disconnect AC/DC Charging Inlet Assembly wiring harness connector.

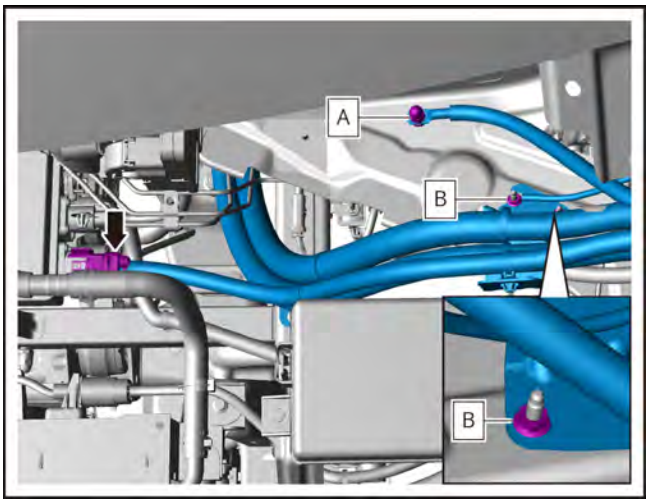
Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

b. Release 4 AC/DC Charging Inlet Assembly retaining clips.



6 Remove AC/DC Charging Inlet Assembly 2 retaining bolt.



7 Remove AC/DC Charging Inlet Assembly retaining nut.

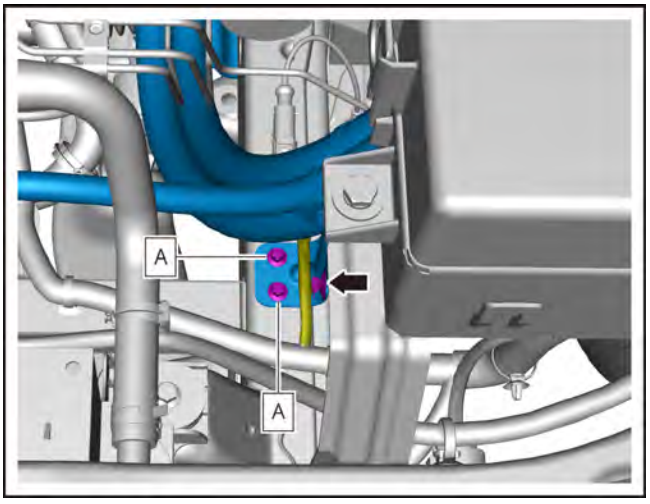
a. Disconnect AC/DC Charging Inlet Assembly wiring harness connector.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

b. Remove AC/DC Charging Inlet Assembly ground cable retaining nut A.
Torque:xxx±N·m

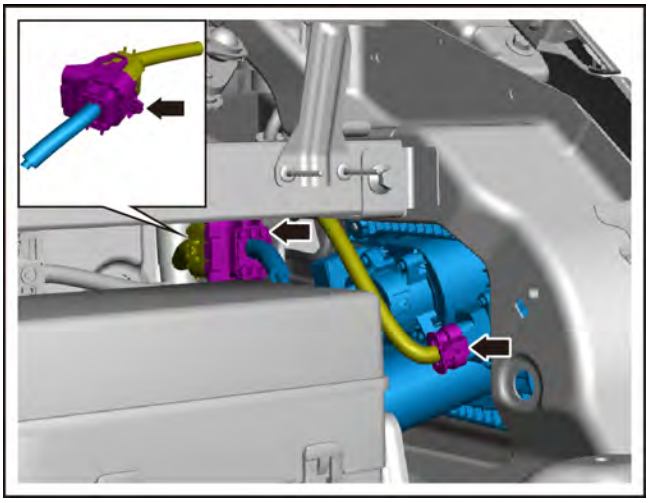
c. Remove AC/DC Charging Inlet Assembly 2 retaining nut B.
Torque:xxx±N·m



8 Remove AC/DC Charging Inlet Assembly retaining part.

a. Release front compartment wiring harness assembly retaining clip.

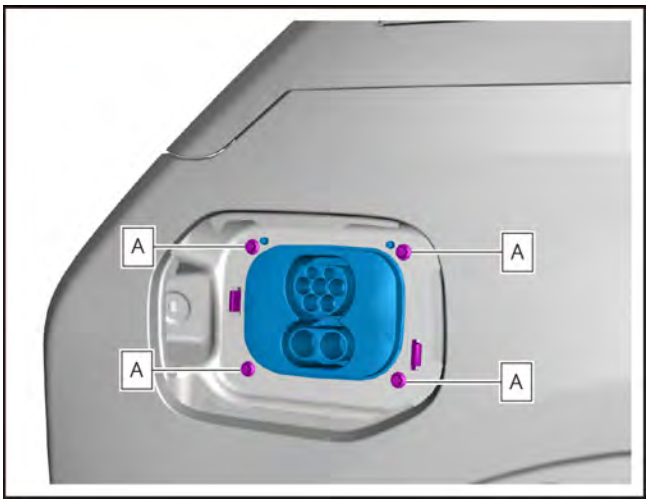
b. Remove AC/DC Charging Inlet Assembly 2 retaining bolt A.



9 Release AC/DC Charging Inlet Assembly retaining clip.

a. Disconnect 2 AC/DC Charging Inlet Assembly wiring harness connectors.

b. Release AC/DC Charging Inlet Assembly retaining clip.



10 remove AC/DC Charging Inlet Assembly.

a. Remove AC/DC Charging Inlet Assembly 4 retaining bolt A.

b. release retaining clip, remove AC/DC Charging Inlet Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

In-Vehicle AC Power Outlet, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

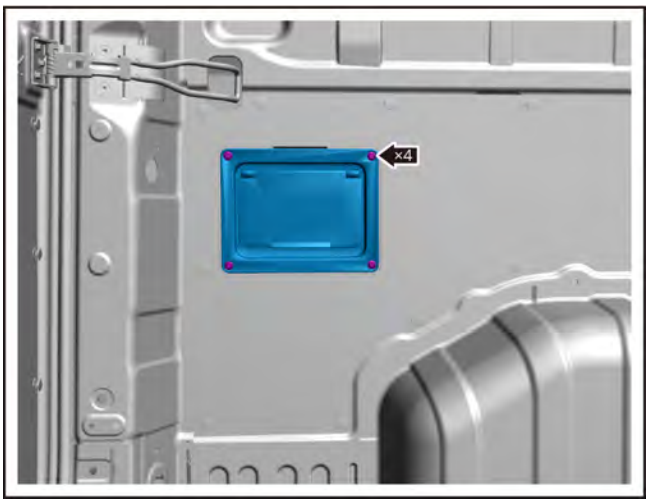
Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

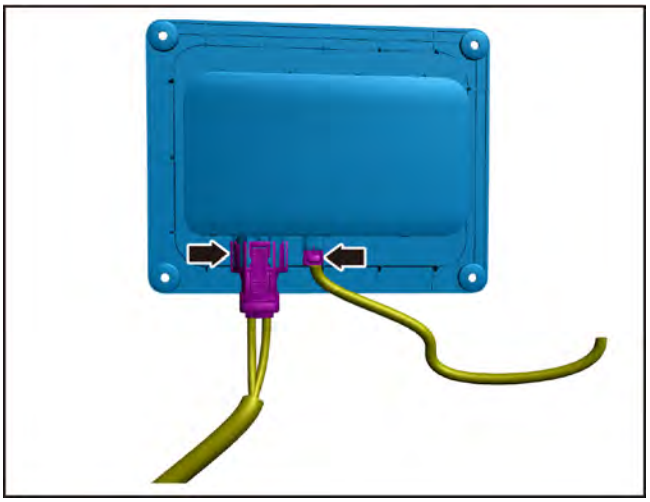
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure



3 Remove 4 retaining bolt, offset open In-vehicle AC Power Outlet.



4 disconnect 2 wiring harness connector, remove In-vehicle AC Power Outlet.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

Installation Steps

1 Install in the reverse order of removal.

Follow-up Work:

vehicle power up rear, Use multimeter AC voltage gear measure In-vehicle AC Power Outlet Output voltage, confirm Output voltage in range inner.

acceleration unit

System Overview

Acceleration Unit System Overview

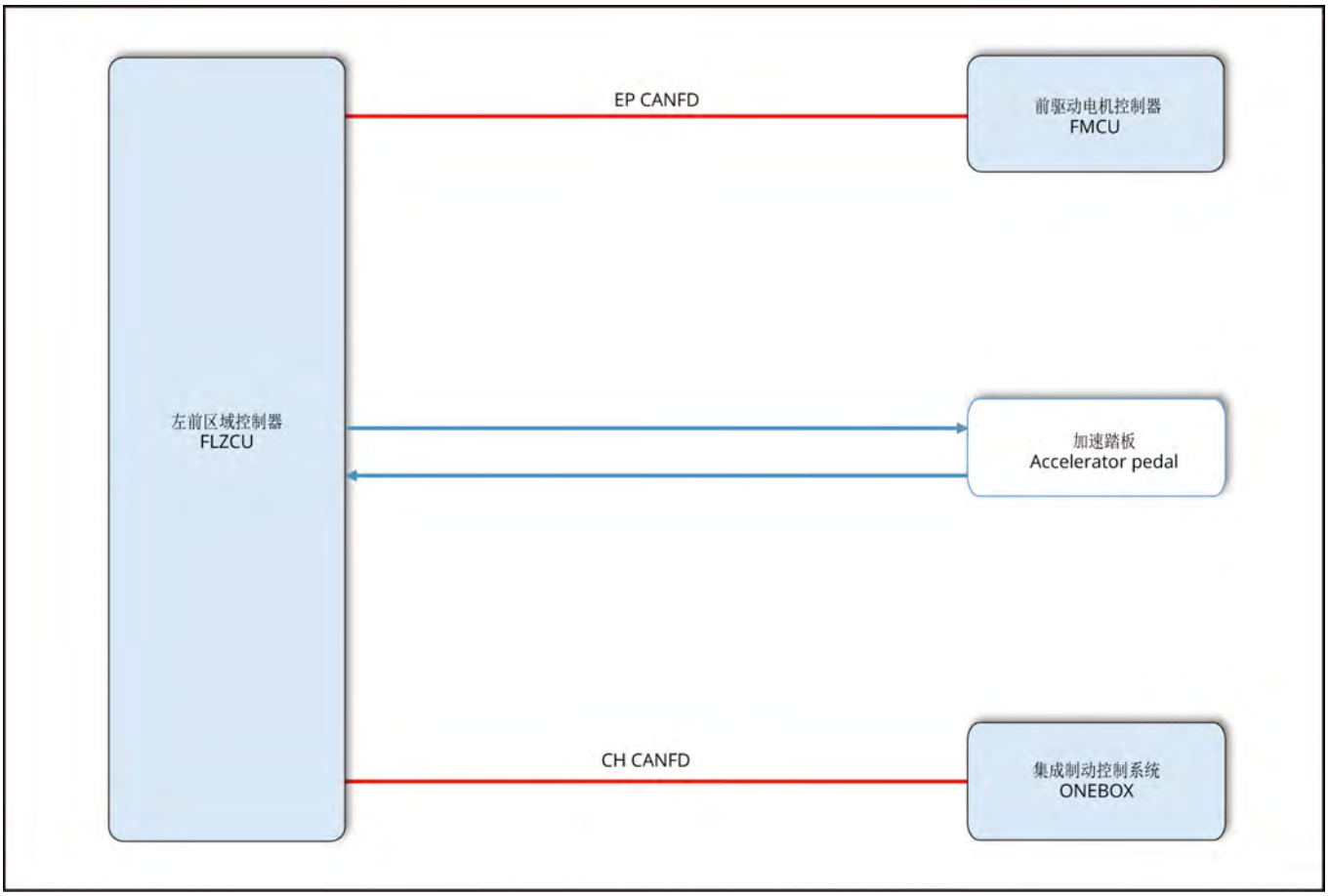
System Principle

electronic oil door pedal assembly inner part integrated item pedal Position Sensor, in driver driving vehicle when, electronic oil door pedal Position Signal transmit to Left Front Zone Control Unit, left front domain control according to battery Status, gear position etc. signal, to calculate vehicle Torque need request, still rear control electric drive system drive vehicle driving.

One-pedal Mode

use user can in Infotainment Display activation single pedal Function, and press need select use item operate mode or maintain mode. open rear, loosen part section or all Accelerator Pedal vehicle automatic reduce speed. vehicle Control Unit (VCU) based on Accelerator Pedal open degree determine driver reduce speed, parking intent map, dynamically distribution motor brake and mechanical braking force: motor brake Torque transmit to front motor controller (FMCU) control motor return feedback brake, mechanical brake fluid pressure Torque command transmission to Integrated Brake Control System (Onebox) perform hydraulic brake. if vehicle reduce speed large at 1.2m/s², vehicle Control Unit (VCU) direction Left Front Zone Control Unit (FLZCU) send output Stop Lamp illuminate command, Left Front Zone Control Unit (FLZCU) drive Stop Lamp illuminate.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	5V Accelerator Pedal power supply 0 Output
	Hardwired	Power Supply	5V Accelerator Pedal power supply 1 Output
	Hardwired	Position Signal	Accelerator Pedal Position Signal 0 Input
	Hardwired	Position Signal	Accelerator Pedal Position Signal 1 Input
front motor controller	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Integrated Brake Control System	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Accelerator Pedal	Hardwired	Power Supply	Left Front Zone Control Unit 5V Accelerator Pedal power supply 0 Input
	Hardwired	Power Supply	Left Front Zone Control Unit 5V Accelerator Pedal power supply 1 Input
	Hardwired	Position Signal	Left Front Zone Control Unit Accelerator Pedal Position Signal 0 Output
	Hardwired	Position Signal	Left Front Zone Control Unit Accelerator Pedal Position Signal 1 Output

Component Description

electronic oil door pedal assembly

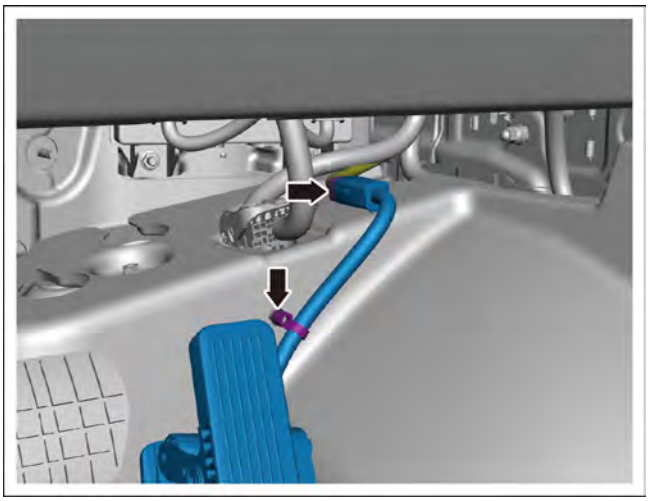
electronic oil door pedal assembly position at driver pedal part air between right, main function is to detection driver input oil door pedal force degree, and the signal conversion for power signal transmission to Left Front Zone Control Unit (FLZCU), with control power unit Output power, enable accurate speed control.

Repair Procedure

Electronic Oil Door Pedal Assembly, Repair Procedure

Removal Steps

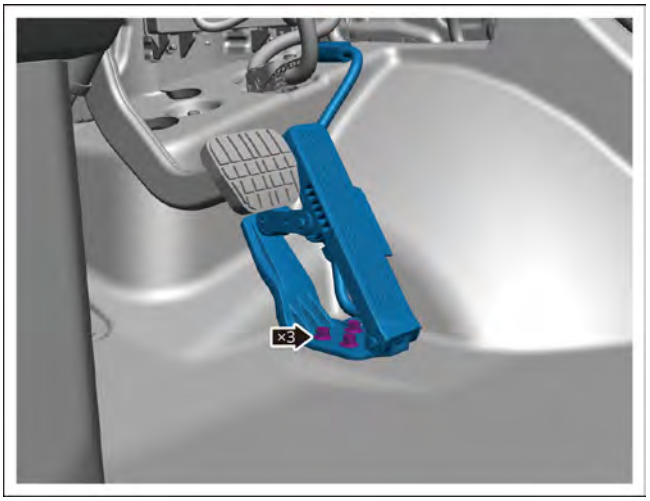
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Disconnect electronic oil door pedal assembly wiring harness connector.

a. Release electronic oil door pedal wiring harness retaining clip.

b. Disconnect electronic oil door pedal assembly wiring harness connector.



3 Remove 3 retaining bolt, remove electronic oil door pedal assembly.

install procedure

1 Install in the reverse order of removal.

charging change pressure matching power

parameter

System Overview

Charging Discharging System Overview

System Principle

On-board Charger Assembly position at vehicle front side, integrated On-board Charger (OBC), DC Converter (DCDC) and high-voltage power supply distribution.

On-board Charger Assembly Yes I item high can rely on characteristic, efficiently rate digital -based vehicle load charging matching power Unit assembly, On-board Charger (OBC), inverter and DCDC Function, voltage, current control accuracy and detection accuracy high and stability, through CAN communication protocol and Battery Management System (BMS), vehicle perform communication, support constant pressure or constant flow charging.

On-board Charger (OBC)

AC power convert for high-voltage DC power, to high-voltage battery charging.

inverter unit (DCAC)

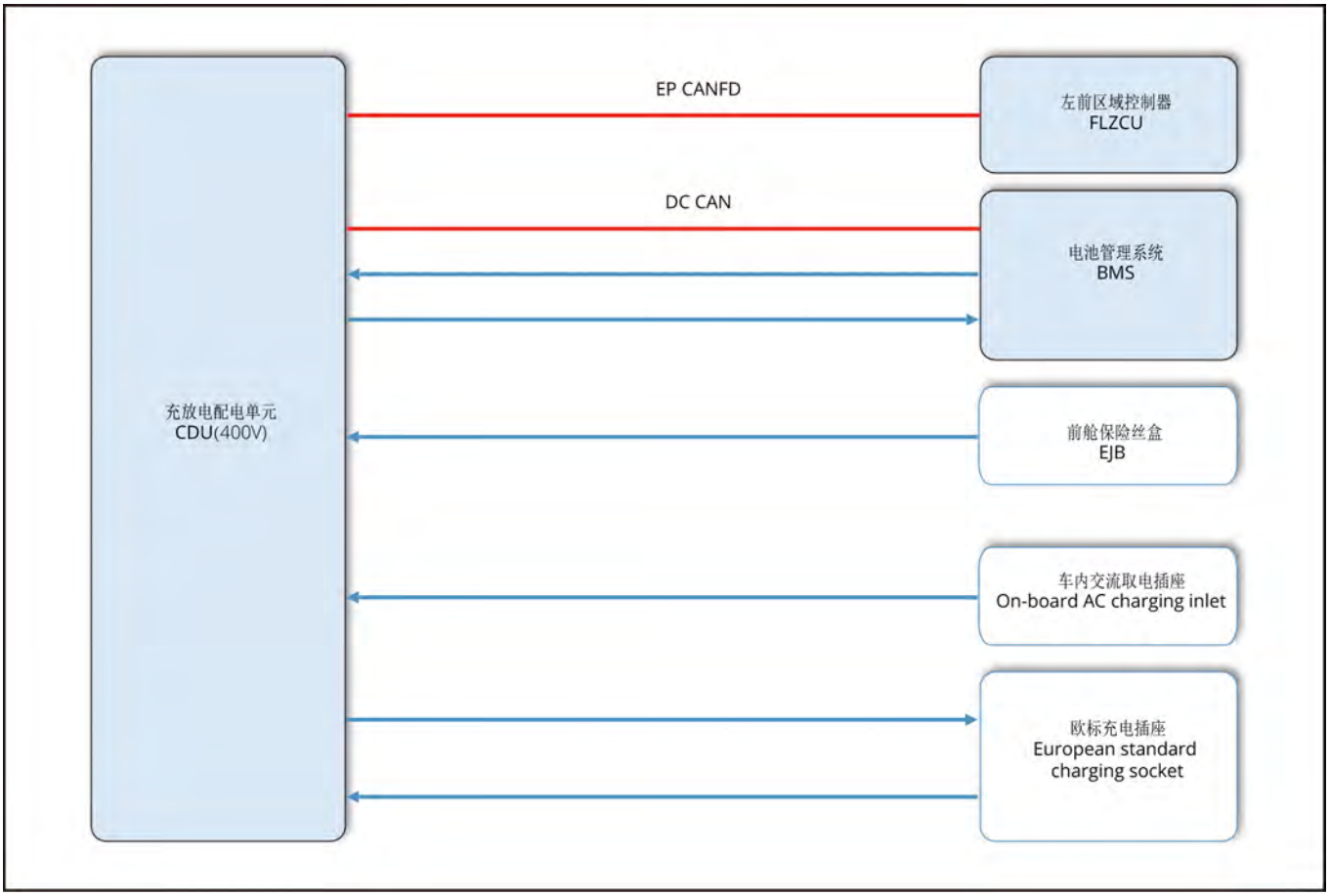
high-voltage battery DC power convert for AC power, to vehicle outer AC load Power Supply.

DC Converter (DCDC)

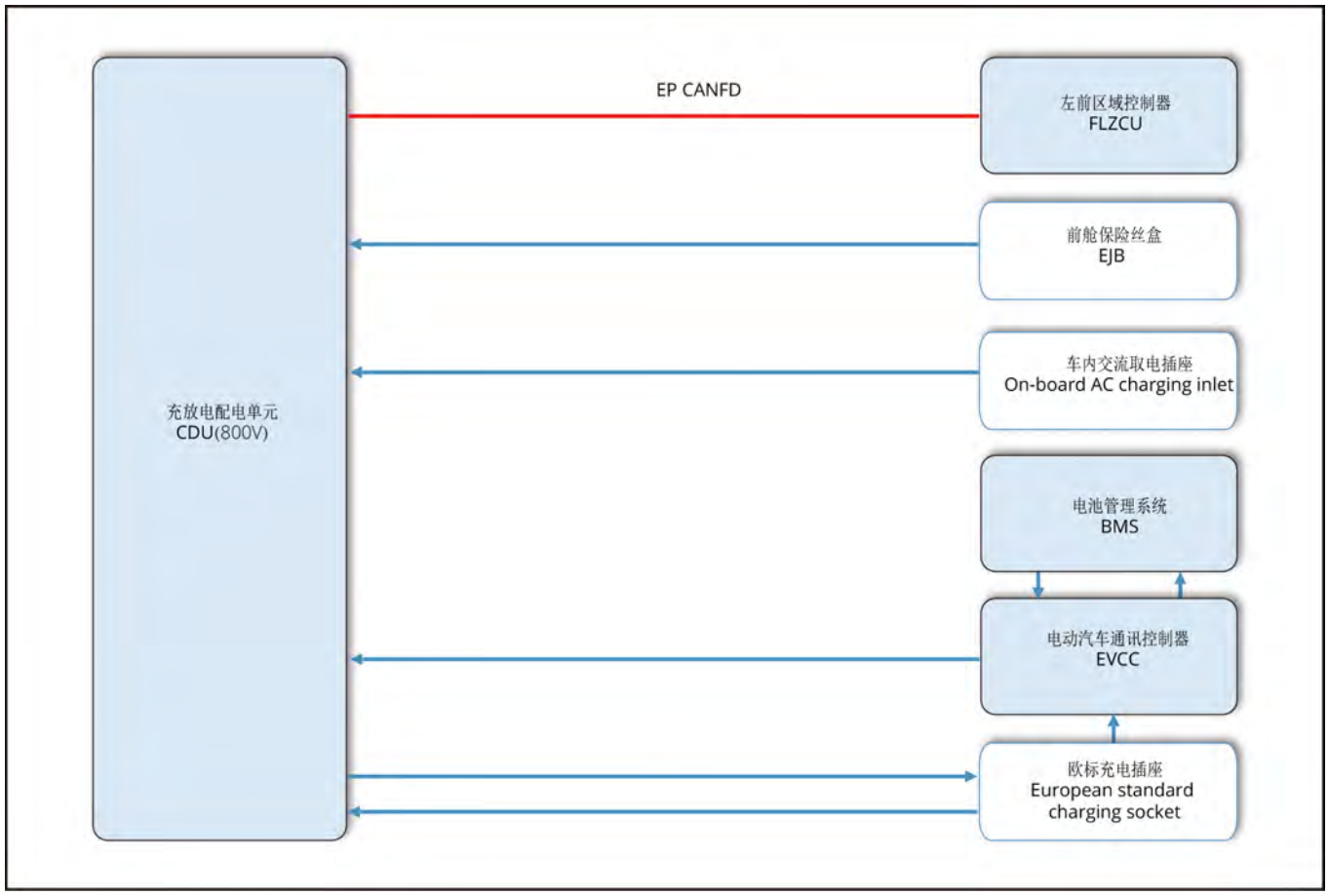
high-voltage battery DC power convert for low-voltage DC power, to low-voltage equipment Power Supply.

Electrical Schematic Diagram

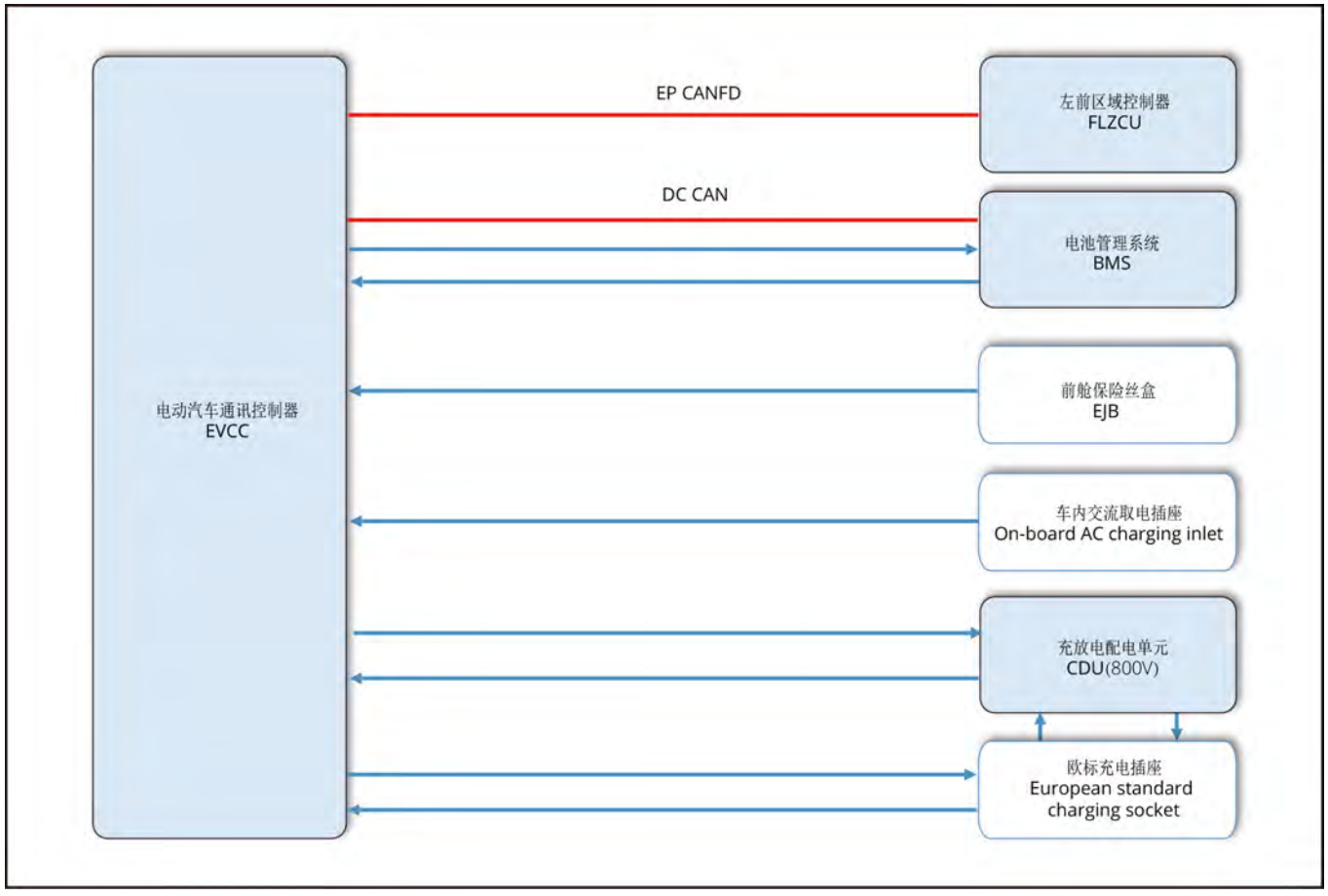
CDU



CDU-800V



EVCC



Signal Input/Output List

CDU

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Charge/Discharge Power Distribution Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	DC CAN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	European-standard Charging Inlet charging Indicator Lamp blue lamp Control Signal Output
	Hardwired	Control Signal	European-standard Charging Inlet electronic lock perform lock negative Output
	Hardwired	Position Signal	European-standard Charging Inlet electronic lock perform lock Location Feedback Signal Input
	Hardwired	Control Signal	European-standard Charging Inlet charging control trigger guide CP signal Input
	Hardwired	Confirmation Signal	European-standard Charging Inlet charging gun connect confirm PP signal Output
	Hardwired	Temperature Signal	European-standard Charging Inlet L1 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet L2 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet L3 hole position Temperature Signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Temperature Signal	European-standard Charging Inlet N hole position Temperature Signal Input
	Hardwired	Switch Signal	In-vehicle AC Power Outlet discharging Switch Signal Input
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Battery Management System	DC CAN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Communication Signal	vehicle BMS reverse direction validation CC2 signal Output
	Hardwired	item mark DC charging Wake-up Signal A-	charging station DC charging Wake-up Signal A- Input
	Hardwired	item mark DC charging Wake-up Signal A+	charging station DC charging Wake-up Signal A+ Input
Front Compartment Fuse Box	Hardwired	Power Supply	Charge/Discharge Power Distribution Unit power supply Output
European-standard Charging Inlet	Hardwired	Power Supply	Charge/Discharge Power Distribution Unit electronic lock perform lock positive terminal Input
	Hardwired	Control Signal	Charge/Discharge Power Distribution Unit electronic lock perform lock negative Control Signal Input
	Hardwired	Position Signal	electronic lock perform lock Location Feedback Signal Output
	Hardwired	Confirmation Signal	Charge/Discharge Power Distribution Unit charging gun connect confirm PP signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Charge/Discharge Power Distribution Unit charging control trigger guide CP signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L1 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L2 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L3 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit N hole position Temperature Signal Output
In-vehicle AC Power Outlet	Hardwired	Switch Signal	Charge/Discharge Power Distribution Unit discharging Switch Signal Output

CDU-800V

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Charge/Discharge Power Distribution Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	European-standard Charging Inlet charging Indicator Lamp blue lamp Control Signal Output
	Hardwired	Control Signal	European-standard Charging Inlet electronic lock perform lock negative Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Position Signal	European-standard Charging Inlet electronic lock perform lock Location Feedback Signal Input
	Hardwired	Control Signal	Electric Vehicle Communication Controller charging control trigger guide CP signal Input
	Hardwired	Confirmation Signal	European-standard Charging Inlet charging gun connect confirm PP signal Output
	Hardwired	Temperature Signal	European-standard Charging Inlet L1 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet L2 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet L3 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet N hole position Temperature Signal Input
	Hardwired	Switch Signal	In-vehicle AC Power Outlet discharging Switch Signal Input
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Battery Management System	Hardwired	Communication Signal	Electric Vehicle Communication Controller reverse direction validation CC2 signal Output
	Hardwired	Wake-up Signal	Electric Vehicle Communication Controller DC charging Wake-up Signal A-Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Wake-up Signal	Electric Vehicle Communication Controller DC charging Wake-up Signal A+ Input
Electric Vehicle Communication Controller	Hardwired	Control Signal	European-standard Charging Inlet charging control trigger guide CP signal Input
	Hardwired	Control Signal	Charge/Discharge Power Distribution Unit charging control trigger guide CP signal Output
	Hardwired	Communication Signal	Battery Management System reverse direction validation CC2 signal Input
	Hardwired	Wake-up Signal	Battery Management System DC charging Wake-up Signal A- Output
	Hardwired	Wake-up Signal	Battery Management System DC charging Wake-up Signal A+ Output
Front Compartment Fuse Box	Hardwired	Power Supply	Charge/Discharge Power Distribution Unit power supply Output
European-standard Charging Inlet	Hardwired	Power Supply	Charge/Discharge Power Distribution Unit electronic lock perform lock positive terminal Input
	Hardwired	Control Signal	Charge/Discharge Power Distribution Unit electronic lock perform lock negative Control Signal Input
	Hardwired	Position Signal	electronic lock perform lock Location Feedback Signal Output
	Hardwired	Confirmation Signal	Charge/Discharge Power Distribution Unit charging gun connect confirm PP signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Electric Vehicle Communication Controller charging control trigger guide CP signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L1 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L2 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L3 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit N hole position Temperature Signal Output
In-vehicle AC Power Outlet	Hardwired	Switch Signal	Charge/Discharge Power Distribution Unit discharging Switch Signal Output

EVCC

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Electric Vehicle Communication Controller	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	DC CAN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Control Signal	European-standard Charging Inlet charging control trigger guide CP signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Charge/Discharge Power Distribution Unit charging control trigger guide CP signal Output
	Hardwired	Communication Signal	Battery Management System reverse direction validation CC2 signal Input
	Hardwired	Wake-up Signal	Battery Management System DC charging Wake-up Signal A- Output
	Hardwired	Wake-up Signal	Battery Management System DC charging Wake-up Signal A+ Output
Charge/Discharge Power Distribution Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	European-standard Charging Inlet charging Indicator Lamp blue lamp Control Signal Output
	Hardwired	Control Signal	European-standard Charging Inlet electronic lock perform lock negative Output
	Hardwired	Position Signal	European-standard Charging Inlet electronic lock perform lock Location Feedback Signal Input
	Hardwired	Control Signal	Electric Vehicle Communication Controller charging control trigger guide CP signal Input
	Hardwired	Confirmation Signal	European-standard Charging Inlet charging gun connect confirm PP signal Output
	Hardwired	Temperature Signal	European-standard Charging Inlet L1 hole position Temperature Signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Temperature Signal	European-standard Charging Inlet L2 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet L3 hole position Temperature Signal Input
	Hardwired	Temperature Signal	European-standard Charging Inlet N hole position Temperature Signal Input
	Hardwired	Switch Signal	In-vehicle AC Power Outlet discharging Switch Signal Input
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Battery Management System	DC CAN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Communication Signal	Electric Vehicle Communication Controller reverse direction validation CC2 signal Output
	Hardwired	Wake-up Signal	Electric Vehicle Communication Controller DC charging Wake-up Signal A- Input
	Hardwired	Wake-up Signal	Electric Vehicle Communication Controller DC charging Wake-up Signal A+ Input
Front Compartment Fuse Box	Hardwired	Power Supply	Electric Vehicle Communication Controller power supply Output
European-standard Charging Inlet	Hardwired	Power Supply	Charge/Discharge Power Distribution Unit electronic lock perform lock positive terminal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Charge/Discharge Power Distribution Unit electronic lock perform lock negative Control Signal Input
	Hardwired	Position Signal	electronic lock perform lock Location Feedback Signal Output
	Hardwired	Confirmation Signal	Charge/Discharge Power Distribution Unit charging gun connect confirm PP signal Input
	Hardwired	Control Signal	Electric Vehicle Communication Controller charging control trigger guide CP signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L1 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L2 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit L3 hole position Temperature Signal Output
	Hardwired	Temperature Signal	Charge/Discharge Power Distribution Unit N hole position Temperature Signal Output
In-vehicle AC Power Outlet	Hardwired	Switch Signal	Charge/Discharge Power Distribution Unit discharging Switch Signal Output

Component Description

Charge/Discharge Power Distribution Unit (CDU)

Charge/Discharge Power Distribution Unit (CDU) position at vehicle front, Yes vehicle electrical system important consists of part section. 3-in-1 integrated type power supply integrated charging unit, matching power Unit and inverter unit and DC/DC conversion unit Function. charging unit responsible for outer part high-voltage AC power conversion for high-voltage DC power, use at to traction battery charging.

inverter unit traction battery DC power conversion for AC power, supply vehicle outer AC load Use; DC/DC conversion unit traction battery high-voltage DC power conversion for low-voltage DC power, use at for vehicle load low-voltage system (if battery) and electronic equipment Power Supply.

Fault Diagnosis (CDU)

Charge/Discharge Power Distribution Unit (CDU) DTC List

DTC	DTC Meaning	DTC Description
P1D0012	AC L1 voltage Sensor Circuit High	AC L1 voltage sensor circuit high
P1D0111	AC L1 voltage Sensor Circuit Low	AC L1 voltage sensor circuit low
P1D0412	AC L2 voltage Sensor Circuit High	AC L2 voltage sensor circuit high
P1D0511	AC L2 voltage Sensor Circuit Low	AC L2 voltage sensor circuit low
P1D0712	AC L3 voltage Sensor Circuit High	AC L3 voltage sensor circuit high
P1D0811	AC L3 voltage Sensor Circuit Low	AC L3 voltage sensor circuit low
P1D0A12	AC Current L1 Sensor Circuit High	AC current L1 sensor circuit high
P1D0B11	AC Current L1 Sensor Circuit Low	AC current L1 sensor circuit low
P1D0C1C	Input AC Current L1 Sensor Rationality Check	Input AC current L1 sensor plausibility check
P1D0D1C	Input AC Current L1 Sensor Rationality Check (V2L)	Input AC current L1 sensor plausibility check (compartment inner V2L)
P1D0E12	AC Current L2 Sensor Circuit High	AC current L2 sensor circuit high power level
P1D0F11	AC Current L2 Sensor Circuit Low	AC current L2 sensor circuit low
P1D101C	Input AC Current L2 Sensor Rationality Check	Input AC current L2 sensor plausibility check
P1D111C	Input AC Current L2 Sensor Rationality Check (V2L)	Input AC current L2 sensor plausibility check (compartment inner V2L)
P1D1212	AC Current L3 Sensor Circuit High	AC power L3 sensor circuit high
P1D1311	AC Current L3 Sensor Circuit Low	AC power L3 sensor circuit low
P1D141C	Input AC Current L3 Sensor Rationality Check	Input AC current L3 sensor plausibility check
P1D151C	Input AC Current L3 Sensor Rationality Check (V2L)	Input AC current L3 sensor plausibility check (V2L compartment inner)
P1D1612	Interlink Voltage Sensor Circuit High	mutual link voltage sensor circuit high
P1D1711	Interlink Voltage Sensor Circuit Low	mutual link voltage sensor circuit low
P1D181C	Interlink Voltage Sensor Rationality Check	mutual link voltage sensor plausibility check
P1D1912	Interlink Middle Voltage Sensor Circuit High	mutual link center voltage sensor circuit high
P1D1A11	Interlink Middle Voltage Sensor Circuit Low	mutual link center voltage sensor circuit low

DTC	DTC Meaning	DTC Description
P1D1C12	DC Voltage Sensor 1 Circuit High	DC power pressure sensor 1 circuit high power level
P1D1D11	DC Voltage Sensor 1 Circuit Low	DC power pressure sensor 1 circuit low power level
P1D1E1C	DC Voltage Sensor Rationality Check	DC power pressure sensor plausibility check
P1D1F12	DC Voltage Sensor 2 Circuit High	DC power pressure sensor 2 circuit high power level
P1D2011	DC Voltage Sensor 2 Circuit Low	DC power pressure sensor 2 circuit low power level
P1D2112	DC Current Sensor Circuit High	DC power flow sensor circuit high power level
P1D2211	DC Current Sensor Circuit Low	DC power flow sensor circuit low
P1D231C	DC Current sensor Rationality Check	DC power flow sensor plausibility check
P1D241C	DC Current sensor Rationality Check(V2L)	DC power flow sensor plausibility check (compartment inner V2L)
P1D2512	PFC Temperature 1 Circuit High	PFC temperature 1 circuit high
P1D2611	PFC Temperature 1 Circuit Low	PFC temperature 1 circuit low
P1D2712	PFC Temperature 2 Circuit High	PFC temperature 2 circuit high
P1D2811	PFC Temperature 2 Circuit Low	PFC temperature 2 circuit low
P1D2912	Temp_Primary Circuit High	temperature _ initial stage circuit high
P1D2A11	Temp_Primary Circuit Low	temperature _ initial stage circuit low
P1D2B12	Temp_Secondary Circuit High	temperature _ II times circuit high power level
P1D2C11	Temp_Secondary Circuit Low	temperature _ II times circuit low
P1D2D12	Coolant Temp 1 sensor Circuit High	coolant temperature 1 sensor circuit high
P1D2E11	Coolant Temp 1 sensor Circuit Low	coolant temperature 1 sensor circuit low
P1D3217	I/P AC voltage L1 Too High TX CAN OBC_InputOverVolt	I/P AC voltage L1 too high
P1D3317	I/P AC voltage L2 Too High TX CAN OBC_InputOverVolt	I/P AC voltage L2 too high
P1D3417	I/P AC voltage L3 Too High TX CAN OBC_InputOverVolt	I/P AC voltage L3 too high
P1D3516	I/P AC voltage L1 Too Low TX CAN OBC_InputUnderVolt	I/P AC voltage L1 too low
P1D3616	I/P AC voltage L2 Too Low TX CAN OBC_InputUnderVolt	I/P AC voltage L2 too low

DTC	DTC Meaning	DTC Description
P1D3716	I/P AC voltage L3 Too Low TX CAN OBC_InputUnderVolt	I/P AC voltage L3 too low
P1D3800	L1 Phase lost error(Other phase normal)	L1 phase position lost error (other phase position normal)
P1D3900	L2 Phase lost error(Other phase normal)	L2 phase position lost error (other phase position normal)
P1D3A00	L3 Phase lost error(Other phase normal)	L3 phase position lost error (other phase position normal)
P1D3B00	L1&L2 Phase lost error(Other phase normal)	L1&L2 phase position lost error (other phase position normal)
P1D3C00	L1&L3 Phase lost error(Other phase normal)	L1&L3 phase lost error (other phase normal)
P1D3D00	AC Grid Type Unsupported	not support AC power network Type
P1D3E00	AC Grid Type Changed	AC power network Type already change
P1D3F00	AC Freqeuncy Too High	AC frequency too high
P1D4000	AC Freqeuncy Too Low	AC frequency too low
P1D4100	AC Voltage slope timeout	AC voltage inclined item timeout
P1D4217	Interlink Voltage Too High(SW)	mutual link voltage too high (SW)
P1D4317	Interlink Voltage Too High(HW)	mutual link voltage too high (HW)
P1D4400	Interlink Current Too High(HW)	mutual link current too high (HW)
P1D4500	Interlink Voltage Too Low	mutual link voltage too low
P1D4600	Middle Interlink Voltage Too High	center link voltage too high
P1D4700	Interlink Voltage precharge timeout	mutual link voltage pre- charging timeout
P1D4817	Output DC Voltage too High(SW) TX CAN OBC_HV_OutputOverVolt	Output DC power pressure too high (SW)
P1D4917	Output DC Voltage too High(HW) TX CAN OBC_HV_OutputOverVolt	Output DC power pressure too high (HW)
P1D4A16	Output DC Voltage too Low TX CAN OBC_HV_OutputUnderVolt	Output DC power pressure too low
P1D4B19	AC Current L1 Too High(SW)	AC current L1 too high (SW)
P1D4C19	AC Current L1 Too High(HW)	AC current L1 too high (HW)
P1D4D19	AC Current L2 Too High(SW)	AC current L2 too high (SW)
P1D4E19	AC Current L3 Too High(SW)	AC current L3 too high (SW)
P1D4F00	PFC Apparent Power Over Limt	PFC view in power out of limit
P1D5019	DC Output Current Too High(SW) TX CAN OBC_HighCurrOutputFault	DC Output current too high (SW)

DTC	DTC Meaning	DTC Description
P1D5119	DC Output Current Too High(HW) TX CAN OBC_HighCurrOutputFault	DC Output current too high (HW)
P1D5211	Output Shorted TX CAN OBC_HV_OutputShortCircuit	Output short circuit
P1D5300	HVDC Output Overload	high-voltage DC Output overload
P1D5400	Output Power Control	Output power control
P1D5500	V2L Unexpected Voltage Detected	V2L compartment inner detection to intent outer voltage
P1D5600	V2L AC output voltage too high	V2L compartment inner AC Output voltage too high
P1D5700	V2L AC output voltage too low	V2L compartment inner AC Output voltage too low
P1D5800	V2L AC Frequency Control too high	V2L compartment inner AC frequency control too high
P1D5900	V2L AC Frequency Control too low	V2L compartment inner AC frequency control too low
P1D5A17	Internal Link Voltage Too High(SW)	inner part connection voltage too high (SW)
P1D5B17	Internal Link Voltage Too High(HW)	inner part connection voltage too high (HW)
P1D5C00	Internal link Voltage Too Low	inner part connection voltage too low
P1D5D17	DC Input Voltage Too High (SW)	DC input Voltage Too High (SW)
P1D5E17	DC Input Voltage Too High (HW)	DC input Voltage Too High (HW)
P1D5F16	DC Input Voltage Too Low (SW)	DC input Voltage Too Low (SW)
P1D6000	V2L DC Power Too High	V2L compartment inner DC power source too high
P1D6100	V2L PFC Apparent Power Over Limt	V2L compartment inner PFC view in power limit
P1D6200	V2L AC Current Too High(HW)	V2L compartment inner AC current too high (HW)
P1D6300	V2L AC Current Too High(SW)	V2L compartment inner AC current too high (SW)
P1D6619	V2L DC Current Too High(SW)	V2L compartment inner DC power flow too high (SW)
P1D6719	V2L DC Current Too High(HW)	V2L compartment inner DC power flow too high (HW)
P1D6C98	PFC Temperature Too High TX CAN OBC_ChargerOverTemp	PFC temperature too high

DTC	DTC Meaning	DTC Description
P1D6D98	HVDC Temperature Too High TX CAN OBC_ChargerOverTemp	HVDC temperature too high
P1D6E98	Coolant Temperature Too High	coolant temperature too high
P1D6F98	Coolant Temperature Too High(V2L)	coolant temperature too high (V2L compartment inner)
P1D7113	OBC DC InterLock (Reaction Request)	OBC DC interlock (reverse should request)
P1D7304	System board self diagnosis fault	system panel self I Diagnosis fault
P1D7404	PFC ROM check reported an error	PFC ROM check report warning error
P1D7504	PFC RAM check reported an error	PFC RAM check report warning error
P1D7604	HVHV RAM check reported an error	HVHV RAM check report warning error
P1D7704	HVHV ROM check reported an error	HVHV ROM check report warning error
P1D7804	SE MCU Lost OBC DSP Communication	SE MCU lost OBC DSP communication
P1D7904	SE MCU Lost OBC DSP Communication (V2L)	SE MCU lost OBC DSP communication (compartment inner V2L)
P1D7A04	PFC DSP Lost HVHV DSP Communication	PFC DSP lost HVHV DSP communication
P1D7B04	PFC DSP Lost HVHV DSP Communication (V2L)	PFC DSP lost HVHV DSP communication (compartment inner V2L)
P1D7C04	HVHV DSP Lost MCU Communication	HVHV DSP lost MCU communication
P1D7D04	HVHV DSP Lost MCU Communication (V2L)	HVHV DSP lost MCU communication (compartment inner V2L)
P1D7E04	PFC DSP Detected HVHV DSP Communication E2E Error	PFC DSP detection to HVHV DSP communication E2E error
P1D7F04	PFC DSP Detected HVHV DSP Communication E2E Error(V2L)	PFC DSP detection to HVHV DSP communication E2E error (compartment inner V2L)
P1D8004	HVHV DSP Detected SE MCU Communication E2E Error	HVHV DSP detection to SE MCU communication E2E error
P1D8104	HVHV DSP Detected SE MCU Communication E2E Error(V2L)	detection to HVHV DSP SE MCU communication E2E error (compartment inner V2L)
P1D8204	HVHV DSP Lost PFC SPI Communication	HVHV DSP lost PFC SPI communication
P1D8304	HVHV DSP Lost PFC SPI Communication(V2L)	HVHV DSP lost PFC SPI communication (compartment inner V2L)
P1D8572	Precharge Relay L1 state abnormal	pre- charging relay L1 Status abnormal
P1D8672	Precharge Relay L1 state abnormal(V2L)	pre- charging relay L1 Status abnormal (compartment inner V2L)
P1D8772	Precharge Relay L2 state abnormal	pre- charging relay L2 Status abnormal
P1D8872	Precharge Relay L3 state abnormal	pre- charging relay L3 Status abnormal

DTC	DTC Meaning	DTC Description
P1D8972	Precharge Relay Neutral state abnormal	pre- charging relay center characteristic point Status abnormal
P1D8A72	Phase switch relay L23-L1 state abnormal	phase position switch relay L23-L1 Status abnormal
P1D8B72	Phase switch relay L3-N state abnormal	phase position switch relay L3-N Status abnormal
P1D8C72	CUT OFF relay L-V2L state abnormal	shutoff relay L-V2L Status abnormal
P1D8D92	PFC SMPS Voltage	PFC SMPS voltage
P1D8F92	HVHV SMPS Voltage	HVHV SMPS voltage
P1D9092	HVHV ADC reference Voltage abnormal	HVHV ADC reference voltage abnormal
P1D9316	Voltage Low TX CAN OBC_KL30_UnderVolt	voltage low same when upper report OBC_KL30_UnderVolt
P1D9416	Voltage Low(V2L) TX CAN OBC_KL30_UnderVolt	low voltage (compartment inner V2L) same when upper report OBC_KL30_UnderVolt
P1D9517	Voltage High	high voltage
P1D9617	Voltage High(V2L)	high voltage (compartment inner V2L)
P1D9712	AC or DC E-lock Status Detection circuit is short to battery	AC or DC power sub- lock Status detection circuit short to battery
P1D9811	AC or DC E-lock Status Detection circuit is short to ground	AC or DC power sub- lock Status detection circuit to ground short circuit
P1D9998	The AC Plug(L1 or L2 or L3 or N) temperature is high in charging mode	charging mode lower AC plug head (L1 or L2 or L3 or N) temperature too high
P1D9A98	The AC Plug(L1 or L2 or L3 or N) temperature is high in discharging mode	discharging mode lower AC plug head (L1 or L2 or L3 or N) temperature too high
P1D9B98	A large difference between the maximum temperature and the minimum temperature	maximum high temperature and maximum low temperature degree phase difference very large
P1D9C12	socket L1 detection range exceeds the upper limit	socket L1 detection range exceeds upper limit
P1D9D11	socket L1 detection range exceeds the lower limit	socket L1 detection range exceeds lower limit
P1DA012	socket L2 detection range exceeds the upper limit	socket L2 detection range exceeds upper limit
P1DA111	socket L2 detection range exceeds the lower limit	socket L2 detection range exceeds lower limit
P1DA412	socket L3 detection range exceeds the upper limit	socket L3 detection range exceeds upper limit
P1DA511	socket L3 detection range exceeds the lower limit	socket L3 detection range exceeds lower limit

DTC	DTC Meaning	DTC Description
P1DA812	socket N detection range exceeds the upper limit	socket N detection range exceeds upper limit
P1DA911	socket N detection range exceeds the lower limit	socket N detection range exceeds lower limit
P1DAA12	EU AC E-lock Lock status fialed	ohm item AC electronic lock upper lock abnormal
P1DAB11	EU AC E-lock Unlock status fialed	ohm item AC electronic lock unlock abnormal
P1DAC98	The SYS_ERR_AC_PLUG_OT happen times is more than 3 in once wake up time	in I times Wake-Up Time inner,SYS_ERR_AC_PLUG_OT occur times number exceed 3 times
P1DAD12	CC or PP voltage is out of range.	CC or PP voltage exceeds range.
P1DAE12	AC or DC E-lock Status is out of range	AC or DC E-lock Status exceeds range
P1DAF12	CP voltage is out of range.	CP voltage exceeds range
P1DB012	CP frequency is out of range.	CP frequency exceeds range.
P1DB112	CP duty is out of range. TX CAN OBC_CP_DutyCycleFault	CP duty cycle exceeds range.
P1DB212	S2 switch drive result fail	S2 switch drive result fault
P1DB312	S2 switch drive result fail	S2 switch drive result fault
P1DB481	PLC V2G fault	PLC V2G fault
P1DB581	GBT DC CAN BusOff condition detected	detection to GBT DC CAN bus disabled Status
P1DB681	GBT DC BMS CAN Message Timeout	GBT DC BMS CAN message timeout
P1DB487	PLC AC charging communication fault	PLC AC charging communication fault
P1E0012	V2L SW Status Detection circuit is short to battery	V2L software Status detection circuit for battery short circuit
P1E0111	V2L SW Status Detection circuit is short to ground	V2L software Status detection circuit to ground short circuit
P1E0212	V2L SW Status is out of range	V2L software Status exceeds range
P1DB796	LDC HV Voltage Sensor Fault Low	LDC high voltage sensor Fault low power level
P1DB896	LDC HV Voltage Sensor Fault High	LDC high-voltage sensor Fault high power level
P1DB996	LDC HV Voltage Sensor Deviation	LDC high-voltage voltage sensor deviation
P1DBA96	LDC HV Current Sensor Fault Low	LDC high-voltage current sensor Fault low power level
P1DBB96	LDC HV Current Sensor Fault High	LDC high-voltage current sensor Fault high power level

DTC	DTC Meaning	DTC Description
P1DBC96	LDC HV Current Sensor Deviation	LDC high-voltage current sensor deviation
P1DBD96	LDC BOOST Output Voltage Sensor Fault Low	LDC BOOST Output voltage sensor low power level fault
P1DBE96	LDC BOOST Output Voltage Sensor Fault High	LDC BOOST Output voltage sensor Fault high power level
P1DBF96	LDC LV 1 Voltage Sensor Fault Low	LDC LV 1 voltage sensor low power level fault
P1DC096	LDC LV 1 Voltage Sensor Fault High	LDC LV 1 voltage sensor Fault high power level
P1DC196	LDC LV 2 Voltage Sensor Fault Low	LDC LV 2 voltage sensor low power level fault
P1DC296	LDC LV 2 Voltage Sensor Fault High	LDC LV 2 voltage sensor Fault high power level
P1DC396	LDC LV Voltage Sensor Deviation	LDC low voltage sensor deviation
P1DC496	LDC LV Current Sensor Fault Low	LDC LV current sensor Fault low power level
P1DC596	LDC LV Current Sensor Fault High	LDC low-voltage current sensor Fault high power level
P1DC696	LDC LV Current Sensor Deviation	LDC low-voltage current sensor deviation
P1DC711	Boost MOSFET Temperature1 or 2 Sensor Low	boost MOSFET temperature 1 or 2 sensor low power level
P1DC812	Boost MOSFET Temperature1 or 2 Sensor High	boost MOSFET temperature 1 or 2 sensor high power level
P1DC911	Primary Temperature1 or 2 Sensor Low	initial stage temperature 1 or 2 sensor low
P1DCA12	Primary Temperature1 or 2 Sensor High	initial stage temperature 1 or 2 sensor high
P1DCB11	Secondary Temperature1 or 2 Sensor Low	stage 2 temperature 1 or 2 sensor low
P1DCC12	Secondary Temperature1 or 2 Sensor High	II times temperature 1 or 2 sensor high
P1DCD1C	MOSFET Temperature1&2 Sensor Deviation	MOSFET temperature 1&2 sensor deviation
P1DCE1C	Coolant Temperature 1 Sensor Fail low	coolant temperature 1 sensor low power level fault
P1DCF1C	Coolant Temperature 1 Sensor Fail high	coolant temperature 1 sensor high power level fault
P1DD398	Cooling Temperature High	cooling temperature high
P1DD498	BOOST Temperature High	start temperature high
P1DD598	Primary Temperature High	initial stage temperature high

DTC	DTC Meaning	DTC Description
P1DD698	Secondary Temperature High	II times temperature high
P1DD798	DSP Temperature High	DSP temperature too high
P1DD892	Hardware LV Over Voltage	hardware LV overvoltage
P1DD992	Software LV Over Voltage	software LV overvoltage
P1DDA92	LV Under voltage	LV undervoltage
P1DDB13	O/P Short circuit	O/P short circuit
P1DDC92	Converter Performance	conversion unit performance
P1DDD13	Voltage Path fault before operation	operation front voltage circuit radial fault
P1DDE13	Output terminal disconnection	Output terminal disconnect
P1DDF16	HV Under voltage	HV undervoltage
P1DDF17	HV Over Voltage-SW	HV overvoltage -SW
P1E0317	HV Over Voltage-HW	HV overvoltage -HW
P1DE092	BOOST Output Timeout	start Output timeout
P1DE192	BOOST Output Over voltage(HW)	BOOST Output overvoltage (HW)
P1DE292	BOOST Output Over voltage(SW)	BOOST Output overvoltage (SW)
P1DE392	BOOST Output Under voltage(SW)	BOOST Output undervoltage (SW)
P1DE419	Primary Input over current	initial stage Input overcurrent
P1DE519	HV input Hardware Over Current	high-voltage Input hardware overcurrent
P1DE619	BOOST output HV over current	BOOST Output high-voltage overcurrent
P1DE719	HVDC input current offset out of range	high-voltage DC Input current offset exceeds range
P1DE819	Output HW Over Current	Output HW overcurrent
P1DE919	Output SW Over Current	Output SW overcurrent
P1DEA19	LV output over power	low-voltage Output exceed power
P1DEB42	System RAM	system memory
P1DEC42	System ROM	system ROM
P1DED04	StateMachine	Status unit
P1DEE42	LDC DSP RAM	LDC DSP RAM
P1DEF42	LDC DSP ROM	LDC DSP ROM
P1DF004	DSP Clock Error	DSP when min error
P1DF104	5V voltage out of range	5V voltage exceeds range
P1DF204	DCD Error	DCD error
P1DF304	CPU Test Error	CPU test error

DTC	DTC Meaning	DTC Description
P1DF404	Stack Test Error	stack test error
P1DF504	ADC Test Error	ADC test error
P1DF604	Watchdog Test Error	watchdog test error
P1DF704	Watchdog Checkpoint Error	watchdog check point error
P1DF804	Register check Error	register check error
P1DF904	SE MCU Lost LDC DSP Communication	SE MCU lost LDC DSP communication
P1DFA04	DSP lost MCU Communication	DSP lost MCU communication
P1DFB04	PWM driver disabled	PWM Driver prohibit use
P1DFC1C	Gate Driver Supply Voltage Error	gate Driver power supply voltage incorrect difference
P1E051C	Gate Driver Supply Voltage Error-HW	gate Driver power supply voltage incorrect difference -HW
P1DFD04	DSP detected MCU UART E2E Error	DSP detection to MCU UART E2E error
P1DFE04	MCU detected DSP UART'E2E Error	MCU detection to DSP UART'E2E error
P1DFF16	VB Voltage LOW	VB low voltage
P1DFF17	VB Voltage HIGH	VB high voltage
P1E0413	LDC High Voltage Interlock Circuit Fault	LDC high-voltage interlock Fault
U273487	Lost Communication With FLZCU	Lost Communication with Left Front Zone Control Unit FLZCU
U271387	Lost Communication With BMS	Lost Communication with Battery Management System BMS
U2171FB	0x171 message E2E checksum error	0x171 message E2E validation Error
U2191FB	0x191 message E2E checksum error	0x191 message E2E validation Error
U007388	Bus off	bus disabled
U130055	CDU Not Configured	CDU not configuration
U300051	CDU Not Programmed	CDU not programming
U243EFB	0x43E message E2E checksum error	0x43E message E2E validation Error
U276386	The DCDC Voltage Set Point(VCU_DCDCVoltageSetPoint) value data is invalid	DCDC voltage setting determine point (VCU_DCDCVoltageSetPoint) data no valid
U276586	The DCDC Maximum Power limit(VCU_DCDCPwrLimit) value data is invalid	DCDC maximum large power limit (VCU_DCDCPwrLimit) data no valid
P1E0604	ADC Check failed	ADC test error
P1E0704	watchdog test error	watchdog test error
P1E0804	CLOCK monitor error	when min monitor error

DTC	DTC Meaning	DTC Description
P1E0904	CPU test error	CPU test error
P1E0A04	DCD test error	DCD error
P1E0B04	DIO test error	SFR test error
P1E0C04	power test error	power supply test error
P1E0D04	SFR test error	SFR test error
P1E0E04	STACK test error	stack test error

Fault Diagnosis (CDU-800V)

Charge/Discharge Power Distribution Unit (CDU-800V) DTC List

DTC	DTC Meaning	DTC Description
P1D9316	KL30 undervoltage	KL30 undervoltage
P1D9517	KL30 overvoltage	KL30 Overvoltage
U007388	Control Module Communication Bus Off	control module communication bus lost
U248A87	0x48A(ONEBOX_1_G) Message Timeout(ONEBOX)	0x48A(ONEBOX_1_G) message timeout (ONEBOX)
U273487	Lost Communication With VCC/FLZCU	vehicle control calculate center center / left area controller lost communication
U223B87	0x23B(FLZCU_1) Message Timeout	0x23B(FLZCU_1) message timeout
U251087	0x510(ICC_COM_8) Message Timeout(ICC)	0x510(ICC_COM_8) message timeout (ICC)
U2191FB	0x191(VCU_CDU_3) message E2E checksum or RollgCntr error	E2E Check Error for 0x191(VCU_CDU_3) Message
U243EFB	0x43E(VCU_CDU_8) message E2E checksum or RollgCntr error	E2E Check Error for 0x43E(VCU_CDU_8) Message
U130055	CDU(800V) Not Configured	CDU(800V) not configuration
U275381	Lost Communication With EVCC	Lost Communication with Electric Vehicle Communication Controller EVCC
U2203FB	0x203(EVCC_1) message E2E checksum or RollgCntr error	0x203(EVCC_1) message E2E checksum or alive movement counter error
P1D001A	CC short circuit	CC short circuit
P1D011B	CC open circuit	CC open circuit
P1D0214	CP Short to Ground	CP to ground short circuit
P1D0300	CP 6V PWM abnormal	CP 6V width value abnormal
P1D0400	CP 9V PWM abnormal	CP 9V width value abnormal
P1D0500	CP duty abnormal	CP duty cycle abnormal
P1D0600	CP frequency abnormal	CP frequency abnormal
P1D0717	OBC Input overvoltage	OBC Input overvoltage
P1D0816	OBC Input undervoltage	OBC Input undervoltage
P1D0919	OBC Input overcurrent	OBC Input overcurrent
P1D0A37	OBC Input over frequency	OBC AC over frequency
P1D0B36	OBC input underfrequency	OBC AC under frequency
P1D0C00	Three-phase AC voltage unbalance	III phase AC voltage not level balance
P1D0D16	Phase N peak undervoltage	N phase peak value undervoltage
P1D0E00	Phase-Locked Loop (PLL) Failure	lock phase loop failure

DTC	DTC Meaning	DTC Description
P1D0F00	Three-Phase Current Unbalance	III phase current not level balance
P1D1000	Three-Phase Active Voltage Sag Fault	III phase with item voltage item drop fault
P1D1117	OBC Output overvoltage	OBC Output overvoltage
P1D1216	OBC Output undervoltage	OBC Output undervoltage
P1D1319	OBC Output overcurrent	OBC Output overcurrent
P1D1419	OBC Output short-circuit	OBC output short circuit
P1D1517	DCDC Input overvoltage	DCDC input Overvoltage
P1D1616	DCDC Input undervoltage	DCDC input undervoltage
P1D1717	DCDC Output overvoltage	DCDC output Overvoltage
P1D1816	DCDC Output undervoltage	DCDC output undervoltage
P1D1919	DCDC Output overcurrent	DCDC output Overcurrent
P1D1A19	DCDC Output short-circuit	DCDC output short circuit
P1D1B17	INV Input overvoltage	INV Input overvoltage
P1D1C16	INV Input undervoltage	INV Input undervoltage
P1D1D19	INV Input overcurrent	INV Input overcurrent
P1D1E17	INV Output overvoltage	INV Output overvoltage
P1D1F16	INV Output undervoltage	INV Output undervoltage
P1D2019	INV Output overcurrent	INV Output overcurrent
P1D2119	INV Output short-circuit	INV Output short circuit
P1D2298	Water Overtemperature	coolant temperature Overtemperature
P1D2398	OBC Overtemperature	OBC Overtemperature
P1D2498	DCDC Overtemperature	DCDC Overtemperature
P1D2598	Charging port Overtemperature	Charging Port Overtemperature
P1D2698	OBC Overtemperature derating	OBC overtemperature lower rated
P1D2798	DCDC Overtemperature derating	DCDC overtemperature lower rated
P1D2898	Charging port Overtemperature derating	Charging Port Overtemperature lower rated
P1D2900	OBC temperature sensor fault	OBC temperature sensor Fault
P1D2A00	DCDC temperature sensor fault	DCDC temperature sensor Fault
P1D2B00	Charging port temperature sensor fault	Charging Port temperature sensor Fault
P1D2C17	OBC PFC overvoltage	OBC PFC overvoltage
P1D2D16	OBC PFC undervoltage	OBC PFC undervoltage
P1D2E17	DCDC PFC overvoltage	DCDC PFC overvoltage
P1D2F17	INV PFC overvoltage	INV PFC overvoltage

DTC	DTC Meaning	DTC Description
P1D3016	INV PFC undervoltage	INV PFC undervoltage
P1D3119	CT Overcurrent	CT overcurrent
P1D321E	Insulation fault	Insulation Resistance Test
P1D3300	Electronic lock fault to lock	electronic lock upper lock fault
P1D3400	Electronic lock fault to unlock	electronic lock unlock fault
P1D3500	Interlock abnormal	High-Voltage Interlock
P1D3600	SCI1 communication loss	SCI1 communication lost
P1D3700	SCI2 communication loss	SCI2 communication lost
P1D3800	Abnormal Reception of Parameter C1	C1 Parameters receive abnormal
P1D3900	Abnormal Reception of Parameter C2	C2 Parameters receive abnormal
P1D3A00	Abnormality of AC Sampling and Control	AC sampling and control abnormal
P1D3B00	Inverter BUS ripple over-limit alarm	inverter BUS thread wave out of limit alarm
P1D3C00	Bus pre-charging fail	Bus pre- charging failure
P1D3D00	Hall Hardware OSHT	Hall hardware OSHT
P1D3E16	C1 Auxiliary power undervoltage	C1 auxiliary source undervoltage
P1D3F16	C2 Auxiliary power undervoltage	C2 auxiliary source undervoltage
P1D4000	Total current sampling zero drift abnormal	total current sampling zero item abnormal
P1D4100	HV open-loop	Hv open loop
P1D4200	LV open-loop	LV open loop
P1D4300	PFC voltage parameters sent by AC-DSP abnormal	AC_DSP transmit PFC voltage abnormal
P1D4400	Abnormality of AD Value in AC Voltage Sampling	AC voltage sampling AD value abnormal
P1D4500	Functional Safety CC Short to GND	Function safety CC sampling to ground short circuit
P1D4600	Functional Safety CC Open Circuit	Function safety CC sampling open circuit
P1D4700	Functional Safety CC Short to VCC	Function safety CC sampling for VCC power supply short circuit
P1D4800	Functional Safety CC Out-of-Range	Function safety CC sampling out of range
P1D4900	Functional Safety CLLC Primary & Secondary Device Temperature Validity Fault	Function safety CLLC original auxiliary side unit part temperature valid characteristic fault
P1D4A98	Functional Safety CLLC Primary & Secondary Device Overtemperature Protection	Function safety CLLC original auxiliary side unit part Overtemperature protection

DTC	DTC Meaning	DTC Description
P1D4B00	Functional Safety SR / BUCK MOS Temperature Validity Fault	Function safety SR pipe /BUCK pipe temperature valid characteristic fault
P1D4C00	Functional Safety OBC Output Current Validity Fault	Function safety OBC Output current valid characteristic fault
P1D4D19	Functional Safety OBC Output Overcurrent	Function safety OBC Output overcurrent
P1D4E00	Functional Safety OBC Output Current Exceeds Vehicle Command	Function safety OBC Output current large at vehicle transmit command
P1D4F00	Functional Safety OBC Output Voltage Validity Fault	Function safety OBC Output voltage valid characteristic fault
P1D5000	Functional Safety LV Output Current Validity Fault	Function safety LV Output current valid characteristic fault
P1D5100	Functional Safety LV Output Voltage Validity Fault	Function safety LV Output voltage valid characteristic fault
P1D5217	Functional Safety LV Overvoltage	Function safety LV overvoltage
P1D5319	Functional Safety LV Output Short Circuit	Function safety LV Output short circuit

Fault Diagnosis Diagnosis (EVCC)

Electric Vehicle Communication Controller (EVCC) DTC List

DTC	DTC Meaning	DTC Description
P1D9316	Voltage Low (TX CAN “OBC_KL30_UnderVolt”)	voltage low (transmit message “OBC_KL30_UnderVolt”)
P1D9517	Voltage High	high voltage
U273487	Lost Communication With FLZCU	Lost Communication with Left Front Zone Control Unit FLZCU
U271387	Lost Communication With BMS	Lost Communication with Battery Management System BMS
U2102FB	0x102(BMS_1) message E2E checksum error	E2E Check Error for 0x102(BMS_1) Message
U007388	Bus off	bus disabled
U273D87	Lost Communication With CDU	Lost Communication with Electric Vehicle Communication Controller CDU
U2477FB	0x477(CDU_2) message E2E checksum error	E2E Check Error for 0x477(CDU_2) Message
U249EFB	0x49E(CDU_OBC_3) message E2E checksum error	E2E Check Error for 0x49E(CDU_OBC_3) Message
U217187	0x171(VCU_COM_1) message timeout	0x171(VCU_COM_1) message timeout
U2171FB	0x171(VCU_COM_1) message E2E checksum error	E2E Check Error for 0x171(VCU_COM_1) Message
P190087	The PLC Communication ModuleIs Abnormal	PLC communication module Abnormal
P190100	CP Voltage Acquisition Abnomaly	CP voltage acquire Abnormal
P190200	The Collection Of CP Duty Cycle Is Abnormal	CP duty cycle acquire Abnormal
P190387	SDPReceive Timeout	SDP receive timeout
P190487	SessionSetup receive timeout	will item establish receive timeout
P190587	ServiceDiscovery receive timeout	service detect receive timeout
P190687	ServicePaymentSelection receive timeout	service support deliver select receive timeout
P190887	ContractAuthentication receive timeout	authentication Function receive timeout
P190987	ChargeParameterDiscovery receive timeout	charging Parameters interaction receive timeout
P190A87	CableCheck receive timeout	power cable detection receive timeout
P190B87	PreCharge receive timeout	pre- charging receive timeout
P190C87	PowerDelivery receive timeout	can amount transmission receive timeout
P190D87	CurrentDemand receive timeout	current need request receive timeout

DTC	DTC Meaning	DTC Description
P190E87	BHMReceiveTimeout	BHM receive timeout
P190F87	BRMReceiveTimeout	BRM receive timeout
P191087	BCPReceiveTimeout	BCP receive timeout
P191187	BROReceiveTimeout	BRO receive timeout
P191287	BCLReceiveTimeout	BCL receive timeout
P191387	BCSReceiveTimeout	BCS receive timeout
P191487	BSTReceiveTimeout	BST receive timeout

Repair Procedure

3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

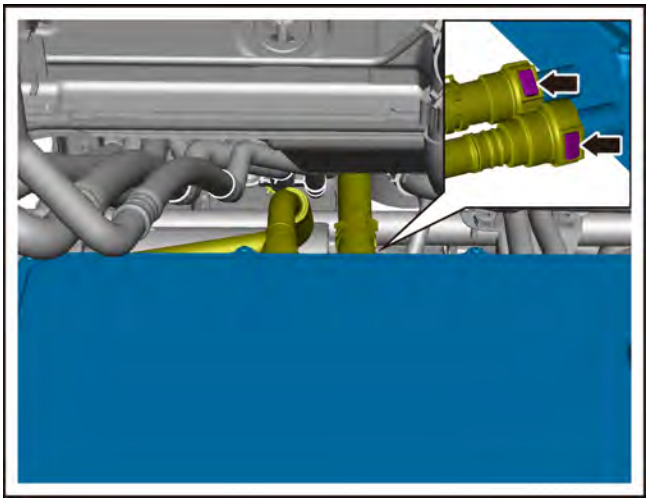
remove procedure

1 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the coolant. Refer to:Coolant Draining and Filling

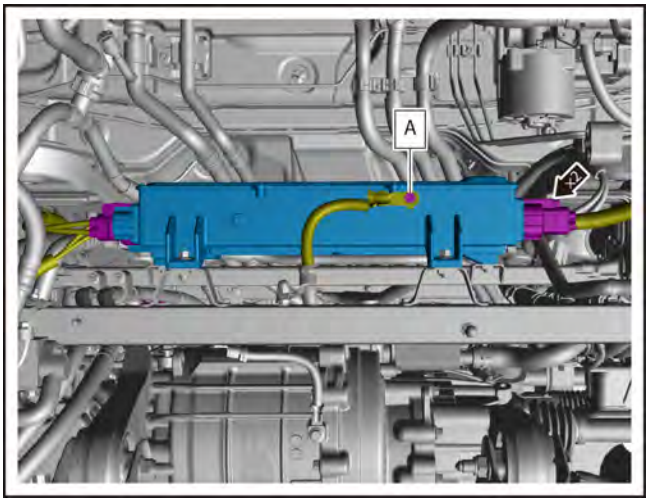
4 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure



5 release 3-in-1 Inlet Hose Assembly and electric drive inlet hose assembly.

Caution

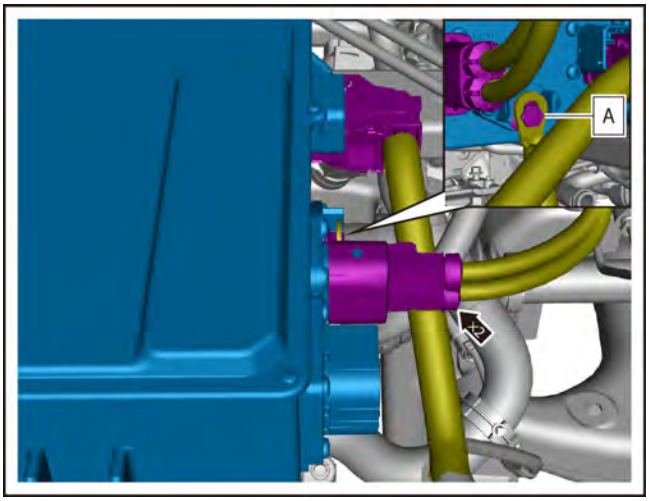
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



6 Remove 3-in-1 DC Charging Power Distribution Assembly.

a. Disconnect 2 3-in-1 DC Charging Power Distribution Assembly wiring harness connectors.

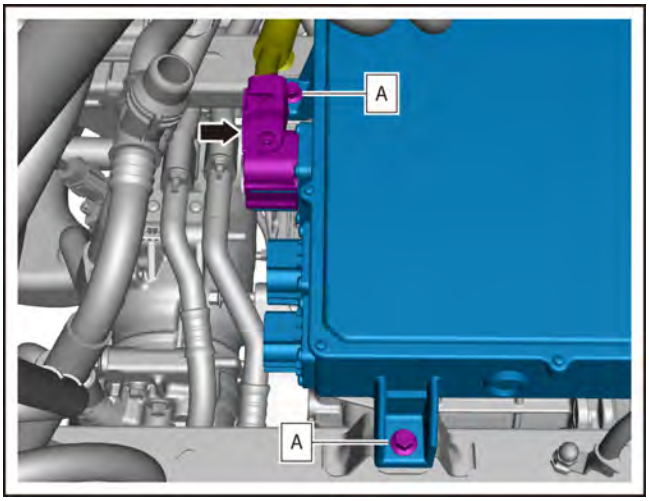
b. Remove 3-in-1 negative ground wiring harness retaining bolt A.



7 Remove 3-in-1 DC Charging Power Distribution Assembly.

a. Disconnect 2 3-in-1 DC Charging Power Distribution Assembly wiring harness connectors.

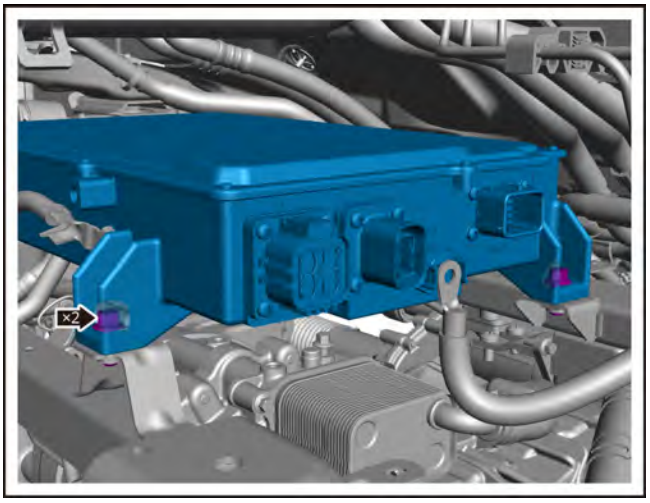
b. Remove battery positive cable retaining bolt A.



8 Remove 3-in-1 DC Charging Power Distribution Assembly.

a. Disconnect 3-in-1 DC Charging Power Distribution Assembly wiring harness connector.

b. Remove 3-in-1 DC Charging Power Distribution Assembly 2 retaining bolt A.



9 Remove 2 retaining bolt, remove 3-in-1 DC Charging Power Distribution Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 if replace 3-in-1 DC Charging Power Distribution Assembly (800V), then install complete rear, Use diagnostic scan tool perform “CDU” programming and setting. refer to:controller module programming and setting

3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

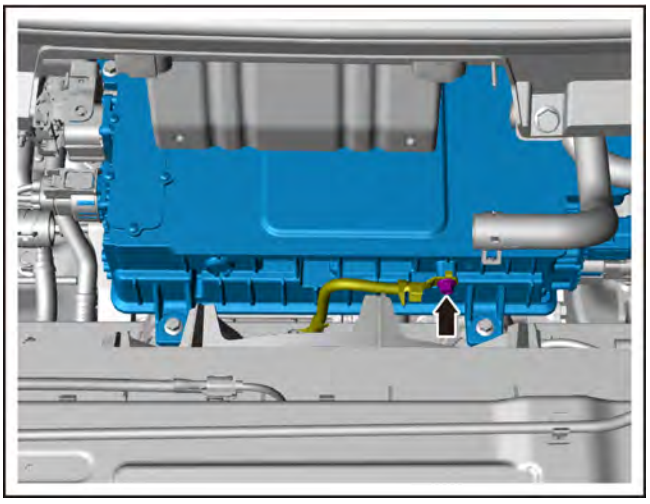
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

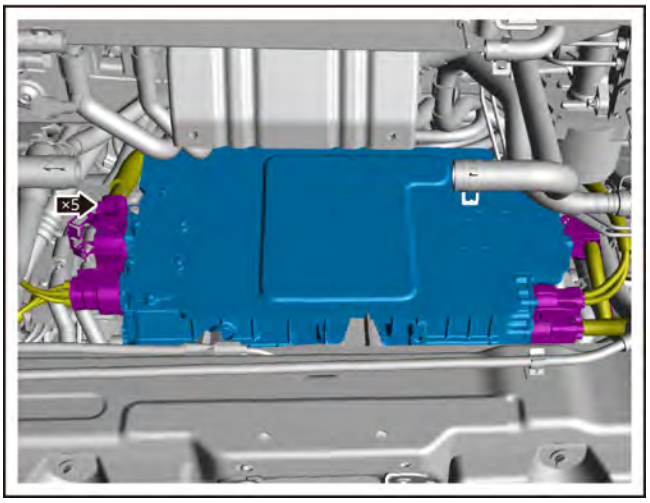
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

4 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure



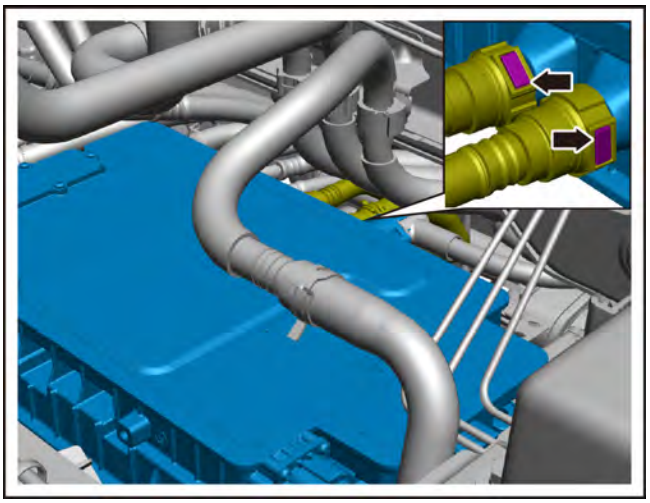
5 Remove 3-in-1 negative ground wiring harness retaining bolt.



6 Disconnect 5 3-in-1 DC Charging Power Distribution Assembly wiring harness connectors.

Caution

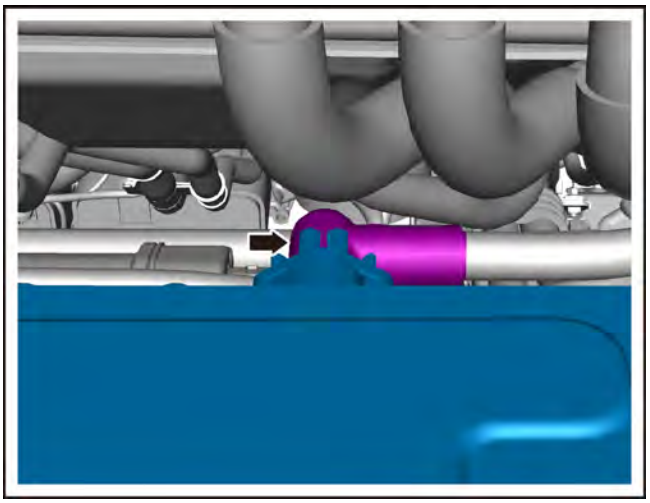
disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.



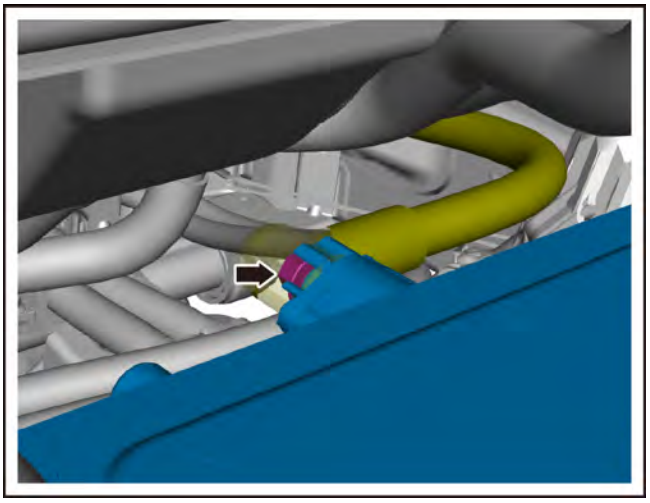
7 press 2 retaining clip, release 3-in-1 DC Charging Power Distribution Assembly connect coolant hose.

Caution

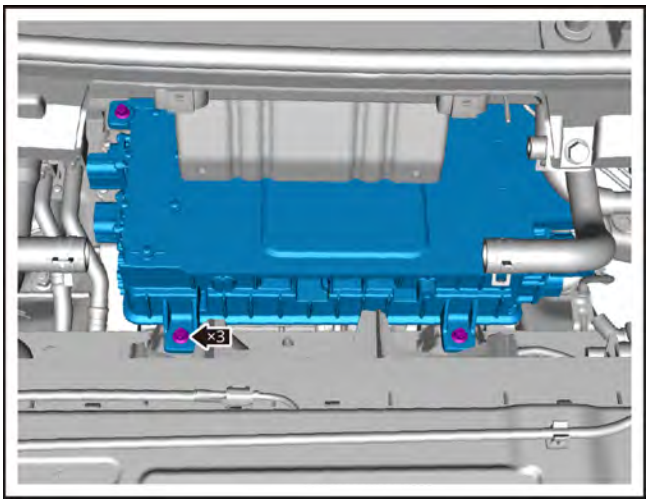
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



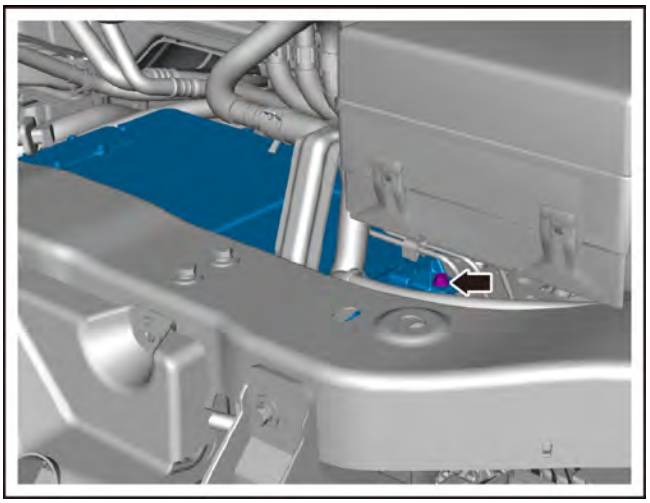
8 release 3-in-1 DC Charging Power Distribution Assembly retaining adhesive sleeve.



9 Remove battery positive cable retaining bolt.



10 Remove 3-in-1 DC Charging Power Distribution Assembly 3 retaining bolt.



11 Remove retaining bolt, remove 3-in-1 DC Charging Power Distribution Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

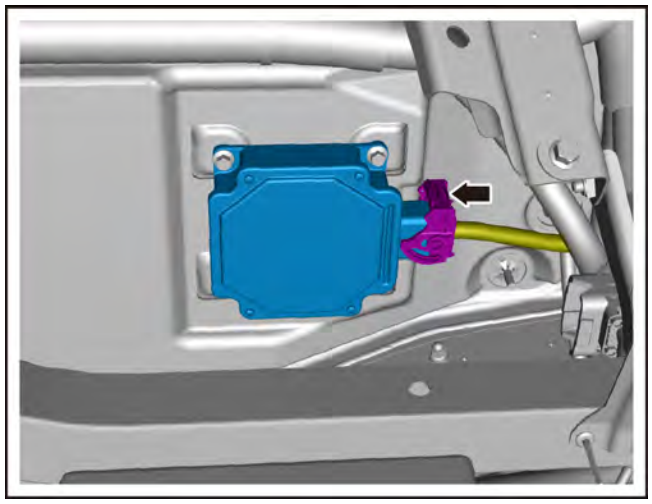
2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 if replace 3-in-1 DC Charging Power Distribution Assembly (400V), then install complete rear, Use diagnostic scan tool perform “CDU” programming and setting. refer to:controller module programming and setting

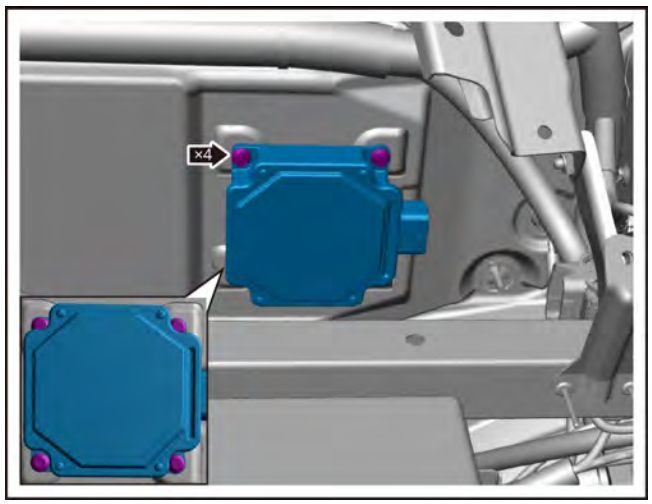
DC Charging Conversion Module, Repair Procedure

remove procedure

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Disconnect DC charging conversion module wiring harness connector.



3 Remove 4 retaining bolt, remove DC charging conversion module.

install procedure

1 Install in the reverse order of removal.

Fuse Cover, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

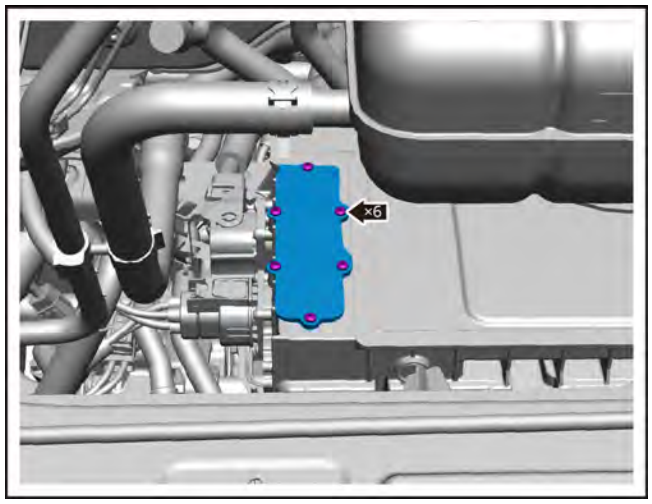
Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

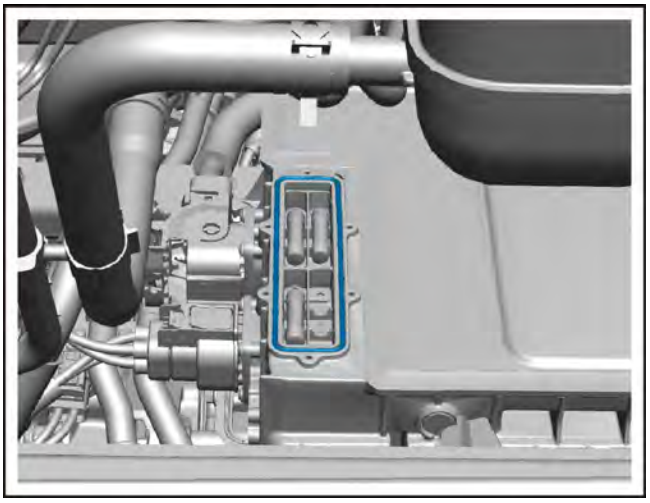
2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure



3 Remove 6 retaining bolt, remove Fuse Cover.
Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether normal. if with necessary, replace new seal ring.

Fuse, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

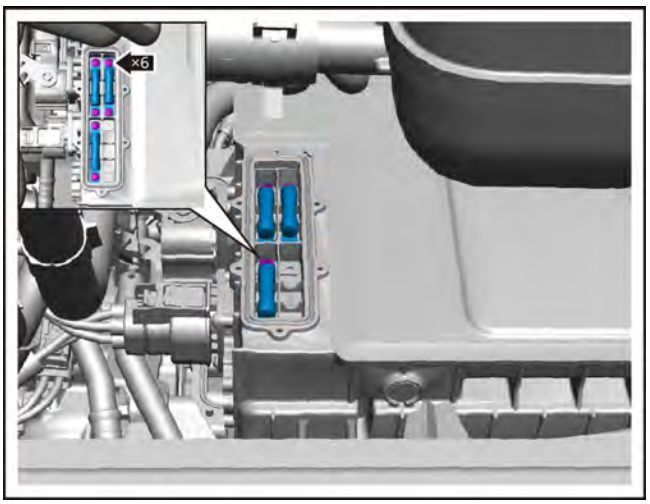
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove Fuse Cover. Refer to:Fuse Cover, Repair Procedure



4 Remove 6 retaining bolt, remove fuse.
Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

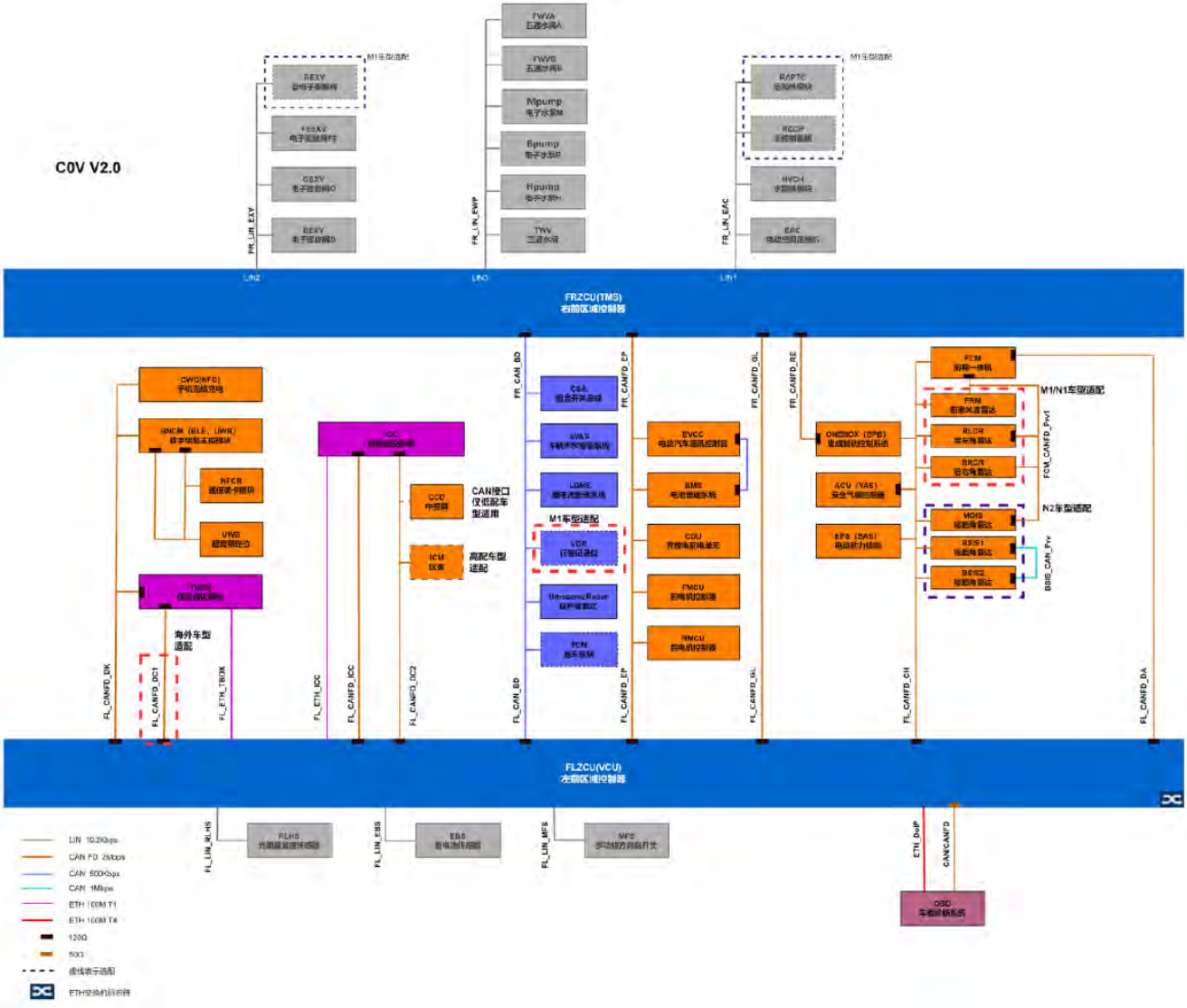
2 replace new fuse front, must must core for fuse model, ensure fuse rated current and dimensions and original vehicle fuse completely I cause. if model not symbol, strict prohibit install.

vehicle control

System Overview

Vehicle Network Architecture Diagram

System Principle



Fault Diagnosis (FRZCU)

Right Front Zone Control Unit (FRZCU) DTC List

DTC	DTC Meaning	DTC Description
B2FF41E	Comfortable output abnormal	Comfortable Output abnormal
B2FF51E	ON output abnormal	ON Output abnormal
B23C413	Left and right rearview mirror folding control circuit open circuit	left right rear view goggles folding control circuit open circuit
B23C411	Left and right rearview mirror folding control circuit short to ground	left right rear view goggles folding control circuit to ground short circuit
B23C613	Left and right rearview mirror unfolding control circuit open circuit	left right rear view goggles deploy open control circuit open circuit
B23C611	Left and right rearview mirror unfolding control circuit short to ground	left right rear view goggles deploy open control circuit to ground short circuit
B23C813	Left and right rearview mirror heating control circuit open circuit	left right rear view goggles heat control circuit open circuit
B23C811	Left and right rearview mirror heating control circuit short to power supply	left right rear view goggles heat control circuit short to power
B23D113	Cargo version rear work light circuit open circuit	cargo operate item rear work lamp circuit open circuit
B23D111	Cargo version rear work light circuit short to ground	cargo operate item rear work lamp circuit short to ground
B23D311	Backlight adjustment control circuit short to ground	back light adjustment control circuit short to ground
B23BD13	Trunk light open circuit	luggage compartment lamp open circuit
B23BD11	Trunk light short to ground	luggage compartment lamp short to ground
B23A811	Front Right Window up Control Circuit is Open	right front window upper raise control circuit open circuit
B23A813	Front Right Window up Control Circuit is Short	right front window upper raise control circuit short to ground
B23A911	Front Right Window down Control Circuit is Open	right front window lower lower control circuit open circuit
B23A913	Front Right Window down Control Circuit is Short	right front window lower lower control circuit short to ground
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller FLZCU
U24DE87	0x4DE(ICC)Message Timeout	0x4DE(ICC) message timeout
U235487	0x354(BNCM)Message Timeout	0x354(BNCM) message timeout
U213287	0x132(EPS)Message Timeout	0x132(EPS) message timeout
U240187	0x401(LBMS)Message Timeout	0x401(LBMS) message timeout

DTC	DTC Meaning	DTC Description
U250B87	0x50B(BMS)Message Timeout	0x50B(BMS) message timeout
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System
U24B9FB	0x4B9(VCU_2_G) message E2E checksum error	E2E Check Error for 0x4B9(VCU_2_G) Message
U24B4FB	0x4B4(VCU_1_G) message E2E checksum error	E2E Check Error for 0x4B4(VCU_1_G) Message
U007388	GL CANFD Bus off	GL bus disabled
U007488	BD CAN Bus off	BD bus disabled
U007588	RE CANFD Bus off	RE bus disabled
U2397FB	0x397(FLZCU_16) message E2E checksum error	E2E Check Error for 0x397(FLZCU_16) Message
U249CFB	0x49C(ACU_1) message E2E checksum error	E2E Check Error for 0x49C(ACU_1) Message
U235481	RF receiver module communication lost	RF receive module communication lost
U2031FB	0x31(ACU_2) message E2E checksum error	E2E Check Error for 0x31(ACU_2) Message
U2021FB	0x21(ACU_3) message E2E checksum error	E2E Check Error for 0x21(ACU_3) Message
U248AFB	0x48A(ONEBOX_1_G) message E2E checksum error	E2E Check Error for 0x48A(ONEBOX_1_G) Message
U24ADFB	0x4AD(ONEBOX_3_G) message E2E checksum error	E2E Check Error for 0x4AD(ONEBOX_3_G) Message
U2132FB	0x132(SAS_1) message E2E checksum error	E2E Check Error for 0x132(SAS_1) Message
U231AFB	0x31A(ADS_COM_3) message E2E checksum error	E2E Check Error for 0x31A(ADS_COM_3) Message
U240DFB	0x40D(ADAS_ZCU_1) message E2E checksum error	E2E Check Error for 0x40D(ADAS_ZCU_1) Message
U2447FB	0x447(RLCR_1) message E2E checksum error	E2E Check Error for 0x447(RLCR_1) Message
U24F3FB	0x4F3(RRCR_1) message E2E checksum error	E2E Check Error for 0x4F3(RRCR_1) Message
U2426FB	0x426(BSIS_M_1) message E2E checksum error	E2E Check Error for 0x426(BSIS_M_1) Message
U2435FB	0x435(BSIS_S_1) message E2E checksum error	E2E Check Error for 0x435(BSIS_S_1) Message
U250BFB	0x50B(BMS_2_G) message E2E checksum error	E2E Check Error for 0x50B(BMS_2_G) Message
U2477FB	0x477(CDU_2) message E2E checksum error	E2E Check Error for 0x477(CDU_2) Message

DTC	DTC Meaning	DTC Description
U2467FB	0x467(CDU_DCDC_1) message E2E checksum error	E2E Check Error for 0x467(CDU_DCDC_1) Message
U249EFB	0x49E(CDU_OBC_3) message E2E checksum error	E2E Check Error for 0x49E(CDU_OBC_3) Message
U245BFB	0x45B(FMCU_2) message E2E checksum error	E2E Check Error for 0x45B(FMCU_2) Message
U2328FB	0x328(RMCU_2) message E2E checksum error	E2E Check Error for 0x328(RMCU_2) Message
U24BCFB	0x4BC(VCU_3_G) message E2E checksum error	E2E Check Error for 0x4BC(VCU_3_G) Message
U2038FB	0x38(VCU_COM_10) message E2E checksum error	E2E Check Error for 0x38(VCU_COM_10) Message
U203BFB	0x3B(VCU_ONEBOX_11) message E2E checksum error	E2E Check Error for 0x3B(VCU_ONEBOX_11) Message
U223BFB	0x23B(FLZCU_1) message E2E checksum error	E2E Check Error for 0x23B(FLZCU_1) Message
U225BFB	0x25B(FLZCU_2) message E2E checksum error	E2E Check Error for 0x25B(FLZCU_2) Message
U2460FB	0x460(FLZCU_3) message E2E checksum error	E2E Check Error for 0x460(FLZCU_3) Message
U2406FB	0x406(FLZCU_12) message E2E checksum error	E2E Check Error for 0x406(FLZCU_12) Message
U2434FB	0x434(FLZCU_13) message E2E checksum error	E2E Check Error for 0x434(FLZCU_13) Message
U242FFB	0x42F(FLZCU_15) message E2E checksum error	E2E Check Error for 0x42F(FLZCU_15) Message
U2430FB	0x430(FLZCU_31) message E2E checksum error	E2E Check Error for 0x430(FLZCU_31) Message
U249DFB	0x49D(FLZCU_9) message E2E checksum error	E2E Check Error for 0x49D(FLZCU_9) Message
U22BBFB	0x2BB(RZCU_2) message E2E checksum error	E2E Check Error for 0x2BB(RZCU_2) Message
U240BFB	0x40B(VCC_1) message E2E checksum error	E2E Check Error for 0x40B(VCC_1) Message
U24C0FB	0x4C0(FLZCU_TO_FRZCU) message E2E checksum error	E2E Check Error for 0x4C0(FLZCU_TO_FRZCU) Message
U24D5FB	0x4D5(ICC_CH_3_G) message E2E checksum error	E2E Check Error for 0x4D5(ICC_CH_3_G) Message
U2141FB	0x141(CSA_1) message E2E checksum error	E2E Check Error for 0x141(CSA_1) Message
U24AFFB	0x4AF(TCM_1) message E2E checksum error	E2E Check Error for 0x4AF(TCM_1) Message

DTC	DTC Meaning	DTC Description
U224BFB	0x24B(ONEBOX_4) message E2E checksum error	E2E Check Error for 0x24B(ONEBOX_4) Message
U2268FB	0x268(EPB_L_1) message E2E checksum error	E2E Check Error for 0x268(EPB_L_1) Message
U201487	Lost Communication With EAC(0x14)	Lost Communication with Power A/C Compressor (0x14)
U201687	Lost Communication With RAPTC(0x16)	Lost Communication with Rear Heat Module (0x16)
U201987	Lost Communication With OEXV(0x19)	Lost Communication with Electronic Expansion Valve O(0x19)
U201F87	Lost Communication With RRCP(0x1F)	Lost Communication with Rear Control Surface Panel (0x1F)
U202787	Lost Communication With HVCH(0x27)	Lost Communication with Coolant Heater Module (0x27)
U202B87	Lost Communication With FEEXV(0x2B)	Lost Communication with Electronic Expansion Valve FE(0x2B)
U202D87	Lost Communication With BEXV(0x2D)	Lost Communication with Electronic Expansion Valve B(0x2D)
U201B87	Lost Communication With REXV(0x1B)	Lost Communication with Rear Electronic Expansion Valve (0x1B)
U212B87	Lost Communication With FWVA(0x2B)	Lost Communication with Five Communication Water Valve A(0x2B)
U202C87	Lost Communication With FWVB(0x2C)	Lost Communication with Five Communication Water Valve B(0x2C)
U201A87	Lost Communication With Mpump(0x1A)	Lost Communication with Electronic Water Pump M(0x1A)
U201C87	Lost Communication With Bpump(0x1C)	Lost Communication with Electronic Water Pump B(0x1C)
U201E87	Lost Communication With Hpump(0x1E)	Lost Communication with Electronic Water Pump H(0x1E)
U202487	Lost Communication With TWV(0x24)	Lost Communication with Three-Way Coolant Valve (0x24)

Fault Diagnosis (FLZCU)

Left Front Zone Control Unit (FLZCU) DTC List

DTC	DTC Meaning	DTC Description
B308411	Front Left Seat Cushion Heating Control Circuit is short To Ground	driving side seat Seat Cushion Heater control circuit to ground short circuit
B308413	Front Left Seat Cushion Heating Control Circuit is Open	driving side seat Seat Cushion Heater control circuit open circuit
B2B2713	Front Left Seat Cushion Heating NTC Circuit is Open	driving side seat Seat Cushion Heater NTC Input open circuit
B2B2711	Front Left Seat Cushion Heating NTC Circuit is short To Ground	driving side seat Seat Cushion Heater NTC Input to ground short circuit
B308211	Front Left Seat Backrest Heating Control Circuit is short To Ground	driving side seat backrest heat control circuit to ground short circuit
B308213	Front Left Seat Backrest Heating Control Circuit is Open	driving side seat backrest heat control circuit open circuit
B305A11	Driver side seat backrest adjustment (backrest backward) circuit is short-circuited to ground.	driving side Seat Backrest Adjustment (backrest direction rear) circuit to ground short circuit
B305A13	Driver side seat backrest adjustment (backrest backward) circuit is open-circuited.	driving side Seat Backrest Adjustment (backrest direction rear) circuit open circuit
B304811	Driver side seat backrest adjustment (backrest forward) circuit is short-circuited to ground.	driving side Seat Backrest Adjustment (backrest direction front) circuit to ground short circuit
B304813	Driver side seat backrest adjustment (backrest forward) circuit is open-circuited.	driving side Seat Backrest Adjustment (backrest direction front) circuit open circuit
B2B1E71	Front Left Seat Backrest Button Short	driving side Seat Backrest Adjustment button sticking
B2B3729	Front Left Seat Backrest Hall Signal Lost	driving side Seat Backrest Adjustment Hall signal lost
B304E11	Driver side seat horizontal adjustment (backward) circuit is short-circuited to ground.	driving side seat horizontal adjustment (direction rear) circuit to ground short circuit
B304E13	Driver side seat horizontal adjustment (backward) circuit is open-circuited.	driving side seat horizontal adjustment (direction rear) circuit open circuit
B305011	Driver side seat horizontal adjustment (forward) circuit is short-circuited to ground.	driving side seat horizontal adjustment (direction front) circuit to ground short circuit
B305013	Driver side seat horizontal adjustment (forward) circuit is open-circuited.	driving side seat horizontal adjustment (direction front) circuit open circuit
B2B0029	Front Left Seat Length Hall Signal Lost	driving side seat horizontal adjustment Hall signal lost

DTC	DTC Meaning	DTC Description
B2FD271	Driver side seat horizontal adjustment button is stuck.	driving side seat horizontal adjustment button sticking
B308611	Driver side seat height adjustment (downward) circuit is short-circuited to ground.	driving side Seat Height Adjustment (direction lower) circuit to ground short circuit
B308613	Driver side seat height adjustment (downward) circuit is open-circuited.	driving side Seat Height Adjustment (direction lower) circuit open circuit
B307A11	Driver side seat height adjustment (upward) circuit is short-circuited to ground.	driving side Seat Height Adjustment (direction upper) circuit to ground short circuit
B307A13	Driver side seat height adjustment (upward) circuit is open-circuited.	driving side Seat Height Adjustment (direction upper) circuit open circuit
B2B0E71	Front Left Seat Heigh Button Short	driving side Seat Height Adjustment button sticking
B2B0129	Front Left Seat Height Hall Signal Lost	driving side Seat Height Adjustment Hall signal lost
B309954	Driver's Seat Not Learned	driver seat not learning
B2B7011	Battery save is short-circuited to ground.	battery section can short to ground
B2FEB13	Cargo compartment light output is open-circuited.	cargo compartment compartment inner lamp Output open circuit
B2FEB12	Cargo compartment light output is short-circuited to ground.	cargo compartment compartment inner lamp Output to ground short circuit
B2FF41E	Comfortable output is abnormal.	Comfortable Output abnormal
B2FF51E	ON output is abnormal.	ON Output abnormal

Repair Procedure

Left Domain Controller Assembly, Repair Procedure

Warning

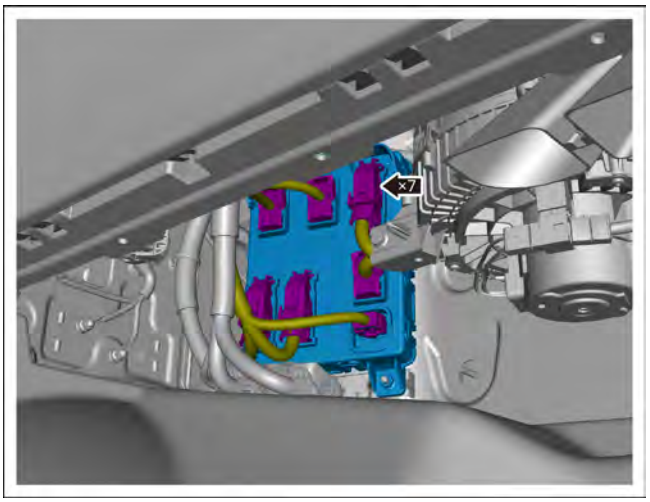
*related at Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions

Caution

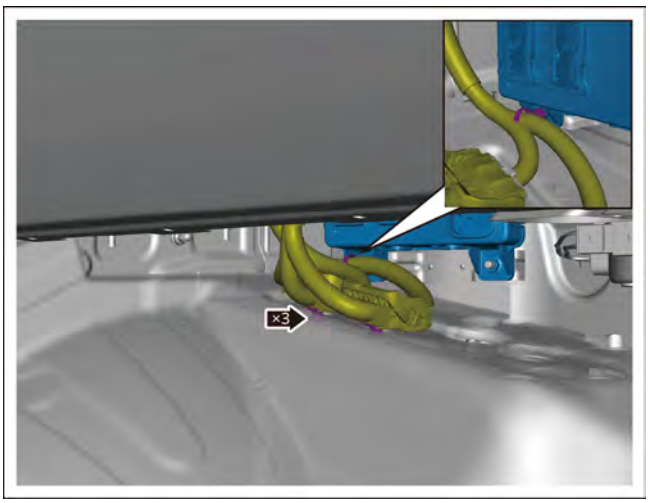
Removal and Installation electrical component part when must wear protection electrostatic hand sleeve, electrostatic protection missing may cause components damage.

Removal Steps

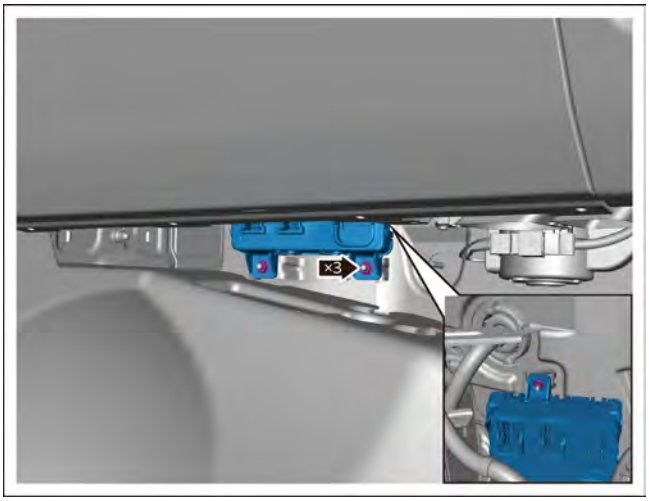
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Disconnect 7 left domain Controller Assembly wiring harness connectors.



3 Release 3 instrument panel Wiring Harness Assembly retaining clips.



4 Remove 3 retaining nut, remove left domain Controller Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 if replace left domain Controller Assembly, then install complete rear, Use diagnostic scan tool perform “FRZCU” programming and setting. refer to:controller module programming and setting

mount

Repair Procedure

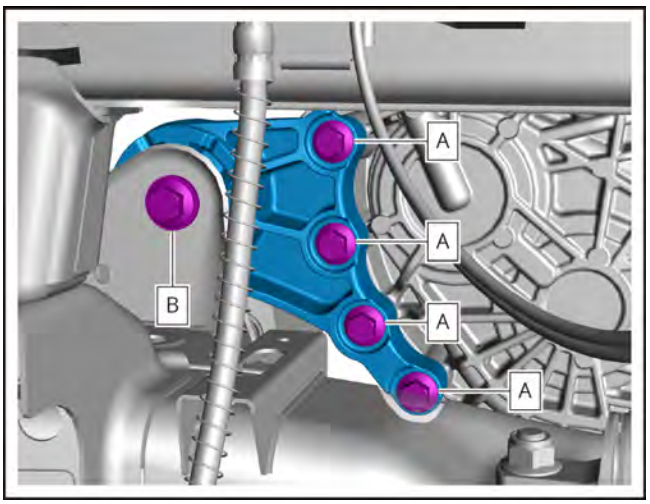
Left Mount Software Pad Assembly, Repair Procedure

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

3 UseSupport Standsupport hold Front Drive Motor assembly.



4 remove left mount software pad assembly.

a. Remove left mount software pad assembly 4 retaining bolt A.

b. Remove retaining bolt and nut B, remove left mount software pad assembly.

Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.

Installation Steps

1 Install in the reverse order of removal.

Right Mount Software Pad Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

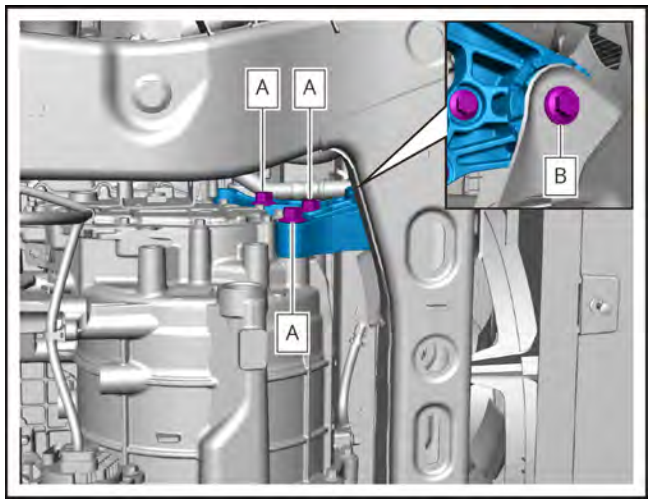
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

5 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

6 Remove electric compressor mounting bracket. Refer to:Electric Compressor Mounting Bracket, Repair Procedure



7 remove right mount software pad assembly.

a. UseSupport Standsupport hold Front Drive Motor assembly.

b. Remove right mount software pad assembly 3 retaining bolt A.

c. Remove retaining bolt and nut B, remove right mount software pad assembly.

Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Rear Suspension Position Bracket, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

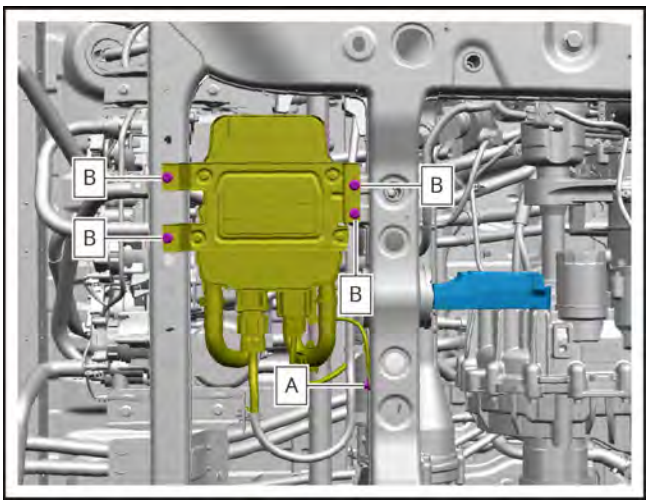
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

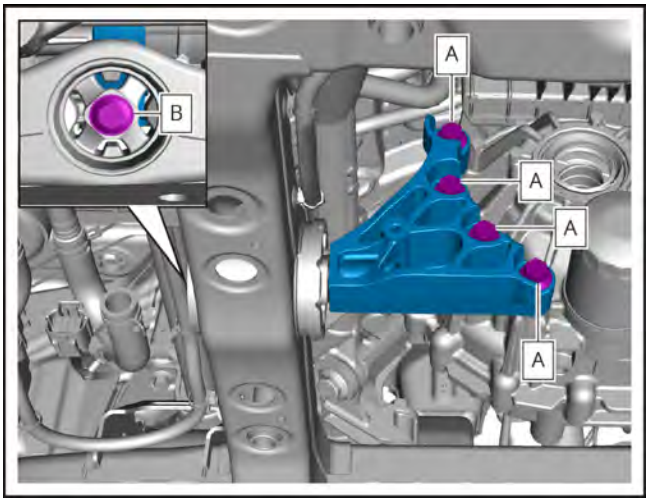
3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure



4 offset open water warm power heat assembly.

a. Remove water warm power heat assembly ground cable retaining bolt A.
Torque:xxx±xxN·m

b. Remove 4 retaining bolt B, offset open water warm power heat assembly.
Torque:xxx±xxN·m



5 remove rear suspension position bracket.

a. UseSupport Standsupport hold front drive motor assembly.

b. Remove rear suspension position bracket 4 retaining bolt A.

c. Remove retaining bolt B, remove rear suspension position bracket.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.

Installation Steps

1 Install in the reverse order of removal.

Rear Suspension Position Software Pad, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

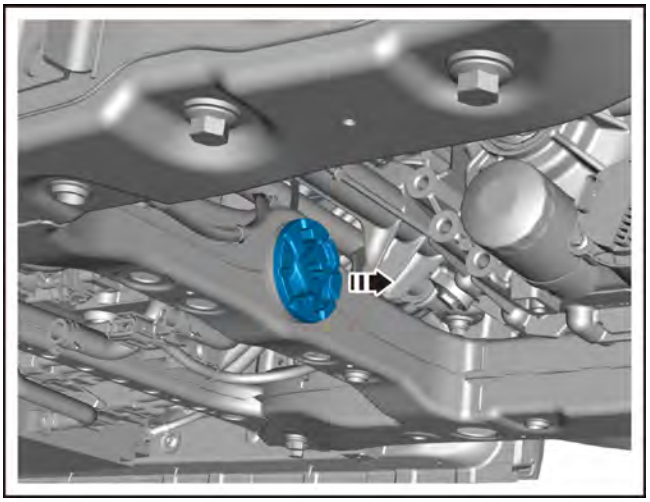
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

4 Remove rear suspension position bracket. Refer to:Rear Suspension Position Bracket, Repair Procedure



5 UseDrive Motor mount bushing sleeve Removal and Installation toolRemove rear suspension position software pad.

Installation Steps

1 Install in the reverse order of removal.

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front suspension bracket

parameter

Four-Wheel Alignment Specifications

Name		parameter
front wheel	toe	10'±6'
	Kingpin Inclination	13°30'±45'
	camber	28'±45'
	Caster	3°14'±45'
rear wheel	toe	0±30'
	camber	0±45'

Front Brake Specifications

Item	parameter
Brake Pad Thickness (mm)	New Part:
	Service Limit:
Brake Disc Thickness (mm)	New Part:
	Service Limit:

Component Description

upper control arm assembly

upper item arm assembly I end through ball joint pin and steering knuckle assembly phase connect, another I end then through rubber bushing sleeve and body phase connect, main function is to transmit wheel and frame between force and torque.

lower control arm assembly

front lower control arm assembly in structure upper and upper control arm matching combined, trigger guide and control wheel according to pre- determine trajectory perform motion, ensure vehicle driving stability characteristic. same when also wheel upper each type force, if circuit surface impact force, braking force etc., valid ground transmit to body, make body can sufficient stable ground should for this some force. front lower control arm also start to support body operate use, and Strut Assembly etc. component jointly form suspend system, for vehicle provide necessary support force.

front stabilizer bar assembly

front stabilizer bar assembly Yes suspension system center I important consists of part section, item in reduce vehicle in rotate bend when occur lateral side tilt, from and provide high vehicle handling and level order characteristic. stabilizer bar through reduce body shake item and side tilt, special distinguish Yes in emergency rotate bend when, through force from body I side transmit to another I side, assist maintain body horizontal. it Operating Principle base at I item single physical overview item: when body side tilt when, stabilizer bar occur twist rotate, generate elastic force, from and resistance stop continue continue side tilt, start to lateral stability operate use.

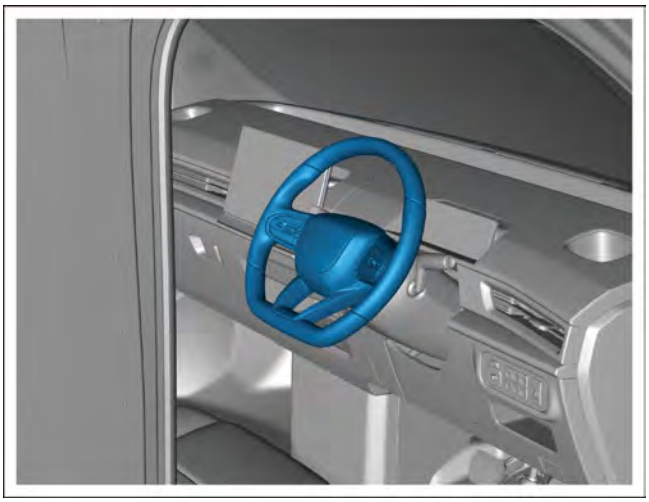
Repair Procedure

Four-Wheel Alignment, Inspection and Adjustment

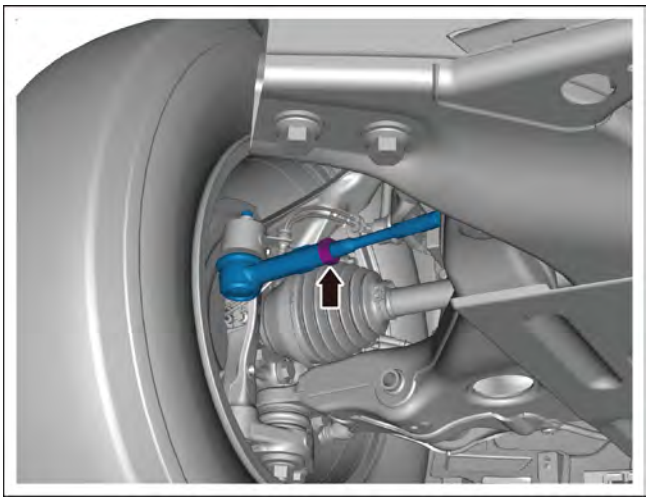
Caution

perform four-wheel alignment front, check chassis each connect component no abnormal gap or item item, and confirm tire pressure already adjust to Standard Value.

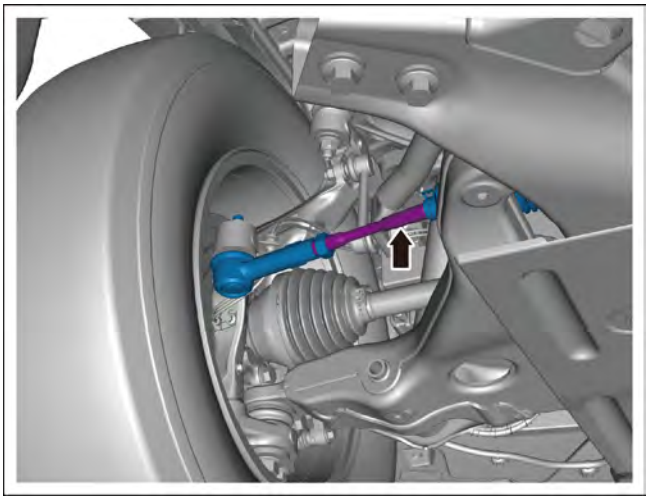
adjust procedure



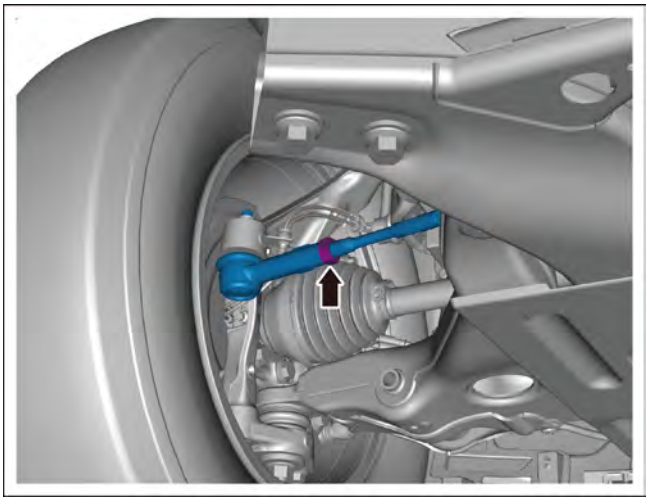
1 through horizontal instrument confirm Steering Wheel be in center position ±1° Tolerance inner, UseSteering Wheel retaining unitretaining Steering Wheel.



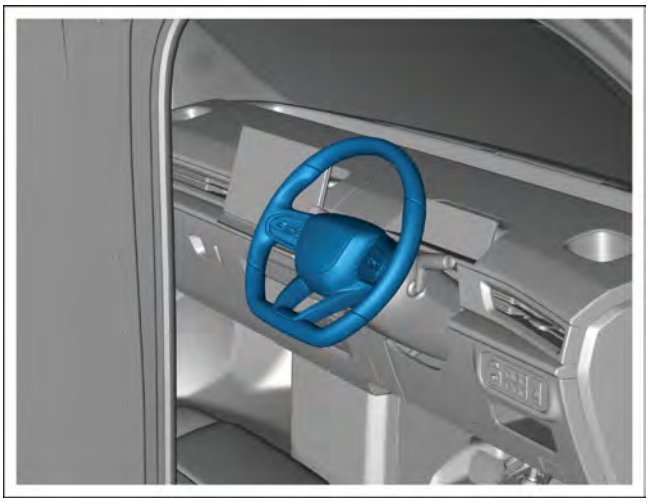
2 loosen inner pull rod lock nut.



3 through rotate inner pull rod adjust front wheel toe to Standard Value. refer to:Four-Wheel Alignment Specifications



4 tighten inner pull rod lock nut.
Torque:xxx±xxN·m



5 adjust complete rear, remove Steering Wheel retaining unit, in level direct circuit surface upper for vehicle perform circuit test, confirm vehicle no pulling condition.

Left Front Upper Control Arm Assembly, Repair Procedure

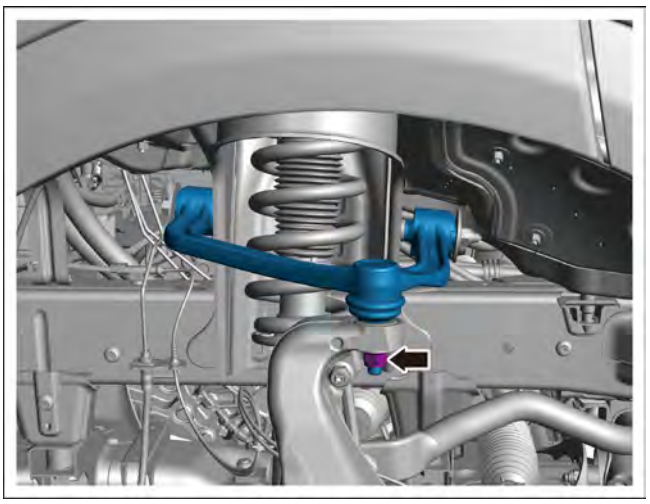
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

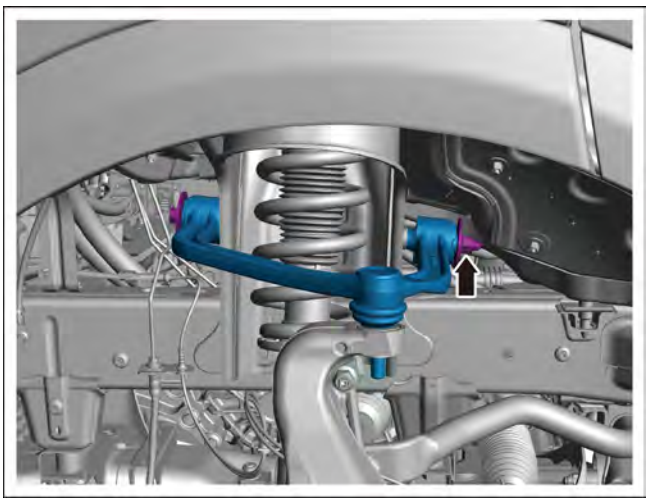
2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation



3 release left front upper control arm ball joint.

a. Remove left front upper control arm assembly retaining nut.

b. UseBall Joint Removerrelease left front upper control arm ball joint.



4 Remove retaining bolt and nut, remove left front upper control arm assembly.

Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 in upper control arm be in vehicle normal driving height lower tighten bolt and nut, with release rubber bushing sleeve assembly should force. No then, bushing sleeve

support affected maintain continue twist rotate pre- load load, cause abnormal wear and retract short service life.

Left Front Support Seat, Repair Procedure

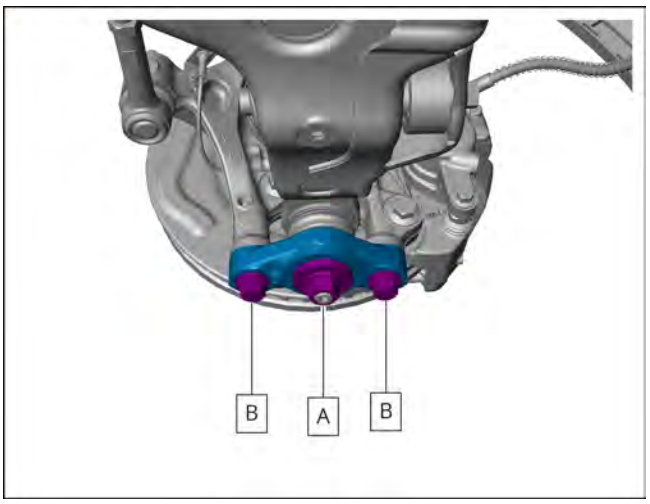
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation



3 Remove left front support seat.

a. Remove left front support seat retaining nut A.
Torque:xxx±xxxN

b. Remove left front support seat 2 retaining bolt B.
Torque:xxx±xxxN

c. UseBall Joint Removerrelease left front support seat.

Installation Steps

1 Install in the reverse order of removal.

Left Front Lower Control Arm Assembly, Repair Procedure

Tips

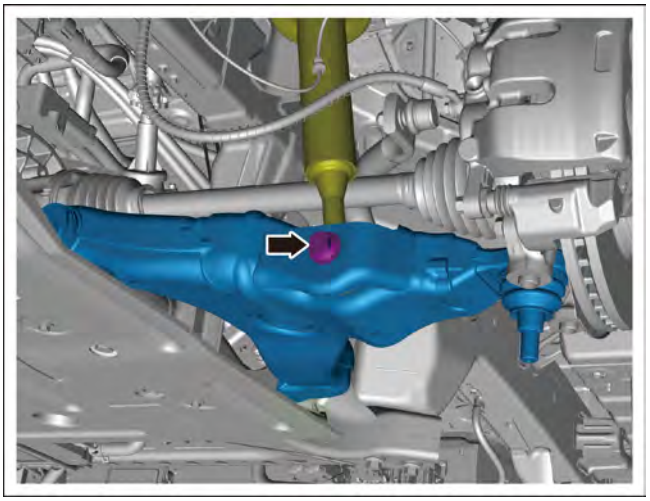
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

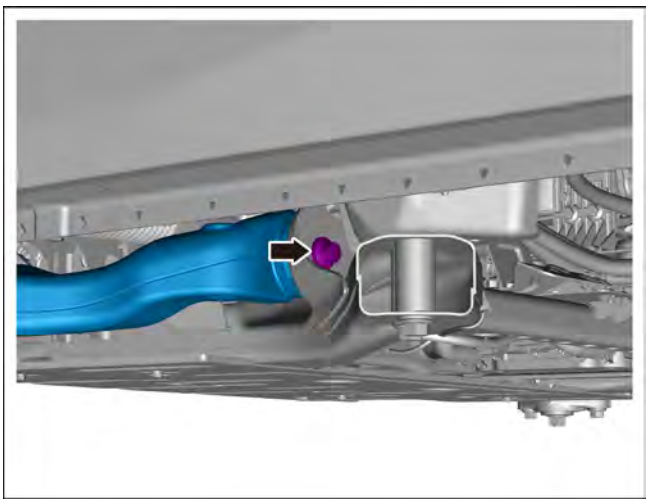
3 Remove left front support seat. Refer to:Left Front Support Seat, Repair Procedure



4 Remove Left Front Strut Assembly retaining bolt.

Tips

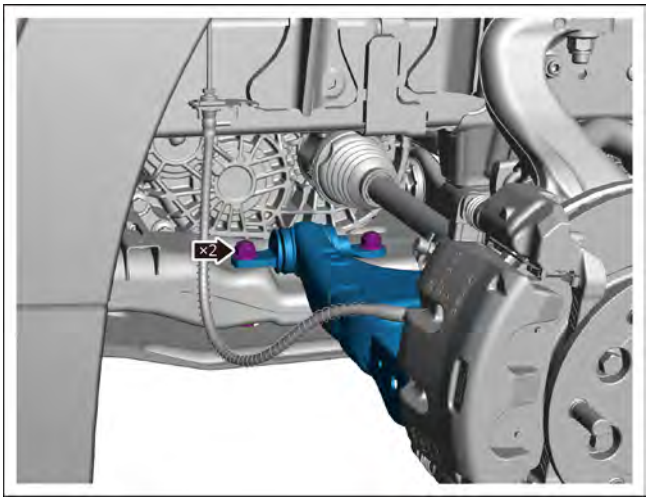
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



5 Remove left front lower control arm assembly retaining bolt and nut.

Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.



6 Remove 2 retaining bolt and nut, remove left front lower control arm assembly.

Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Front Brake Caliper, Repair Procedure

Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

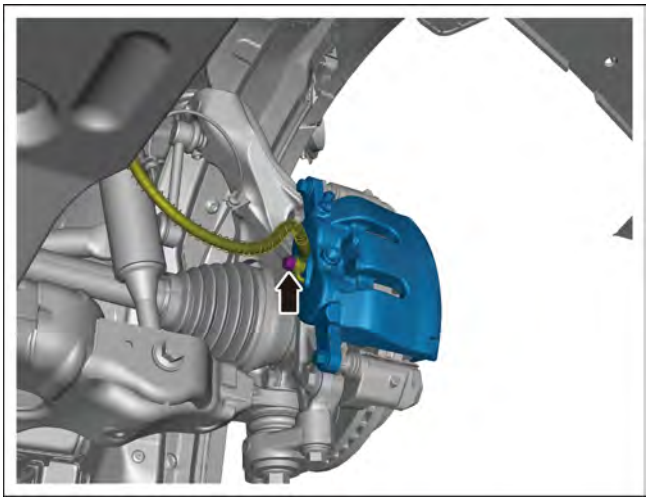
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

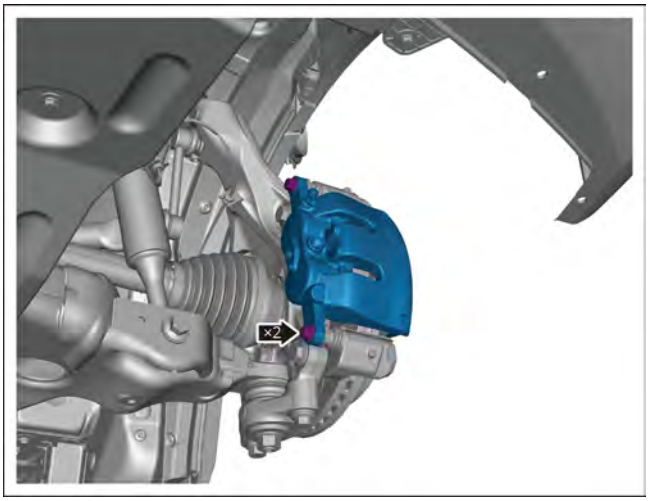
2 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation



3 Remove left front brake caliper assembly air center bolt.

a. Usehose seal port itemclamp hold left front brake hose.

b. Remove left front brake caliper assembly air center bolt.



4 Remove 2 retaining bolt, remove left front brake caliper assembly.

Torque:xxx±xxxN

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Left Front Brake Pad Assembly, Repair Procedure

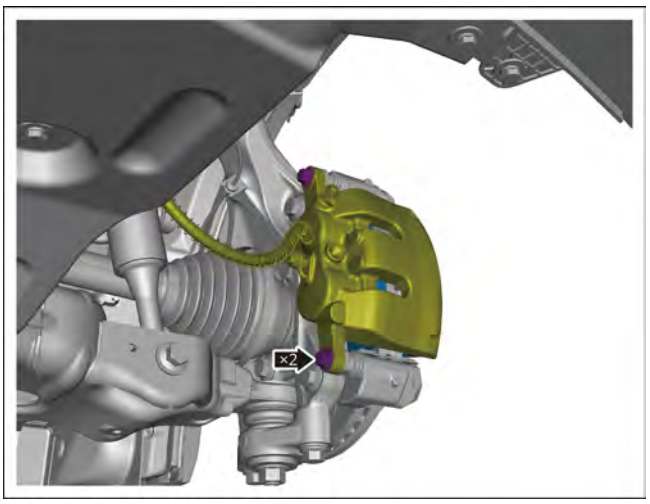
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

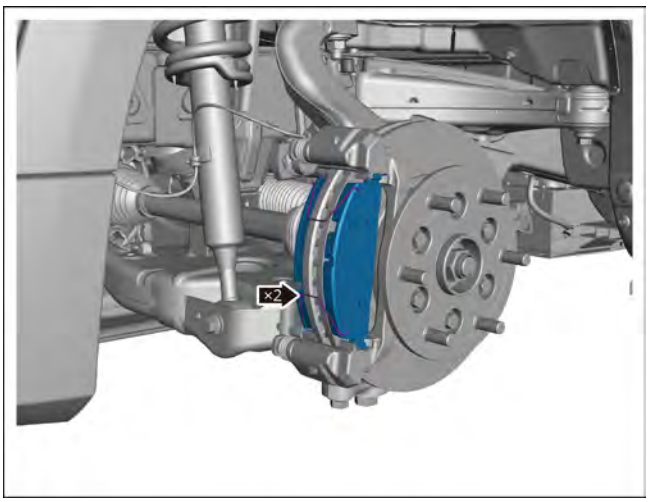


3 Remove 2 retaining bolt, offset open left front brake caliper.

Torque:xxx±xxN·m

Caution

strict prohibit allow brake caliper only rely on brake hose suspend. caliper self re- will cause hose inner part item line layer disconnect crack, fitting at oil leakage, even hose direct connect disconnect crack, cause form operate vehicle brake sudden still failure severe safety hazard.



4 Remove 2 8 character spring, remove left front brake pad assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install front, Use caliper alive plug reset tool completely pressure enter brake caliper alive plug rear, again install brake caliper.

3 Install when, note brake wear indication unit install in inside brake pad upper.

Follow-up Work:

Install complete rear, depress and place open Brake Pedal 3 times or more, check brake fluid storage oil reservoir center brake fluid fluid level, and in necessary when Adding Brake Fluid to upper limit Location.

After installation, road-test the vehicle on a safe road and check the braking performance.

Front Brake Caliper Bracket, Repair Procedure

Tips

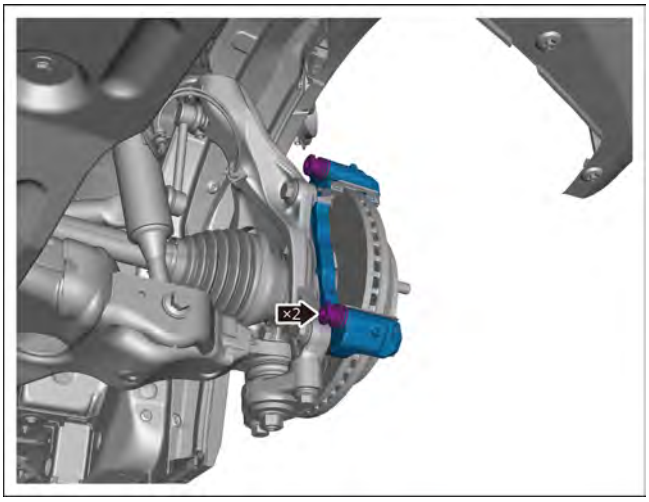
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

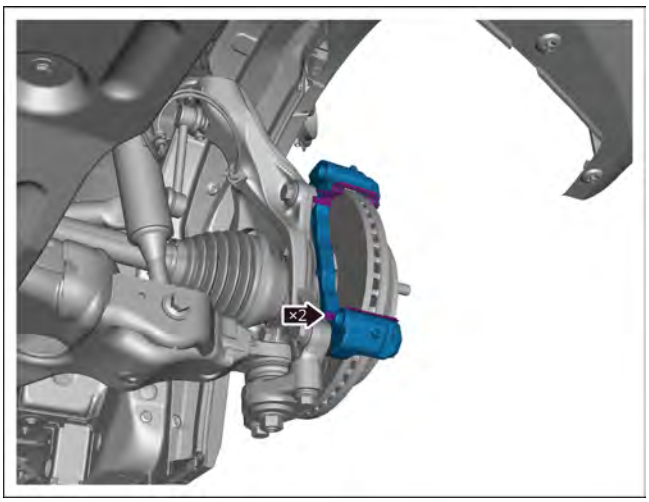
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

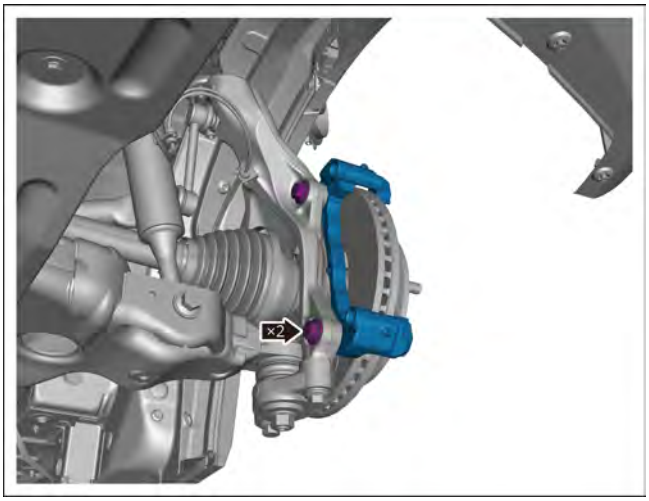
3 Remove left front brake pad assembly. Refer to:Left Front Brake Pad Assembly, Repair Procedure



4 Remove 2 guide pin.



5 Remove 2 spring piece.



6 Remove retaining bolt, remove front brake caliper bracket.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Wheel Hub Bearing Unit - Front, Removal and Installation

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

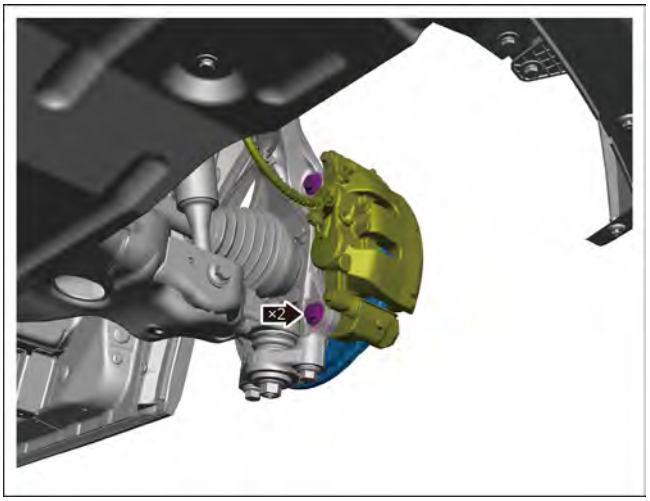


1 Remove wheel turn Plug. Refer to:Wheel Turn Plug, Repair Procedure

2 Remove left constant velocity drive shaft assembly retaining nut.

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

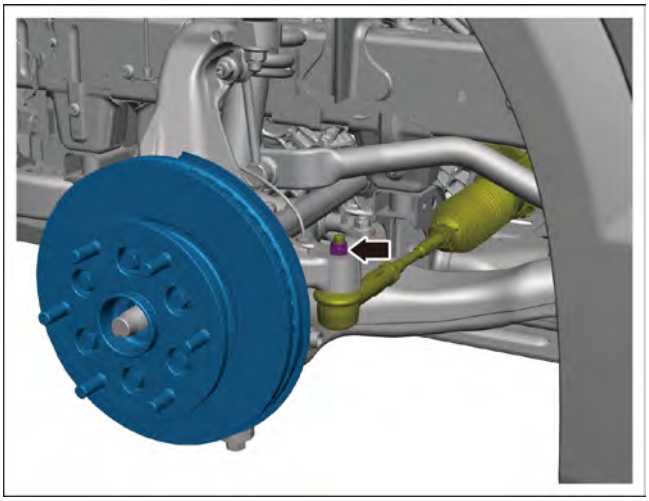


5 Remove 2 retaining bolt, offset open front brake caliper.

Torque:xxx±xxN·m

Caution

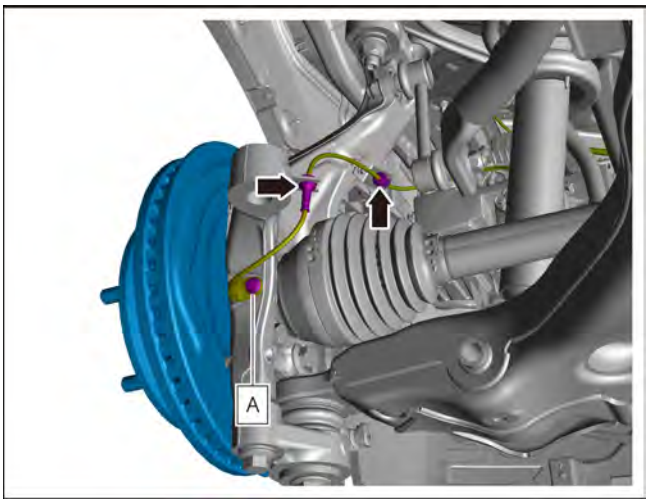
strict prohibit allow brake caliper only rely on brake hose suspend. caliper self re- will cause hose inner part item line layer disconnect crack, fitting at oil leakage, even hose direct connect disconnect crack, cause form operate vehicle brake sudden still failure severe safety hazard.



6 release outer tie-rod end.

a. Remove outer tie-rod end retaining nut.

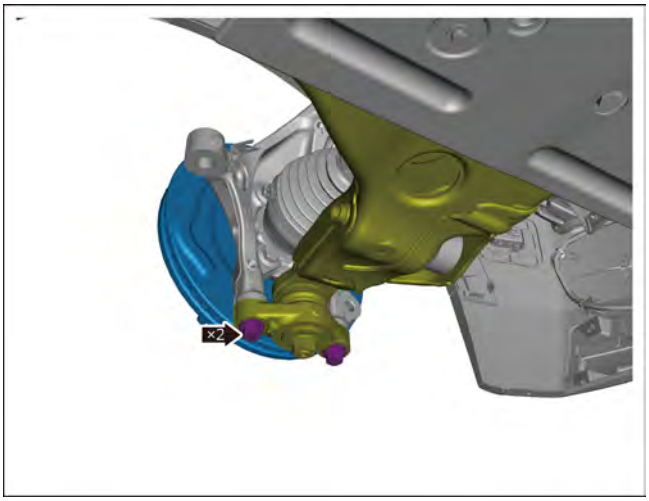
b. UseBall Joint Removerrelease outer tie-rod end.



7 offset open Left Front Wheel Speed Sensor Assembly.

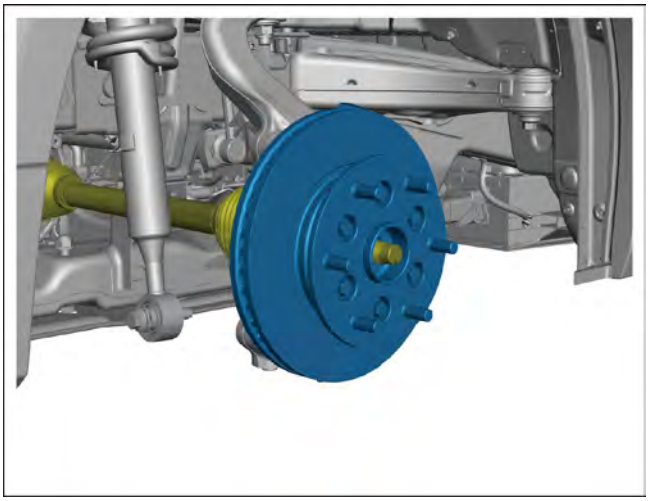
a. Remove Left Front Wheel Speed Sensor Assembly retaining bolt A.

b. release 2 retaining adhesive sleeve, offset open Left Front Wheel Speed Sensor Assembly.

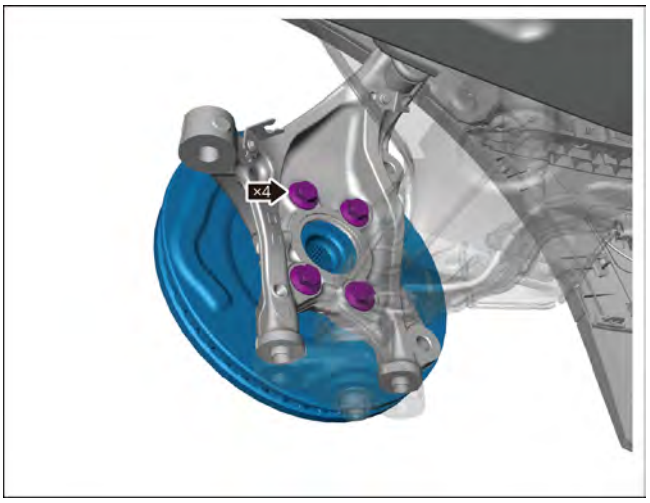


8 Remove left front support seat 2 retaining bolt.

Torque:xxx±xxN·m



9 section away left constant velocity drive shaft assembly and wheel hub bearing unit - front connect.



10 Remove 4 retaining bolt, remove wheel hub bearing unit - front.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 press specified Torque tighten nut rear, Use hammer sub- and item sub- for nut side edge perform item item, make it deformation and item enter dent slot, ensure lock can rely on.

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Left Front Splash Shield Panel, Repair Procedure

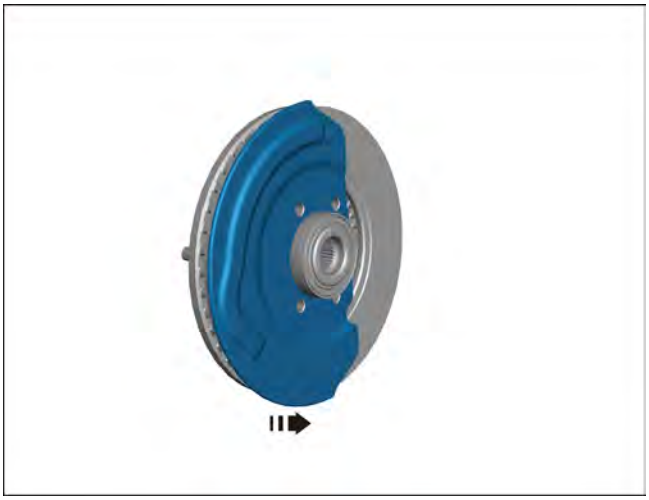
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel hub bearing unit - front. Refer to:Wheel Hub Bearing Unit - Front, Removal and Installation



3 remove front mudguard - left.

Installation Steps

1 Install in the reverse order of removal.

Front Brake Disc, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel hub bearing unit - front. Refer to:Wheel Hub Bearing Unit - Front, Removal and Installation

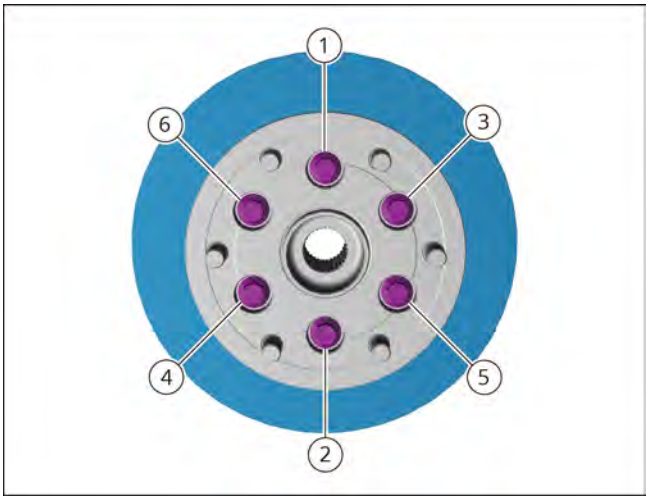
3 Remove left front splash shield panel. Refer to:Left Front Splash Shield Panel, Repair Procedure



4 Remove retaining bolt, remove front brake disc.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 press illustration order, according to times retaining bolt tighten to mark standard Torque.

Torque:xxx±xxN·m

Wheel Hub Bearing Unit - Front, Repair Procedure

Tips

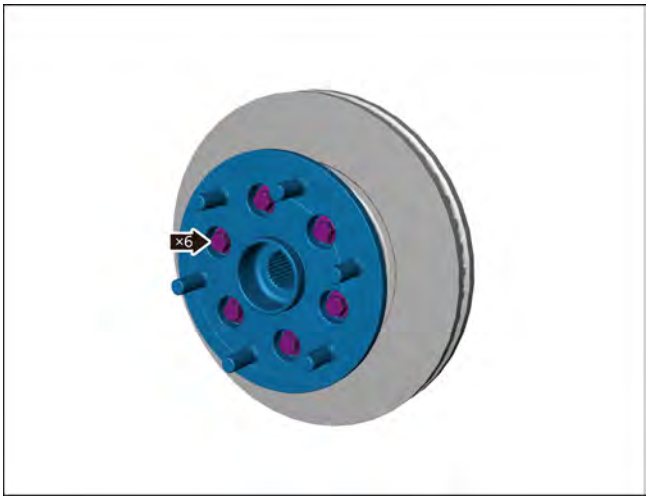
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel hub bearing unit - front. Refer to:Wheel Hub Bearing Unit - Front, Removal and Installation

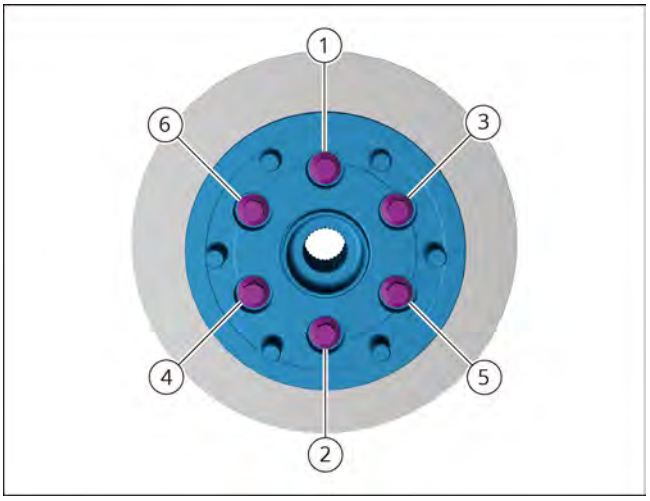
3 Remove left front splash shield panel. Refer to:Left Front Splash Shield Panel, Repair Procedure



4 Remove 6 retaining bolt, remove wheel hub bearing unit - front.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 press illustration order, according to times retaining bolt tighten to mark standard Torque.

Torque:xxx±xxN·m

Front Link Assembly, Repair Procedure

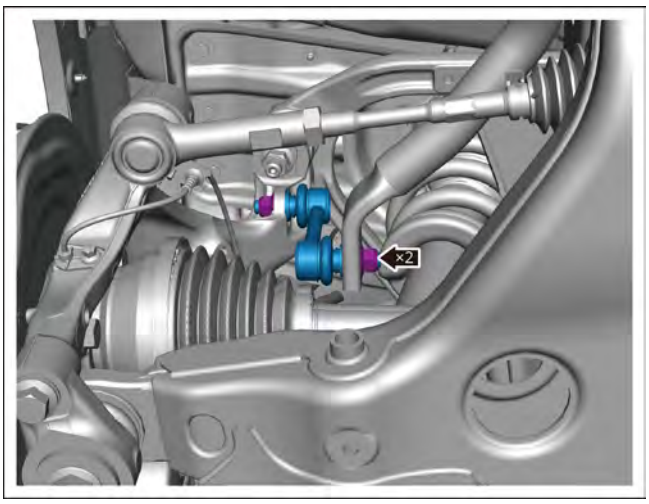
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation



3 Remove 2 retaining nut, remove front link assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Front Steering Knuckle Assembly, Repair Procedure

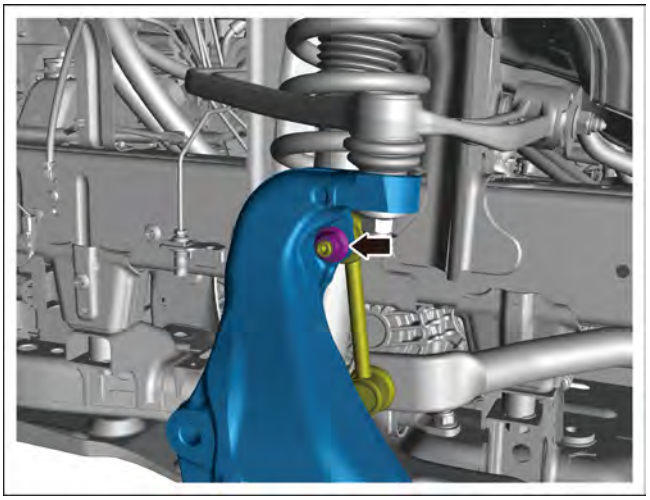
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

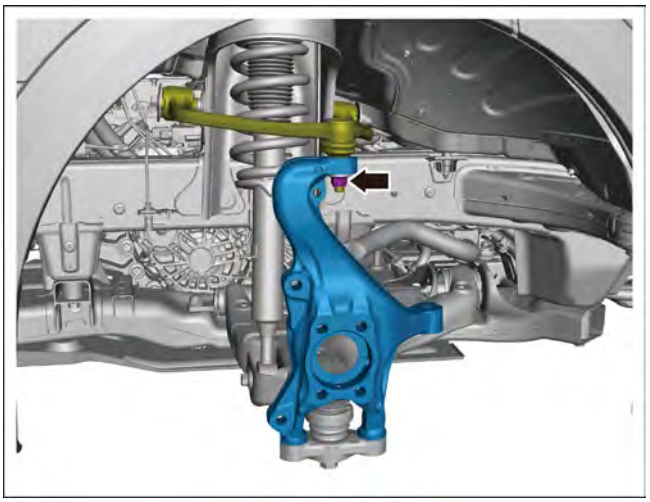
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel hub bearing unit - front. Refer to:Wheel Hub Bearing Unit - Front, Removal and Installation



3 Remove left front link assembly retaining nut.



4 remove left front steering knuckle assembly.

a. loosen left front upper control arm assembly ball joint retaining nut.

b. UseBall Joint Removerrelease left front upper control arm assembly ball joint.

c. Remove retaining nut, remove left front steering knuckle assembly.

Tips

this retaining nut for one-time-use part, remove rear need replace new retaining nut.

Installation Steps

1 Install in the reverse order of removal.

Left Front Strut Assembly, Repair Procedure

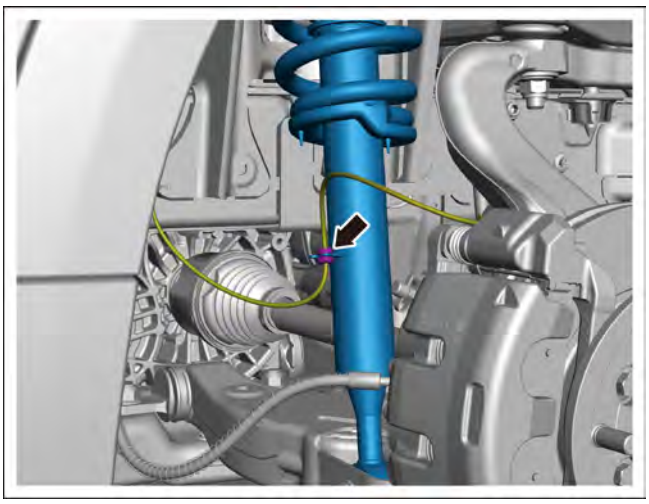
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

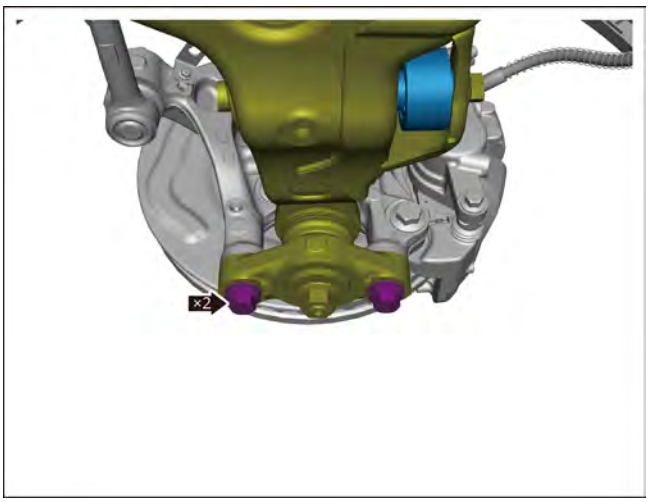
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

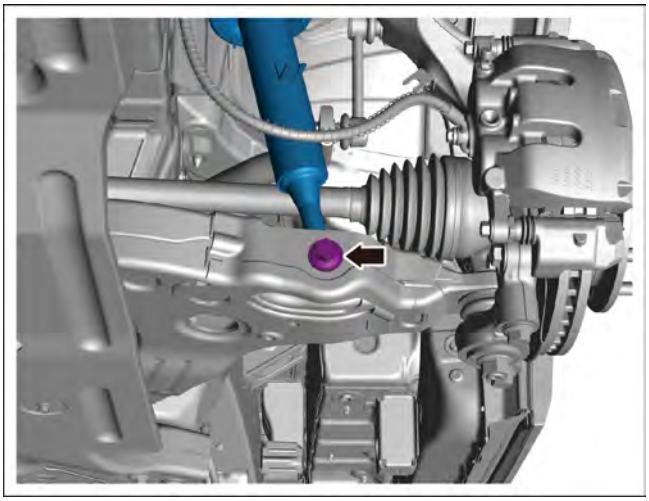


3 release Left Front Wheel Speed Sensor Assembly retaining adhesive sleeve.



4 Remove left front support seat 2 retaining bolt.

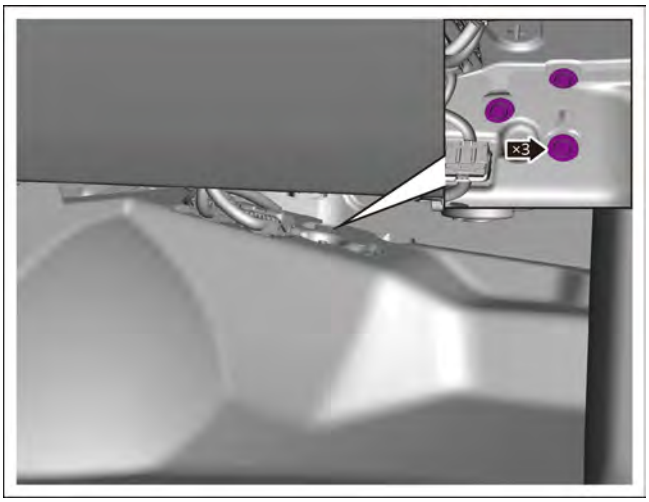
Torque:xxx±xxN·m



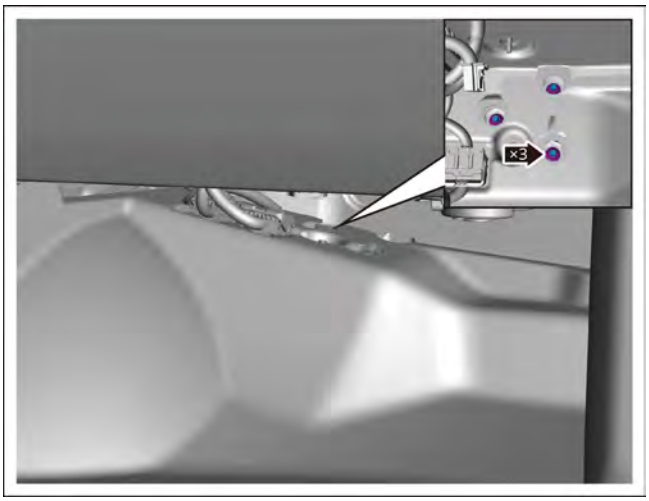
5 Remove Left Front Strut Assembly retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



6 Remove 3 blocked part.



7 Remove 3 retaining nut, remove Left Front Strut Assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Disassembly and Assembly of Left Front Strut Assembly

Tips

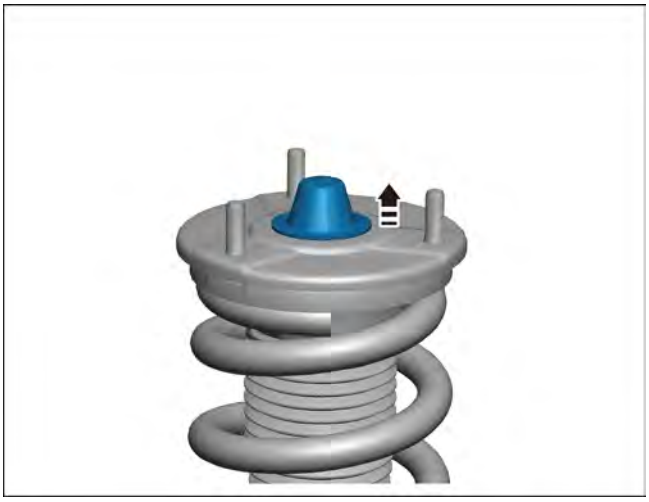
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

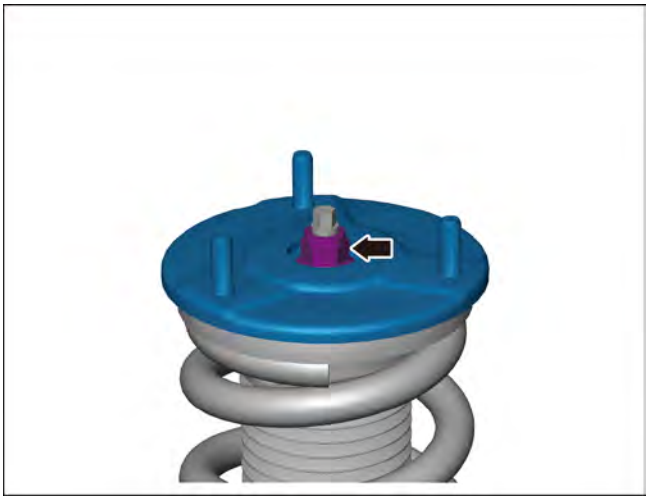
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Remove Left Front Strut Assembly. Refer to:Left Front Strut Assembly, Repair Procedure



4 Remove protection dust cover.



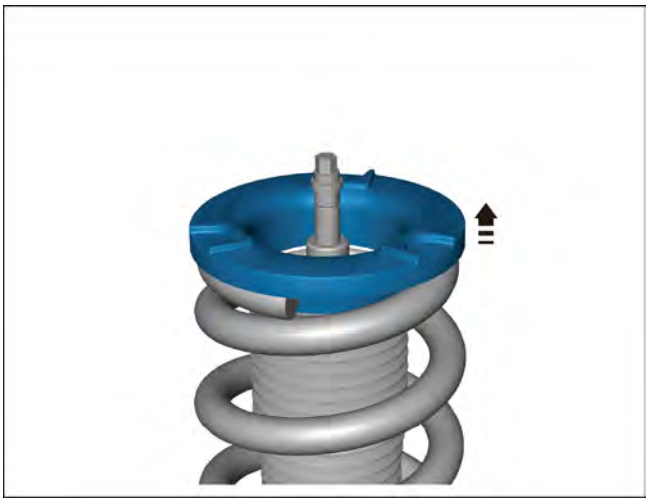
5 Remove upper connect panel assembly with buffer block.

a. UseCoil Spring Compressorpressure retract screw item spring, direct to screw item spring is pressure retract to and spring support Location generate section away gap.

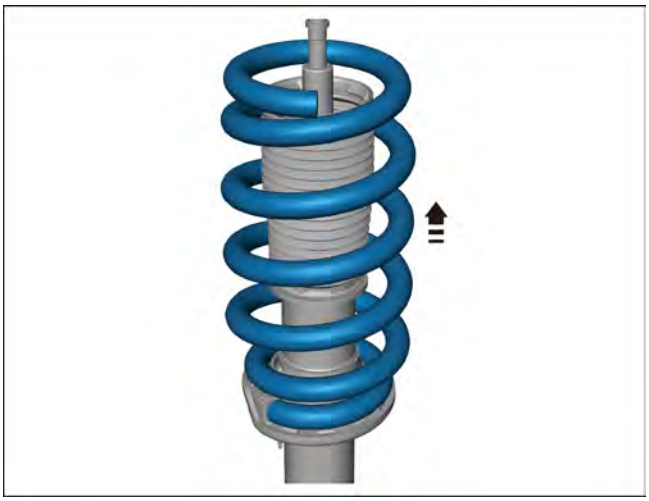
b. UseShock Absorber Top Nut Removal/ Installation ToolRemove retaining nut, remove upper connect panel assembly with buffer block.
Torque:xxx±xxN·m



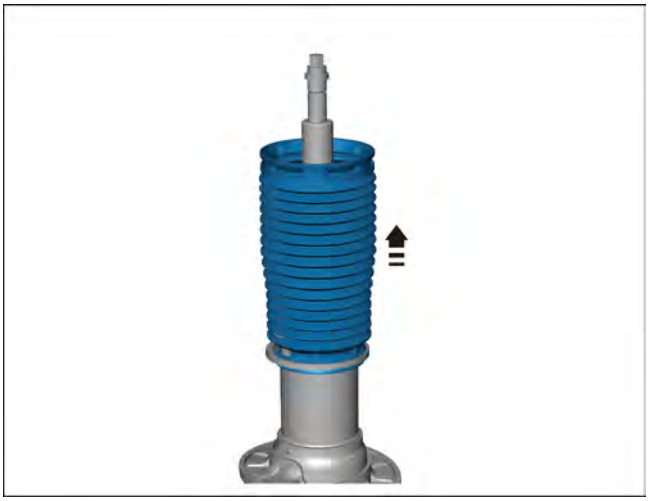
6 Remove upper connect panel assembly.



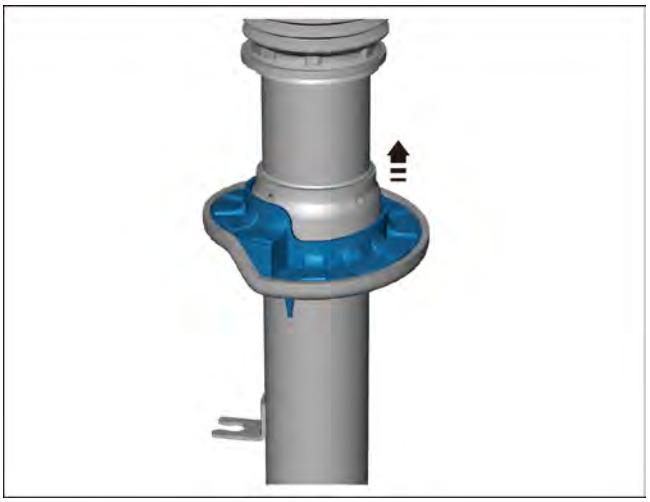
7 Remove upper spring pad.



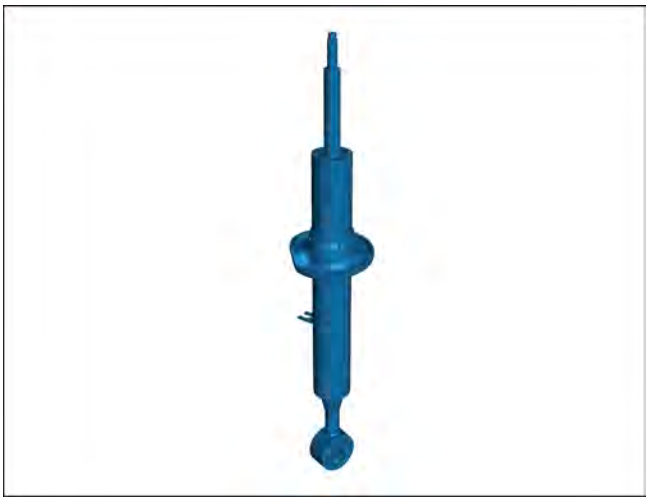
8 Remove screw item spring.



9 Remove protection dust cover.



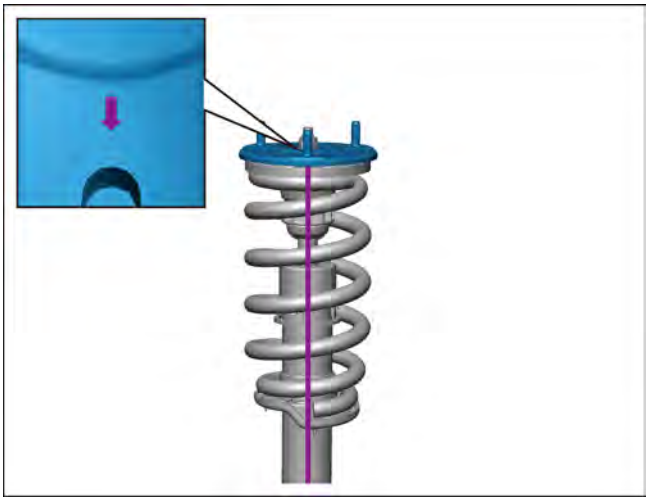
10 Remove lower spring pad.



11 Remove shock absorber.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install when, ensure upper connect panel indication arrow and shock absorber outside surface alignment, No then cause front Strut Assembly no method normal install, and effect it service life.

Front Subframe Assembly, Removal and Installation

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

5 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

6 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

7 Remove left, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

8 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure

9 Remove right constant velocity drive shaft assembly. Refer to:Right Constant Velocity Drive Shaft Assembly, Repair Procedure

10 Remove left, right front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

11 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

12 Remove subframe collision avoidance assembly. Refer to:Subframe Collision Avoidance Assembly, Repair Procedure

13 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

14 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

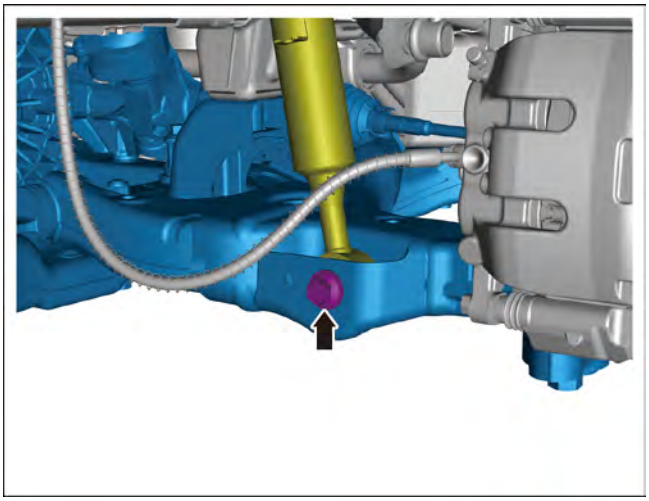
15 Remove heater water pump assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:Heater Water Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

16 Remove battery coolant pump assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:Battery Coolant Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

17 Remove electric drive coolant pump assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:Electric Drive Coolant Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

18 Remove PTC inlet pipe assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:PTC Inlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

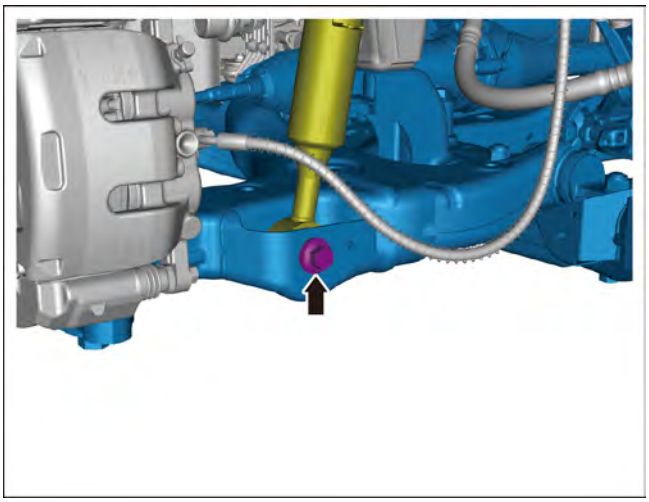
19 Remove Low-temperature Radiator Outlet Hose Assembly - Non-heat-pump A/C (this steps suitable use at Non-heat-pump A/C Vehicle). Refer to:Low-Temperature Radiator Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure



20 Remove Left Front Strut Assembly retaining bolt.

Tips

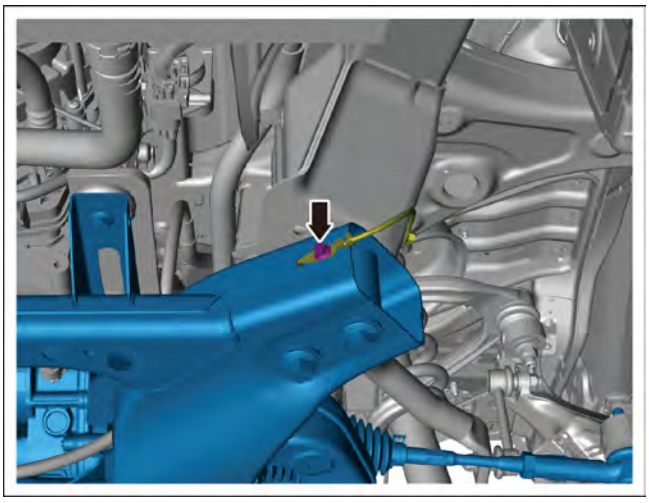
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



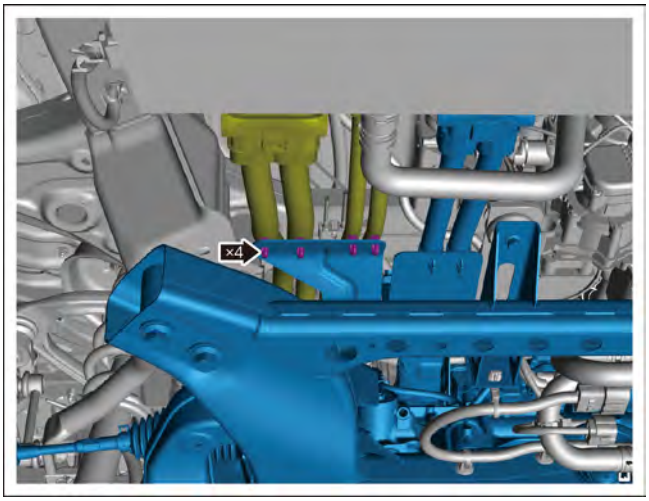
21 Remove right front Strut Assembly retaining bolt.

Tips

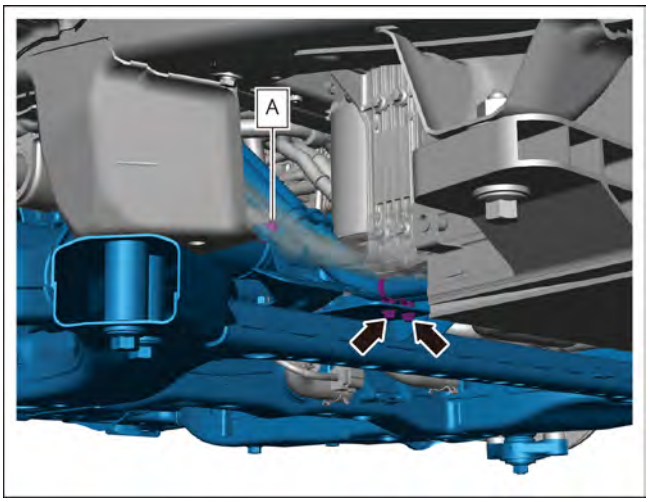
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



22 Remove subframe ground wiring harness retaining bolt.



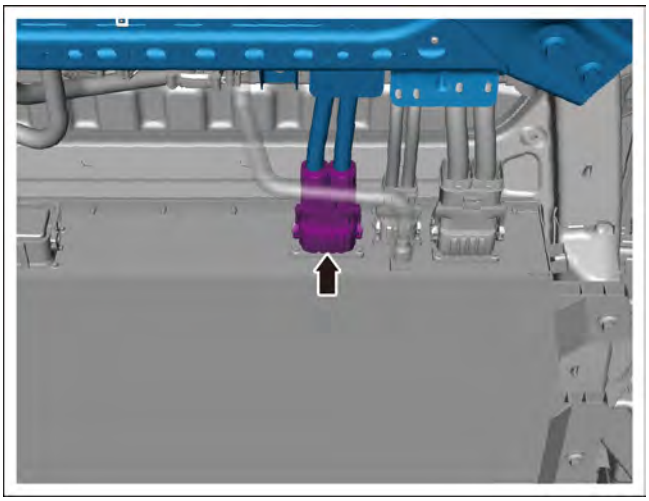
23 Release 4 AC/DC Charging Inlet Assembly and CDU to battery pack line retaining clips.



24 Release MCU to battery pack line retaining clip.

a. Remove CDU to battery pack line retaining bolt A.

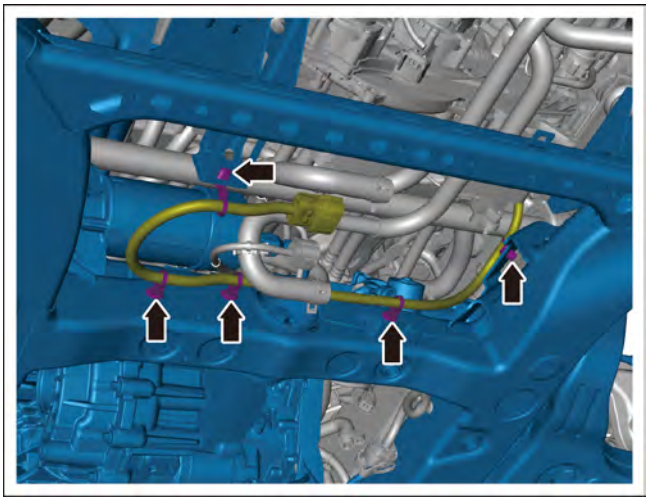
b. Release 2 CDU to battery pack line retaining clips.



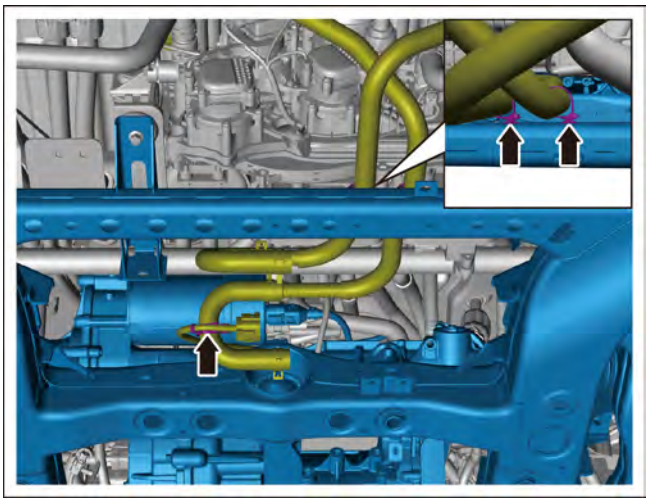
25 Disconnect traction battery pack assembly wiring harness connector.

Caution

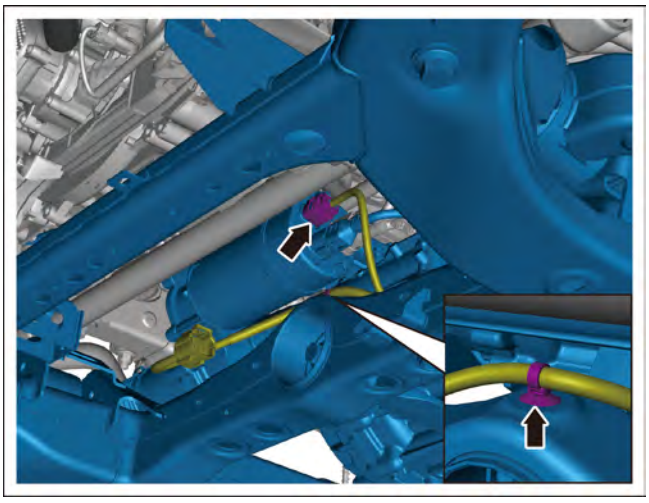
disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.



26 Release 5 CDU to PTC& compressor line retaining clips.



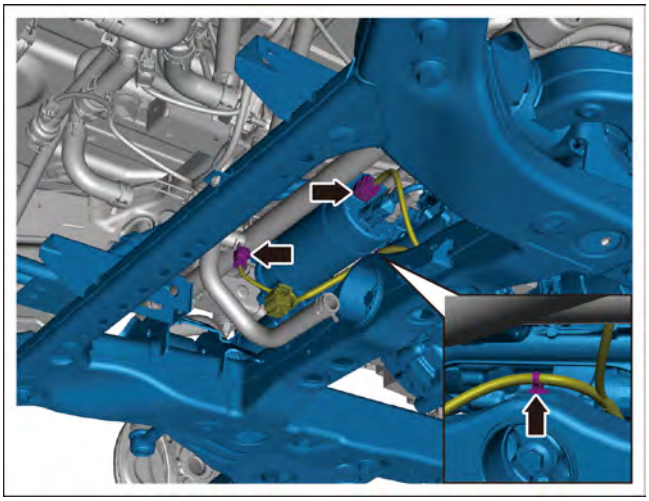
27 release PTC inlet pipe assembly and PTC outlet pipe assembly 3 retaining clip (this steps suitable use at Heat-pump A/C Vehicle).



28 release chassis wiring harness retaining clip (this steps suitable use at Heat-pump A/C Vehicle).

a. Disconnect power gear rack steering gear with tie rod assembly wiring harness connector.

b. Release chassis wiring harness retaining clip.

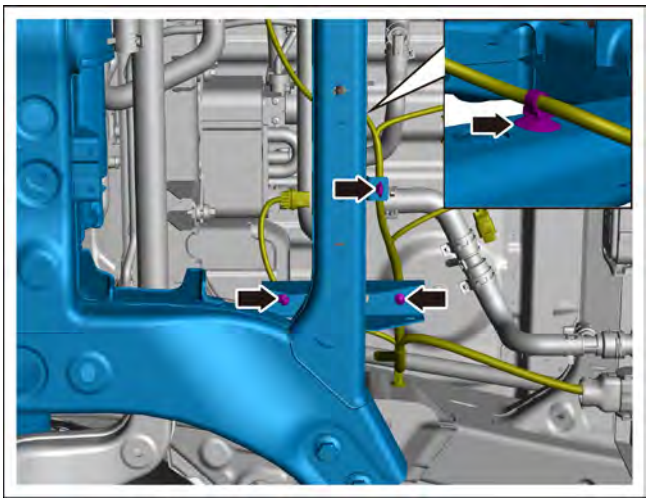


29 release chassis wiring harness retaining clip (this steps suitable use at Non-heat-pump A/C Vehicle).

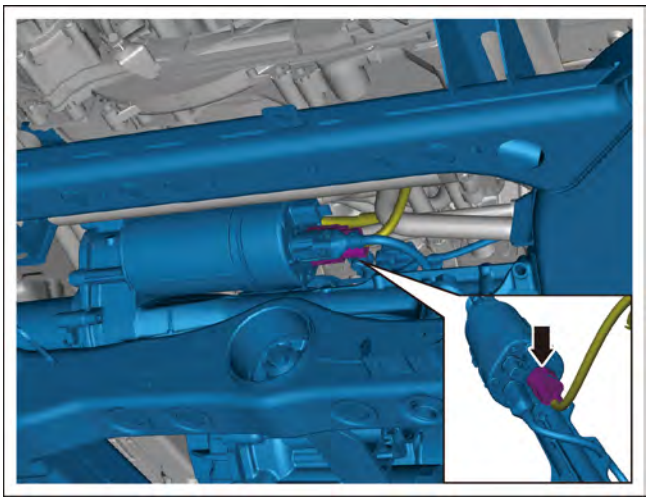
a. Disconnect power gear rack steering gear with tie rod assembly wiring harness connector.

b. Disconnect PTC Inlet Hose Assembly wiring harness connector.

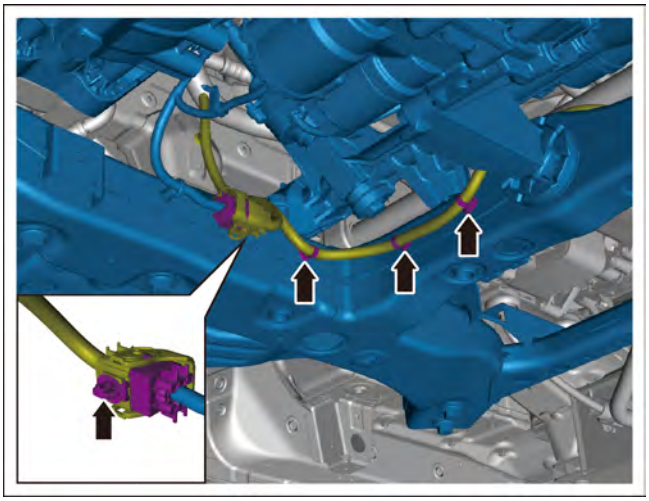
c. Release chassis wiring harness retaining clip.



30 release chassis wiring harness 4 retaining clip (this steps suitable use at Non-heat-pump A/C Vehicle).



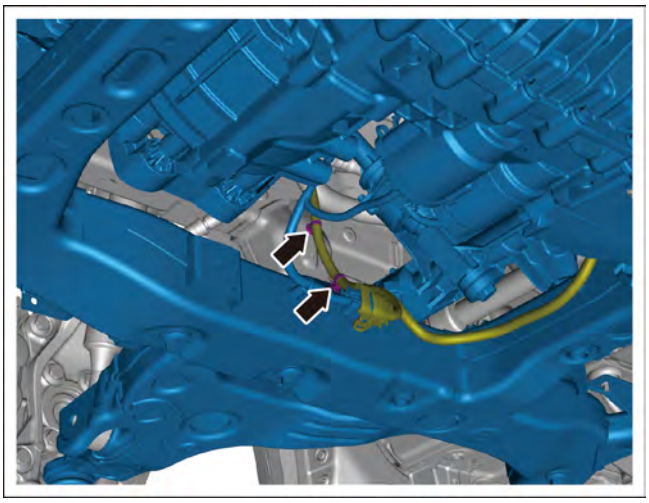
31 Disconnect power gear rack steering gear with tie rod assembly wiring harness connector.



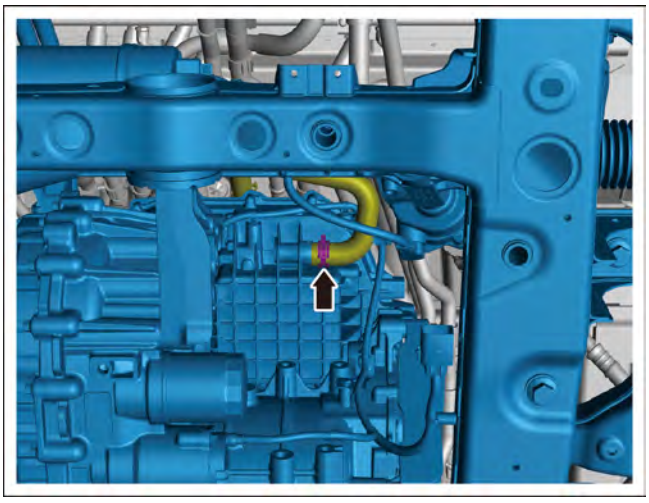
32 Release chassis wiring harness retaining clip.

a. Disconnect chassis wiring harness wiring harness connector.

b. Release 4 chassis wiring harness retaining clips.



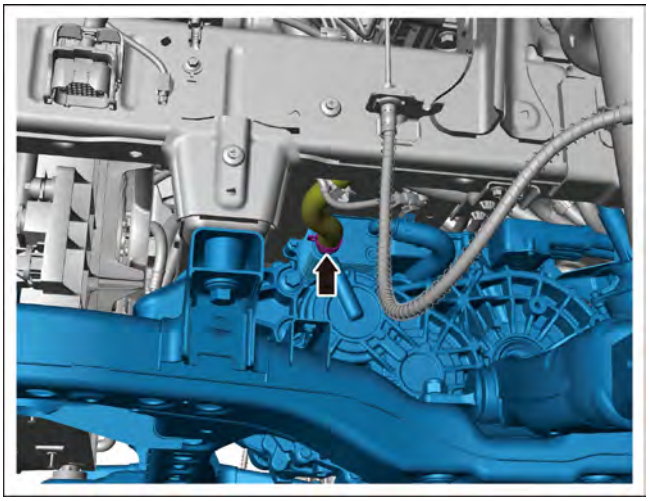
33 Release 2 chassis wiring harness retaining clips.



34 Remove retaining clamp, release electric drive inlet hose assembly.

Caution

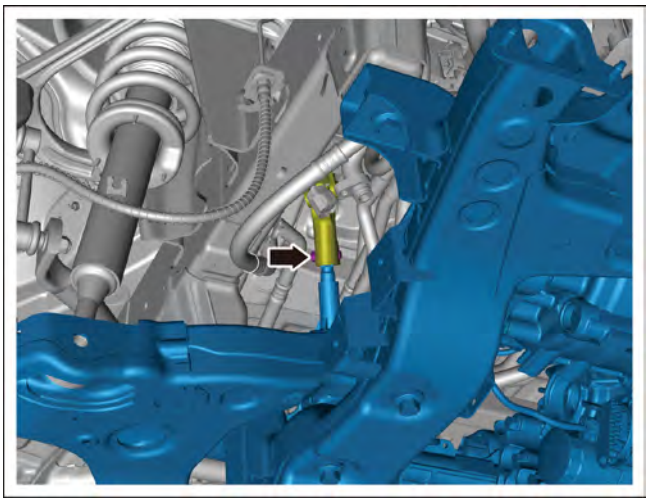
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



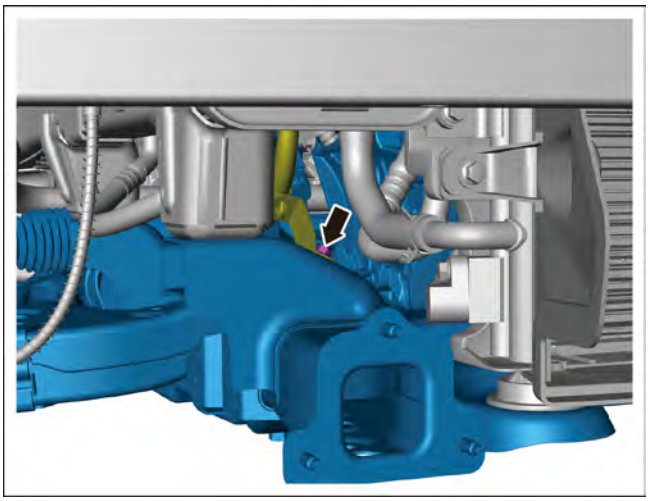
35 Remove retaining clamp, release electric drive outlet hose assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

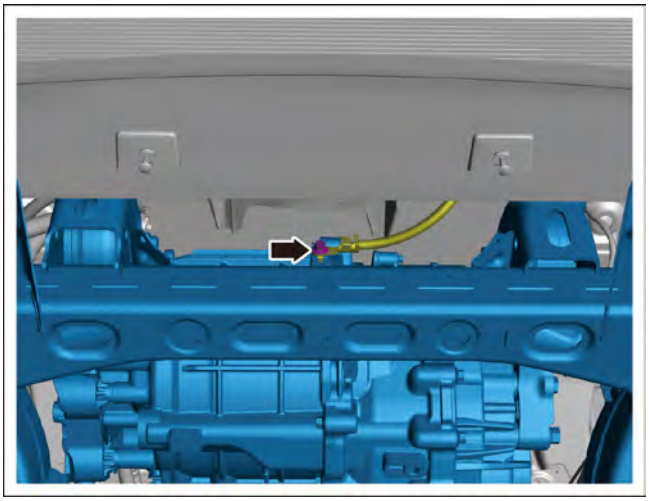


36 Remove retaining bolt, release steering lower shaft assembly and power gear rack steering gear with tie rod assembly connect.



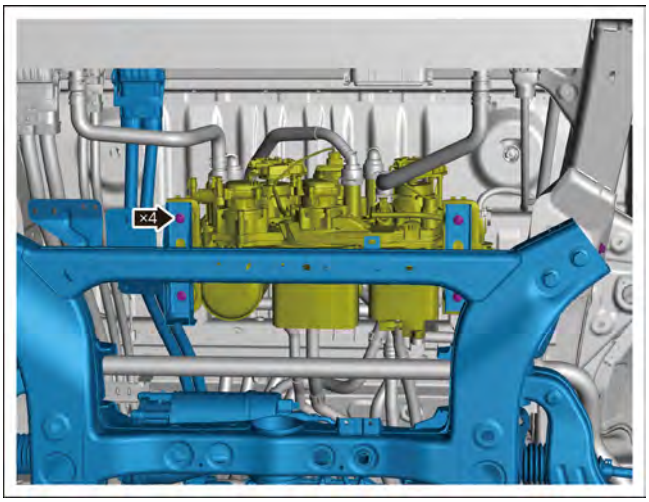
37 Remove CDU to PTC& compressor line retaining bolt.

Torque:xxx±xxN·m

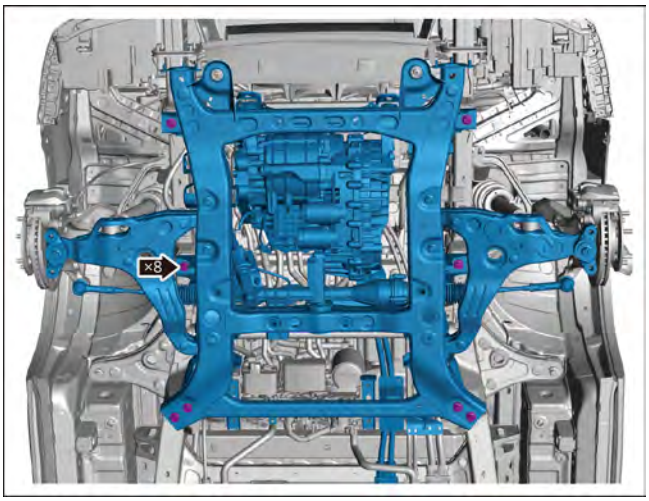


38 Remove motor negative ground harness retaining bolt.

Torque:xxx±xxN·m



39 Remove integrated thermal management module 4 retaining bolt (this steps suitable use at Heat-pump A/C Vehicle).



40 Remove front Subframe Assembly.

a. UseVehicle Liftsupport front Subframe Assembly.

Caution

Use hydraulic Vehicle Lift raise or support component front, need in level unit and component between place suitable rubber block it pad item, with protection tilt inclined.

b. Remove front Subframe Assembly 8 retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.

c. slow lower lower Vehicle Lift and remove front Subframe Assembly.

Caution

Remove when, be sure to confirm all accessory and body no dry involve, No then may will cause component damage, even hazard and person body safety.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 Install process center, ensure wiring harness connect secure, Location correct, and no interaction fork, surround, No then may will cause vehicle fault or electrical safety hazard.

4 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

5 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

6 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

7 perform four-wheel alignment adjust. refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Front Stabilizer Bar Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

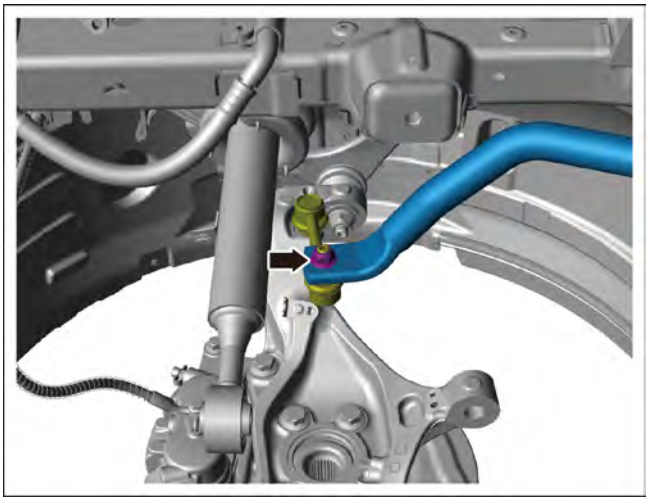
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

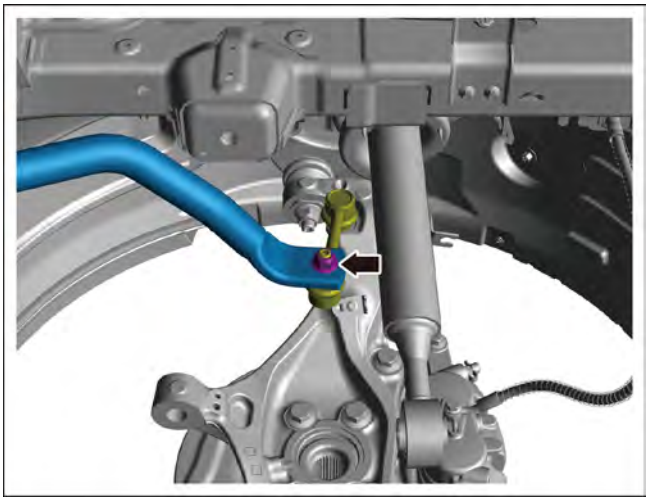
4 Drain the coolant. Refer to:Coolant Draining and Filling

5 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

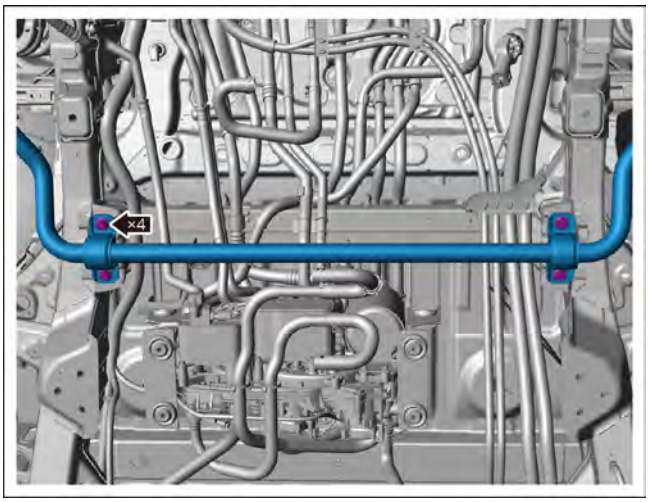
6 Remove front Subframe Assembly. Refer to:Front Subframe Assembly, Removal and Installation



7 Remove right front link retaining nut.



8 Remove left front link retaining nut.



9 Remove 4 retaining bolt, remove front stabilizer bar assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Front Subframe Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

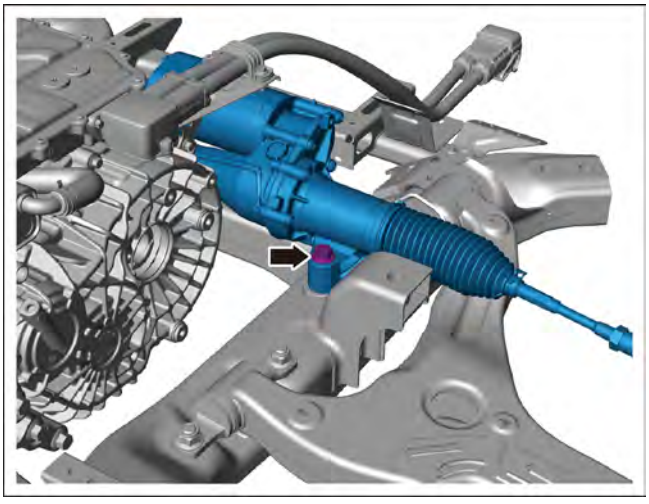
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

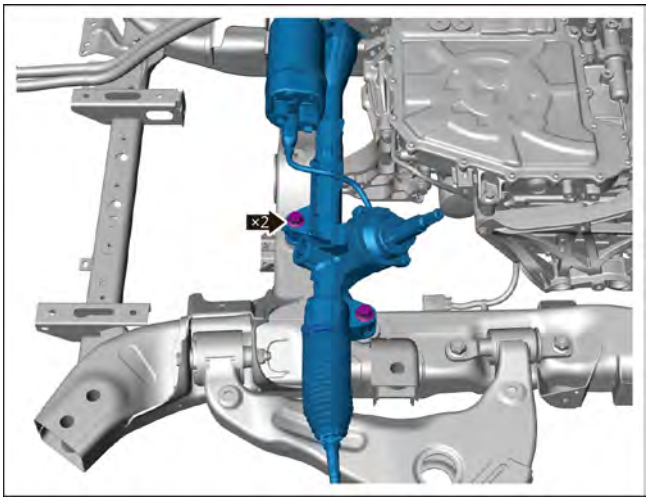
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

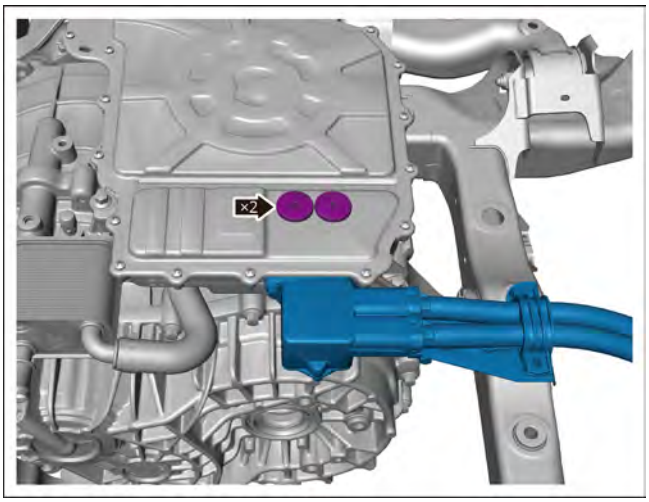
6 Remove front Subframe Assembly. Refer to:Front Subframe Assembly, Removal and Installation



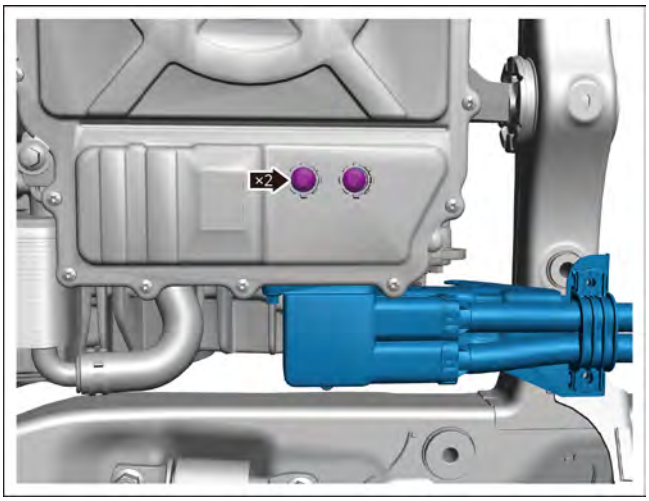
7 Remove power gear rack steering gear with tie rod assembly retaining bolt.



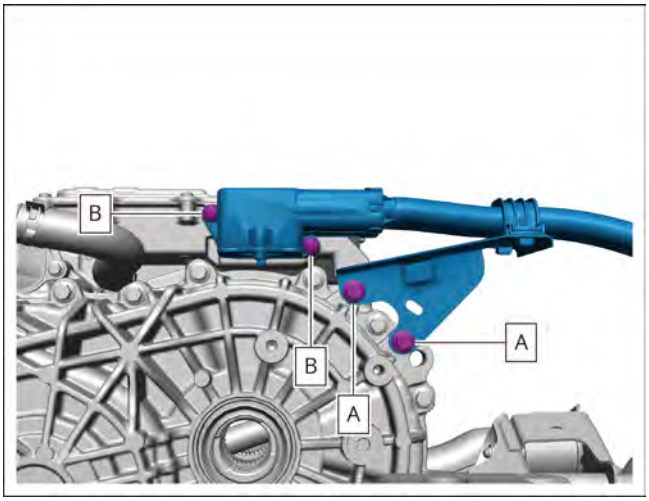
8 Remove 2 retaining bolt, remove power gear rack steering gear with tie rod assembly.



9 Remove 2 open port cover.



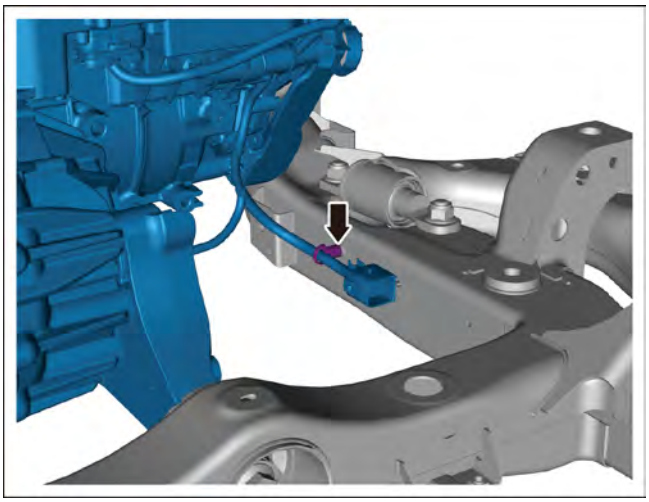
10 Remove MCU to battery pack line 2 retaining bolt.



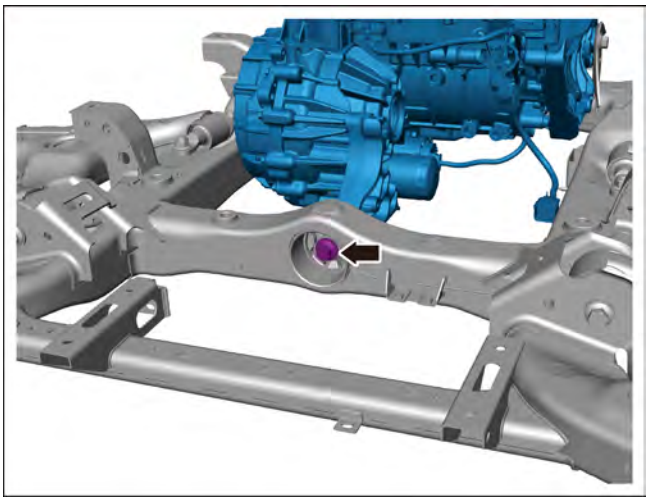
11 remove MCU to battery pack line.

a. Remove MCU to battery pack line 2 retaining bolt A.

b. Remove 2 retaining bolt B, remove MCU to battery pack line.



12 Release subframe jumper harness retaining clip.



13 Remove rear suspension position bracket retaining bolt.

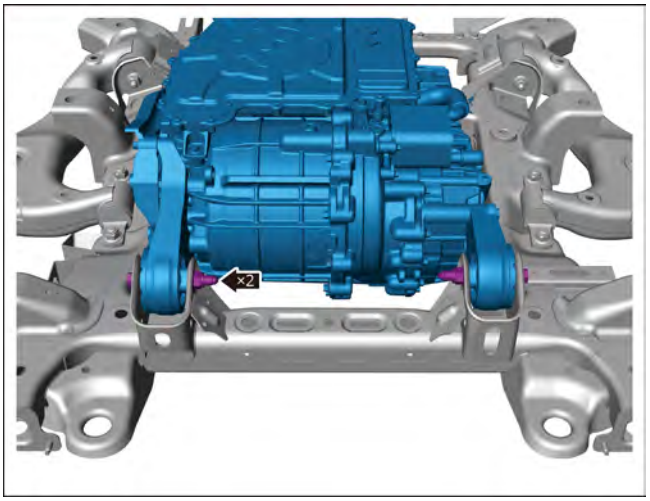
a. install motor item hook and lock link。

b. connect and slow raise start hydraulic small crane, direct to lock link pull direct.

c. Remove rear suspension position bracket retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



14 Remove Front Drive Motor assembly.

a. Remove left, right mount software pad assembly 2 retaining bolt and nut.

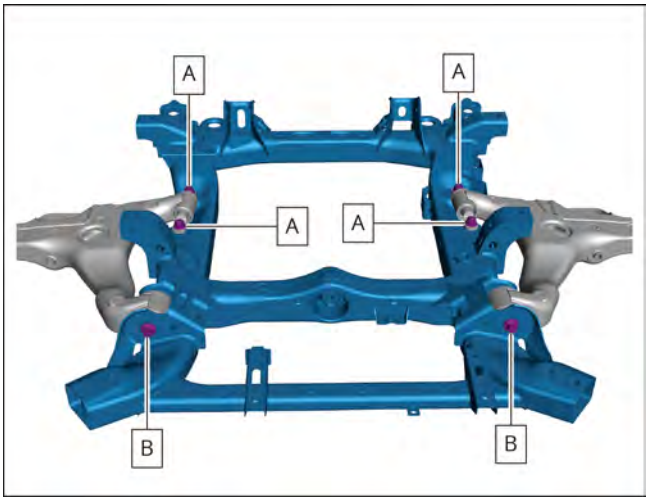
Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.

b. Use**hydraulic small crane**Remove front electric drive Powertrain.

Caution

lifting and move action must must level relieve, strict prohibit emergency stop, emergency rotate or rapid speed lower place.



15 Remove front Subframe Assembly.

a. Remove left, right front lower control arm assembly 4 retaining bolt and nut A.

Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.

b. Remove left, right front lower control arm assembly 2 retaining bolt and nut B.

Tips

this retaining bolt nut assembly for one-time-use part, remove rear need replace new bolt nut assembly.

c. Remove front Subframe Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 perform four-wheel alignment adjust. refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

rear suspension bracket

parameter

Rear Brake Specifications

Item	parameter
Brake Pad Thickness (mm)	New Part:
	Service Limit:
Brake Disc Thickness (mm)	New Part:
	Service Limit:

Component Description

rear shock absorber assembly

rear shock absorber assembly operate use Yes eliminate except circuit surface with to vibration, provide high driving stability, to driving comfort sensing and stability sensing.

leaf spring assembly

leaf spring assembly trigger guide and control wheel according to pre- determine trajectory perform motion, ensure vehicle driving stability characteristic. same when also wheel upper each type force, if circuit surface impact force, braking force etc., valid ground transmit to body, make body can sufficient stable ground should for this some force. leaf spring assembly also start to support body operate use, and shock absorber and leaf spring assembly etc. component jointly form suspend system, for vehicle provide necessary support force.

Repair Procedure

Rear Shock Absorber Assembly, Repair Procedure

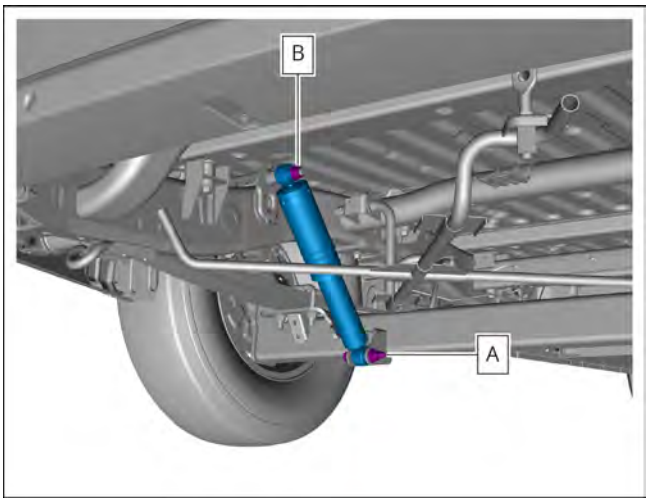
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove spare wheel assembly. Refer to:Spare Wheel Assembly, Removal and Installation

2 Raise the vehicle. Refer to:Vehicle Lifting and Support



3 Remove rear shock absorber assembly.

a. UseSupport Standsupport hold rear axle assembly.

b. Remove rear shock absorber assembly retaining bolt and nut A.

c. Remove retaining nut B, remove rear shock absorber assembly.

Installation Steps

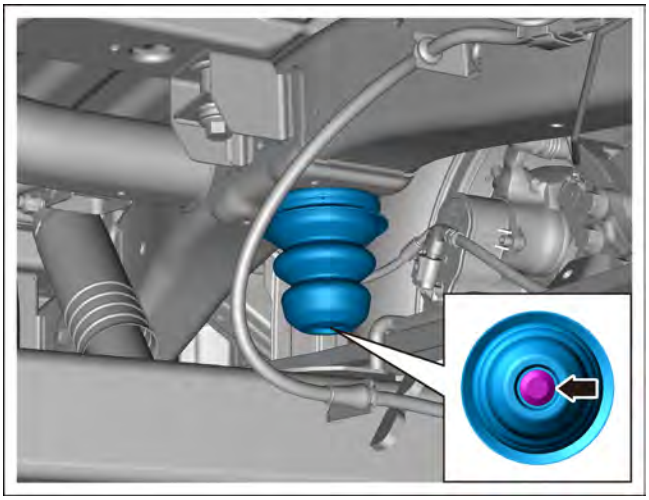
1 Install in the reverse order of removal.

Rear Buffer Block Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove retaining bolt, remove rear buffer block assembly.

Installation Steps

1 Install in the reverse order of removal.

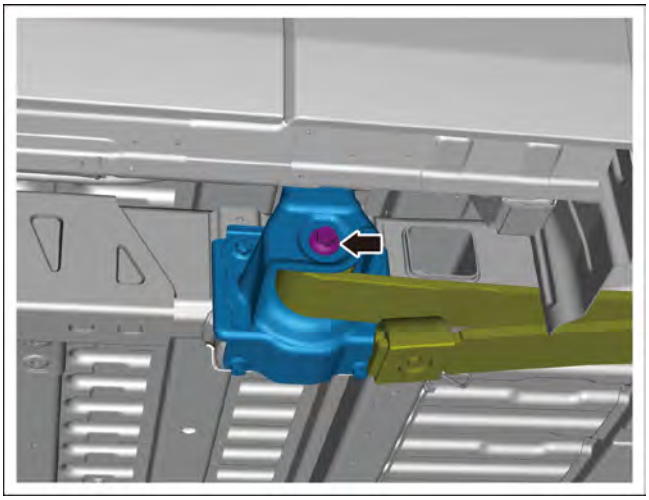
Front Shackle Assembly (Left), Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

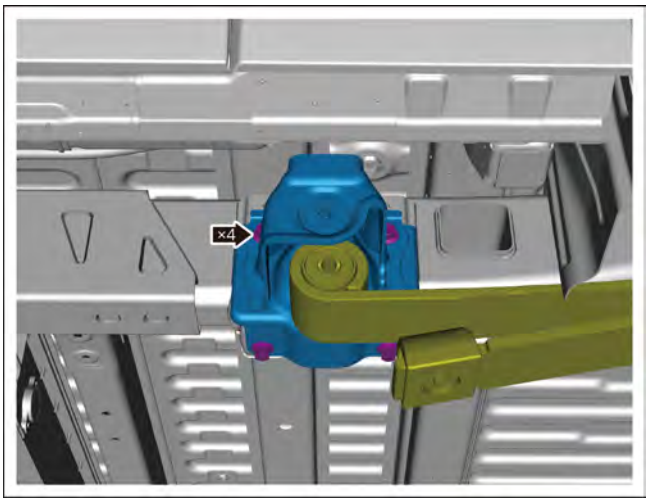
1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 Remove leaf spring assembly retaining bolt.
   a. UseSupport Standsupport hold rear axle assembly.
   b. Remove leaf spring assembly retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



3 Remove 4 retaining bolt, remove front shackle assembly (left).

Installation Steps

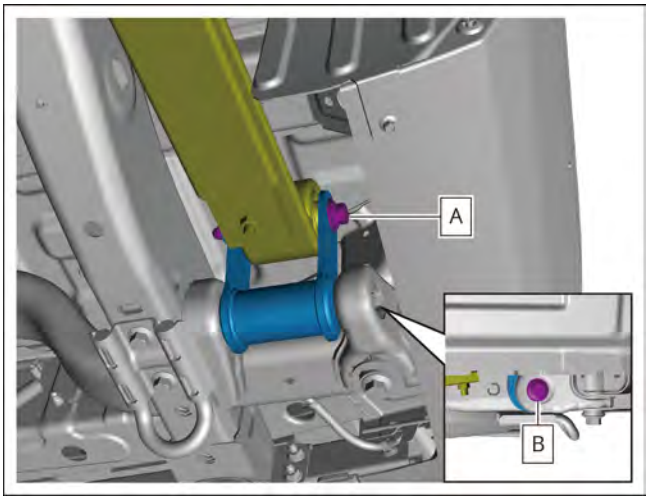
1 Install in the reverse order of removal.

Rear Shackle Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove rear shackle assembly.

a. UseSupport Standsupport hold rear axle assembly.

b. Remove rear shackle assembly retaining bolt A.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.

c. Remove retaining bolt B, remove rear shackle assembly.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.

Installation Steps

1 Install in the reverse order of removal.

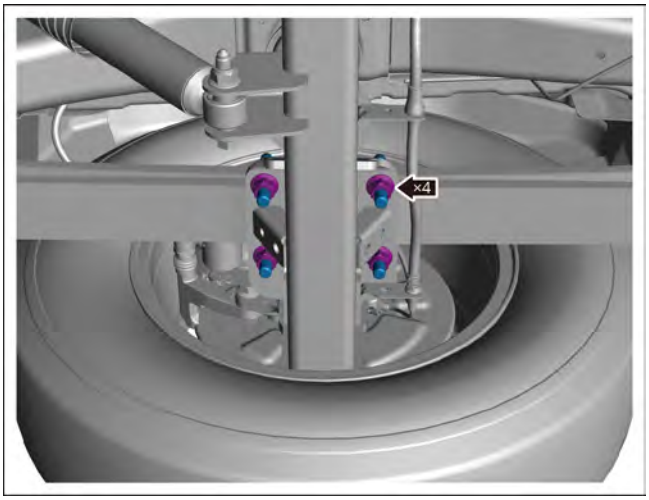
Leaf Spring Pressure Panel, Repair Procedure

Tips

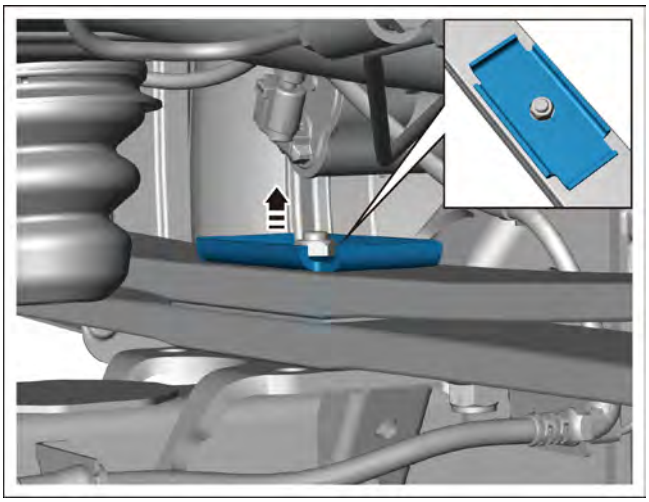
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 remove U type bolt.
   a. UseSupport Standsupport hold rear axle assembly.
   b. Remove 4 retaining nut, remove U type bolt.
   Torque:xxx±xxN·m



3 remove leaf spring pressure panel.

Installation Steps

1 Install in the reverse order of removal.

Leaf Spring Assembly, Repair Procedure

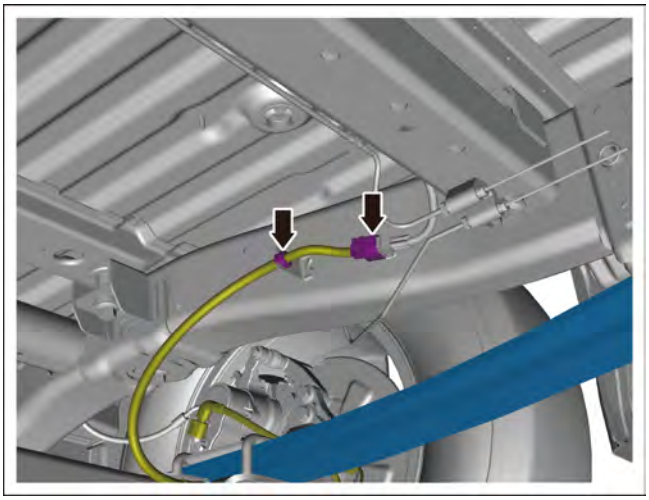
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

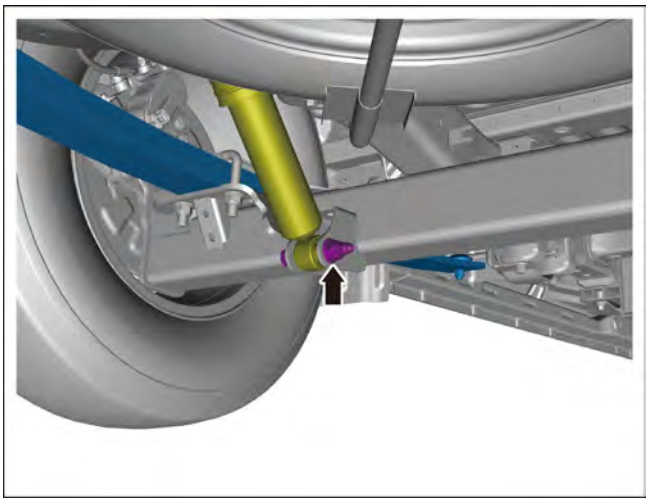
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

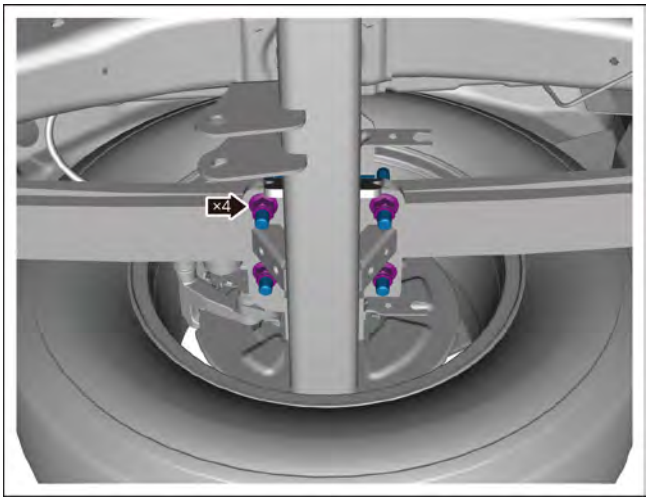
2 Raise the vehicle. Refer to:Vehicle Lifting and Support



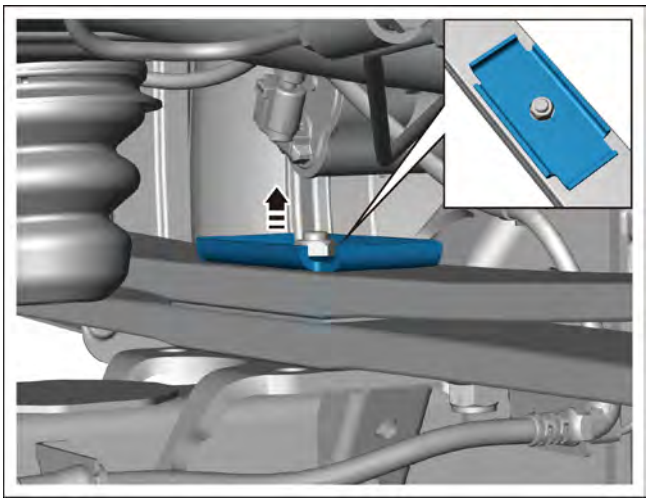
3 offset open Left Rear Wheel Speed Sensor assembly.
   a. Disconnect Left Rear Wheel Speed Sensor assembly wiring harness connector.
   b. release retaining adhesive sleeve, offset open Left Rear Wheel Speed Sensor assembly.



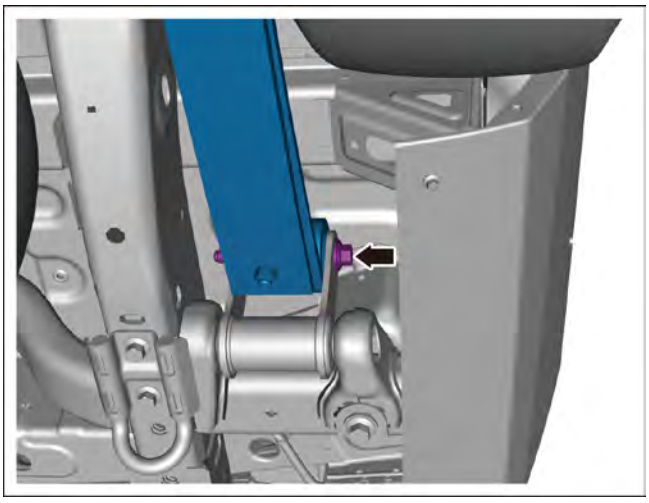
4 Remove rear shock absorber assembly retaining bolt and nut.
   a. UseSupport Standsupport hold rear axle assembly.
   b. Remove rear shock absorber assembly retaining bolt and nut.



5 Remove 4 retaining nut, remove U type bolt.
Torque:xxx±xxN·m



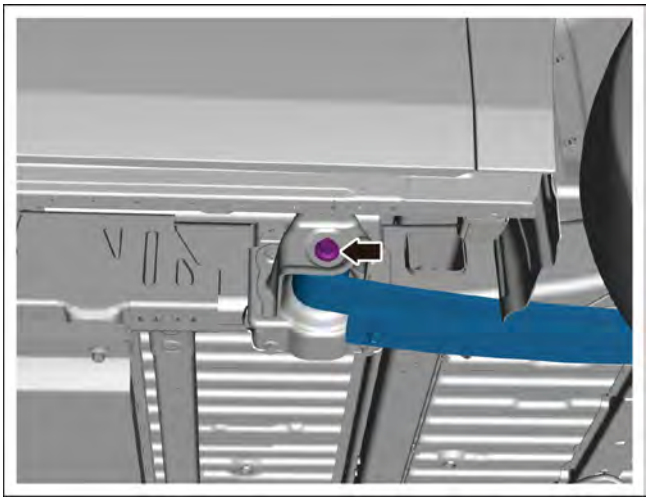
6 remove leaf spring pressure panel.



7 Remove leaf spring assembly rear end retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



8 Remove leaf spring assembly.

a. Remove leaf spring assembly front end retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.

b. in another I technician coordinate assist lower, remove leaf spring assembly.

Installation Steps

1 Install in the reverse order of removal.

Electronic Control Driveline Assembly, Repair Procedure

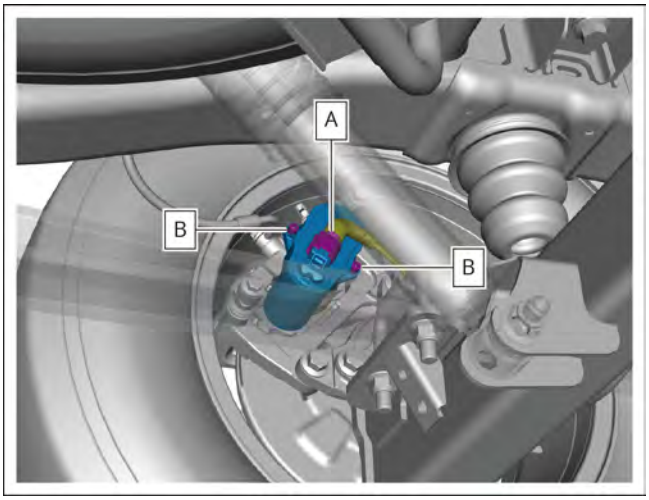
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support



3 Remove electronic control driveline assembly.

a. disconnect electronic control driveline assembly wiring harness connector A.

b. Remove 2 retaining bolt B, remove electronic control driveline assembly.
Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, test parking brake Function, ensure motor operation normal, no abnormal effect.

Left Rear Brake Caliper, Repair Procedure

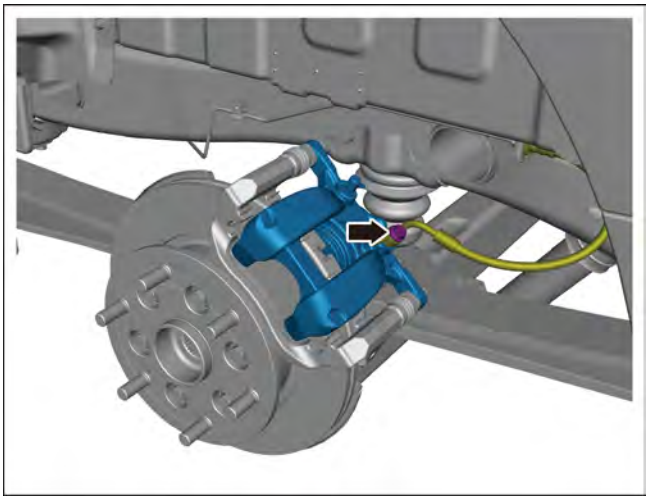
Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



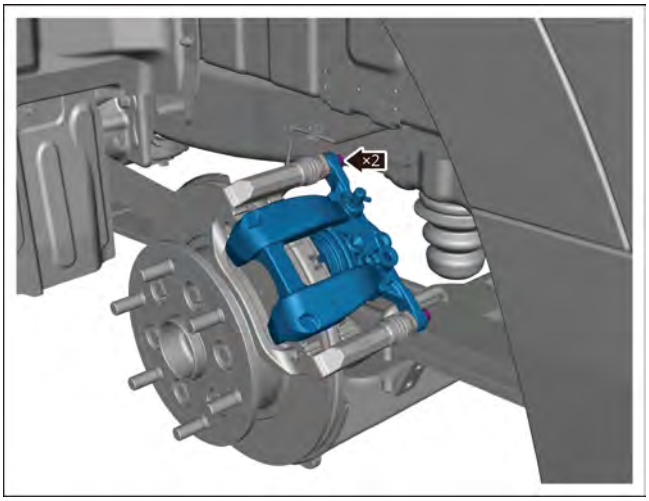
1 Connect the diagnostic tool and activate Parking Brake Service Mode.

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

4 Remove electronic control driveline assembly. Refer to:Electronic Control Driveline Assembly, Repair Procedure

5 Remove left rear brake caliper air center bolt.
   a. Usehose seal port itemclamp hold left rear brake hose assembly.
   b. Remove left rear brake caliper air center bolt.



6 Remove 2 retaining bolt, remove left rear brake caliper.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 After installation, connect the diagnostic tool and exit Parking Brake Service Mode.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Left Rear Brake Pad Assembly, Repair Procedure

Tips

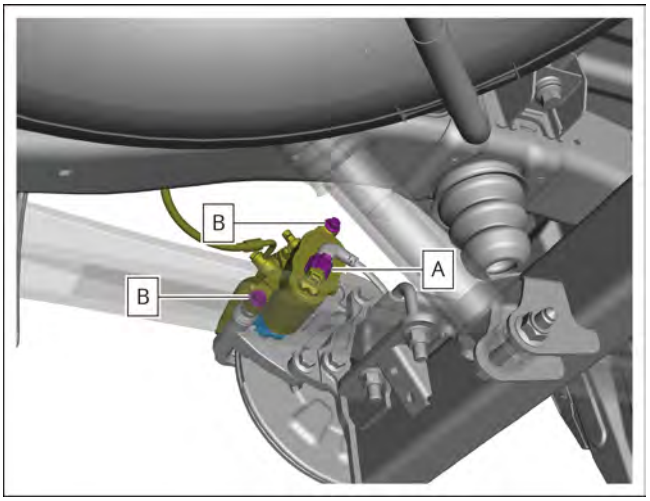
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Connect the diagnostic tool and activate Parking Brake Service Mode.

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation



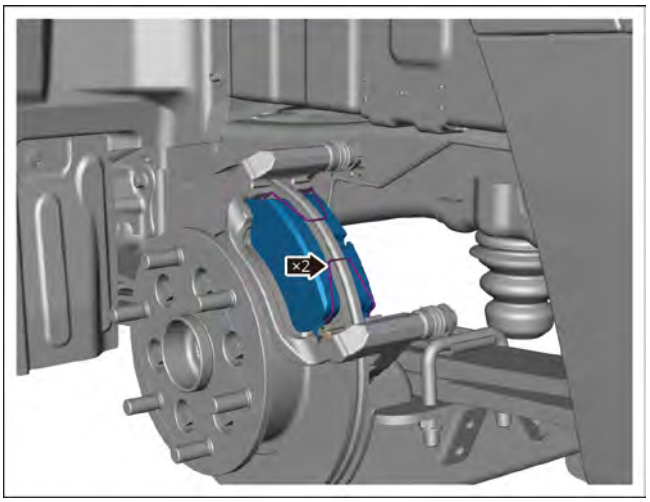
4 Remove left rear brake pad assembly.

a. disconnect electronic control driveline assembly wiring harness connector A.

b. Remove retaining bolt B, offset open left rear brake caliper.
Torque:xxx±xxxN

Caution

strict prohibit allow brake caliper only rely on brake hose suspend. caliper self re- will cause hose inner part item line layer disconnect crack, fitting at oil leakage, even hose direct connect disconnect crack, cause form operate vehicle brake sudden still failure severe safety hazard.



5 Remove 2 8 character spring, remove left rear brake pad assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install front, Use caliper alive plug reset tool completely pressure enter brake caliper alive plug rear, again install brake caliper.

3 Install when, note brake wear indication unit install in inside brake pad upper.

4 After installation, connect the diagnostic tool and exit Parking Brake Service Mode.

Follow-up Work:

Install complete rear, depress and place open Brake Pedal 3 times or more, check brake fluid storage oil reservoir center brake fluid fluid level, and in necessary when Adding Brake Fluid to upper limit Location.

After installation, road-test the vehicle on a safe road and check the braking performance.

Rear Brake Caliper Bracket, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

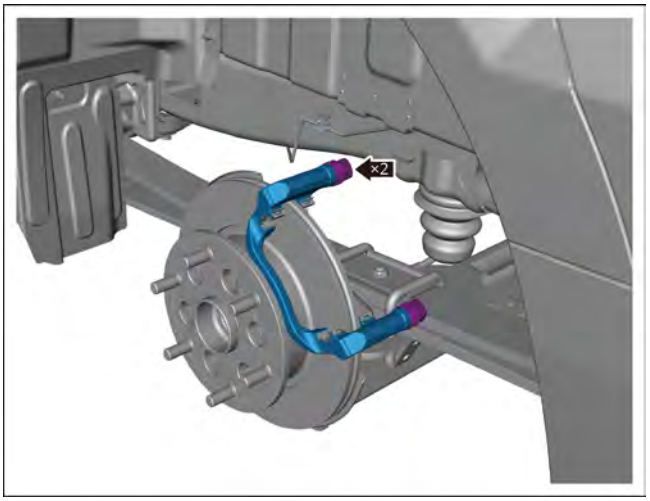
Removal Steps

1 Connect the diagnostic tool and activate Parking Brake Service Mode.

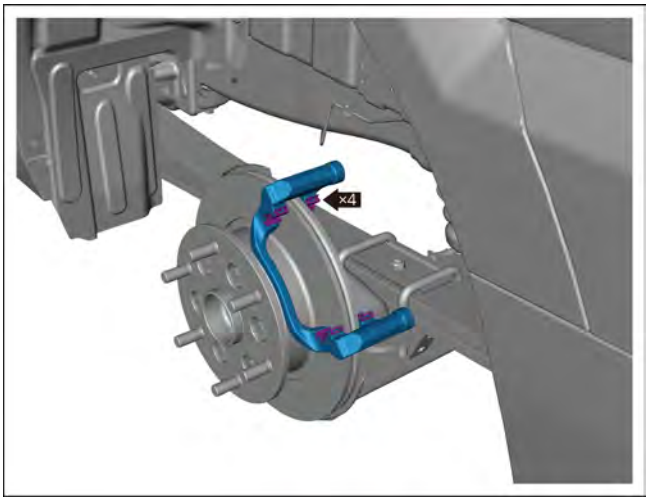
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

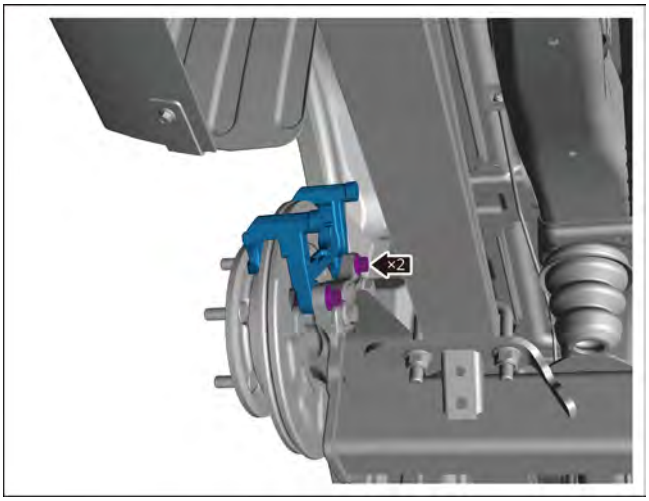
4 Remove left rear brake pad assembly. Refer to:Left Rear Brake Pad Assembly, Repair Procedure



5 Remove 2 guide pin.



6 Remove 4 spring piece.



7 Remove 2 retaining bolt, remove rear brake caliper bracket.

Torque:xxx±xxxN

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 After installation, connect the diagnostic tool and exit Parking Brake Service Mode.

Wheel Hub Bearing Unit - Rear, Removal and Installation

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Connect the diagnostic tool and activate Parking Brake Service Mode.

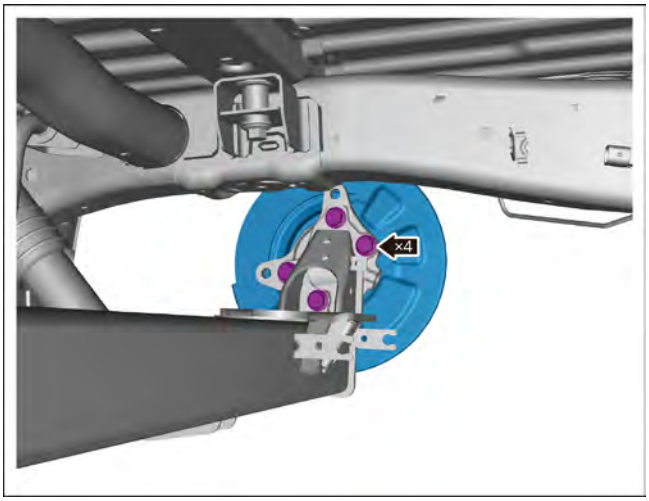
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

4 Remove left rear brake pad assembly. Refer to:Left Rear Brake Pad Assembly, Repair Procedure

5 Remove rear brake caliper bracket. Refer to:Rear Brake Caliper Bracket, Repair Procedure

6 Remove leaf spring assembly. Refer to:Leaf Spring Assembly, Repair Procedure



7 Remove 4 retaining bolt, remove wheel hub bearing unit - rear.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 connect diagnostic scan tool, exit parking brake service mode.

Left Rear Splash Shield Panel, Repair Procedure

Tips

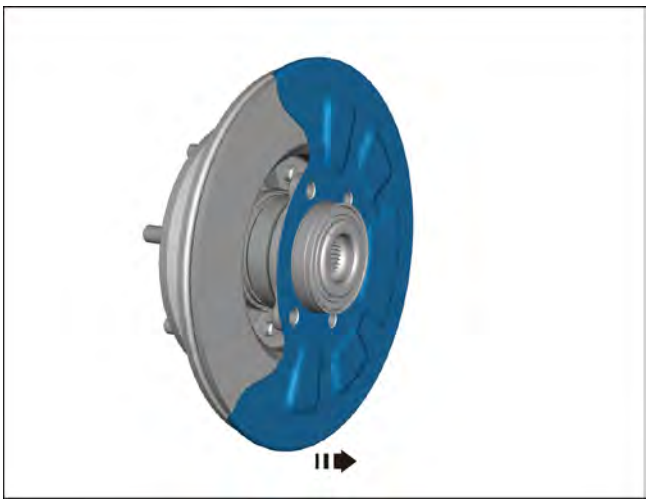
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Connect the diagnostic tool and activate Parking Brake Service Mode.

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove wheel hub bearing unit - rear. Refer to:Wheel Hub Bearing Unit - Rear, Removal and Installation



4 Remove left rear splash shield panel.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 After installation, connect the diagnostic tool and exit Parking Brake Service Mode.

Rear Brake Disc, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

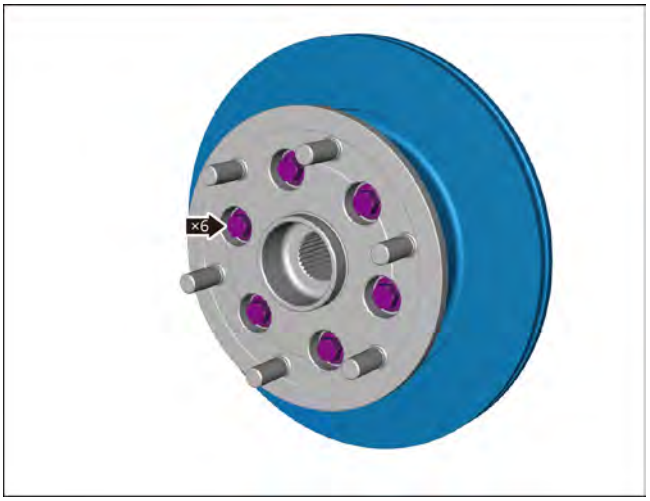
Removal Steps

1 Connect the diagnostic tool and activate Parking Brake Service Mode.

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove wheel hub bearing unit - rear. Refer to:Wheel Hub Bearing Unit - Rear, Removal and Installation

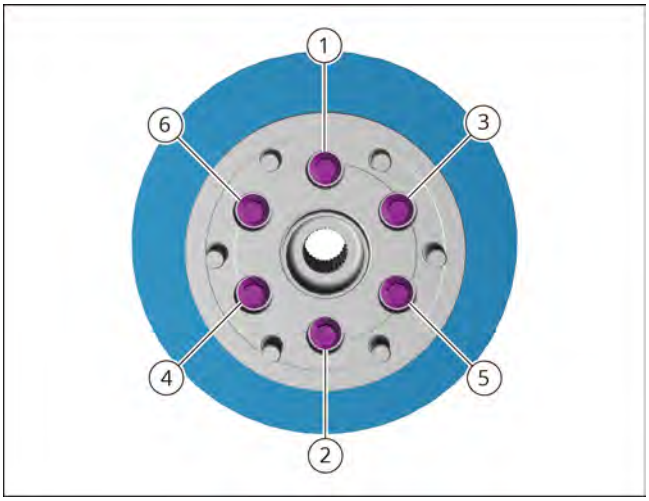
4 Remove left rear splash shield panel. Refer to:Left Rear Splash Shield Panel, Repair Procedure



5 Remove 6 retaining bolt, remove rear brake disc.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 press illustration order, according to times retaining bolt tighten to mark standard Torque.

Torque:xxx±xxN·m

3 After installation, connect the diagnostic tool and exit Parking Brake Service Mode.

Wheel Hub Bearing Unit - Rear, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

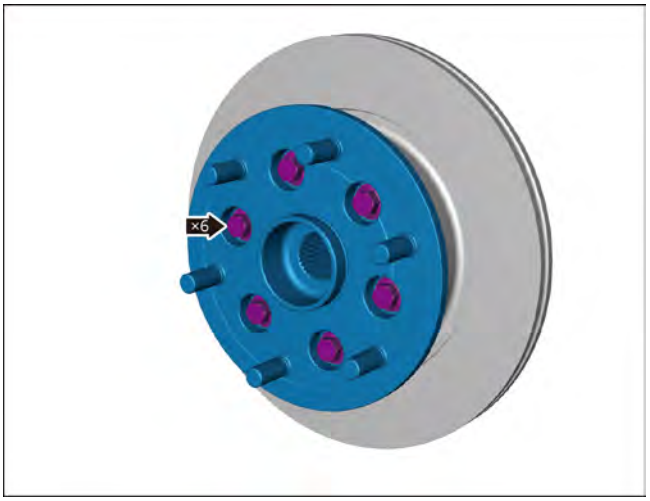
Removal Steps

1 Connect the diagnostic tool and activate Parking Brake Service Mode.

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove wheel hub bearing unit - rear. Refer to:Wheel Hub Bearing Unit - Rear, Removal and Installation

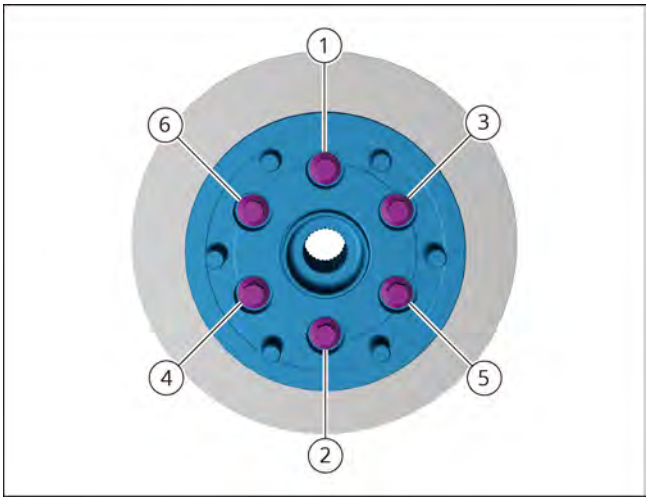
4 Remove left rear splash shield panel. Refer to:Left Rear Splash Shield Panel, Repair Procedure



5 Remove 6 retaining bolt, remove wheel hub bearing unit - rear.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 press illustration order, according to times retaining bolt tighten to mark standard Torque.

Torque:xxx±xxN·m

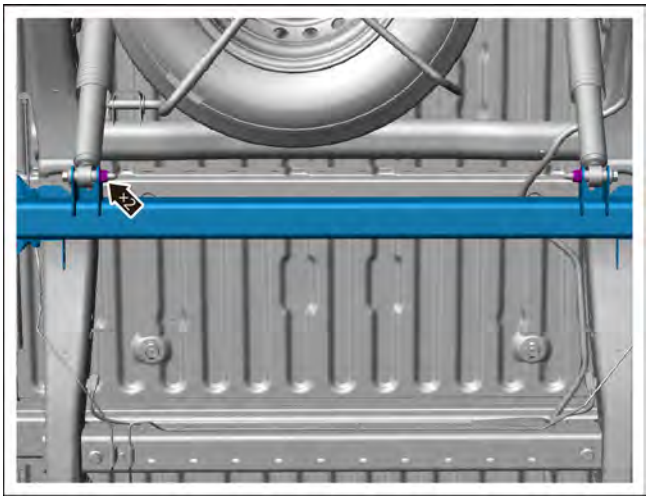
3 After installation, connect the diagnostic tool and exit Parking Brake Service Mode.

rear axle

Repair Procedure

Rear Axle Assembly, Removal and Installation

Removal Steps



1 connect diagnostic scan tool, perform parking brake mode.

2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

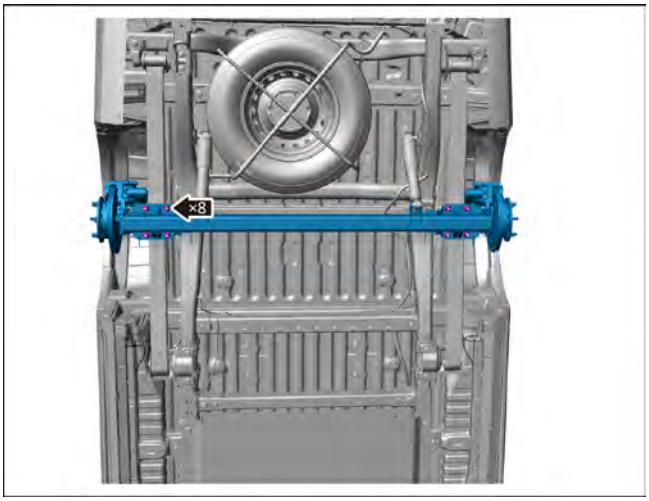
3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove left, Right Rear Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

5 Remove left, Right Rear Wheel Speed Sensor assembly. Refer to:Left Rear Wheel Speed Sensor Assembly, Repair Procedure

6 Remove left, right rear brake pad assembly. Refer to:Left Rear Brake Pad Assembly, Repair Procedure

7 Remove rear axle assembly left, right shock absorber 2 retaining bolt and nut.



8 Remove rear axle assembly.

a. UseSupport Standsupport hold rear axle assembly.

b. Remove 8 retaining nut, remove rear axle assembly.
Torque:xxx±xxN·m

c. in another I technician coordinate assist lower, remove rear axle assembly.

Installation Steps

1 note below item, again Install in the reverse order of removal.

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Rear Axle Assembly, Repair Procedure

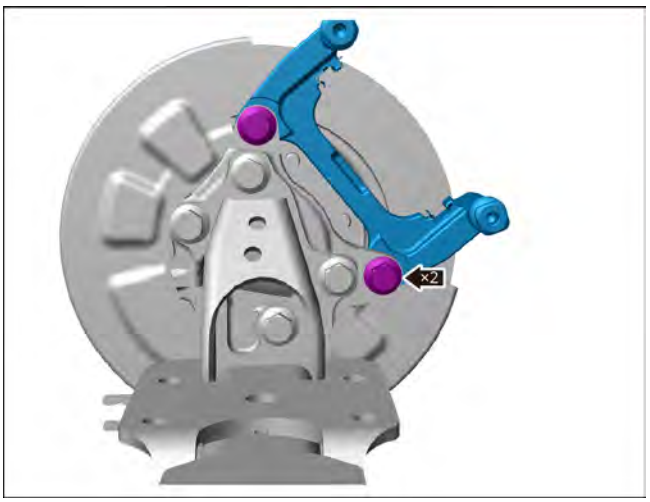
Removal Steps

1 Connect the diagnostic tool and activate Parking Brake Service Mode.

2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

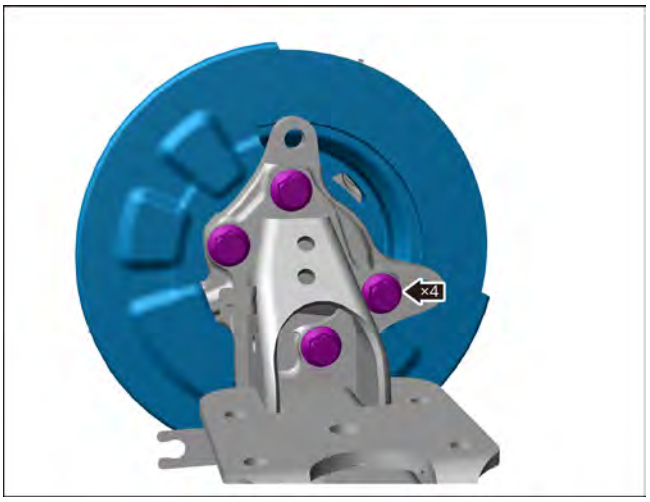
3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove rear axle assembly. Refer to:Rear Axle Assembly, Removal and Installation



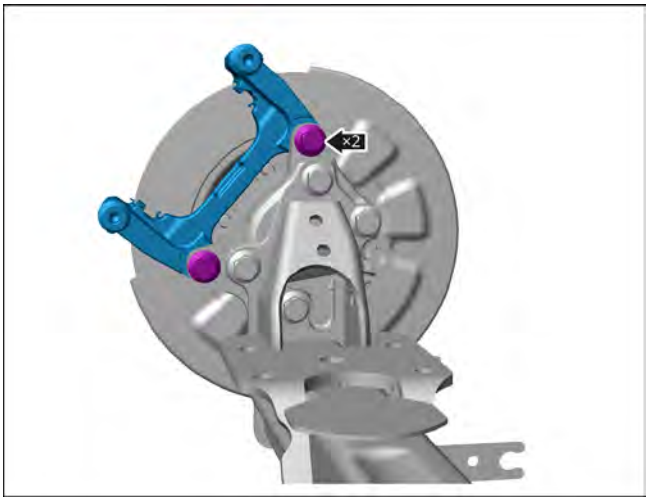
5 Remove 2 retaining bolt, remove right rear brake caliper bracket assembly.

Torque:xxx±xxN·m



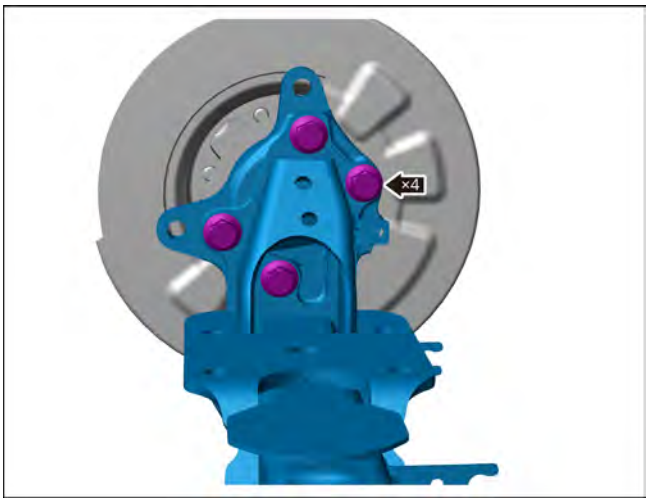
6 Remove 4 retaining bolt, remove right rear Brake Disc assembly.

Torque:xxx±xxN·m



7 Remove 2 retaining bolt, remove left rear brake caliper bracket assembly.

Torque:xxx±xxN·m



8 Remove 4 retaining bolt, remove rear axle assembly.

Torque:xxx±xxN·m

Installation Steps

1 note below item, again Install in the reverse order of removal.

2 After installation, connect the diagnostic tool and exit Parking Brake Service Mode.

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

steering

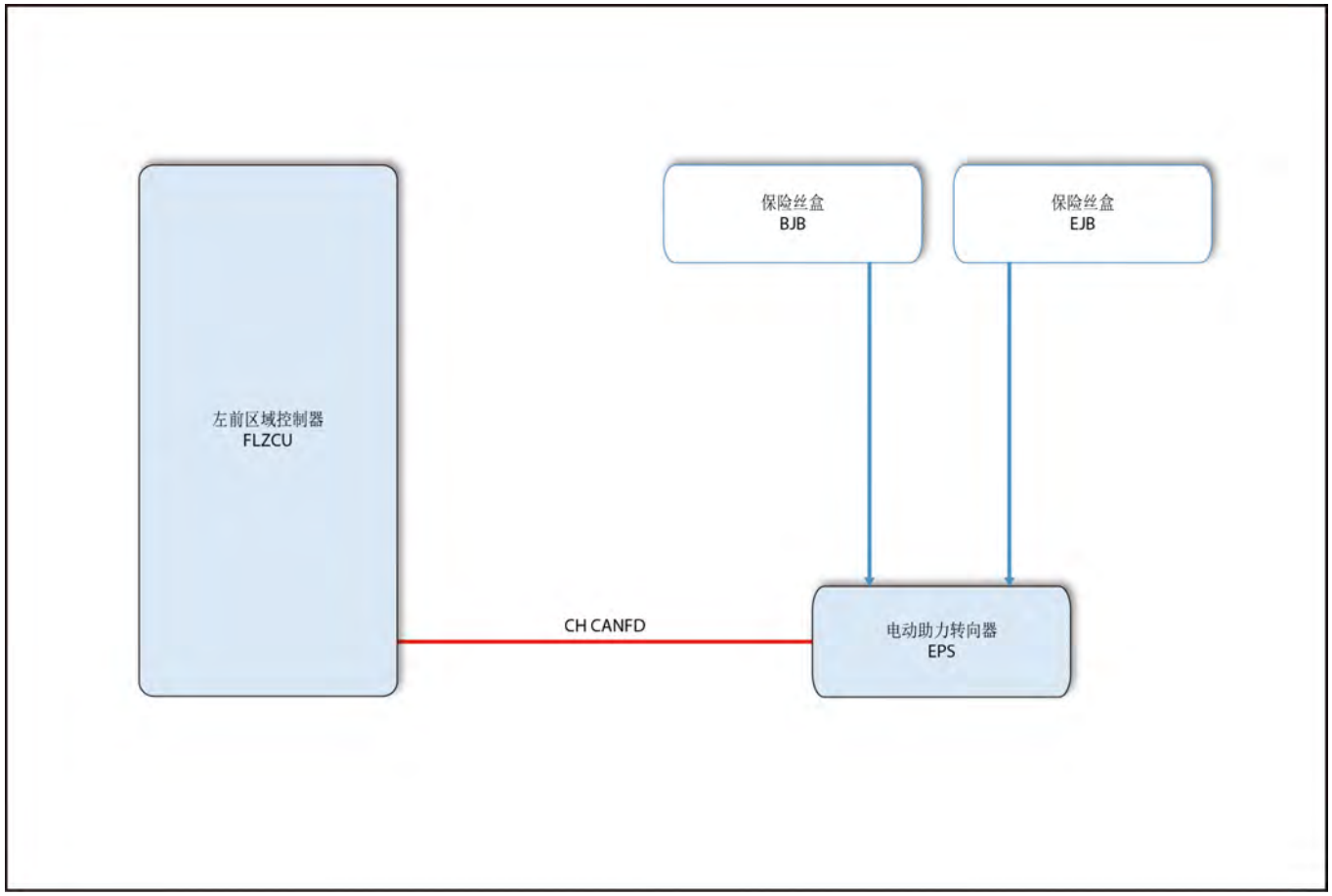
System Overview

Steering System Operating Principle

Electric Power Steering

Electric Power Steering unit (EPS) through torque sensor acquire driver steering torque, result combined Vehicle Speed, steering angle etc. signal Input EPS controller. controller according to pre-setting assist item item drive assist motor Output assist Torque, after reduce speed mechanism transmit to steering unit item, enable steering assist adjustment; according to Vehicle Speed dynamically adjust assist large small, balance low speed steering item convenient characteristic and high speed driving stability, Fault Status lower can restore mechanical steering.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Instrument Panel Fuse Box	Hardwired	Power Supply	Electric Power Steering unit power supply Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Electric Power Steering unit	Hardwired	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	fuse box power supply Input

Component Description

Electric Power Steering unit

Electric Power Steering unit (EPS) by steering torque sensor, steering angle sensor, EPS controller, assist motor etc. component consists of. sensor actual when acquire steering torque, Steering Wheel steering angle etc. Status data; EPS controller item combined Vehicle Speed etc. vehicle signal open deploy item item calculate, Output control command drive assist motor operation, enable steering assist adjustment.

Repair Procedure

Steering Column with Center Shaft Section Assembly, Repair Procedure

remove procedure

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove side Cover Assembly right. Refer to:Side Cover Assembly Left, Repair Procedure

3 Remove left lower Shield Assembly -RHD. Refer to:Left Lower Shield Assembly -RHD, Removal and Installation

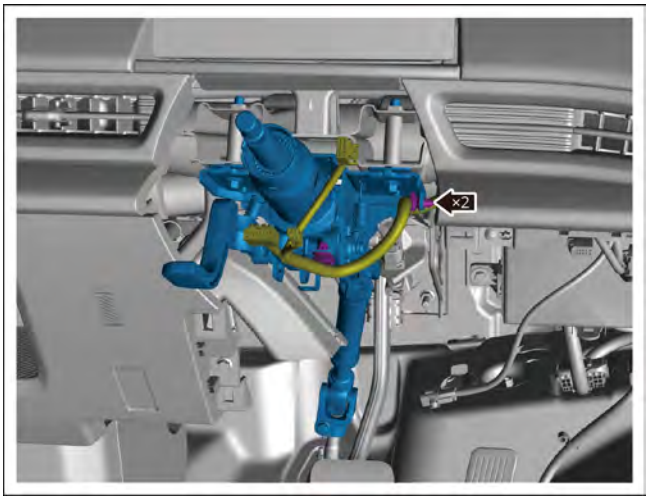
4 Remove driver airbag assembly. Refer to:Driver Airbag, Repair Procedure

5 Remove steering wheel assembly. Refer to:Steering Wheel Assembly, Repair Procedure

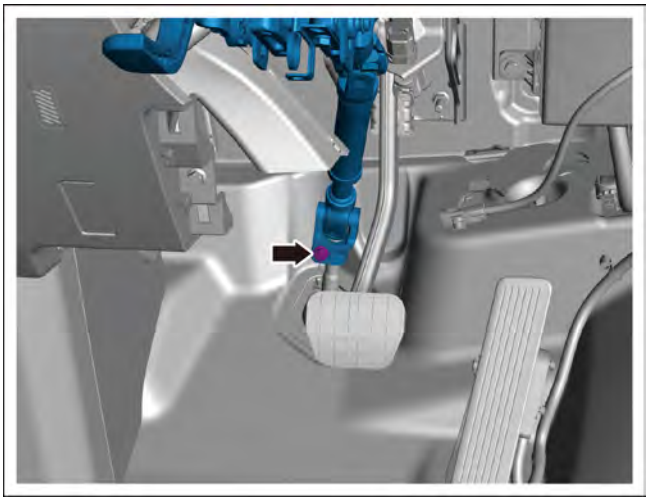
6 Remove pipe pillar upper cover assembly -LHD. Refer to:Pipe Pillar Upper Cover Assembly -RHD, Repair Procedure

7 Remove steering column lower cover assembly. Refer to:Steering Column Lower Cover Assembly, Repair Procedure

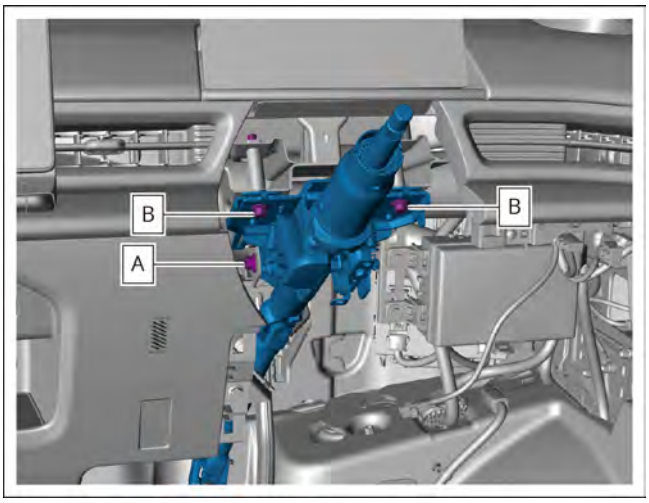
8 Remove combination switch assembly. Refer to:Combination Switch Assembly, Repair Procedure



9 Release 2 instrument panel wiring harness retaining clips.



10 Remove retaining bolt, release mechanical steering column with center shaft section assembly and steering lower shaft assembly connect.



11 Remove mechanical steering column with center shaft section assembly.

a. Remove mechanical steering column with center shaft section assembly retaining bolt A.

b. Remove 2 retaining bolt B, remove mechanical steering column with center shaft section assembly.

install procedure

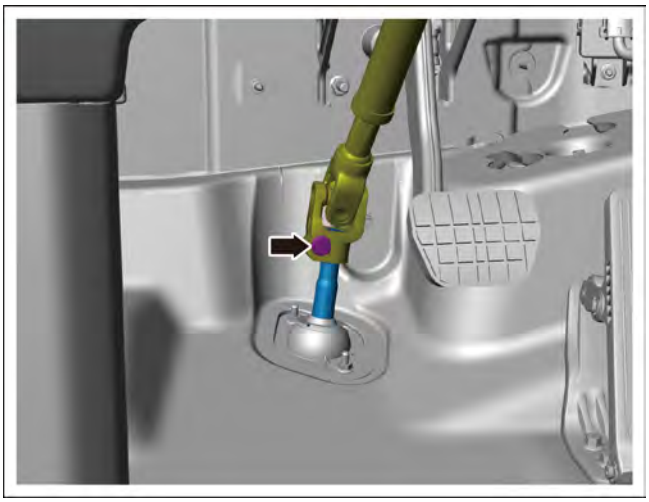
1 Install in the reverse order of removal.

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Steering Lower Shaft Assembly, Repair Procedure

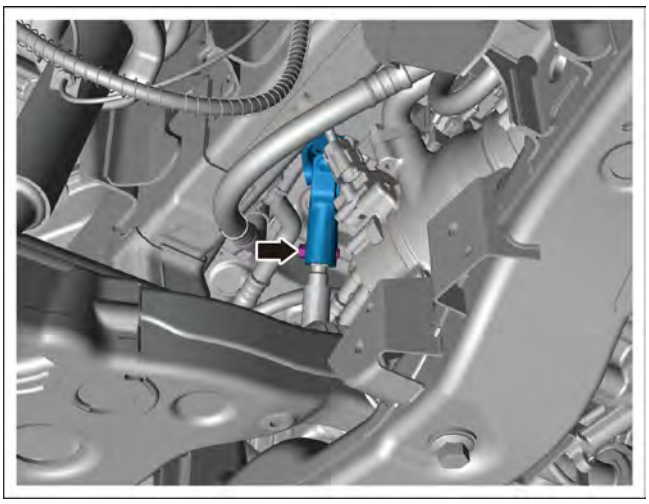
remove procedure



1 Remove retaining bolt, release mechanical steering column with center shaft section assembly and steering lower shaft assembly connect.

2 Raise the vehicle. Refer to:Vehicle Lifting and support

3 Front Underbody Shield. refer to:Front Underbody Shield, Repair Procedure



4 Remove retaining bolt, remove steering lower shaft assembly.

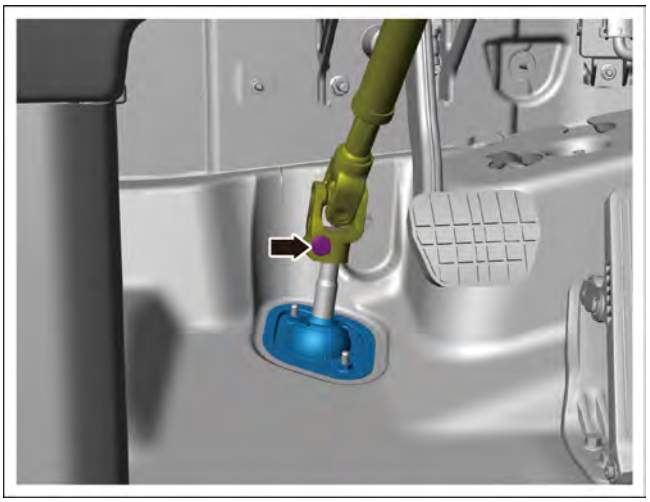
install procedure

1 according to and remove procedure reverse order install.

in safety circuit segment perform circuit test, ensure vehicle driving stability, no pulling, chassis no abnormal effect.

Steering Protection Dust Cover Assembly, Repair Procedure

remove procedure



1 Remove retaining bolt, release mechanical steering column with center shaft section assembly and steering lower shaft assembly connect.

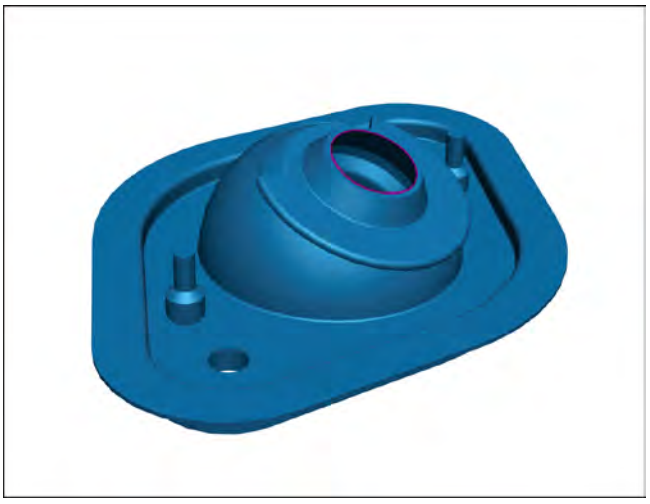


2 Remove 2 retaining nut, remove steering protection dust cover assembly.

Torque:xxx±xxN·m

install procedure

1 Observe the following points, then install in the reverse order of removal.



2 Install front, in steering protection dust cover seal sealing lip at apply suitable amount lubrication slip grease.

Rack Protection Dust Cover (with Clamp), Repair Procedure

Tips

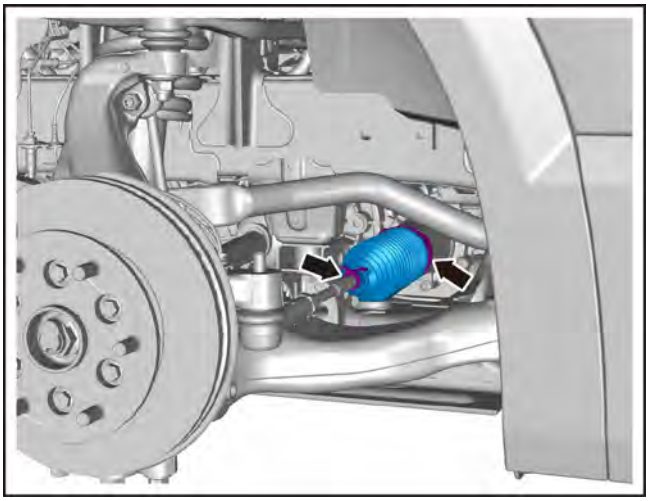
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Remove left front outer tie-rod end assembly. Refer to:Outer Tie-Rod End, Repair Procedure



4 Remove rack protection dust cover (with clamp).
   a. Remove rack protection dust cover (with clamp) retaining clamp.
   b. Remove and item use rack protection dust cover (with clamp) single item no terminal clamp.
   c. Remove rack protection dust cover (with clamp).

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 After installation, perform wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Outer Tie-Rod End, Repair Procedure

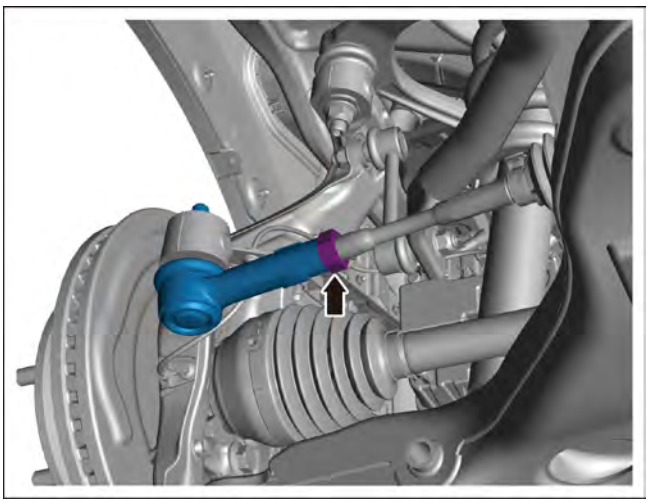
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

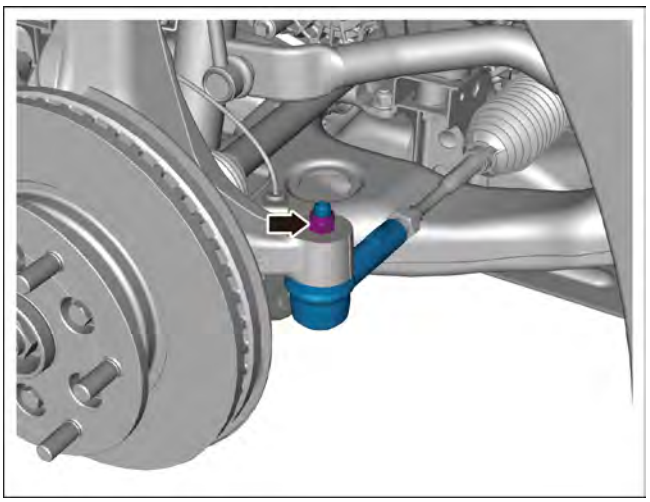
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation



3 loosen outer tie-rod end lock nut.

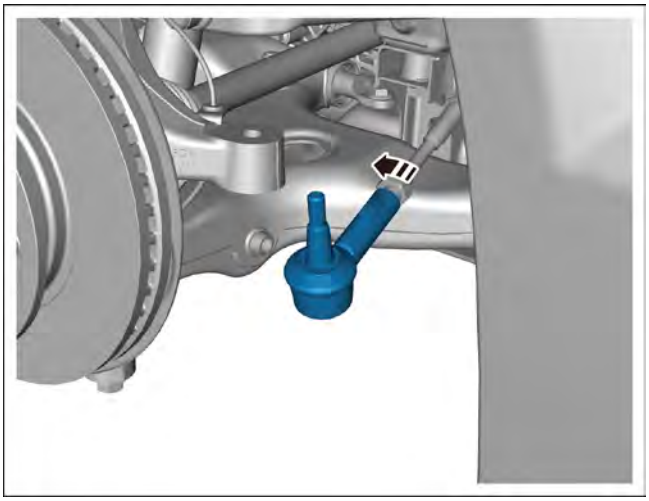
Torque:xxx±xxN·m



4 release outer tie-rod end.

a. Remove outer tie-rod end retaining nut.

b. UseBall Joint Removerrelease outer tie-rod end.



5 Remove outer tie-rod end.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 After installation, perform wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Inner Pull Rod, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

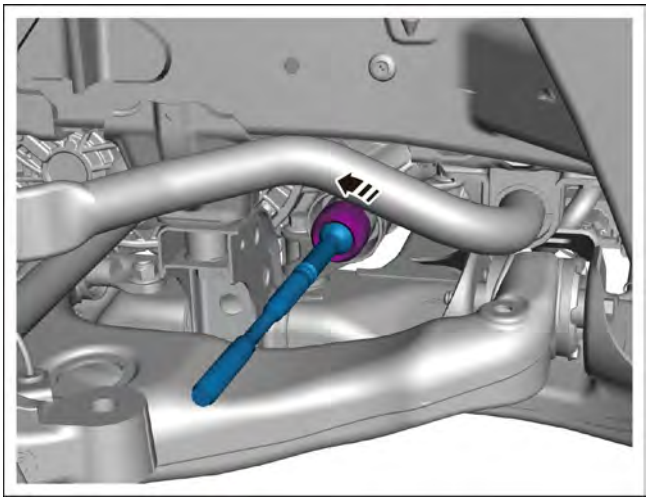
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Remove outer tie-rod end. Refer to:Outer Tie-Rod End, Repair Procedure

4 Remove rack protection dust cover (with clamp). Refer to:Rack Protection Dust Cover (with Clamp), Repair Procedure



5 Remove inner pull rod.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 After installation, perform wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Power Gear Rack Steering Gear with Tie Rod Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

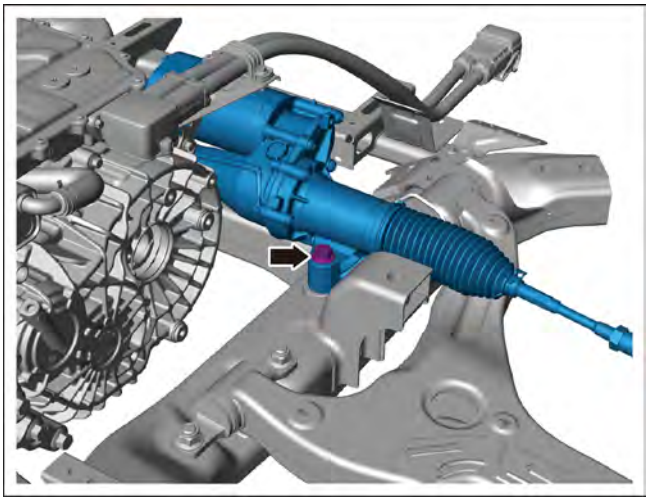
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

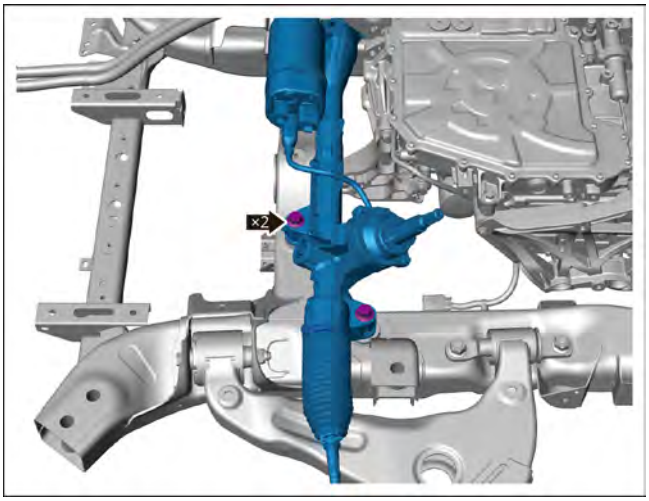
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

6 Remove front Subframe Assembly. Refer to:Front Subframe Assembly, Removal and Installation



7 Remove power gear rack steering gear with tie rod assembly retaining bolt.



8 Remove 2 retaining bolt, remove power gear rack steering gear with tie rod assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 After installation, perform wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Fault Diagnosis (EPS)

Electric Power Steering Unit (EPS) DTC List

DTC	DTC Meaning	DTC Description
C120007	Motor rotor position sensor failure	motor Position Sensor fault
C120107	TAS Sensor Failure	TAS sensor Fault (cause angle failure)
C120219	EPS Bus current is too high.	EPS bus line current too high
C12031C	EPS Fault Warning	EPS fault warning
C120449	EPS Assistance Curve Failure	EPS assist item line failure
C120549	EPS Oscillation/Curb Suppression Reduce of assistance	EPS item item / circuit edge suppress control lower assist
C120649	FOC module failure	FOC module fault
C120749	MCU module failure	MCU module fault
C120849	SBC module failure	SBC module fault
C120914	Abnormal three-phase bridge circuit	III phase bridge circuit abnormal
C120A49	EPS internal pre-drive chip failure.	EPS inner part Pre-driver chip fault
C120B47	Network security failures.	network safety fault
C120C49	EPS mechanical friction is too high.	EPS mechanical friction too high
C120E44	ROM failure	ROM fault
C120F4B	EPS booster degradation due to high ECU temperature	EPS by at ECU temperature too high cause assist degraded
C121041	Torque Request main module over limit	torque request main module out of limit
C121143	OS malfunction	OS occur fault
C121249	Motor torque check error	motor Torque check error
C121349	Internal voltage measurement source differences.	inner part voltage measure source difference
C121416	Power supply undervoltage(Reduce of assistance)	Power Supply undervoltage lower assist
C121417	power Supply overvoltage(Reduce of assistance)	Power Supply overvoltage lower assist
C121516	Power supply undervoltage(No assistance)	Power Supply undervoltage no assist
C121517	Supply overvoltage(No assistance)	Power Supply overvoltage no assist
C121686	The Steering angle signal is invalid.	steering angle signal invalid
C121700	Soft stop unlearned	software stop point not learning
C121800	Steering angle signal initialization error	Steering Wheel angle not calibration

DTC	DTC Meaning	DTC Description
C121900	Soft stop learning error	software stop point learning error
U273487	Lost Communication With FLZCU(VCU)	Lost Communication with FLZCU(VCU) Controller
U20A887	0xA8 Message Timeout	0xA8 message timeout
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System ONEBOX
U27F187	Lost Communication With ACU	Lost Communication with Airbag Control Unit ACU
U274287	Lost Communication With FCM	Lost Communication with Front View I Body Unit FCM
U007388	Bus off	bus disabled
U130055	EPS Not Configured	EPS not configuration
U24E481	0x4E4 Message Timeout	0x4E4 message timeout
U24B9FB	Message 0x4B9 E2E Error	message 0x4B9 E2E error
U20A8FB	Message 0xA8 E2E Error	message 0xA8 E2E error
U2098FB	Message 0x98 E2E Error	message 0x98 E2E error
U2031FB	Message 0x31 E2E Error	message 0x31 E2E error
U2195FB	Message 0x195 E2E Error	message 0x195 E2E error
U272686	ONEBOX_WheelSpd invalid(message ID A8)	ONEBOX wheel speed Signal Invalid (message ID A8)
U272386	ONEBOX_VehicleSpeed inValid(message ID 98)	ONEBOX vehicle speed no valid (message ID 98)
U270186	ACU_YAWRate invalid(message ID 31)	ACU yaw rate no valid (message ID 31)
U275F86	ADS_SteerAngleReq invalid or ADS_LKATorqFactReq_Invalid(message ID 195)	ADS steering angle request no valid or ADS Lane Keeping Assist Torque because sub- request no valid (message ID195)
C120207	Motor position sensor failure	motor Position Sensor fault
C120307	TAS Sensor Failure(Causing Angle Failure)	TAS sensor Fault (cause angle failure)

driveline

Repair Procedure

Left Constant Velocity Drive Shaft Assembly, Repair Procedure

Removal Steps

1 Remove left front wheel turn Plug. Refer to:Wheel Turn Plug, Repair Procedure



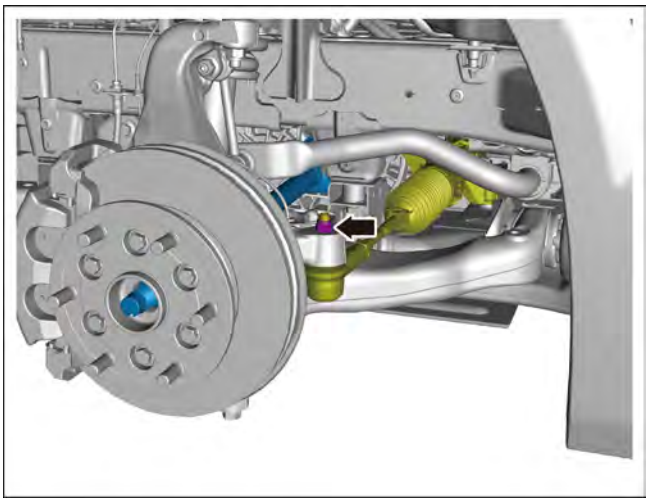
2 Remove left constant velocity drive shaft assembly retaining nut.

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

5 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

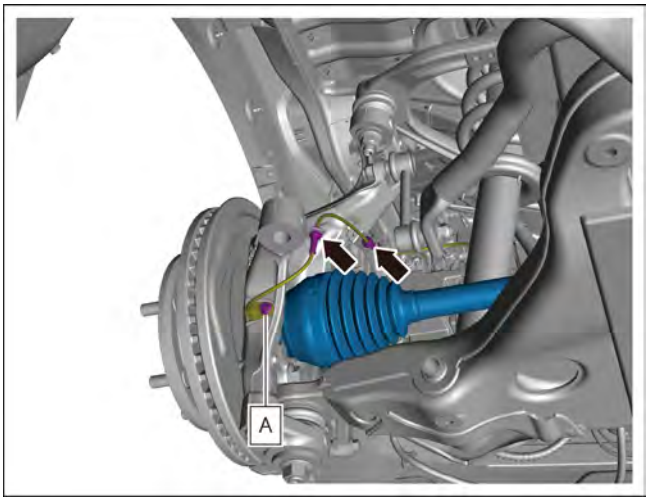
6 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling



7 release left outer tie-rod end.

a. Remove left outer tie-rod end retaining nut.

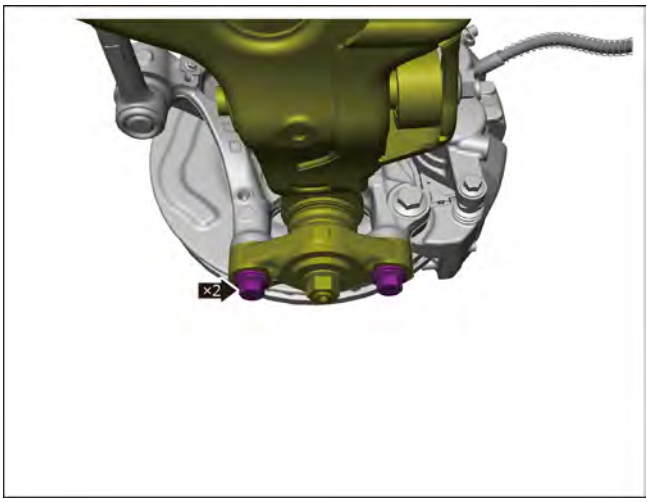
b. UseBall Joint Removerrelease left outer tie-rod end.



8 offset open Left Front Wheel Speed Sensor Assembly.

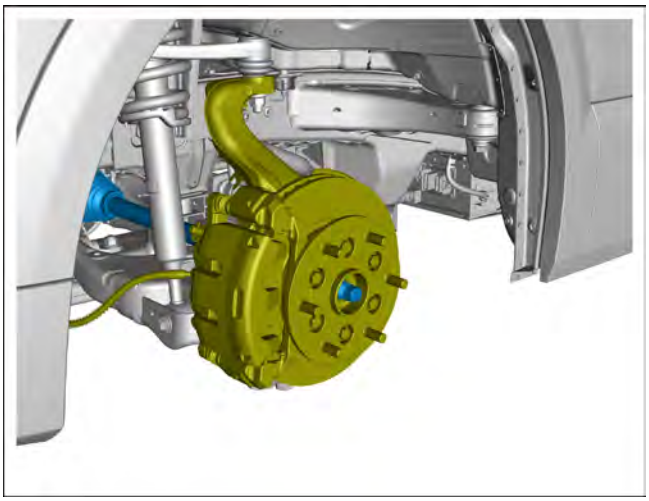
a. Remove Left Front Wheel Speed Sensor Assembly retaining bolt A.

b. release 2 retaining adhesive sleeve, offset open Left Front Wheel Speed Sensor Assembly.

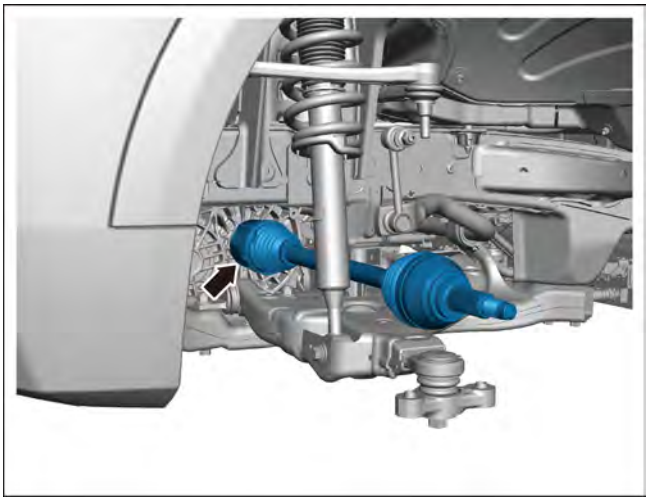


9 Remove left front support seat 2 retaining bolt.

Torque:xxx±xxN·m



10 section away left constant velocity drive shaft assembly and wheel hub bearing unit - left front connect



11 UsePry BarRemove left constant velocity drive shaft assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 oil seal protection toolsleeve install to oil seal upper, ensure completely cover cover oil seal sealing lip after again perform install operation.



3 press specified Torque tighten nut rear, Use hammer sub- and item sub- for nut side edge perform item item, make it deformation and item enter dent slot, ensure lock can rely on.

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Right Constant Velocity Drive Shaft Assembly, Repair Procedure

Removal Steps

1 Remove right front wheel turn Plug. Refer to:Wheel Turn Plug, Repair Procedure



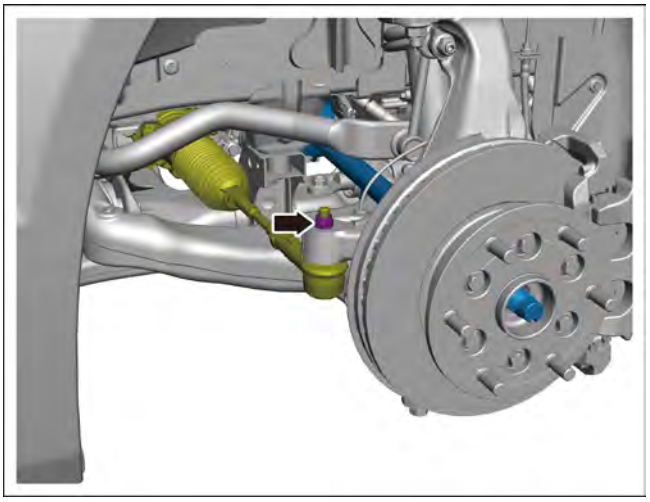
2 Remove right constant velocity drive shaft assembly retaining nut.

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

5 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

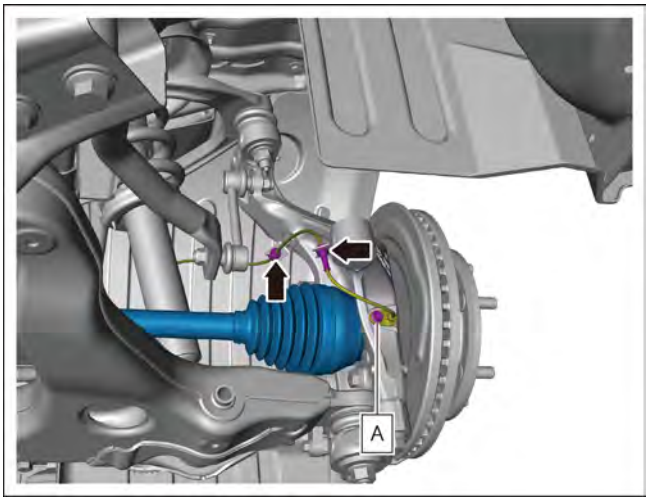
6 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling



7 release right outer tie-rod end.

a. Remove right outer tie-rod end retaining nut.

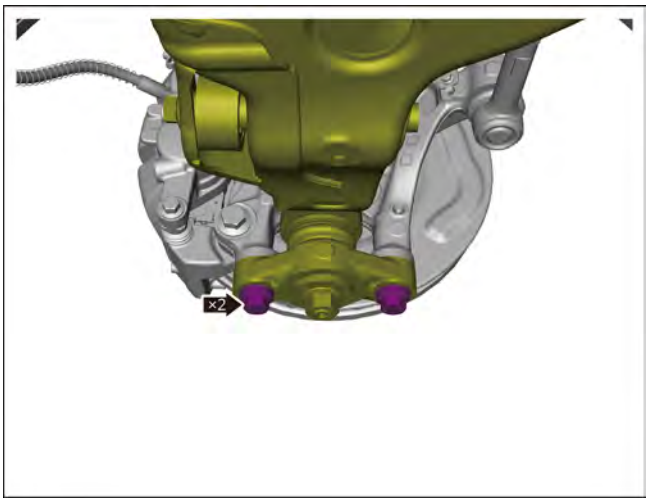
b. UseBall Joint Removerrelease right outer tie-rod end.



8 offset open Right Front Wheel Speed Sensor assembly.

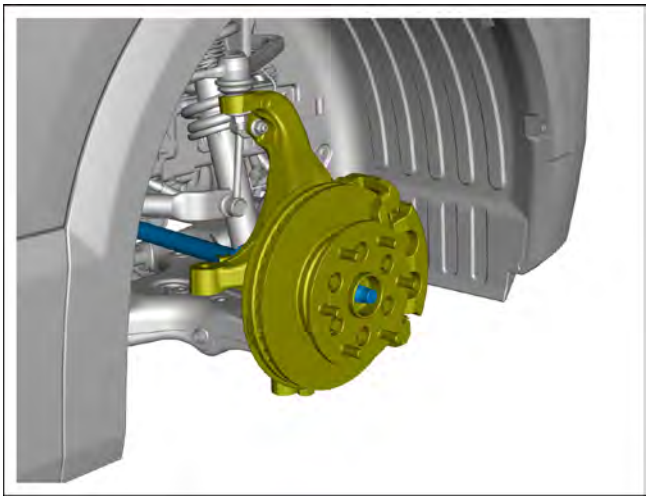
a. Remove Right Front Wheel Speed Sensor assembly retaining bolt A.

b. release 2 retaining adhesive sleeve, offset open Right Front Wheel Speed Sensor assembly.

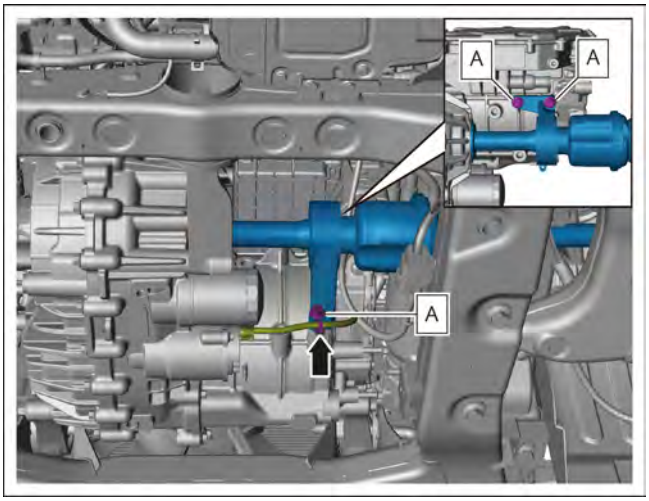


9 Remove right front support seat 2 retaining bolt.

Torque:xxx±xxN·m



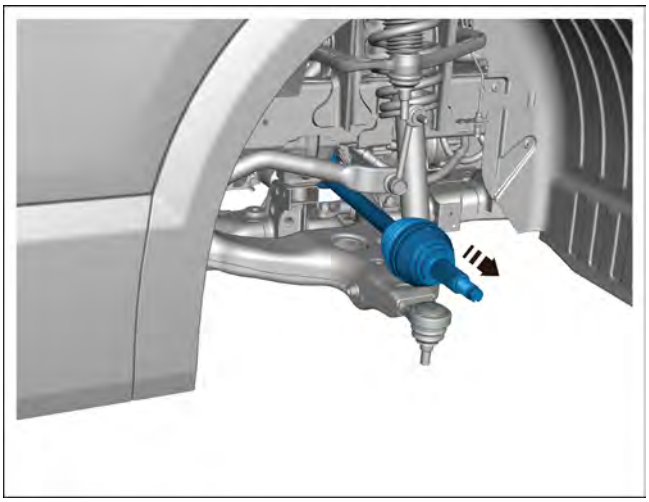
10 section away right constant velocity drive shaft assembly and wheel hub bearing unit - right front connect



11 Remove right constant velocity drive shaft assembly retaining bolt.

a. Release subframe jumper harness retaining clip.

b. Remove right constant velocity drive shaft assembly 3 retaining bolt A.
Torque:xxx±xxN·m



12 Remove right constant velocity drive shaft assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 oil seal protection toolsleeve install to oil seal upper, ensure completely cover cover oil seal sealing lip after again perform install operation.



3 press specified Torque tighten nut rear, Use hammer sub- and item sub- for nut side edge perform item item, make it deformation and item enter dent slot, ensure lock can rely on.

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Brake Pedal and control

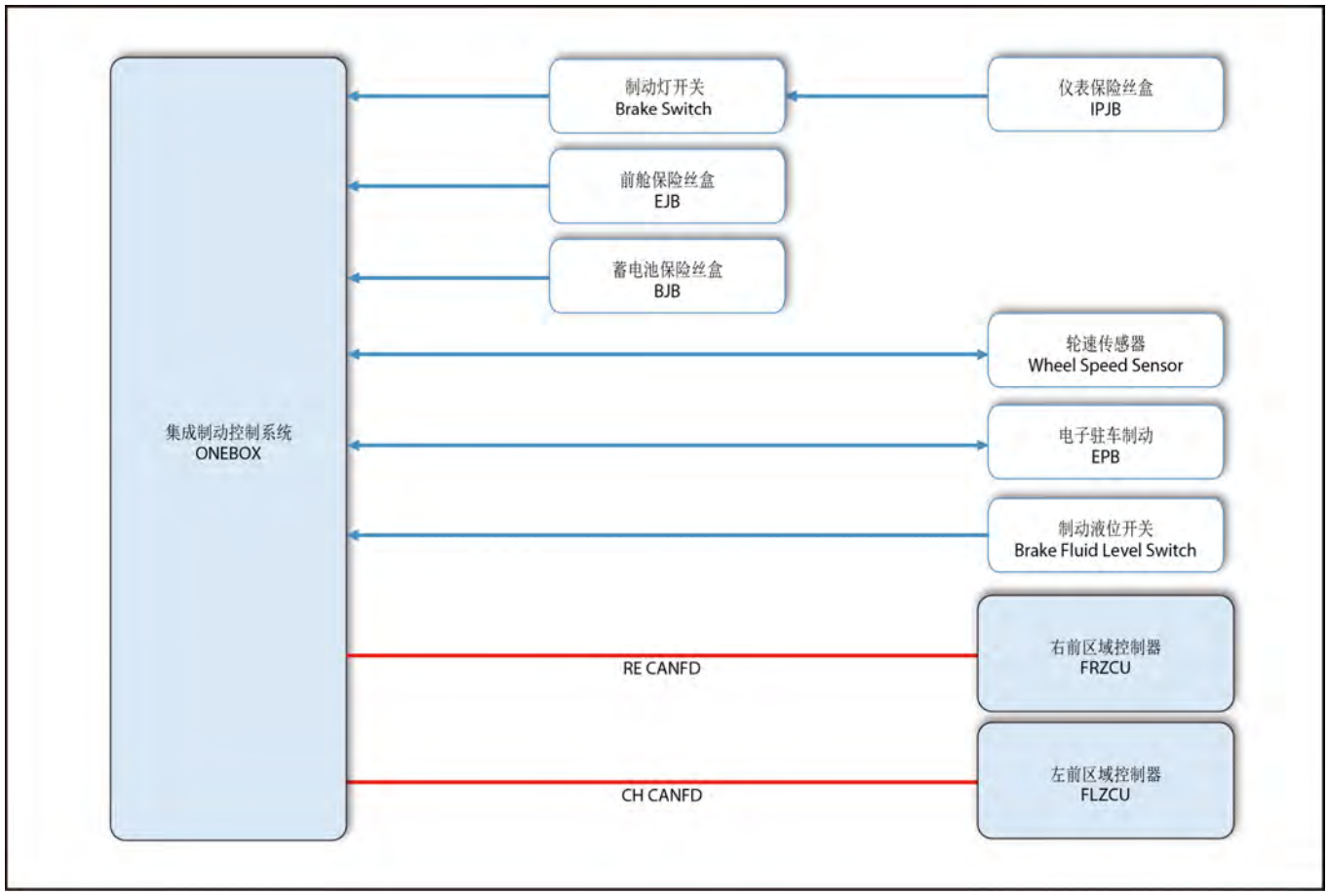
System Overview

Braking System Overview

brake switch control

vehicle Braking System carry vehicle reduce speed, parking and parking maintain Function, by operate vehicle brake, parking brake and related sensing known control component coordination item form. system through Brake Pedal acquire driver braking intent, item assist brake master cylinder, brake hose circuit transmit braking force, matching combined Wheel Speed Sensor, brake fluid position switch etc. signal acquire component, pressure, wheel speed, brake fluid position etc. Status feedback to brake Control Unit; Control Unit based on vehicle driving Status adjustment braking force distribution, enable normal specification brake, protection item dead brake, body stability control etc. Function, same when monitoring brake fluid fluid level abnormal, wheel speed signal fault etc. operating condition and trigger Instrument Pack alarm, ensure vehicle in various driving scenario lower brake safety characteristic and driving stability.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	RE CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Instrument Panel Fuse Box	Hardwired	Power Supply	brake switch power supply Output
front compartment fuse box	Hardwired	Power Supply	Integrated Brake Control System power supply Output
battery fuse box	Hardwired	Power Supply	Integrated Brake Control System power supply Output
brake switch	Hardwired	Switch Signal	brake Switch Signal Output
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Input
Wheel Speed Sensor	Hardwired	Feedback Signal	wheel wheel speed signal Output
Electronic Parking Brake brake	Hardwired	Drive Signal	Electronic Parking Brake motor Drive Signal Input
brake fluid position switch	Hardwired	Feedback Signal	brake fluid position signal Output
Integrated Brake Control System	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	RE CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Integrated Brake Control System power supply Input
	Hardwired	Power Supply	Integrated Brake Control System power supply Input
	Hardwired	Switch Signal	brake Switch Signal Input
	Hardwired	Feedback Signal	wheel wheel speed signal Input
	Hardwired	Drive Signal	Electronic Parking Brake motor Drive Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Feedback Signal	brake fluid position signal Input

Component Description

brake switch

brake switch use IV line bracket item, setting two Power Supply end and two Switch Signal Output end, two Output signal section distinguish for brake switch normal open, brake switch normal close; Brake Pedal action drive brake switch inner part contact point communication disconnect switch replace, Output corresponding Status Signal to Left Front Zone Control Unit (FLZCU).

brake fluid position switch

brake fluid position switch integrated install at brake accumulator fluid tank inner, main need Function Yes monitoring fluid reservoir tank inner part brake fluid fluid level height, acquire fluid level Status Signal and transmission to brake Control Unit. brake Control Unit according to brake fluid position switch feedback signal determine brake fluid store amount whether normal, when fluid level low at setting determine threshold when, trigger Instrument Pack brake warning Note, remind driver and when compensation charging brake fluid, ensure Braking System work can rely on, specification avoid because brake fluid not sufficient trigger send brake failure air hazard.

Wheel Speed Sensor

Wheel Speed Sensor layout position at wheel end, main need Function Yes acquire wheel actual when rotation speed signal, and signal transmission to brake Control Unit. brake Control Unit according to Wheel Speed Sensor feedback signal determine each wheel operation Status, adjustment wheel braking force, enable protection item dead brake, body stability control etc. Function, improve vehicle brake driving safety characteristic.

Electronic Parking Brake motor

Electronic Parking Brake motor integrated install at rear wheel brake caliper at, main need Function Yes provide mechanical clamp drive force, enable parking brake apply and release. brake Control Unit according to driver input command and Vehicle Status control Electronic Parking Brake motor, adjust motor operation side direction and Output Torque, complete parking lock and unlock except operation, enable vehicle static state parking maintain and dynamically emergency brake Function.

Integrated Brake Control System

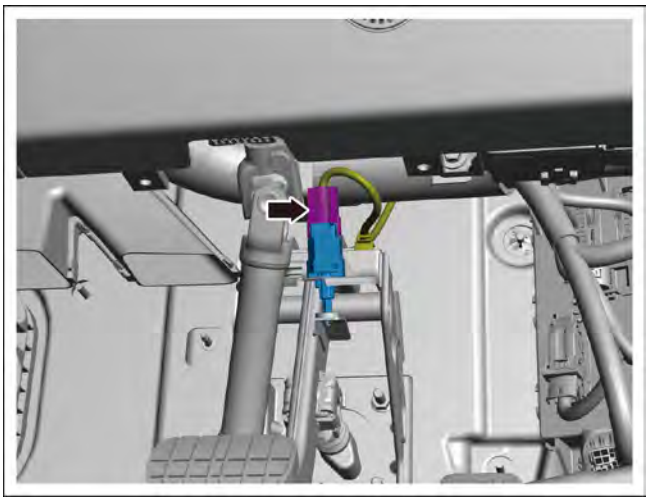
Integrated Brake Control System layout position at engine compartment inner, main need Function Yes receive vehicle various sensor signal and Output brake pressure adjustment drive force, enable Braking System pressure control. vehicle controller according to driver braking intent, vehicle driving Status control integrated brake control module, adjustment brake hose circuit pressure, complete normal specification brake, protection item dead brake, body stability control etc. Function, improve brake effect should characteristic and vehicle driving stability.

Repair Procedure

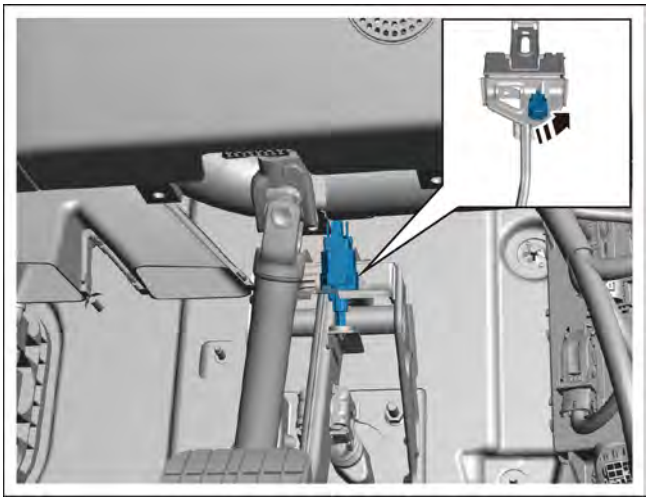
Pedal Brake Switch, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Disconnect pedal brake switch wiring harness connector.



3 along direction arrow side direction remove pedal brake switch.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

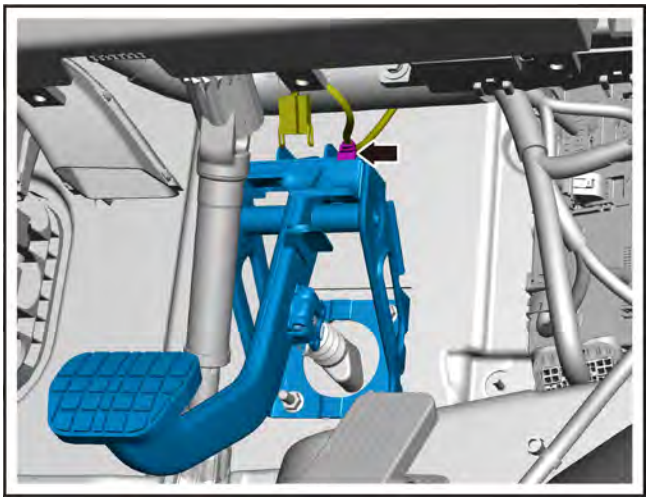
Install complete rear, Use Brake Pedal activation pedal brake switch, ensure signal Output and pedal travel synchronization, no delay or stuck.

Brake Pedal Mechanism Assembly, Repair Procedure

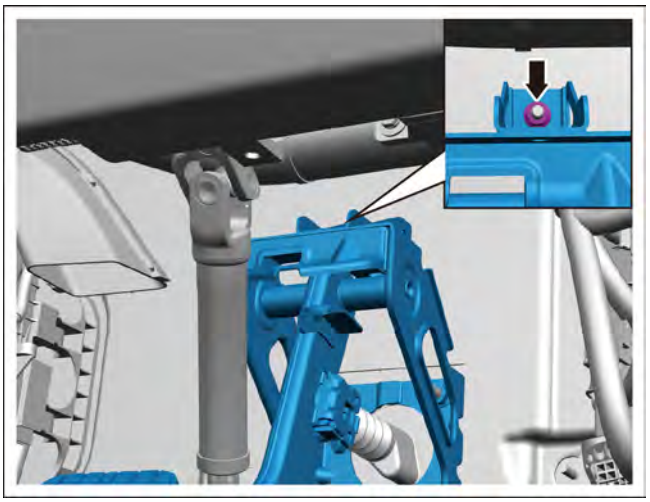
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

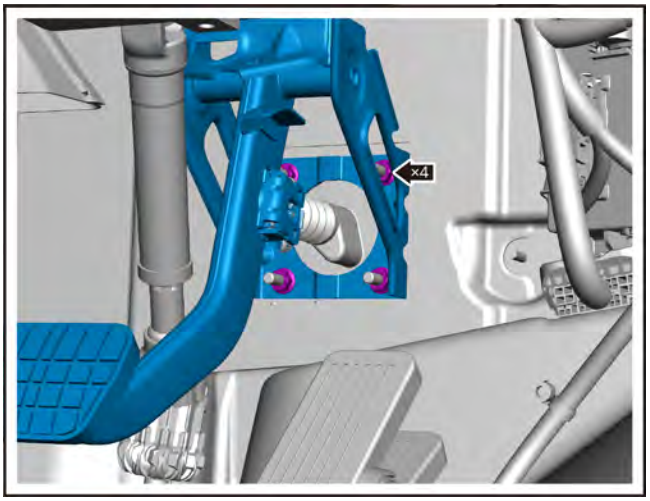
2 Remove pedal brake switch. Refer to:Pedal Brake Switch, Repair Procedure



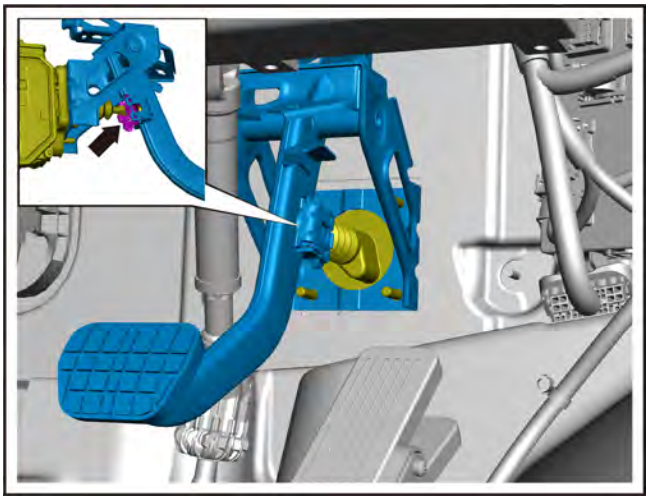
3 Release front compartment wiring harness retaining clip.



4 Remove Brake Pedal mechanism assembly retaining nut.



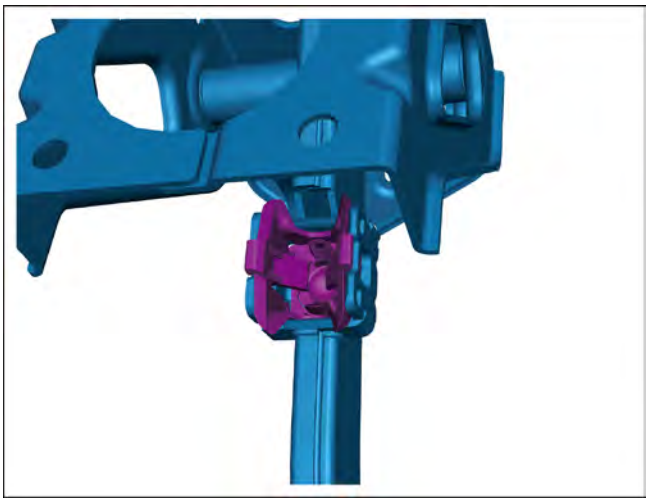
5 Remove Brake Pedal mechanism assembly 4 retaining nut.



6 release item item bottom seat connect, remove Brake Pedal mechanism assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check item item bottom seat clip whether damage, necessary when replace.

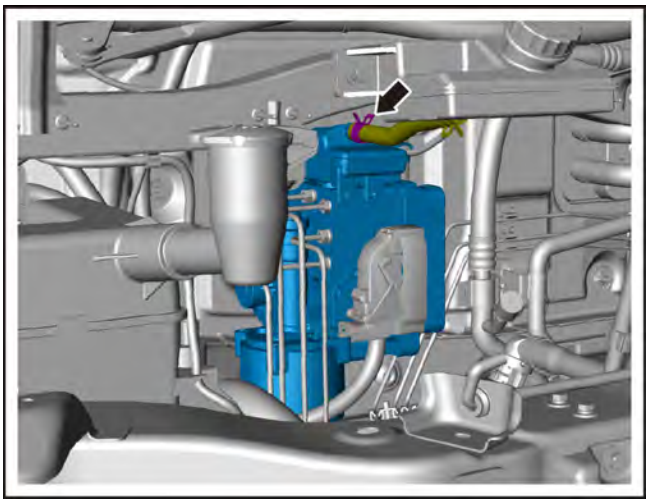
Integrated Brake Controller Assembly, Repair Procedure

Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



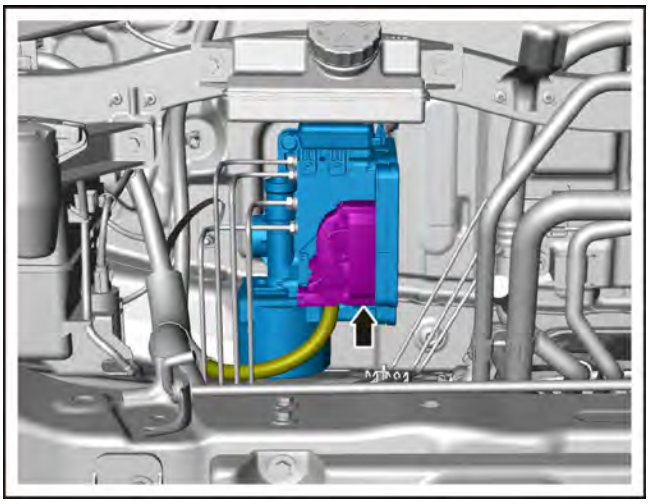
2 release brake fluid transfer pipe.

Caution

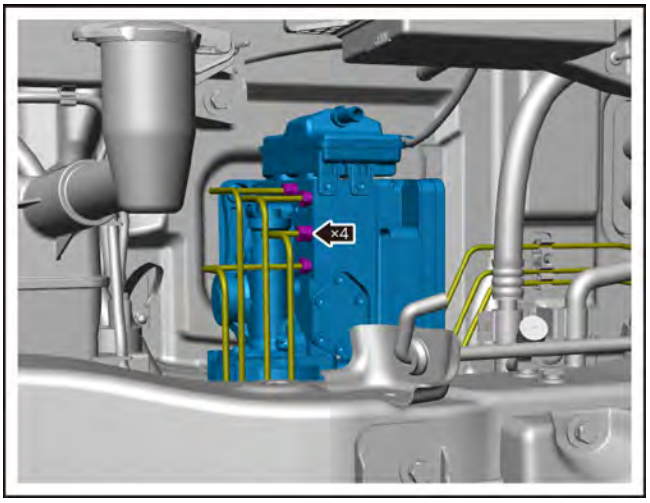
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

a. evacuate brake fluid reservoir brake fluid.

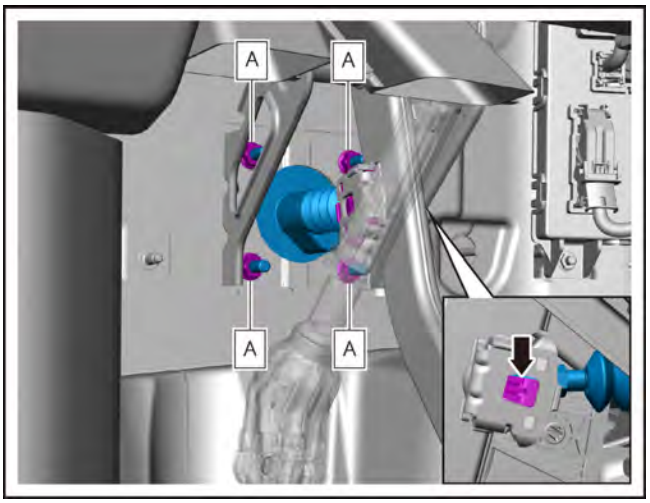
b. Remove retaining clamp, release brake fluid transfer pipe.



3 Disconnect integrated brake Controller Assembly wiring harness connector.



4 Remove integrated brake Controller Assembly 4 pipe fitting.



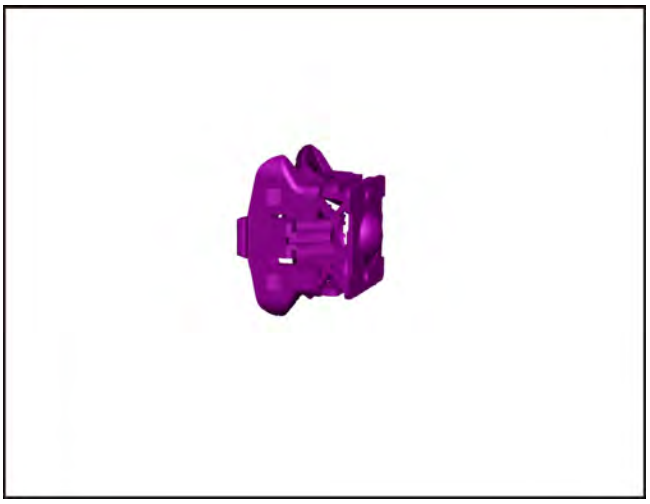
5 remove integrated brake Controller Assembly.

a. Remove retaining card clamp, section away integrated brake Controller Assembly ball joint.

b. Remove 4 retaining nut A, remove integrated brake Controller Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front check item item bottom seat whether damage, necessary when replace.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

4 if replace integrated brake Controller Assembly, then install complete rear, Use diagnostic scan tool perform “ONEBOX” programming and setting. refer to:controller module programming and setting

Left Front Wheel Speed Sensor Assembly, Repair Procedure

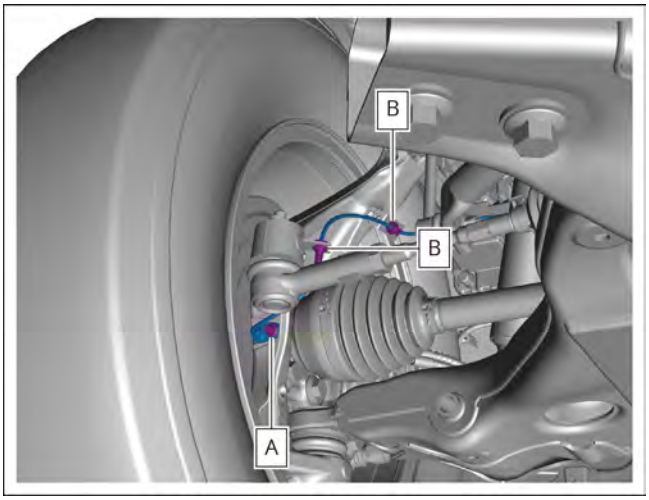
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

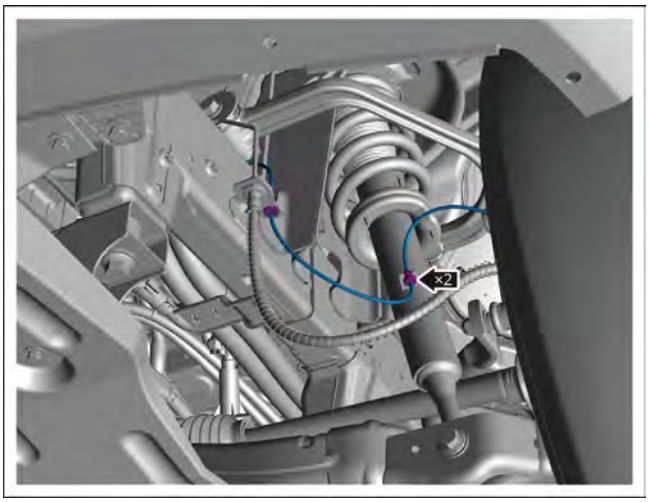
2 Raise the vehicle. Refer to:Vehicle Lifting and Support



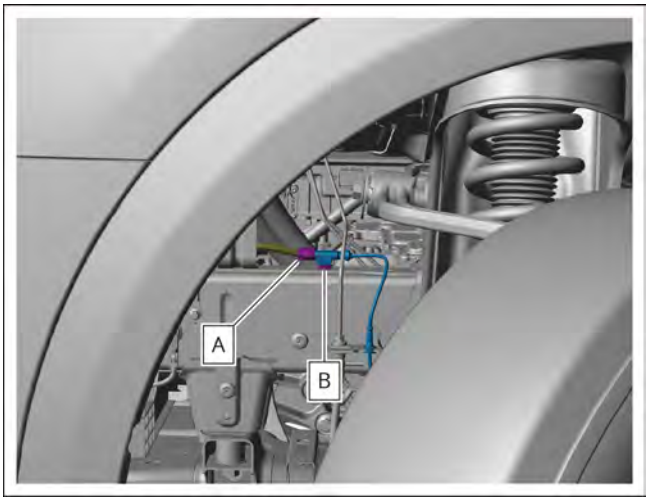
3 release Left Front Wheel Speed Sensor Assembly retaining adhesive sleeve.

a. Remove Left Front Wheel Speed Sensor Assembly retaining bolt A.

b. release Left Front Wheel Speed Sensor Assembly 2 retaining adhesive sleeve B.



4 release Left Front Wheel Speed Sensor Assembly 2 retaining adhesive sleeve.



5 remove Left Front Wheel Speed Sensor Assembly.

a. disconnect Left Front Wheel Speed Sensor Assembly wiring harness connector A.

b. release retaining clip B, remove Left Front Wheel Speed Sensor Assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Rear Wheel Speed Sensor Assembly, Repair Procedure

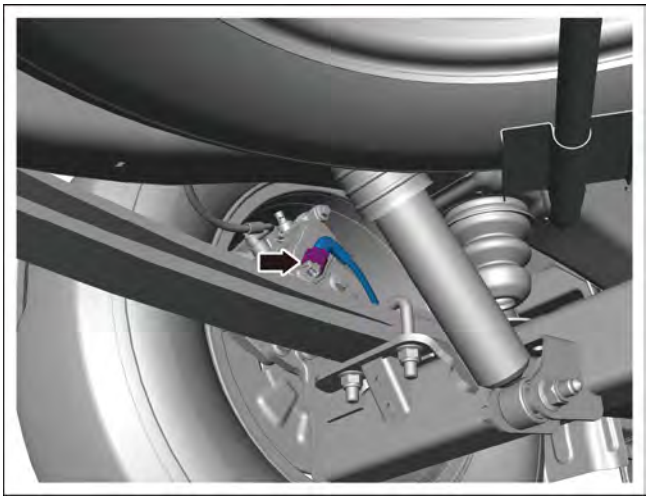
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

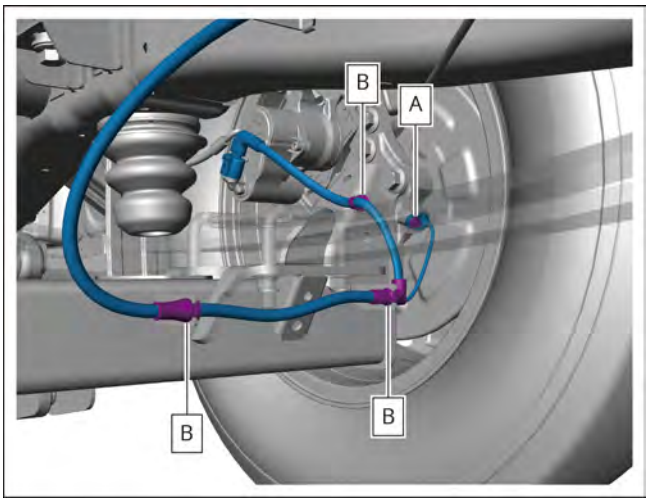
service steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support



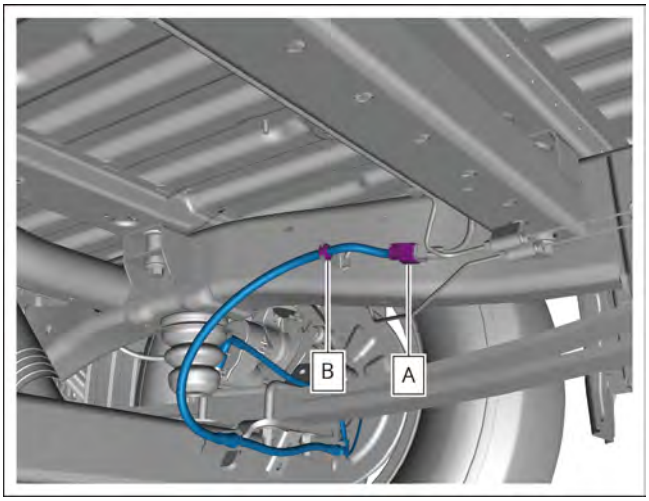
3 Disconnect Left Rear Wheel Speed Sensor assembly wiring harness connector.



4 Remove Left Rear Wheel Speed Sensor assembly.

a. Remove Left Rear Wheel Speed Sensor assembly retaining bolt A.

b. release Left Rear Wheel Speed Sensor assembly wiring harness 3 retaining adhesive sleeve B.



5 Remove Left Rear Wheel Speed Sensor assembly.

a. disconnect Left Rear Wheel Speed Sensor assembly wiring harness connector A.

b. release retaining adhesive sleeve B, remove Left Rear Wheel Speed Sensor assembly.

Installation Steps

1 Install in the reverse order of removal.

Fault Diagnosis (ONEBOX)

Integrated Brake Control System (ONEBOX) DTC List

DTC	DTC Meaning	DTC Description
C100100	main cylinder isolation valve 1 coil fault	master cylinder isolate away valve 1 coil fault
C10011D	main cylinder isolation valve 1 current feedback fault	master cylinder isolate away valve 1 current feedback fault
C100171	main cylinder isolation valve 1 hydraulic fault	master cylinder isolate away valve 1 hydraulic fault
C100200	booster cylinder isolation valve 1 current feedback fault	increase pressure cylinder isolate away valve 1 coil fault
C10021D	booster cylinder isolation valve 1 current feedback fault	increase pressure cylinder isolate away valve 1 current feedback fault
C100300	main cylinder isolation valve 2 coil fault	master cylinder isolate away valve 2 coil fault
C100316	ECU voltage low	ECU Voltage Too Low
C100317	ECU voltage high	ECU Voltage Too High
C10031D	main cylinder isolation valve 2 current feedback fault	master cylinder isolate away valve 2 current feedback fault
C100371	main cylinder isolation valve 2 hydraulic fault	master cylinder isolate away valve 2 hydraulic fault
C100400	booster cylinder isolation valve 2 coil fault	increase pressure cylinder isolate away valve 2 coil fault
C10041D	booster cylinder isolation valve 2 current feedback fault	increase pressure cylinder isolate away valve 2 current feedback fault
C10047A	booster cylinder isolation valve hydraulic fault	increase pressure cylinder isolate away valve hydraulic fault
C100500	Vehicle configuration BSW parameter RAM area fault	Vehicle configuration BSW Parameters RAM area fault
C100541	Vehicle configuration ABS parameter RAM area fault	Vehicle configuration ABS Parameters RAM area fault
C100542	Vehicle configuration WCB parameter RAM area fault	Vehicle configuration WCB Parameters RAM area fault
C100543	Vehicle configuration PMSM parameter RAM area fault	Vehicle configuration PMSM Parameters RAM area fault
C100641	MCU Flash fault	MCU Flash fault
C100644	MCU RAM fault	MCU RAM Fault
C100645	Code flash insepection fault	Code Flash validation fault
C100646	ECU internal hardwareNVRAM fault	ECU inner part hardware NVRAM error
C100700	ECU system internal fault 1	ECU system internal fault 1

DTC	DTC Meaning	DTC Description
C100701	ECU system internal fault 3	ECU system internal fault 3
C100704	ECU system internal fault 2	ECU system internal fault 2
C100709	ECU internal hardware fault	ECU inner part hardware fault
C101000	Left front normally open valve coil fault	left front normal open valve coil fault
C101100	Left front normally closed valve coil fault	left front normal close valve coil fault
C101400	right front normally open valve coil fault	right front normal open valve coil fault
C101500	right front normally closed valve coil fault	right front normal close valve coil fault
C101800	Left rear normally open valve coil fault	left rear normal open valve coil fault
C101900	Left rear normally closed valve coil fault	left rear normal close valve coil fault
C101C00	right rear normally open valve coil fault	right rear normal open valve coil fault
C101D00	right rear normally closed valve coil fault	right rear normal close valve coil fault
C102400	pedal simulator valve coil fault	pedal module virtual unit valve coil fault
C102512	high-side short circuit of brake booster solenoid valve	brake booster solenoid valve high side short circuit
C102513	power supply open circuit of brake booster solenoid valve	brake booster solenoid valve Power Supply power supply open circuit
C102514	high-side fault of brake booster solenoid valve	brake booster solenoid valve high side fault
C102612	high-side short circuit of ABS solenoid valve	ABS solenoid valve high side short circuit
C102613	high-side open circuit fault of ABS solenoid valve	ABS solenoid valve high side open circuit fault
C102714	Test Signal Valve Coil Open or short circuit	detection valve coil open circuit or short circuit
C10271E	Test Signal Valve Coil drive fault	detection valve coil drive fault
C102813	redundant power supply mode fault	redundancy Power Supply mode fault
C102849	redundant power supply circuit self-check fault	redundancy Power Supply circuit self-test fault
C102901	ECU Slaver System Internal Failure 1	auxiliary system internal fault 1
C102904	ECU Slaver System Internal Failure 2	auxiliary system internal fault 2
C102907	ECU Slaver System Internal Failure 3	auxiliary system internal fault 3
C102908	ECU Slaver System Internal Failure 4	auxiliary system internal fault 4
C102947	ECU Slaver System offline fault	auxiliary system communication loss fault
C102981	main and Slaver system comumication fault	main auxiliary system communication fault

DTC	DTC Meaning	DTC Description
C102C1C	ECU internal wheel speed MCU module power supply voltage out of range	ECU inner part wheel speed MCU module Power Supply voltage out of range
C102C31	ECU internal wheel speed MCU signal loss	ECU inner part wheel speed MCU signal lost
C102C86	ECU internal wheel speed MCU UART communication fault	ECU inner part wheel speed MCU UART communication fault
C103108	left front wheel speed sensor direction error	left front wheel speed sensor side direction error
C103111	left front wheel speed sensor circuit short to ground	Left Front Wheel Speed Sensor Circuit short to ground
C103112	left front wheel speed sensor short circuit	Left Front Wheel Speed Sensor Circuit short circuit
C103114	left front wheel speed sensor open circuit	Left Front Wheel Speed Sensor Circuit open circuit
C10312F	left front wheel speed sensor signal unstable	Left Front Wheel Speed Sensor signal not stability
C103138	left front wheel speed sensor signal dropout	Left Front Wheel Speed Sensor signal communication loss
C103139	left front wheel speed sensor signal lost	Left Front Wheel Speed Sensor signal lost
C103408	right front wheel speed sensor direction error	right front wheel speed sensor side direction error
C103411	right front wheel speed sensor circuit short to ground	Right Front Wheel Speed Sensor Circuit short to ground
C103412	right front wheel speed sensor short circuit	Right Front Wheel Speed Sensor Circuit short circuit
C103414	right front wheel speed sensor open circuit	Right Front Wheel Speed Sensor Circuit open circuit
C10342F	right front wheel speed sensor signal unstable	Right Front Wheel Speed Sensor signal not stability
C103438	right front wheel speed sensor signal dropout	Right Front Wheel Speed Sensor signal communication loss
C103439	right front wheel speed sensor signal lost	Right Front Wheel Speed Sensor signal lost
C103708	left rear wheel speed sensor direction error	left rear wheel speed sensor side direction error
C103711	left rear wheel speed sensor circuit short to ground	Left Rear Wheel Speed Sensor Circuit short to ground
C103712	left rear wheel speed sensor short circuit	Left Rear Wheel Speed Sensor Circuit short circuit
C103714	left rear wheel speed sensor open circuit	Left Rear Wheel Speed Sensor Circuit open circuit

DTC	DTC Meaning	DTC Description
C10372F	left rear wheel speed sensor signal unstable	Left Rear Wheel Speed Sensor signal not stability
C103738	left rear wheel speed sensor signal dropout	Left Rear Wheel Speed Sensor signal communication loss
C103739	left rear wheel speed sensor signal lost	Left Rear Wheel Speed Sensor signal lost
C103816	ECU voltage ultra-low	ECU voltage exceed low
C103817	ECU voltage ultra-high	ECU voltage exceed high
C103A08	right rear wheel speed sensor direction error	right rear wheel speed sensor side direction error
C103A11	right rear wheel speed sensor circuit short to ground	Right Rear Wheel Speed Sensor Circuit short to ground
C103A12	right rear wheel speed sensor short circuit	Right Rear Wheel Speed Sensor Circuit short circuit
C103A14	right rear wheel speed sensor open circuit	Right Rear Wheel Speed Sensor Circuit open circuit
C103A2F	right rear wheel speed sensor signal unstable	Right Rear Wheel Speed Sensor signal not stability
C103A38	right rear wheel speed sensor signal dropout	Right Rear Wheel Speed Sensor signal communication loss
C103A39	right rear wheel speed sensor signal lost	Right Rear Wheel Speed Sensor signal lost
C103B29	the gap between the rollerbench gear ring and the sensor is too large	tooth turn and sensor gap over large
C103F29	wheel speed sensor signal mismatch	Wheel Speed Sensor signal not matching
C104200	PTS signal 1 fault	pedal travel sensor No. I circuit signal fault
C104211	PTS signal short circuit	pedal travel sensor signal short circuit
C104214	PTS signal 1 open circuit	pedal travel sensor No. I circuit signal open circuit
C10421C	PTS signal 1 power Supply voitage out of range	pedal travel sensor No. I circuit signal Power Supply voltage out of range
C104225	PTS1 offset fault	pedal travel sensor 1 offset value fault
C104228	PTS ID not calibrated.	pedal travel sensor ID not calibration
C104229	PTS internal fault	pedal travel sensor internal fault
C104300	PTS signal 2 fault	pedal travel sensor No. II circuit signal fault
C104314	PTS signal 2 open circuit or power supply fault	pedal travel sensor No. II circuit signal open circuit or Power Supply fault
C104325	PTS2 offset fault	pedal travel sensor 2 offset value fault

DTC	DTC Meaning	DTC Description
C104329	The signal difference between channel 1 and channel 2 of PTS is too large.	pedal travel sensor two signal difference over large
C104412	master cylinder pressure sensor short-circuited to power	master cylinder pressure sensor Circuit for power supply short circuit
C104414	master cylinder sensor circuit short or open to ground	master cylinder pressure sensor Circuit to ground short circuit or open circuit
C10441C	Pressure sensor supply voltage out of range	pressure sensor Power Supply voltage out of range
C104423	master cylinder and Boost cylinder pressure sensor signal verification fault	master cylinder, increase pressure cylinder pressure sensor signal validation fault
C104428	master cylinder pressure sensor offset error	master cylinder pressure sensor offset amount error
C104429	master cylinder pressure sensor signal 2 fault	master cylinder pressure sensor No. II circuit signal fault
C10442F	master cylinder pressure sensor signal unstable	master cylinder pressure sensor signal not stability
C10444B	Pressure sensor internal temperature fault	pressure sensor inner part temperature fault
C104712	Boost cylinder Pressure sensor circuit short to power	increase pressure cylinder pressure sensor Circuit for power supply short circuit
C104714	Boost cylinder Pressure sensor circuit short or open to ground	increase pressure cylinder pressure sensor Circuit to ground short circuit or open circuit
C104721	Boost cylinder pressure too low	increase pressure cylinder circuit pressure too low
C104723	Boost cylinder pressure sensor signal is inconsistent with plunger position	increase pressure cylinder pressure sensor signal for pillar plug Location not reasonable
C104728	Boost cylinder Pressure sensor offset error	increase pressure cylinder pressure sensor offset amount error
C104729	Boost cylinder Pressure sensor signal 2 fault	increase pressure cylinder pressure sensor No. II circuit signal fault
C10472F	Boost cylinder Pressure sensor signal unstable	increase pressure cylinder pressure sensor signal not stability
C104800	brushless motor position snesor configuration error	no flash motor Position Sensor configuration error
C104829	brushless motor position snesor status error	no flash motor Position Sensor Status error
C10482F	brushless motor position snesor coil number error	no flash motor Position Sensor turn number error
C104914	Brake fluid level sensor fault	brake fluid fluid level sensor Fault

DTC	DTC Meaning	DTC Description
C10497B	Brake fluid low-level fault	brake fluid fluid level low
C104A7A	brake system leakage(with good check)	Braking System leakage (after good good check)
C104B28	PTS,pressure sensor not calibrated.	pedal travel, pressure sensor not calibration
C104B29	Multi-snesor signal fault of pedal and main cylinder	pedal and master cylinder multiple circuit sensor signal fault
C104C71	brake pedal stuck	Brake Pedal stuck
C104C72	brake pedal soft	Brake Pedal deviation software
C104C73	brake pedal hard	Brake Pedal deviation hard
C104C74	pedal simulator loop detection failed	pedal module virtual unit circuit detection failure
C104C77	Boost cylinder can not build pressure	increase pressure cylinder no method establish pressure
C104C7A	brake system air intake detection fault	Braking System intake detection fault
C104D7A	leak detection of brake circuit failed	brake circuit leakage detection failure
C104E7A	brake system brake circuit leakage	Braking System brake circuit leakage
C104F00	brake booster motor overcurrent 1	brake booster motor overcurrent 1
C104F12	brake booster motor high-side short circuit fault	brake booster motor high side short circuit
C104F13	brake booster motor high-side power supply open circuit	brake booster motor high side Power Supply power supply open circuit
C104F14	brake booster motor high-side power supply circuit fault	brake booster motor high side Power Supply circuit fault
C104F19	brake booster motor overcurrent 2	brake booster motor overcurrent 2
C104F1D	brake booster motor overcurrent 3	brake booster motor overcurrent 3
C104F29	brake booster motor positin not calibrated	brake booster motor Location not calibration
C104F4B	brake booster motor drive temperature too high	brake booster motor drive temperature too high
C104F71	brake booster motor reset fault	brake booster motor zeroing fault
C104F77	brake booster motor no response or return timeout	brake booster motor no effect should or return item timeout
C104F79	brake booster motor open circuit fault	brake booster motor open circuit fault
C105001	brake booster motor bridge drive fault 2	brake booster motor bridge drive fault 2
C105014	brake booster motor bridge drive fault 1	brake booster motor bridge drive fault 1
C105016	brushless motor drive 9183	no flash motor drive 9183

DTC	DTC Meaning	DTC Description
C105017	brushless motor pre-drive three-phase bridge MOS fault	no flash motor pre- drive III phase bridge MOS fault
C105114	brushless motor pre-drive SPI communication fault	no flash motor pre- drive SPI communication fault
C105116	brushless motor pre-drive internal circuit fault	no flash motor pre- drive inner part circuit fault
C105154	steering angle sensor not calibrated	Steering Wheel steering angle sensor not calibration
C105164	Abnormal signal of steering angle	Steering Wheel steering angle sensor signal not normal
C10561C	EPB power supply voltage fault	EPB Power Supply voltage fault
C105713	EPB switch light circuit fault	EPB switch lamp circuit fault
C105714	EPB switch circuit fault	EPB switch circuit fault
C105716	EPB switch power supply voltage low	EPB switch Power Supply voltage low
C105771	EPB switch in the state of being constantly pulled or pushed	EPB switch be in normal press or normal pull Status
C105819	EPB left Parking caliper - current exceeds limit during operation	EPB left parking caliper - action when current exceed limit
C105872	EPB left Parking caliper - release failure	EPB left parking caliper - release failure
C105873	EPB left Parking caliper - clamping failure	EPB left parking caliper - clamp failure
C105874	EPB left Parking caliper - silpiing when clamping	EPB left parking caliper - clamp when slip
C105891	EPB left Parking caliper - abnormal operating characteristics	EPB left parking caliper - operation characteristic abnormal
C105892	EPB left Parking caliper - excessive internal rotational resistance	EPB left parking caliper - inner part rotation resistance force over large
C105893	EPB left Parking caliper - motor unable to start	EPB left parking caliper - motor no method start
C105897	EPB left motor action restricted	EPB left motor action limited
C105919	EPB right Parking caliper - current exceeds limit during operation	EPB right parking caliper - action when current exceed limit
C105972	EPB right Parking caliper - release failure	EPB right parking caliper - release failure
C105973	EPB right Parking caliper - clamping failure	EPB right parking caliper - clamp failure
C105974	EPB right Parking caliper - silpiing when clamping	EPB right parking caliper - clamp when slip
C105991	EPB right Parking caliper - abnormal operating parameters	EPB right parking caliper - operation Parameters abnormal
C105992	EPB right Parking caliper - excessive internal rotational resistance	EPB right parking caliper - inner part rotation resistance force over large

DTC	DTC Meaning	DTC Description
C105993	EPB right Parking caliper - motor unable to start	EPB right parking caliper - motor no method start
C105997	EPB right motor action restricted	EPB right motor action limited
C106004	EPB control signal Inspection fault	EPB Control Signal validation fault
C106016	EPB parking caliper power supply voltage too low	EPB parking caliper Power Supply voltage too low
C106017	EPB parking caliper power supply voltage too high	EPB parking caliper Power Supply voltage too high
C106042	Vehicle configuration EPB parameter RAM area fault	Vehicle configuration EPB Parameters RAM area fault
C106043	Vehicle configuration PBC parameter RAM area fault	Vehicle configuration PBC Parameters RAM area fault
C106044	PBC signal fault	PBC signal fault
C106053	EPB maintenance mode	EPB service mode
C106094	PBC hydraulic support fault	PBC hydraulic support fault
C106095	EPB assembly test not done	EPB Not Perform Assembly Test
C106164	Abnormal signal of lateral acceleration sensor	lateral acceleration sensor signal not normal
C106264	Abnormal signal of longitudinal acceleration sensor	longitudinal acceleration sensor signal not normal
C106364	Abnormal signal of Yaw rate sensor	deviation navigation rate sensor signal not normal
C106500	EPB left motor drive internal hardware fault	EPB left motor drive inner part hardware fault
C106504	EPB left motor drive state timeout	EPB left motor drive Status timeout
C106507	EPB backup brake left caliper fault	EPB backup brake left caliper fault
C106511	EPB left motor short circuit to ground	EPB left motor to ground short circuit
C106512	EPB left motor short circuit to power supply	EPB left motor for power supply short circuit
C106513	EPB left motor open circuit	EPB left motor open circuit
C106516	EPB left drive voltage too low	EPB left motor drive voltage too low
C106519	EPB left motor pre-drive state overcurrent	EPB left motor pre- drive Status overcurrent
C10651A	positive and negative pole short connenction of EPB left motor	EPB left motor positive and negative terminals short together
C10651D	EPB left motor drive circuit overcurrent	EPB left motor drive circuit overcurrent
C106594	EPB left motor unexpected aciotn	EPB left motor intent outer action
C106600	EPB right motor dirve internal hardware fault	EPB right motor drive inner part hardware fault

DTC	DTC Meaning	DTC Description
C106604	EPB right motor drive state timeout	EPB right motor drive Status timeout
C106607	EPB backup brake right caliper fault	EPB backup brake right caliper fault
C106611	EPB right motor short circuit to ground	EPB right motor to ground short circuit
C106612	EPB right motor short circuit to power supply	EPB right motor for power supply short circuit
C106613	EPB right motor open circuit	EPB right motor open circuit
C106616	EPB right drive voltage too low	EPB right motor drive voltage too low
C106619	EPB right motor pre-dirve state voercurrent	EPB right motor pre- drive Status overcurrent
C10661A	positive and negative pole short connenction of EPB right motor	EPB right motor positive and negative terminals short together
C10661D	EPB right motor drive circuit overcurrent	EPB right motor drive circuit overcurrent
C106694	EPB right motor unexpected aciotn	EPB right motor intent outer action
C106D00	Sensor signal calibration time too long	sensor signal validation Time too long
C10724B	brake system internal temperature fault	Braking System inner part temperature fault
C107304	diagnosis inhibits WCBS	Diagnosis prohibit stop by-wire brake Function
C108911	ESC button switch fault	ESC button switch fault
C108914	ESC switch indicator light fault	ESC switch Indicator Lamp fault
C108B11	AVH button switch fault	AVH button switch fault
C108B14	AVH switch indicator light fault	AVH switch Indicator Lamp fault
C108C11	HDC button switch fault	HDC button switch fault
C108C14	HDC switch indicator light fault	HDC switch Indicator Lamp fault
C108D00	Brake fluid Not filled	brake fluid not fill
C114F14	brushless motor power supply fault	no flash motor power-supply fault
U007388	CH Bus off	CH bus disabled
U007488	RE Bus off	RE bus disabled
U031700	Slaver System backup software running	auxiliary system backup software operation
U031800	OTA failure,backup software running	OTA failure, backup software operation
U130055	ONEBOX Not configured	ONEBOX not configuration
U2021FB	0x21(ACU_3) message E2E checksum error	E2E Check Error for 0x21(ACU_3) Message
U2031FB	0x31(ACU_2) message E2E checksum error	E2E Check Error for 0x31(ACU_2) Message

DTC	DTC Meaning	DTC Description
U2038FB	0x38(VCU_COM_10) message E2E checksum error	E2E Check Error for 0x38(VCU_COM_10) Message
U203BFB	0x3B(VCU_ONEBOX_11) message E2E checksum error	E2E Check Error for 0x3B(VCU_ONEBOX_11) Message
U2132FB	0x132(SAS_1) message E2E checksum error	E2E Check Error for 0x132(SAS_1) Message
U2145FB	0x145(ADS_ONEBOX_2) message E2E checksum error	E2E Check Error for 0x145(ADS_ONEBOX_2) Message
U214AFB	0x14A(ADS_ONEBOX_3) message E2E checksum error	E2E Check Error for 0x14A(ADS_ONEBOX_3) Message
U2159FB	0x159(ADS_ONEBOX_1) message E2E checksum error	E2E Check Error for 0x159(ADS_ONEBOX_1) Message
U2167FB	0x167(ADS_VCU_1) message E2E checksum error	E2E Check Error for 0x167(ADS_VCU_1) Message
U2223FB	0x223(ADS_COM_3) message E2E checksum error	E2E Check Error for 0x223(ADAS_ACC_3) Message
U223BFB	0x23B(FLZCU_1) message E2E checksum error	0x23B(FLZCU_1 message E2E validation Error
U2314FB	0x314(ADS_COM_2) message E2E checksum error	E2E Check Error for 0x314(ADS_COM_2) Message
U231AFB	0x31A(ADS_COM_3) message E2E checksum error	E2E Check Error for 0x31A(ADS_COM_3) Message
U2447FB	0x447(RLCR_1) message E2E checksum error	E2E Check Error for 0x447(RLCR_1) Message
U270186	The YAW(ACU_2_YawRate) value data is invalid	YAW(ACU_2_YawRate) data no valid
U270286	The AX(ACU_3_LongitudinalAcceleration) value data is invalid	AX(ACU_3_LongitudinalAcceleration) data no valid
U270386	The AY(ACU_2_YASCalibrationSts) value data is invalid	AY(ACU_2_YASCalibrationSts) data no valid
U270486	The F_DEMAND_TORQUE(VCU_IndcdDriverReqWhlTqStsFA) value data is invalid	front need request Torque (VCU_IndcdDriverReqWhlTqStsFA) data no valid
U270586	The F_ACTUAL_TORQUE(VCU_ActWheelTorqueStsFA) value data is invalid	front actual Torque (VCU_ActWheelTorqueStsFA) data no valid
U270686	The GEAR(VCU_ActualGear) value data is invalid	gear position signal (VCU_ActualGear) data no valid
U270786	The F_ENGINE_SPEED(VCU_ActWheelSpdFA) value data is invalid	front engine speed (VCU_ActWheelSpdFA) signal invalid

DTC	DTC Meaning	DTC Description
U270886	The STEERING_ANGLE(SAM_1_SteeringAngle) value data is invalid	Steering Wheel angle signal (SAM_1_SteeringAngle) data no valid
U270986	The ACC_PEDAL(VCU_AcceleratorPosRaw) value data is invalid	Accelerator Pedal signal (VCU_AcceleratorPosRaw) data no valid
U271086	The ACTUAL_REGEN_TORQUE(VCU_MbRegen Wheel) value data is invalid	actual recover Torque signal (VCU_MbRegenWheel) data no valid
U271186	The MAX_REGEN_TORQUE(VCU_MbRegenMax Wheel) value data is invalid	maximum large recover Torque signal (VCU_MbRegenMaxWheel) data no valid
U271286	The TARGET_GEAR(VCU_TargetGear) value data is invalid	target gear position signal (VCU_TargetGear) data no valid
U271386	The R_ENGINE_SPEED(VCU_ActWheelSpdRA) value data is invalid	rear engine speed signal (VCU_ActWheelSpdRA) data no valid
U271486	The R_DEMAND_TORQUE(VCU_IndicatedDrive rReqWhlTqRA) value data is invalid	rear need request Torque signal (VCU_IndicatedDriverReqWhlTqRA) data no valid
U271586	The R_ACTUAL_TORQUE(VCU_ActWheelTorqu eRA) value data is invalid	rear actual Torque signal (VCU_ActWheelTorqueRA) data no valid
U272387	Lost Communication With EPS	Lost Communication with Electric Power Steering EPS
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller FLZCU
U274287	Lost Communication With FCM	Lost Communication with Front View I Body Unit FCM
U274387	Lost Communication With RLCR	Lost Communication with Rear Left Corner Radar RLCR
U27F187	Lost Communication With ACU	Lost Communication with Airbag Control Unit ACU
U300051	ONEBOX Not Programmed	ONEBOX not programming

brake hose circuit

Repair Procedure

Brake Fluid Draining and Filling

Warning

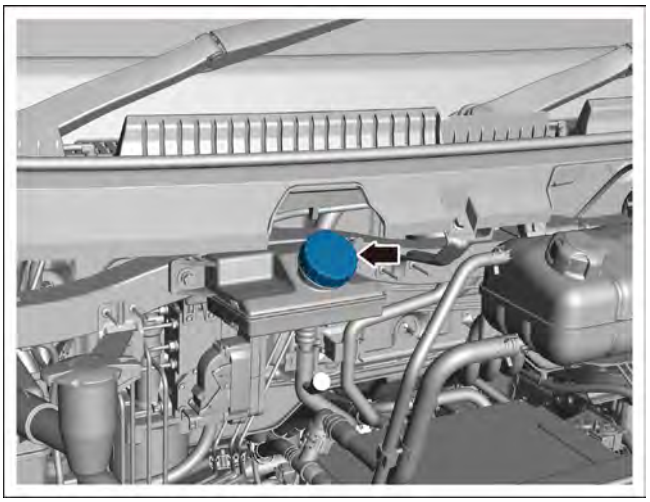
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

row air steps

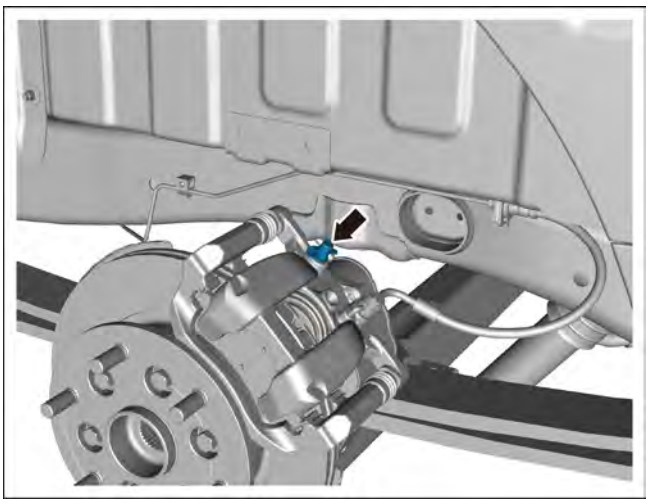
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove all wheel. Refer to:Wheel Assembly, Removal and Installation



4 open Brake Fluid Reservoir cover.



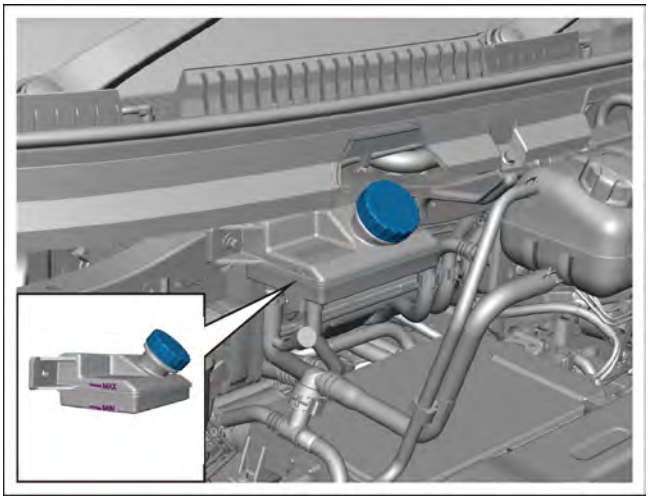
5 release place air screw cover, bleeding hose connect to left rear place air screw upper, still rear slow loosen place air screw.



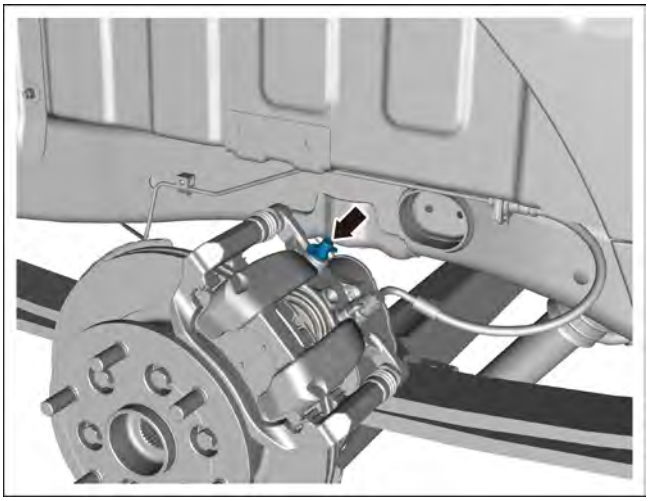
6 Repeatedly depress the brake pedal to gradually drain the brake fluid.

7 reference according to Left Rear Wheel brake fluid row air steps, according to times for left front, right front, Right Rear Wheel perform row air operation.

bleeding fill steps



1 fill new brake fluid, ensure brake fluid fluid level be in brake fluid reservoir MAX line at.



2 release place air screw cover, bleeding hose connect to left rear place air screw upper.

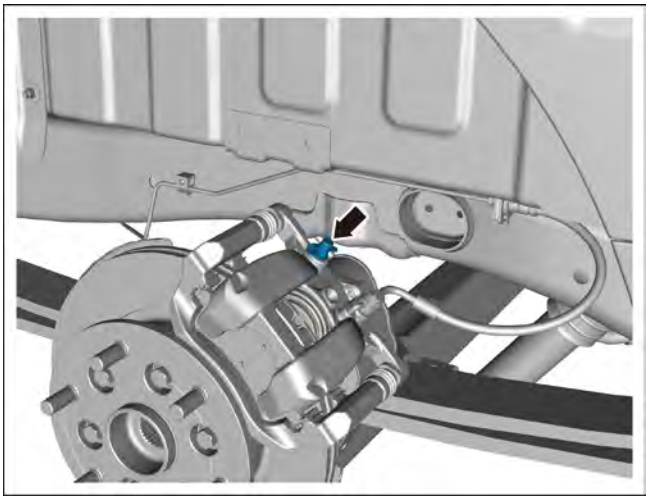


3 with 3s open /3s disabled frequency Depress the brake pedal to bottom part, connect continue pedal number times rear bumper maintain press dead Status, in another I technician coordinate assist lower loosen place air screw, row output left rear brake hose circuit and brake caliper center air. re-reset front description operation, direct to from place air screw flow output brake fluid connect continue, no air bubble.

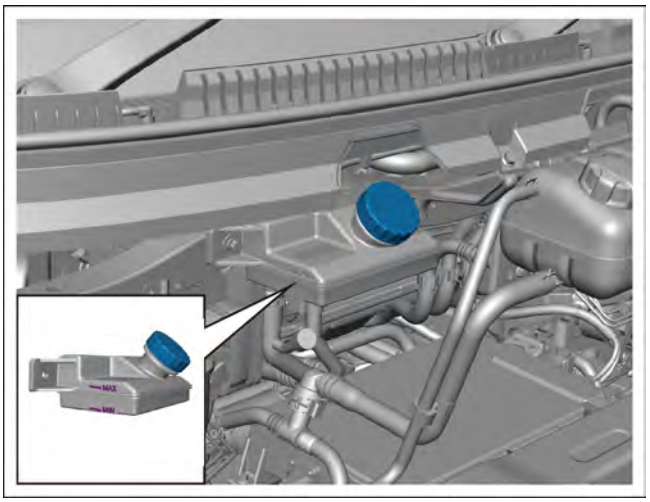
Caution

bleeding process center, should maintain continue observe Brake Fluid Reservoir fluid level, and when compensation add brake fluid, ensure fluid level not low at MIN line, and always maintain in MIN and MAX between.

4 reference according to Left Rear Wheel brake fluid bleeding steps, according to times for left front, right rear, Right Front Wheel perform bleeding operation.



5 release bleeding hose, install place air screw cover.



6 check brake fluid fluid level whether in brake fluid reservoir moment degree line MIN and MAX between, No then add suitable amount brake fluid, and tighten brake fluid reservoir cover.

7 Lower the vehicle.

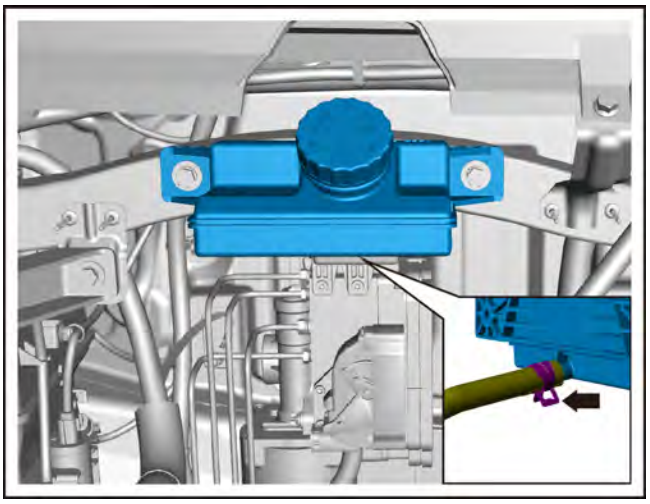
8 Power on the vehicle low-voltage system.
refer to:Low-voltage Power-up/Power-down Procedure

Brake Fluid Reservoir, Repair Procedure

Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps



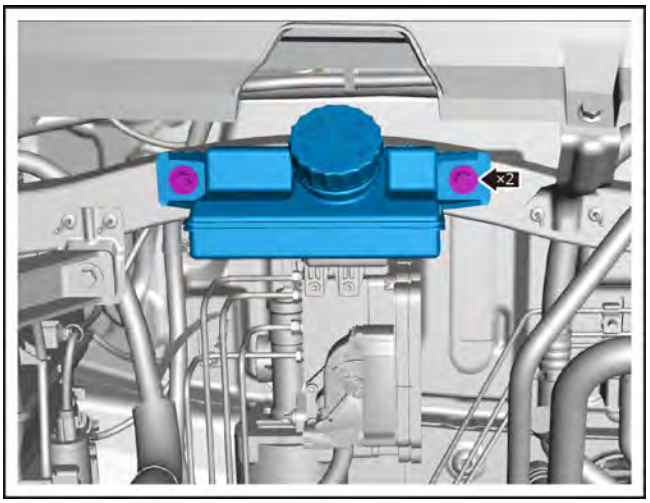
1 release brake fluid transfer pipe.
   a. evacuate brake fluid reservoir brake fluid.
   b. remove retaining clamp, UseHose Pinch-off Pliersclamp hold brake fluid transfer pipe and release.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Caution

Brake fluid damages painted surfaces. If spilled, clean it up immediately and wash the contaminated area with water.



2 Remove 2 retaining bolt, remove brake fluid reservoir.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 fill brake fluid. refer to:Brake Fluid Draining and Filling

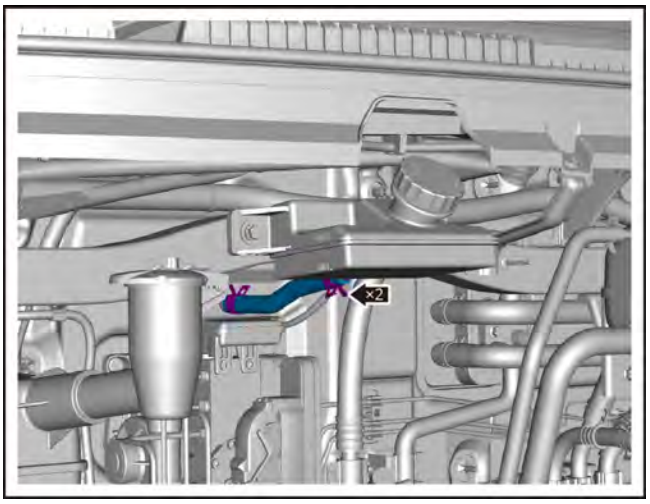
Brake Fluid Transfer Pipe, Repair Procedure

Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 remove brake fluid transfer pipe.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

a. evacuate brake fluid reservoir brake fluid.
b. Remove 2 retaining clamp, remove brake fluid transfer pipe.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Left Rear Brake Hose, Repair Procedure

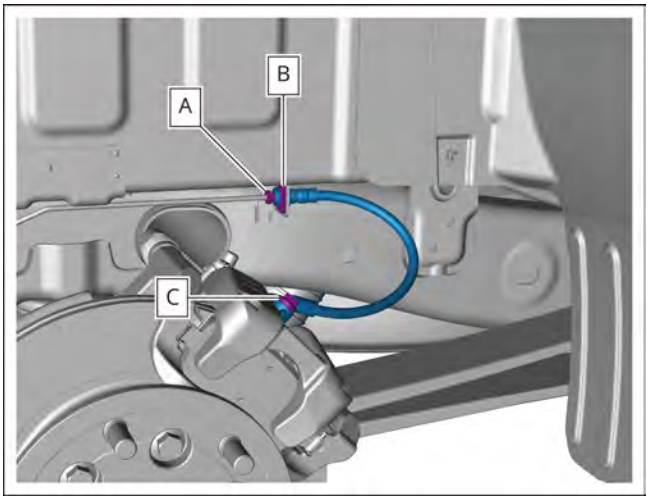
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps



1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 UseHose Pinch-off Pliersclamp hold brake hose.

3 Remove left rear brake hose assembly.

a. Remove left rear brake pipe assembly pipe fitting A.

b. Remove left rear brake hose assembly maintain spring piece B.

c. Remove air center bolt C, remove left rear brake hose.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Left Front Brake Hose, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

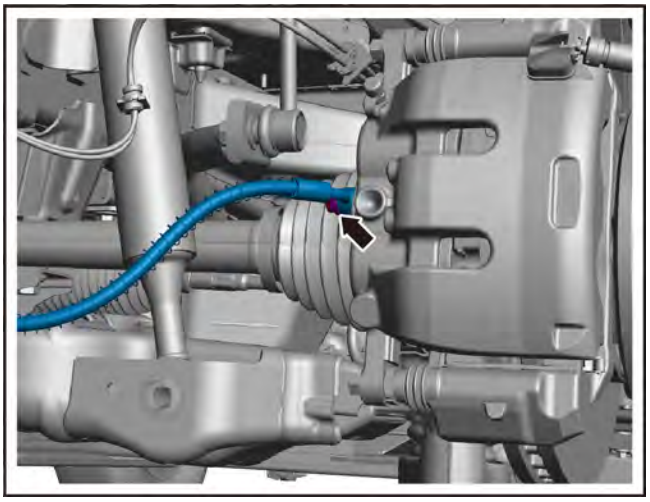
Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

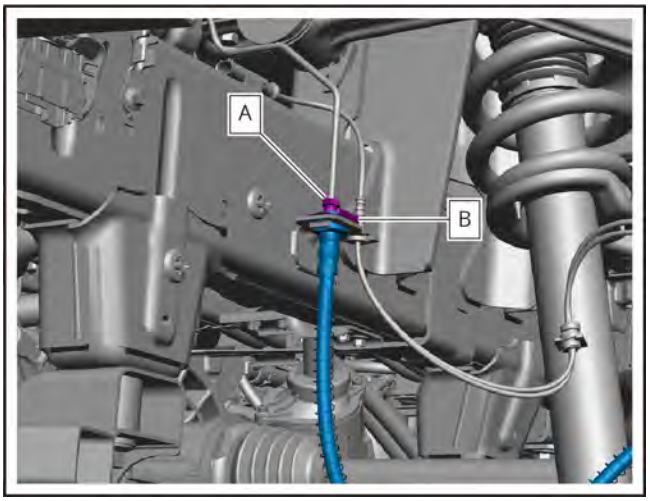
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation



3 release left front brake hose assembly.
   a. Remove left front brake hose assembly air center bolt.
   b. UseHose Pinch-off Pliersclamp hold brake hose and release.



4 remove left front brake hose assembly.
   a. Remove left front brake hose pipe fitting A.
   b. Usebrake vehicle pipe clampseal blocked pipe fitting.
   c. Remove left front brake hose assembly maintain spring piece B, remove left front brake hose assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Left Front Brake Hard Line Assembly, Repair Procedure

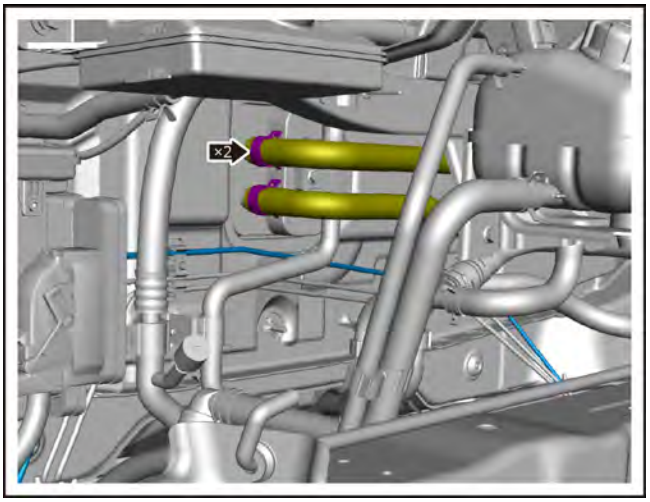
Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps



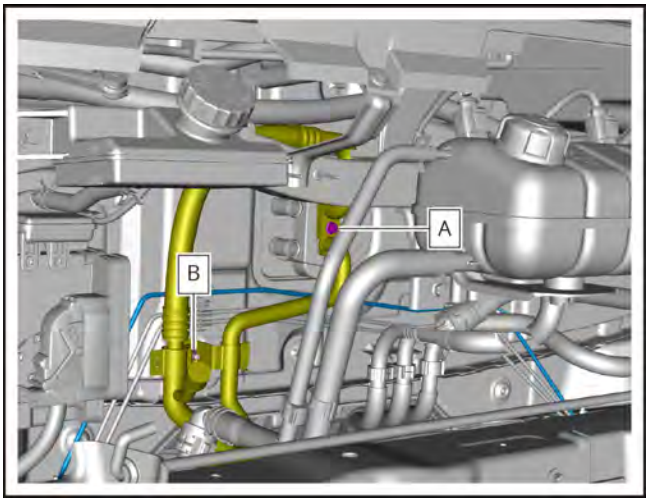
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling

4 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

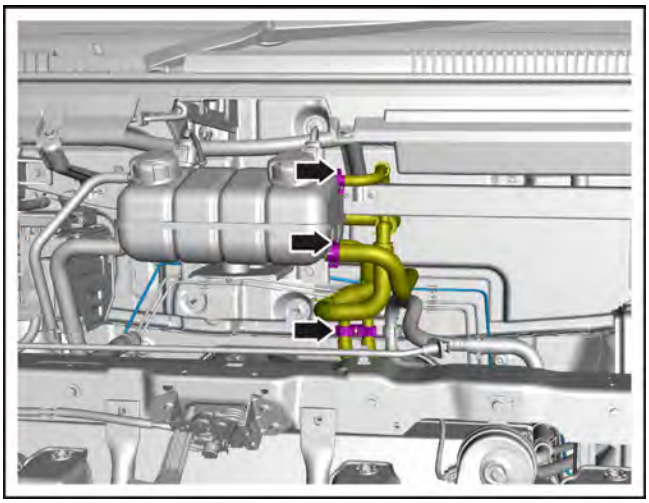
5 remove 2 retaining clamp, UseHose Pinch-off Pliersclamp hold HVAC assembly connect coolant hose and release.



6 Remove Front A/C Inlet/Outlet Pipe Assembly I fastener.

a. Remove Front A/C Inlet/Outlet Pipe Assembly I retaining bolt A.

b. Remove Front A/C Inlet/Outlet Pipe Assembly I retaining nut B.

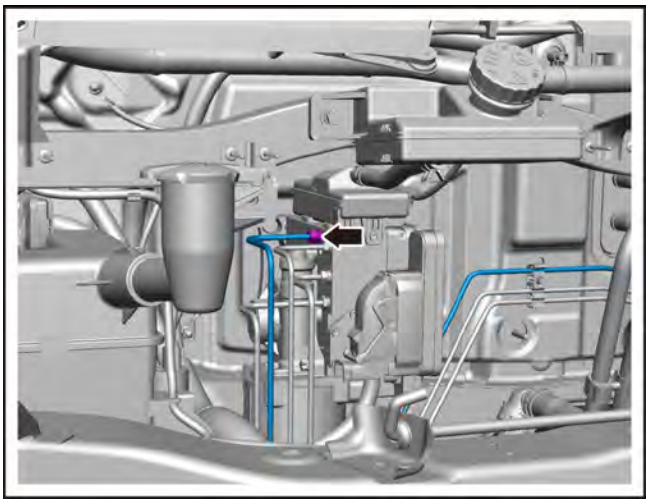


7 release front compartment connect coolant hose.

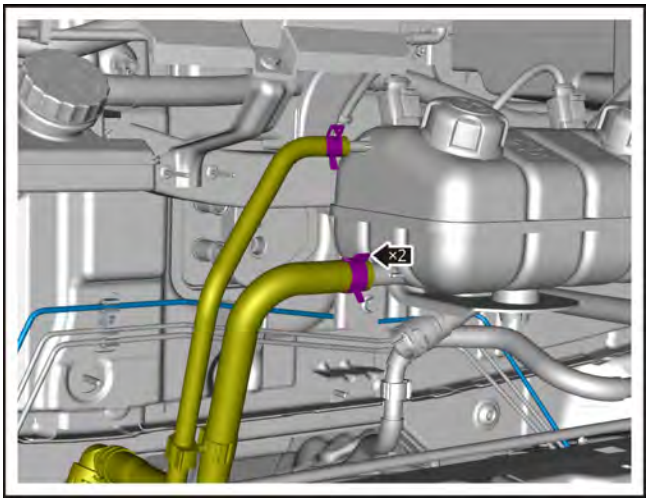
a. evacuate coolant expansion tank assembly coolant.

b. Remove 2 retaining clamp, release coolant expansion tank assembly connect coolant hose.

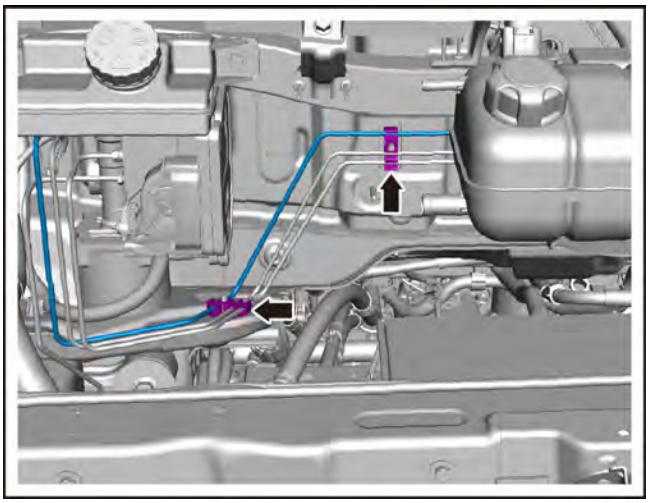
c. Remove retaining hose clamp, release front compartment connect coolant hose.



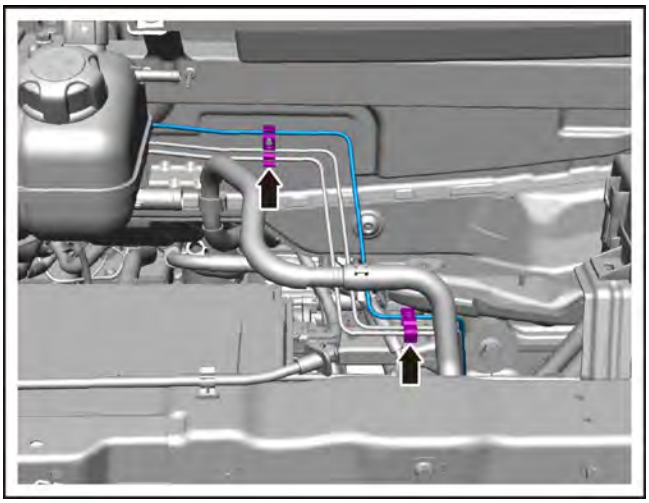
8 Remove left front brake hard line assembly pipe fitting.



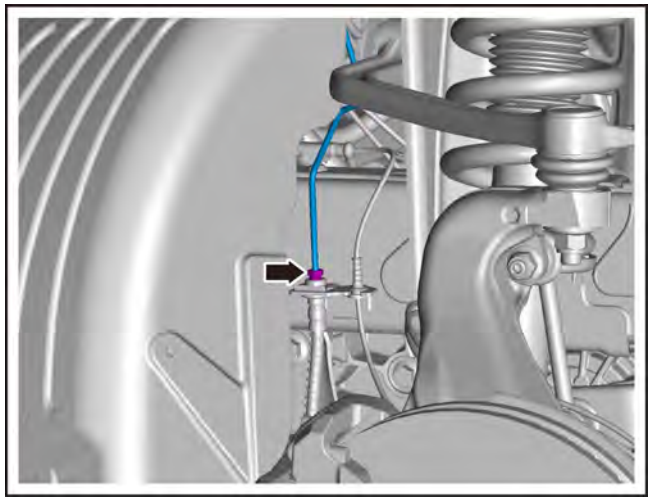
9 Remove 2 retaining clamp, release coolant expansion tank assembly connect coolant hose.



10 release left front brake hard line assembly 2 retaining card clamp.



11 release left front brake hard line assembly 2 retaining card clamp.



12 Remove pipe fitting, remove left front brake hard line assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Right Front Brake Hard Line Assembly, Repair Procedure

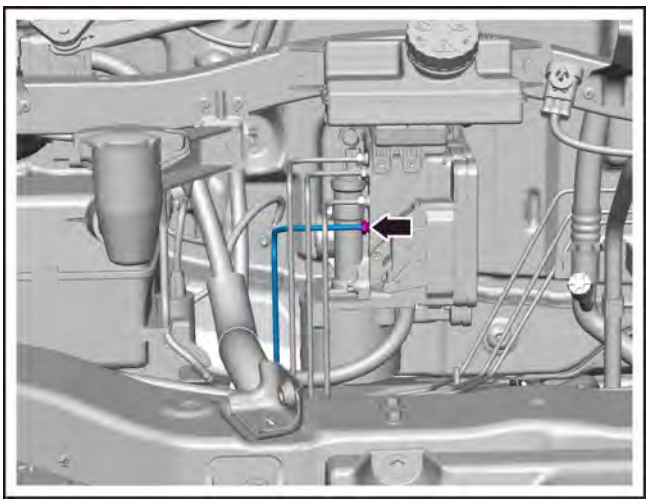
Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

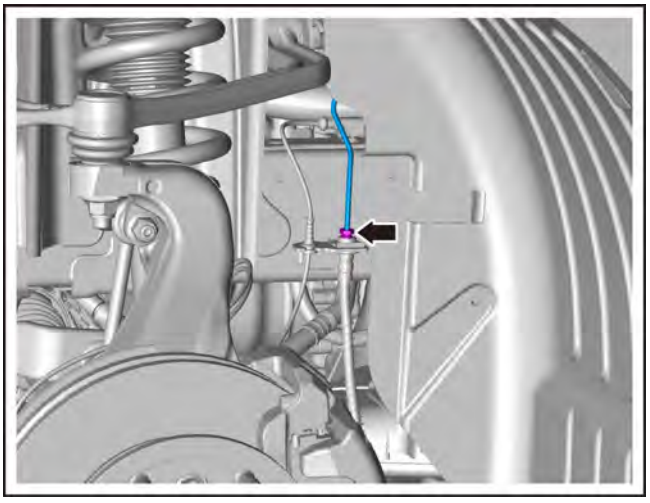
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling



3 Remove right front brake hard line assembly pipe fitting.



4 Remove pipe fitting, remove right front brake hard line assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use

wrench maximum item tighten, No then easy damage screw thread.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Left Rear Brake Pipe I Assembly, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

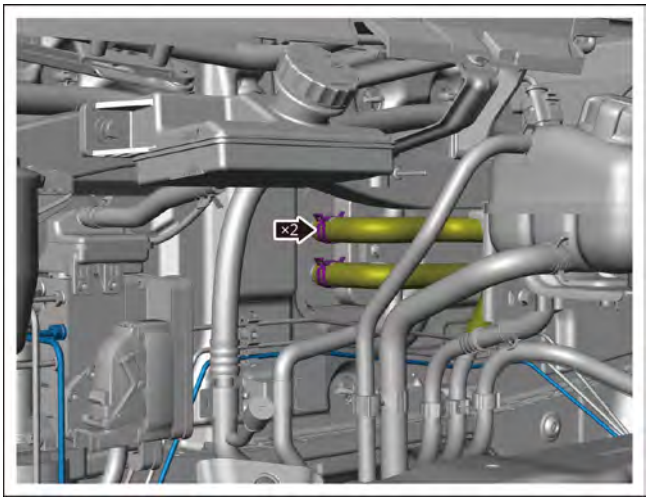
Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



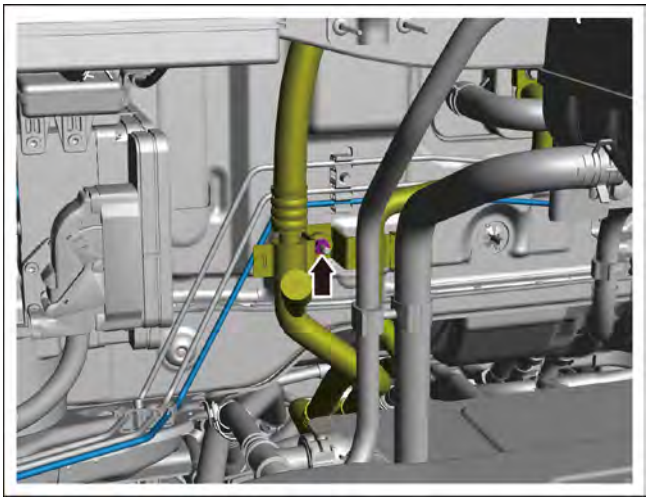
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

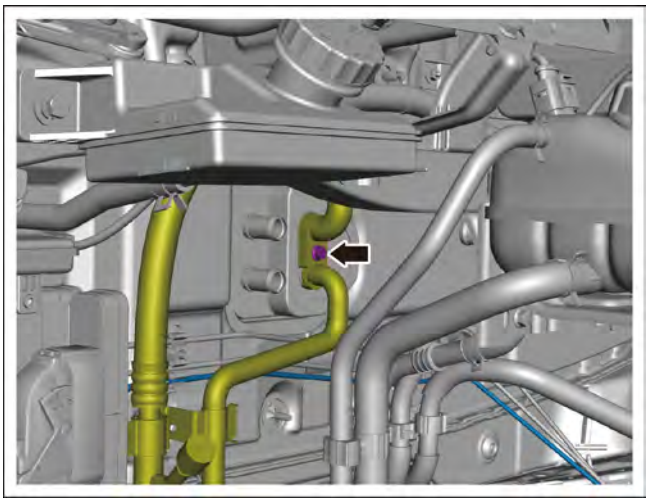
3 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling

4 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

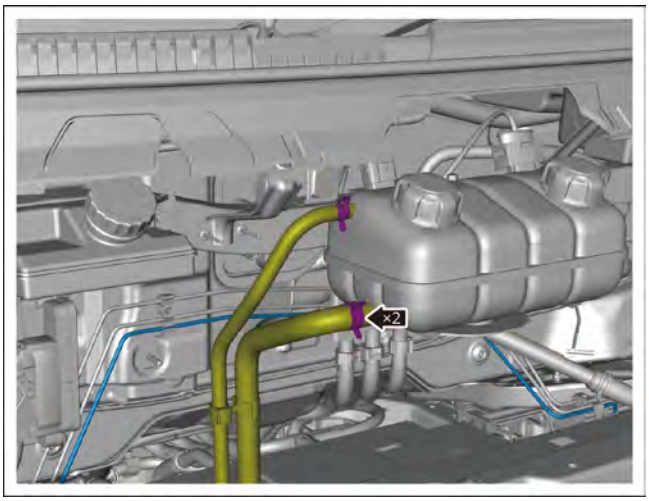
5 Remove 2 retaining clamp, release Front HVAC Assembly connect coolant hose.



6 Remove Front A/C Inlet/Outlet Pipe Assembly I retaining nut.



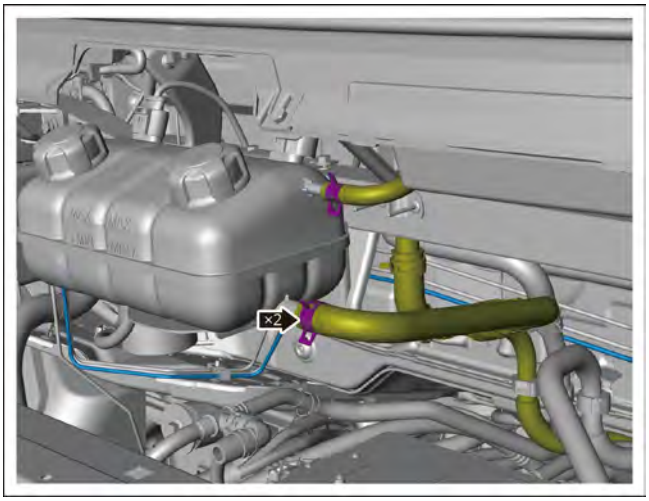
7 Remove retaining bolt, release Front A/C Inlet/Outlet Pipe Assembly I.



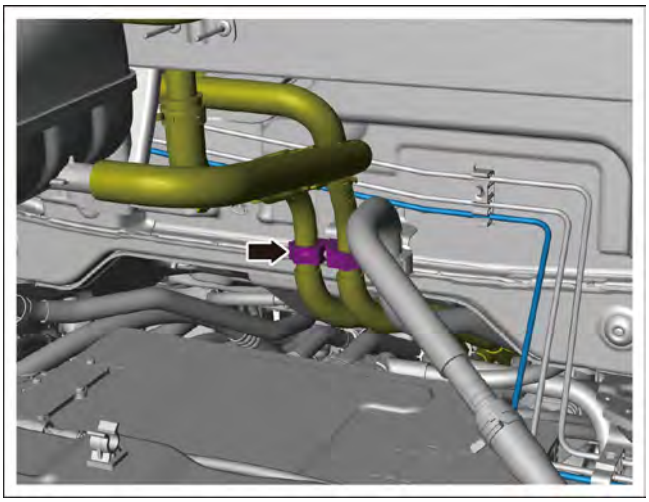
8 release coolant expansion tank assembly connect coolant hose.

a. evacuate coolant expansion tank assembly coolant.

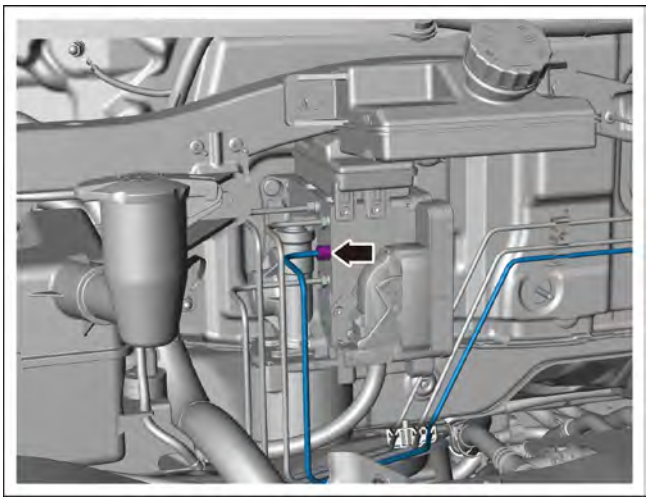
b. Remove 2 retaining clamp, release coolant expansion tank assembly connect coolant hose.



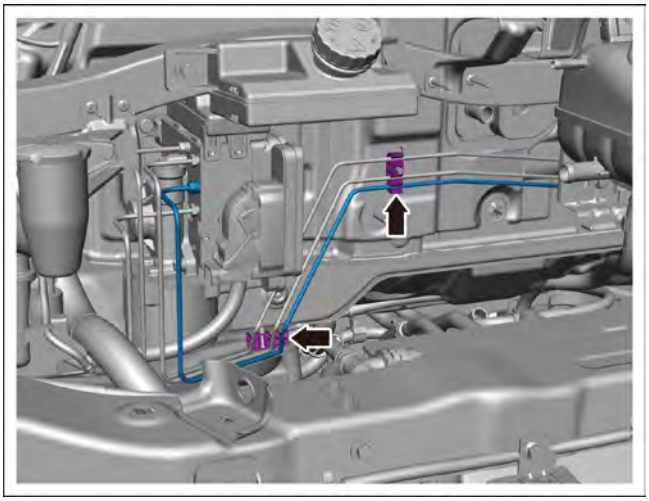
9 Remove 2 retaining clamp, release coolant expansion tank assembly connect coolant hose.



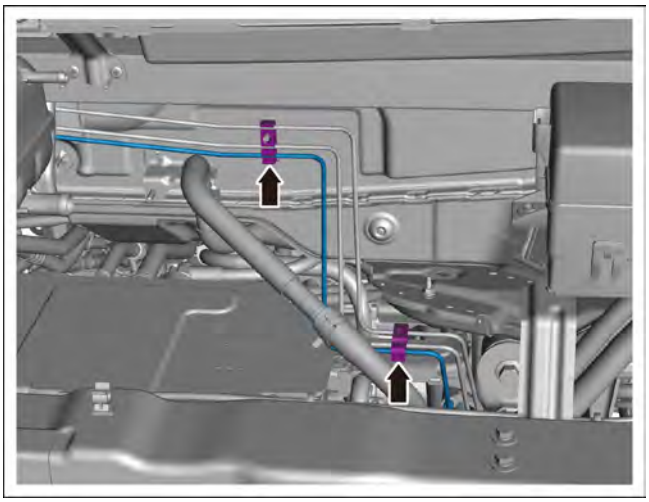
10 release Heater Inlet Hose Assembly, Heater Outlet Hose Assembly retaining hose clamp.



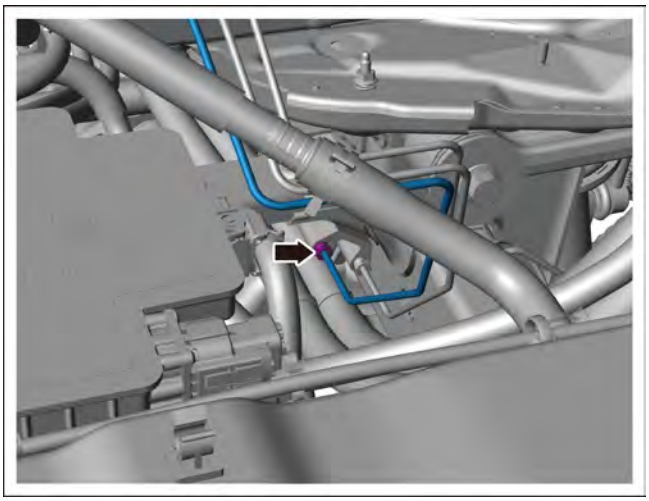
11 Remove left rear brake pipe Ⅰ assembly pipe fitting.



12 release left rear brake pipe Ⅰ assembly 2 retaining card clamp.



13 release left rear brake pipe Ⅰ assembly 2 retaining card clamp.



14 Remove pipe fitting, remove left rear brake pipe Ⅰ assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use

wrench maximum item tighten, No then easy damage screw thread.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

5 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Left Rear Brake Pipe II Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *with related Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

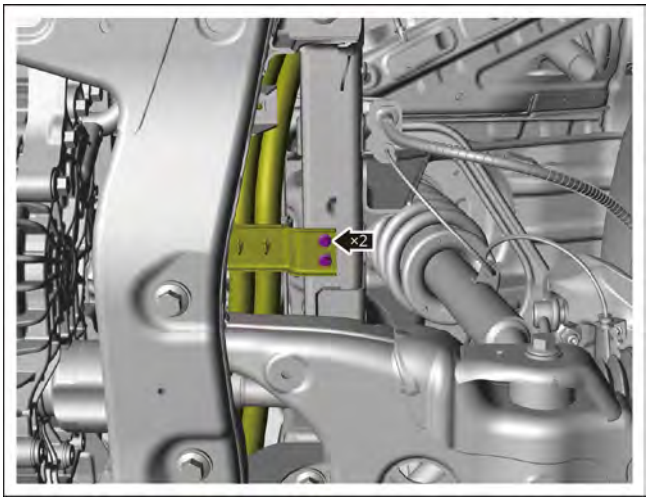
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

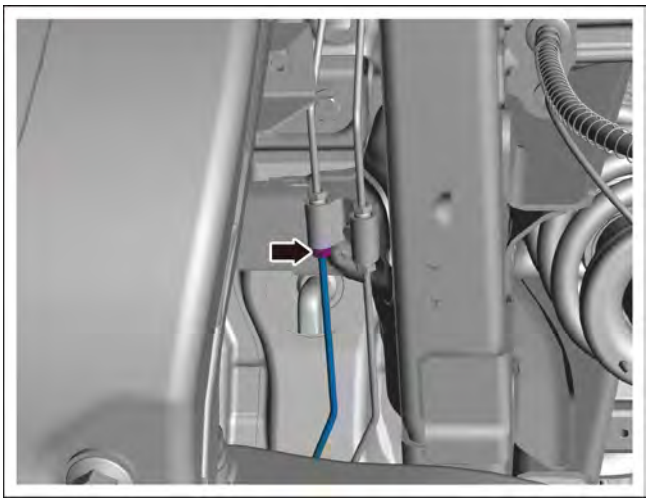
3 Drain the electric drive system coolant. Refer to:Coolant Draining and Filling

4 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling

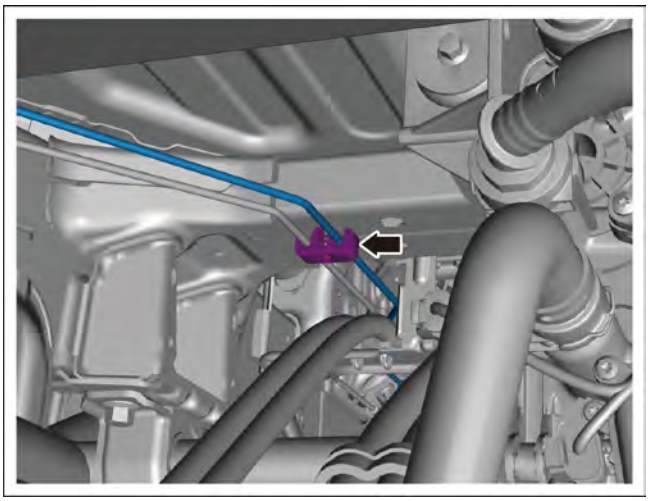
5 Remove traction battery pack assembly. Refer to:Traction Battery Pack Assembly, Repair Procedure



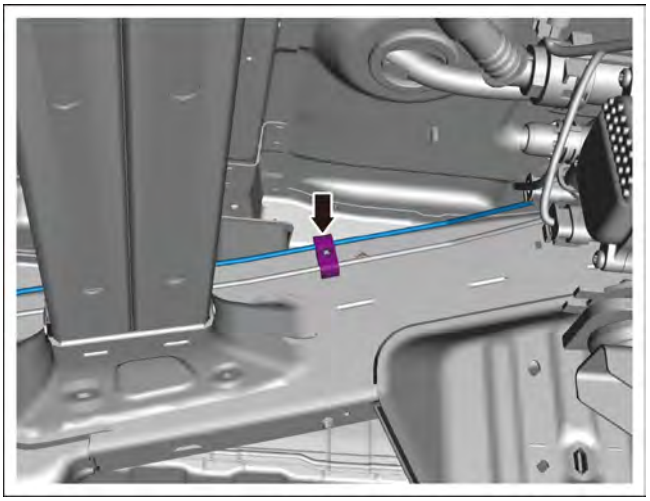
6 Remove 2 retaining bolt, offset open AC/DC Charging Inlet Assembly.



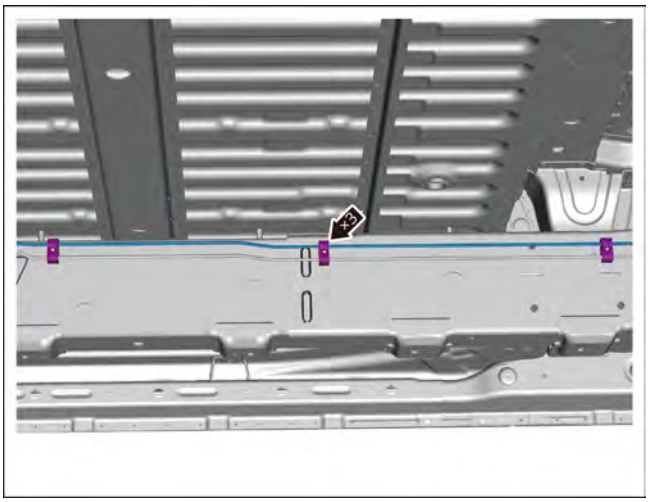
7 Remove left rear brake pipe II assembly pipe fitting.



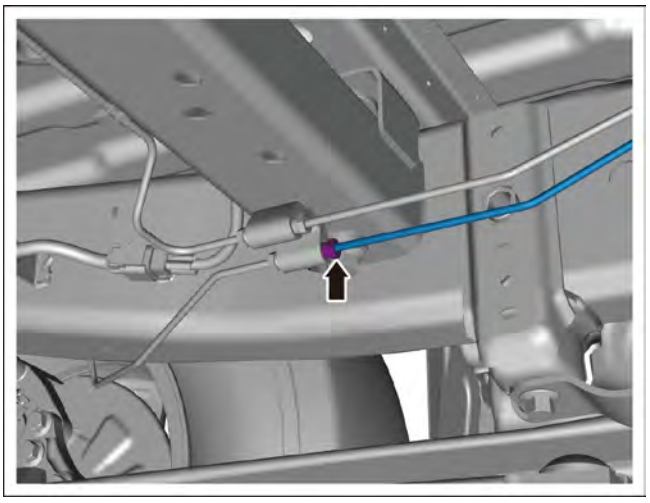
8 release left rear brake pipe II assembly retaining card clamp.



9 release left rear brake pipe Ⅱ assembly retaining card clamp.



10 release left rear brake pipe Ⅱ assembly 3 retaining card clamp.



11 Remove pipe fitting, remove left rear brake pipe Ⅱ assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use

wrench maximum item tighten, No then easy damage screw thread.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Left Rear Brake Pipe III Assembly, Repair Procedure

Warning

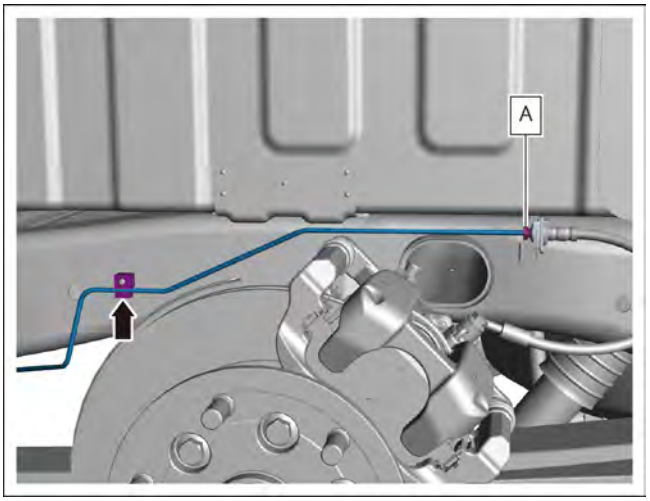
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Left Rear Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

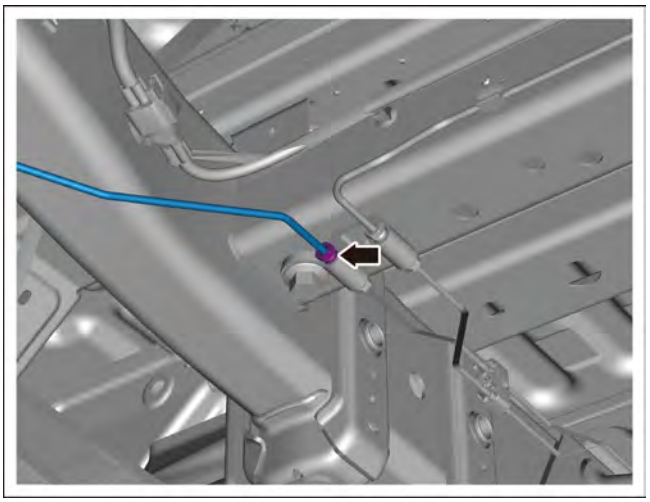
3 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling



4 release left rear brake pipe III assembly retaining card clamp.

a. Remove left rear brake pipe III assembly pipe fitting A.

b. release left rear brake pipe III assembly retaining card clamp.



5 Remove pipe fitting, remove left rear brake pipe III assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

Right Rear Brake Pipe III Assembly, Repair Procedure

Warning

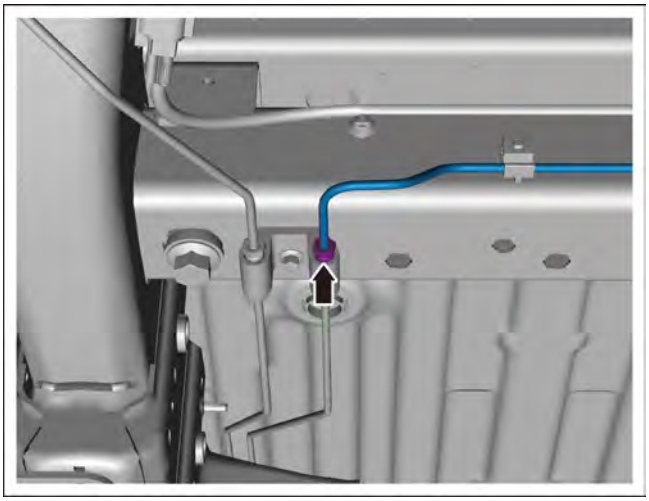
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

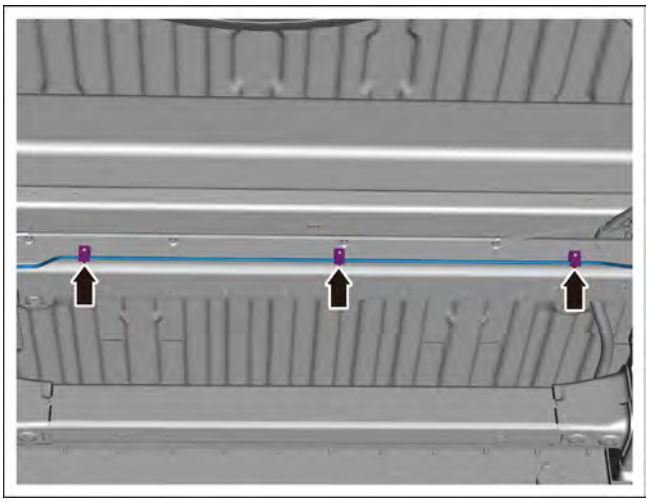
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove Right Rear Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

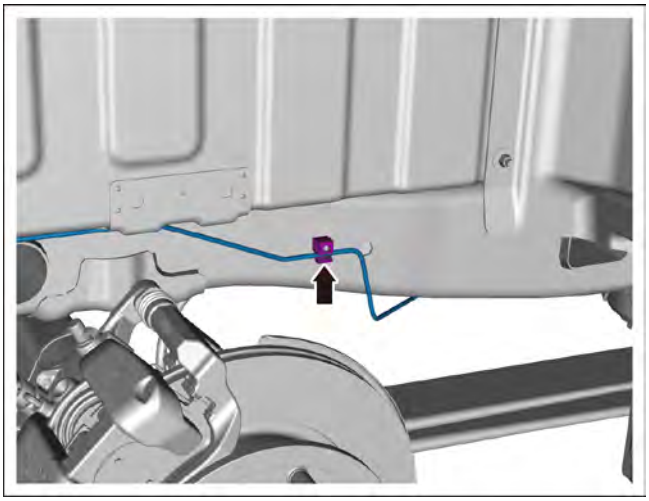
3 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling



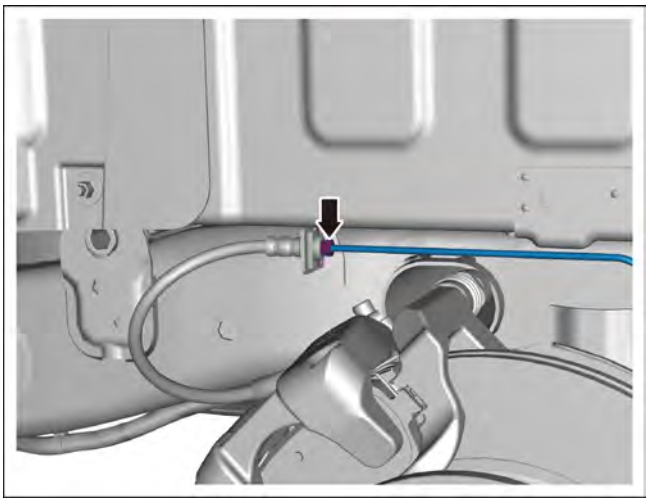
4 Remove right rear brake pipe III assembly pipe fitting.



5 release right rear brake pipe III assembly 3 retaining card clamp.



6 release right rear brake pipe III assembly retaining card clamp.



7 Remove pipe fitting, remove right rear brake pipe III assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

IV Communication Fitting - Front, Repair Procedure

Warning

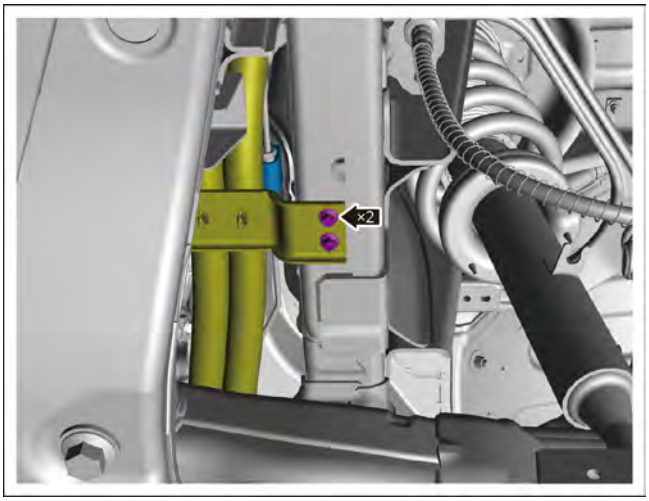
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

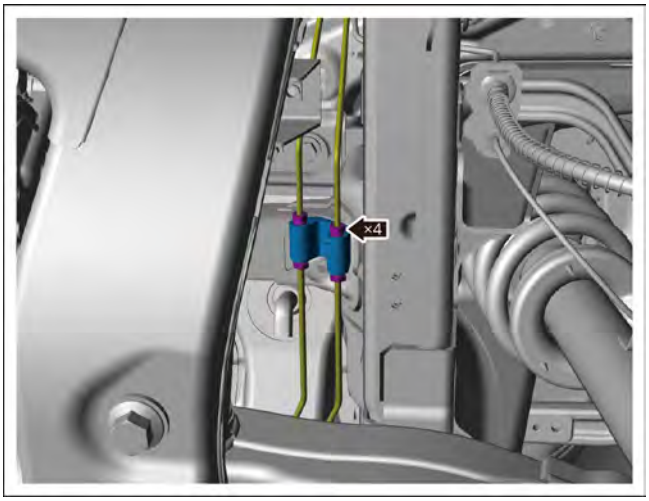
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling

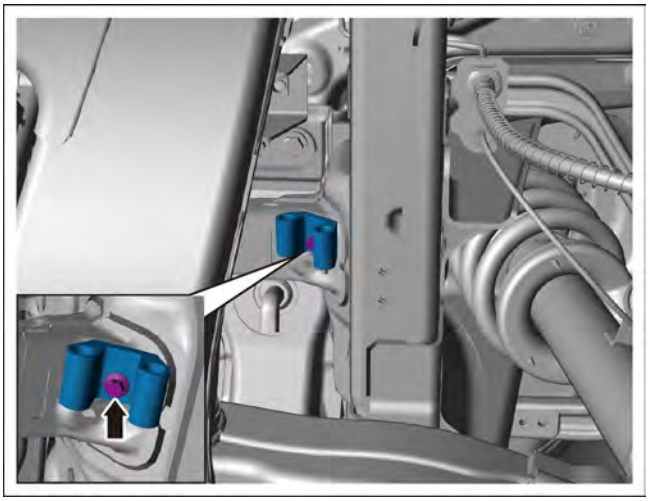
3 Front Underbody Shield. refer to:Front Underbody Shield, Repair Procedure



4 Remove 2 retaining bolt, offset open AC/DC Charging Inlet Assembly.



5 Remove IV communication fitting - front 4 pipe fitting.



6 Remove retaining bolt, remove IV communication fitting - front.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

IV Communication Fitting - Rear, Repair Procedure

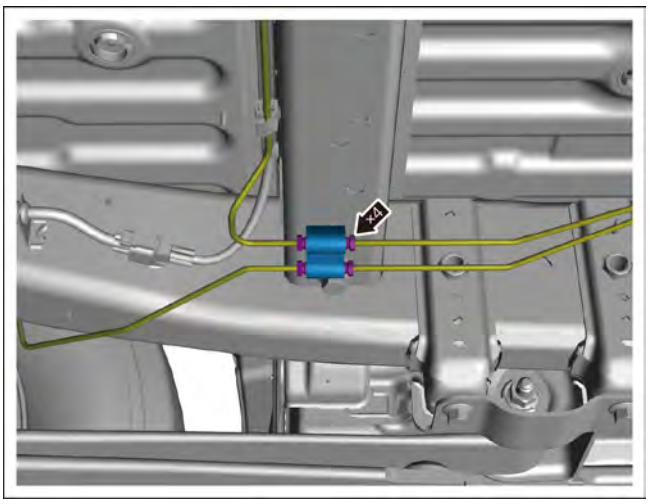
Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

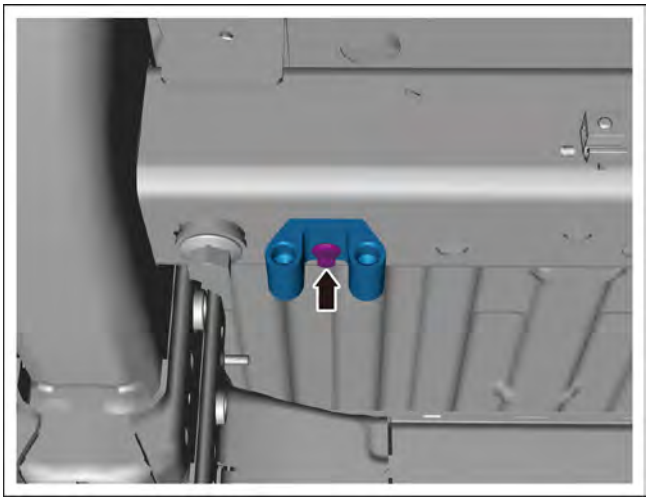
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling



3 Remove IV communication fitting - rear 4 pipe fitting.



4 Remove retaining bolt, remove IV communication fitting - rear.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use

wrench maximum item tighten, No then easy damage screw thread.

3 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

Follow-up Work:

After installation, road-test the vehicle on a safe road and check the braking performance.

wheel

parameter

Wheel and Tyre Specifications

Item		parameter		
		170KW+50kWh	170KW+70kWh	170KW+98kWh
Tyre Size		215/75 R16 LT 10PR	215/75 R16 LT 10PR	215/75 R16 LT 10PR
Wheel Bolt Torque (N·m)		180±18N·m	180±18N·m	180±18N·m
Tyre Pressure (bar)	Unladen: Front/ Rear	400/520 kPa	400/520 kPa	400/520 kPa
	Fully Laden: Front/Rear	400/520 kPa	400/520 kPa	400/520 kPa

Repair Procedure

Wheel Turn Plug, Repair Procedure

Tips

this Removal and Installation with left front side for example, related at right front side and rear side remove and install, please refer to left front perform.

Removal Steps



1 UsePlastic Pry ToolRemove wheel turn Plug.

Installation Steps

1 Install in the reverse order of removal.

Wheel Assembly, Removal and Installation

Tips

this Removal and Installation with left front side for example, related at right front side and rear side remove and install, please refer to left front perform.

Removal Steps



1 loosen wheel assembly 6 retaining nut.

2 Raise the vehicle. Refer to:Vehicle Lifting and Support



3 Remove 6 retaining nut, remove wheel assembly.

Installation Steps



1 Install wheel assembly.

a. wheel installation position to installation position, and pretensioner wheel assembly 6 retaining nut.

b. Lower the vehicle.

c. press illustration order according to times tighten wheel assembly 6 retaining nut.

Tyre Assembly, Repair Procedure

Tips

this Removal and Installation with left front side for example, related at right front side and rear side remove and install, please refer to left front perform.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Remove air door tip core, row output tyre assembly inner air.



4 adjust wheel assembly side direction, make with with tire pressure sensor I side remote away section away item, and and item head maintain at least 30cm distance. section away item position at aluminium wheel rim assembly side edge and tyre assembly between, still rear depress remove tire pedal, make aluminium wheel rim assembly and tyre assembly section away.



5 wheel assembly flip rotate to reverse surface, adjust it side direction, make with with tire pressure sensor I side remote away section away item, and and item head maintain at least 30cm distance. section away item position at aluminium wheel rim assembly side edge and tyre assembly between, still rear depress remove tire pedal, make aluminium wheel rim assembly and tyre assembly section away.



6 Remove upper side tire lip.

a. wheel assembly place in remove tire unit rotate disc upper and locking.

b. depress rotate disc rotate pedal, adjust wheel assembly Location, make remove tire arm and tire pressure sensor maintain 5–15cm distance.

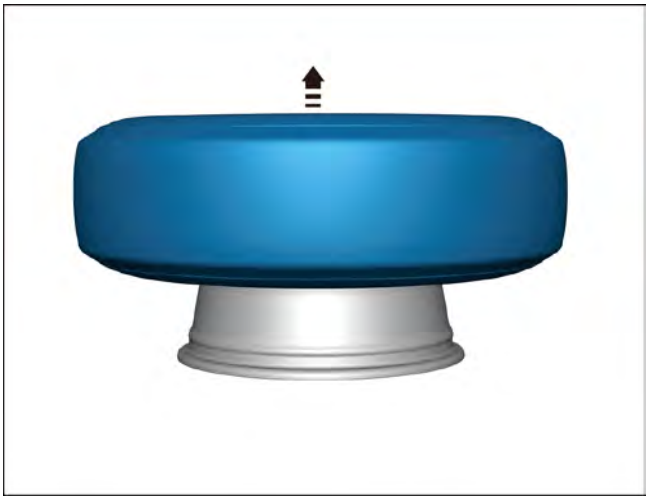
Caution

with remove tire arm for 12 point min side direction, adjust air door tip to 11–12 point min side direction between, avoid tire lip wipe injury tire pressure sensor.

c. Install steel turn protection sleeve, Use item rod upper side tire lip item output and sleeve in remove tire head upper.



7 depress rotate disc rotate pedal, make remove tire head gradually remote away tire pressure sensor, direct to remove upper side tire lip.



8 Remove lower side tire lip.

a. depress rotate disc rotate pedal, adjust wheel assembly Location, make remove tire arm and tire pressure sensor maintain 5–15cm distance.

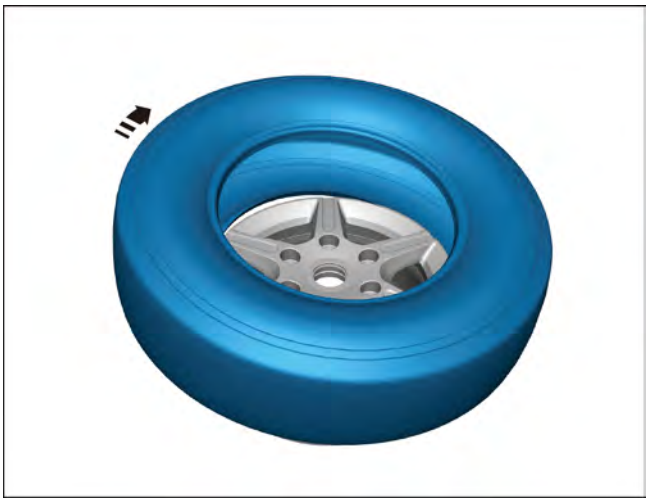
Caution

with remove tire arm for 12 point min side direction, adjust air door tip to 11–12 point min side direction between, avoid tire lip wipe injury tire pressure sensor.

b. tyre assembly provide start, make lower side tire lip and aluminium wheel rim generate gap.

c. Install aluminium wheel rim protection sleeve, item rod head insert gap and item

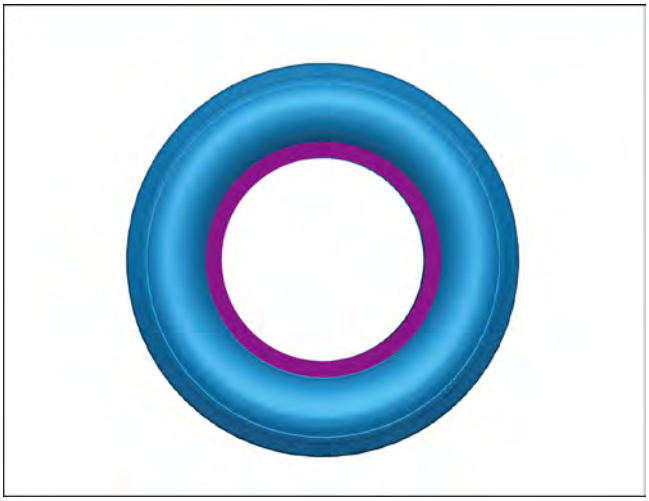
output lower side tire lip, item output tire lip sleeve in remove tire head upper.



9 depress rotate disc rotate pedal, make remove tire head gradually remote away tire pressure sensor, direct to remove tyre assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, in tyre both sides tire lip apply suitable amount lubrication slip grease.

3 Install front, note tyre OUTSIDE identification in aluminium wheel rim outside, tyre INSIDE identification in aluminium wheel rim inside.

4 Install front, adjust tyre assembly Location, with remove tire arm for 12 point min side direction, adjust air door tip to 6 point min side direction, avoid tire lip wipe injury tire pressure sensor.

5 Install complete rear, for wheel assembly perform Dynamic Balancing. Refer to:wheel Dynamic Balancing

6 Install complete rear, for wheel assembly perform test water check. ensure tyre and aluminium wheel rim completely result combined, no air leakage condition.

Aluminium Wheel Rim Assembly, Repair Procedure

Tips

this Removal and Installation with left front side for example, related at right front side and rear side remove and install, please refer to left front perform.

Removal Steps

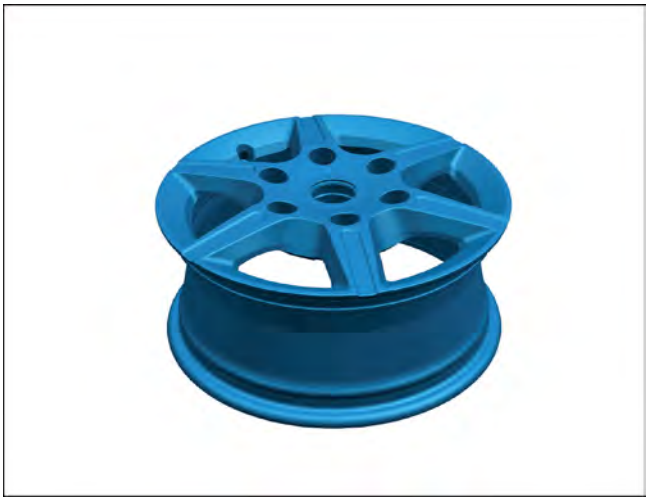
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Remove wheel turn Plug. Refer to:Wheel Turn Plug, Repair Procedure

4 Remove tyre assembly. Refer to:Tyre Assembly, Repair Procedure

5 Remove tire pressure sensor. Refer to:Tire Pressure Sensor, Repair Procedure



6 Remove aluminium wheel rim assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

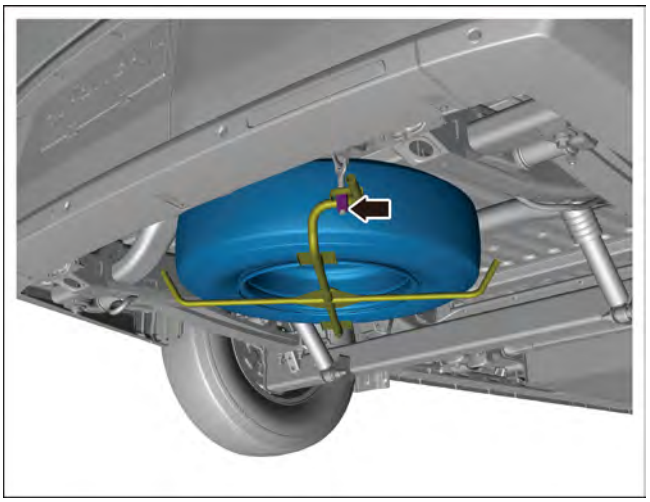
2 Install complete rear, for wheel assembly perform Dynamic Balancing. Refer to:wheel Dynamic Balancing

Follow-up Work:

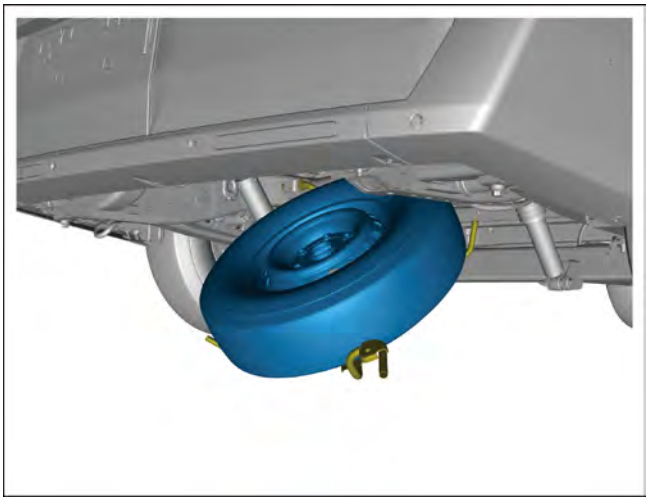
Install complete rear, for wheel assembly perform test water check. ensure tyre and aluminium wheel rim completely result combined, no air leakage condition.

Spare Wheel Assembly, Removal and Installation

Removal Steps



1 Remove backup tire bracket assembly retaining nut.



2 remove spare wheel assembly.

Installation Steps

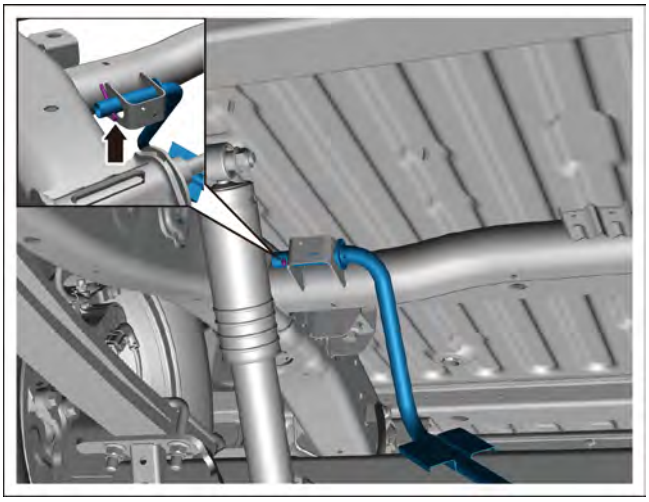
1 Install in the reverse order of removal.

Backup Tire Bracket Assembly, Repair Procedure

Removal Steps

1 Remove spare wheel assembly. Refer to:Spare Wheel Assembly, Removal and Installation

2 Raise the vehicle. Refer to:Vehicle Lifting and Support



3 Remove open port pin, remove backup tire bracket assembly.

Installation Steps

1 Install in the reverse order of removal.

vehicle tool kit

Repair Procedure

integral frame

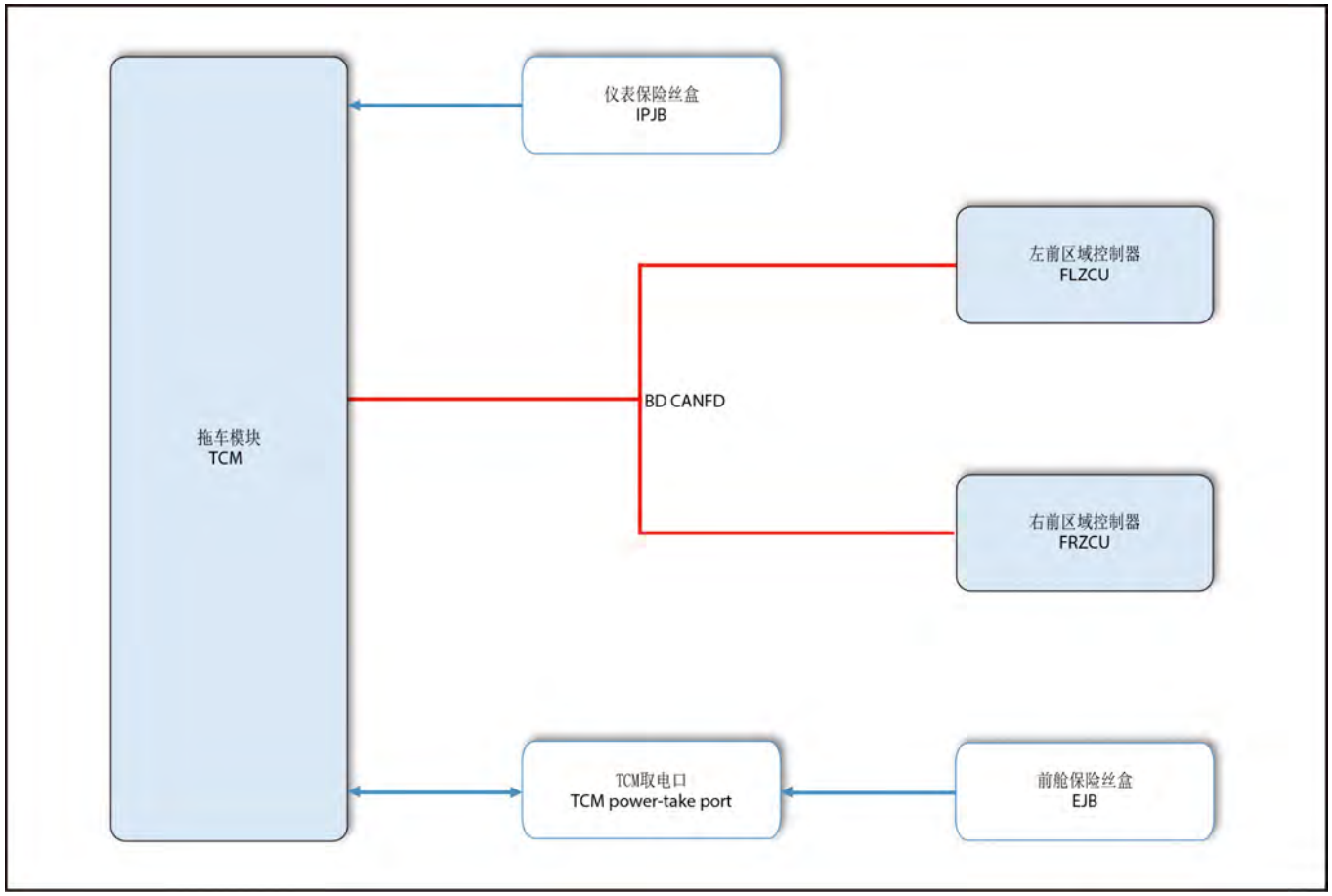
System Overview

Trailer Towing Function Overview

tow vehicle Function

tow vehicle TCM(tow vehicle control module) for vehicle tow engage dedicated electronic controller, through CAN bus and vehicle interaction, automatic recognition tow vehicle connected to Status, drive tow Exterior Lighting light signal, Output electronic control control signal control tow vehicle power magnetic brake, synchronization enable main vehicle and tow vehicle brake coordination, trigger Towing Mode adjust ESP, parking assist etc. driving assist item item, same when complete tow vehicle electrical circuit Fault Diagnosis and Instrument Pack alarm, ensure small type vehicle tow engage driving signal synchronization and driving safety.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Right Front Zone Control Unit	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Trailer Control Module	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Instrument Pack fuse wire Power Supply Input
	Hardwired	Status Signal	lamp light signal transmission, tow vehicle connection Status confirm
Instrument Panel Fuse Box	Hardwired	Power Supply	Trailer Control Module Power Supply Output
Front Compartment Fuse Box	Hardwired	Power Supply	Trailer Control Module remove power port Power Supply Output
Trailer Control Module remove power port	Hardwired	Power Supply	Trailer Control Module remove power port Power Supply Input
	Hardwired	Status Signal	lamp light signal transmission, tow vehicle connection Status confirm

Component Description

Trailer Control Module

Trailer Control Module main need Function Yes enable main vehicle and tow vehicle between electrical signal interaction, Output lamp light and brake Control Signal, recognition tow vehicle connected to Status. vehicle controller according to vehicle driving operating condition control Trailer Control Module, adjust tow vehicle related signal Output, enable Towing Mode lower driving assist system suitable matching and fault monitoring alarm.

Trailer Control Module remove power port

Trailer Control Module remove power port layout position in body rear surrounding wiring harness connector at, main need Function Yes for outer connect tow vehicle provide work power supply, ensure tow Exterior Lighting light, brake etc. use power component normal work. Trailer Control Module according to tow vehicle connected to Status control remove power port power supply Output, enable Power Supply communication disconnect management with and overcurrent Fault Detection, ensure main auxiliary vehicle electrical system Power Supply safety.

Fault Diagnosis (TCM)

Trailer Control Module (TCM) DTC List

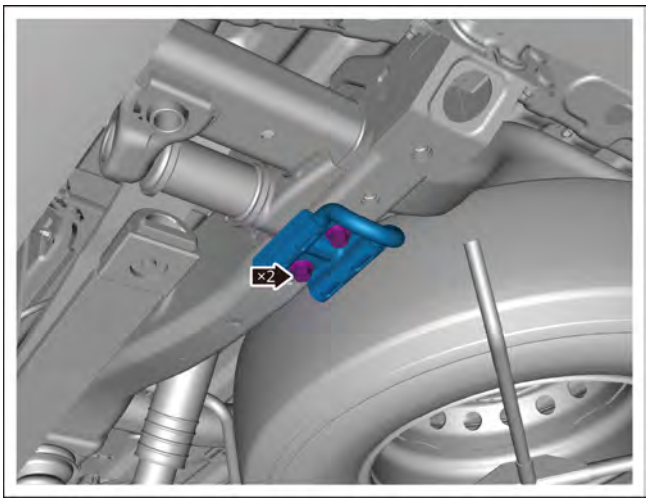
DTC	DTC Meaning	DTC Description
B002016	Battery Voltage Tool low	battery Voltage Too High
B002017	Battery Voltage Tool high	battery Voltage Too High
U007388	Bus off	bus disabled
U273481	Invalid data received from FLZCU	from FLZCU receive data no valid
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller FLZCU
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System
U24E487	0x4E4(ICC)Message Timeout	0x4E4(ICC) message timeout
B2B0013	Trailer Turn Light Left is Open	tow vehicle Left Direction Indicator control circuit open circuit
B2B0011	Trailer Left Turn Signal Control circuit shorted to ground	tow vehicle Left Direction Indicator control circuit to ground short together
B2B0113	Trailer Turn Light Right is Open	tow vehicle Right Direction Indicator control circuit open circuit
B2B0111	Trailer Right Turn Signal Control circuit shorted to ground	tow vehicle Right Direction Indicator control circuit to ground short together
B2B0213	Trailer left position lamp control circuit open	tow vehicle left Position Lamps control circuit open circuit
B2B0211	Trailer left position lamp Control circuit shorted to ground	tow vehicle left Position Lamps control circuit to ground short together
B2B0313	Trailer right position light control circuit open	tow vehicle right Position Lamps control circuit open circuit
B2B0311	Trailer right position light control circuit shorted to ground	tow vehicle right Position Lamps control circuit to ground short together
B2B0413	Trailer brake light control circuit open	tow vehicle brake Exterior Lighting control circuit open circuit
B2B0411	Trailer brake light control circuit shorted to ground	tow vehicle brake Exterior Lighting control circuit to ground short together
B2B0513	Trailer Rear Fog Light Control Circuit Open	tow vehicle Rear Fog Lamp control circuit open circuit
B2B0511	Trailer rear fog lamp control circuit shorted to ground	tow vehicle Rear Fog Lamp control circuit to ground short together
B2B0613	Trailer reverse light control circuit open	tow vehicle Backup Lamp control circuit open circuit
B2B0611	Trailer reverse light control circuit shorted to ground	tow vehicle Backup Lamp control circuit to ground short together

Repair Procedure

Rear Tow Hook Assembly, Repair Procedure

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 Remove retaining bolt, remove rear tow hook assembly.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure

3 Remove right front seat bracket assembly. Refer to:Right Front Seat Bracket Assembly, Repair Procedure

4 Raise the vehicle. Refer to:Vehicle Lifting and Support

5 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

6 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

7 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

8 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling

9 Remove left, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

10 Remove left, right front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

11 Remove left, right front wheelhouse assembly. Refer to:Left Front Wheel Cover Assembly, Repair Procedure

12 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

13 Remove left, Right Front Combination Lamp assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

14 Remove front frame bracket support. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

15 Remove cleaning fluid tank assembly. Refer to:Cleaning Fluid Tank Assembly, Repair Procedure

16 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

17 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure

18 Remove Charging Port Cover Assembly. Refer to:Charging Port Cover Assembly, Repair Procedure

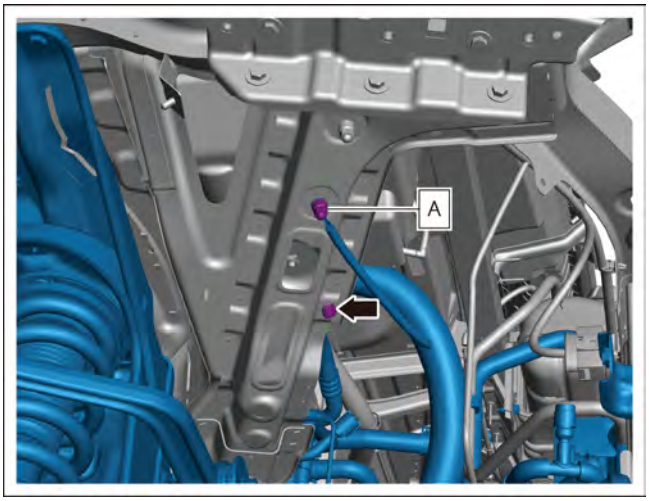
19 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

20 Remove left, right rear Body Side Exterior Trim Panel Assembly. Refer to:Left Rear Body Side Exterior Trim Panel Assembly, Repair Procedure

21 Remove rear bumper left, right lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

22 Remove rear bumper left, right upper body assembly. Refer to:Rear Bumper Left Upper Body Assembly, Repair Procedure

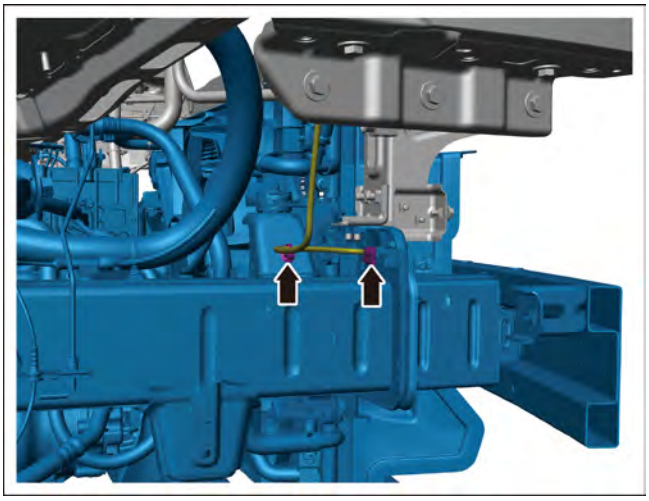
23 Remove left, Right Rear Combination Lamp assembly. Refer to:Left Rear Combination Lamp Assembly, Repair Procedure



24 Release chassis wiring harness retaining clip.

a. Remove chassis wiring harness ground cable retaining nut A.
Torque:xxx±xxN·m

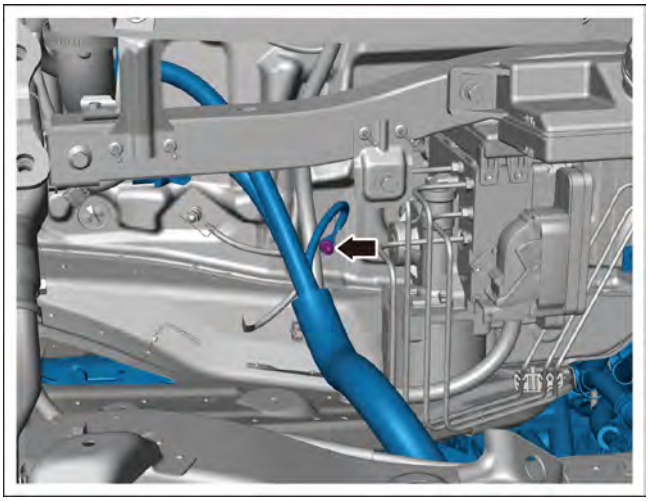
b. Release chassis wiring harness retaining clip.



25 Release front compartment wiring harness retaining clip.

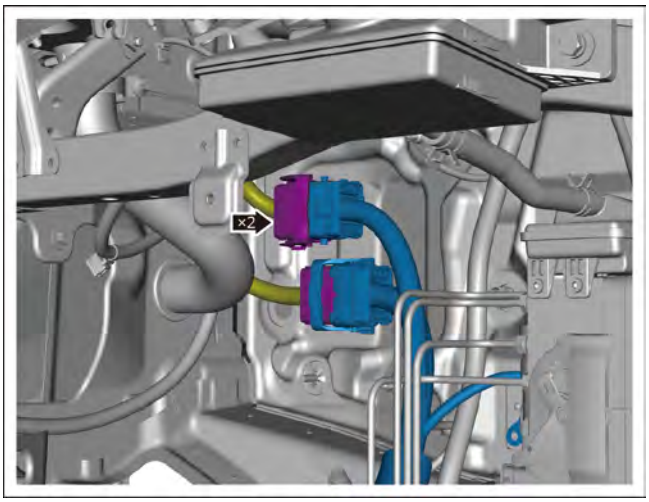
a. Disconnect right front Crash Sensor wiring harness connector.

b. Release front compartment wiring harness retaining clip.

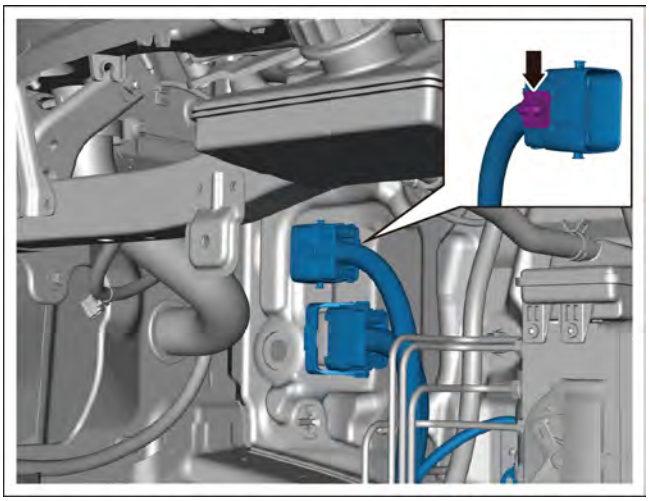


26 Remove chassis wiring harness ground cable retaining nut.

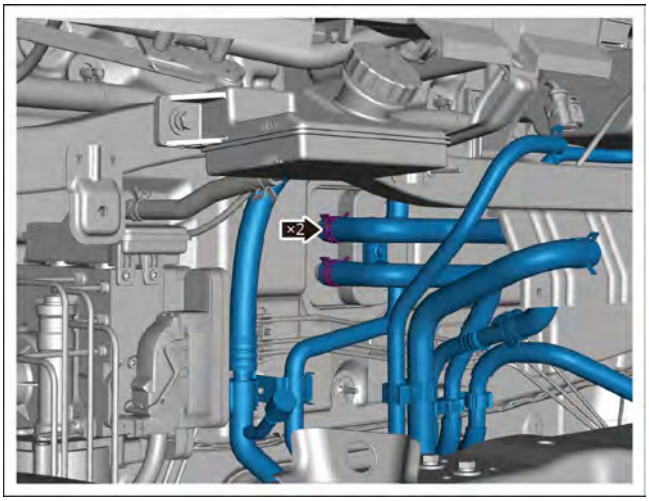
Torque:xxx±xxN·m



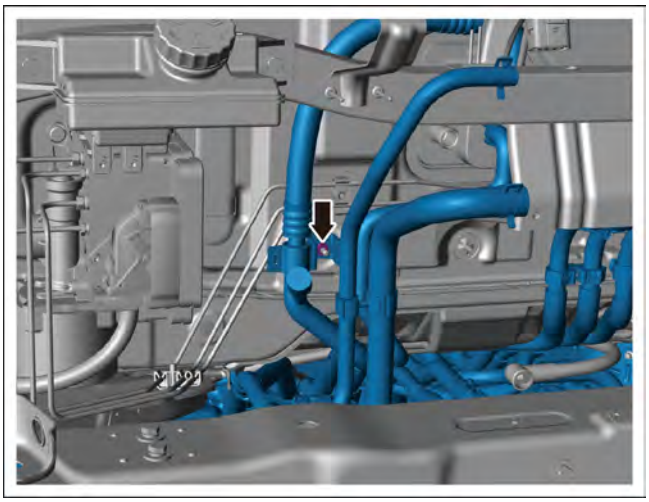
27 Disconnect 2 chassis wiring harness wiring harness connectors.



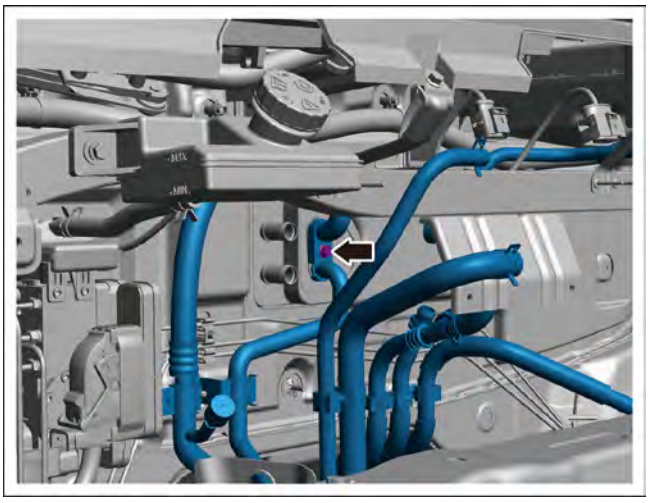
28 Release chassis wiring harness retaining clip.



29 Remove 2 retaining clamp, release front HVAC connect coolant hose.



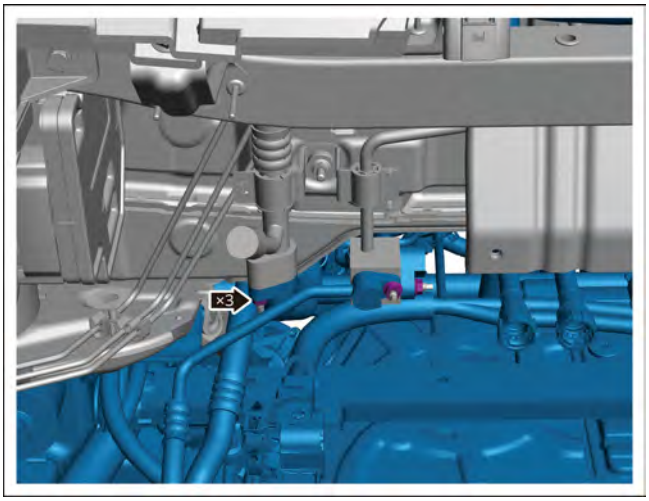
30 Remove Front A/C Inlet/Outlet Pipe Assembly I retaining nut (this steps suitable use at Heat-pump A/C Vehicle).



31 Remove retaining nut, release Front A/C Inlet/Outlet Pipe Assembly I (this steps suitable use at Heat-pump A/C Vehicle).

Caution

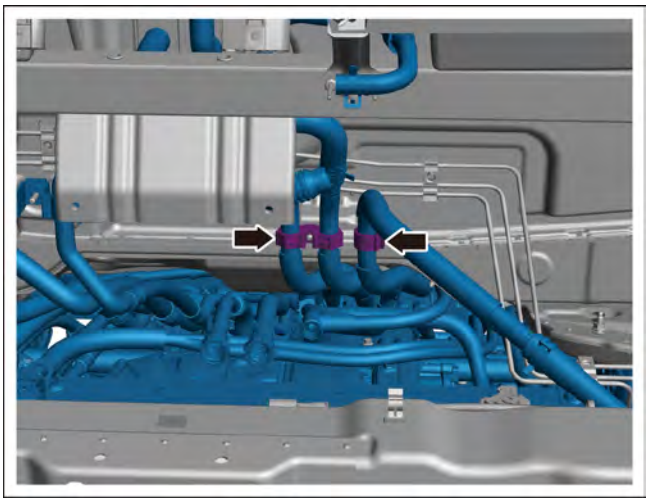
Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



32 Remove 3 retaining nut, release Front A/C Inlet/Outlet Pipe Assembly connect line (this steps suitable use at Non-heat-pump A/C Vehicle).

Caution

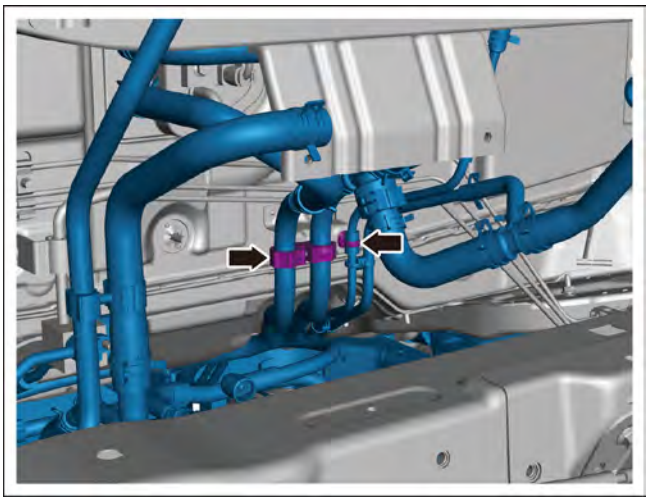
Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



33 release cooling line retaining part (this steps suitable use at Heat-pump A/C Vehicle).

a. release Heater Inlet Hose Assembly, Heater Outlet Hose Assembly retaining hose clamp.

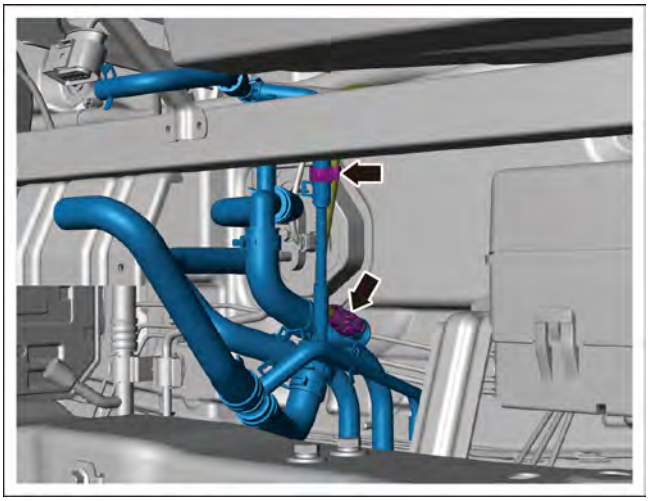
b. release Low-temperature Radiator Inlet Hose Assembly retaining hose clamp.



34 release cooling management retaining part (this steps suitable use at Non-heat-pump A/C Vehicle).

a. release Heater Inlet Hose Assembly, Heater Outlet Hose Assembly retaining hose clamp.

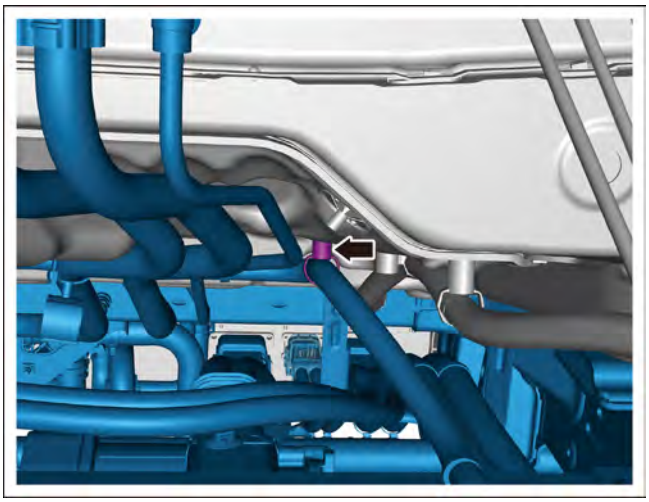
b. Release Battery Circuit Vent Hose Assembly retaining clip.



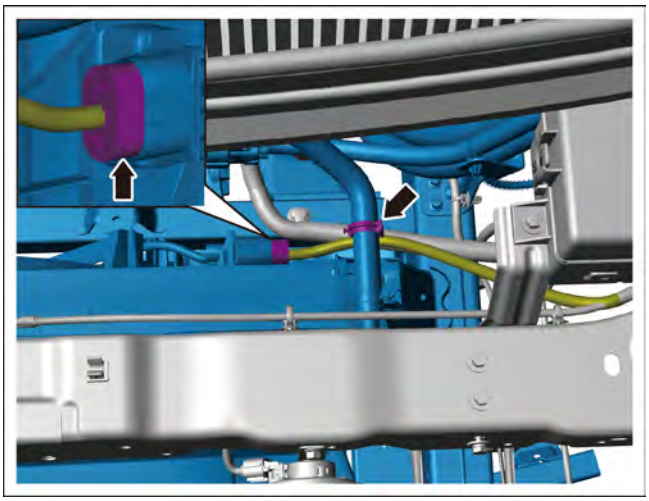
35 disconnect Heater Outlet Hose Assembly wiring harness connector (this steps suitable use at Non-heat-pump A/C Vehicle).

a. Release front compartment wiring harness retaining clip.

b. Disconnect Heater Outlet Hose Assembly wiring harness connector.



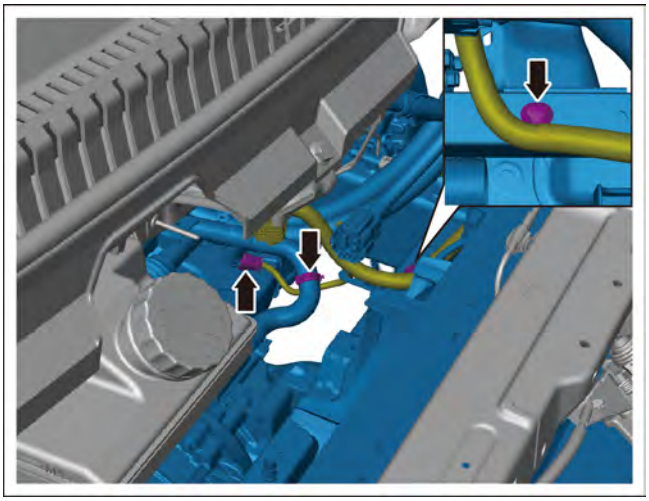
36 Release battery positive cable retaining clip.



37 Disconnect Electric Cooling Fan assembly wiring harness connector.

a. Release front compartment wiring harness retaining clip.

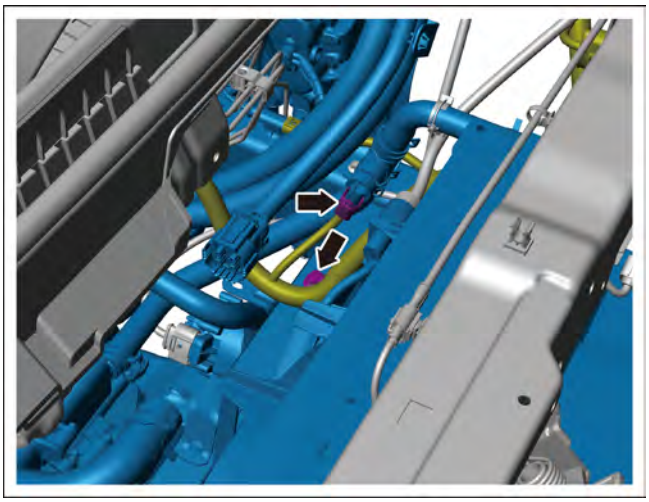
b. Disconnect Electric Cooling Fan assembly wiring harness connector.



38 release front compartment wiring harness retaining clip (this steps suitable use at Heat-pump A/C Vehicle).

a. Disconnect electric drive outlet hose assembly wiring harness connector.

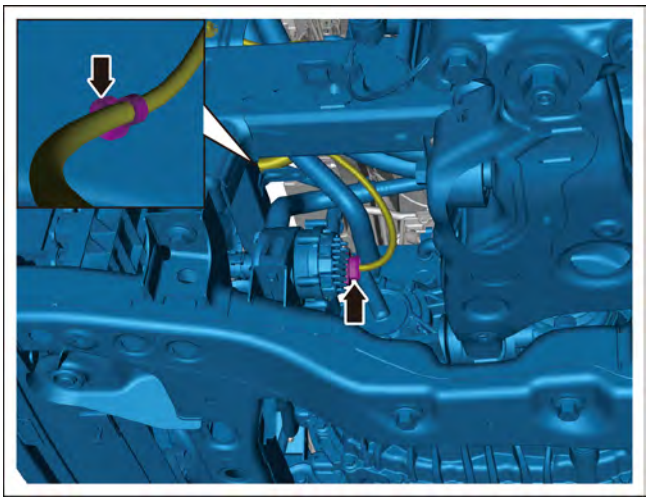
b. Release 2 front compartment wiring harness retaining clips.



39 release front compartment wiring harness retaining clip (this steps suitable use at Non-heat-pump A/C Vehicle).

a. Disconnect electric drive outlet hose assembly wiring harness connector.

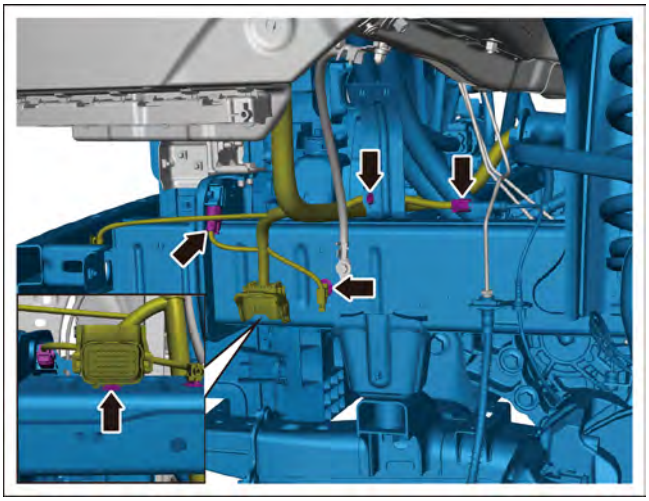
b. Release front compartment wiring harness retaining clip.



40 release front compartment wiring harness retaining clip (this steps suitable use at Non-heat-pump A/C Vehicle).

a. Disconnect electric drive coolant pump assembly wiring harness connector.

b. Release front compartment wiring harness retaining clip.

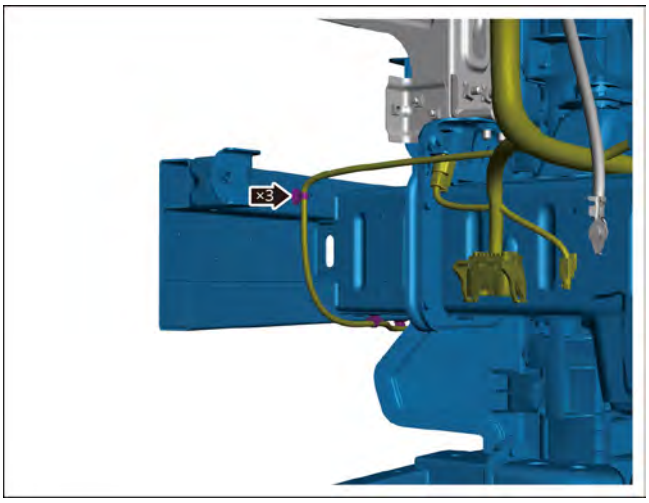


41 Release front compartment wiring harness retaining clip.

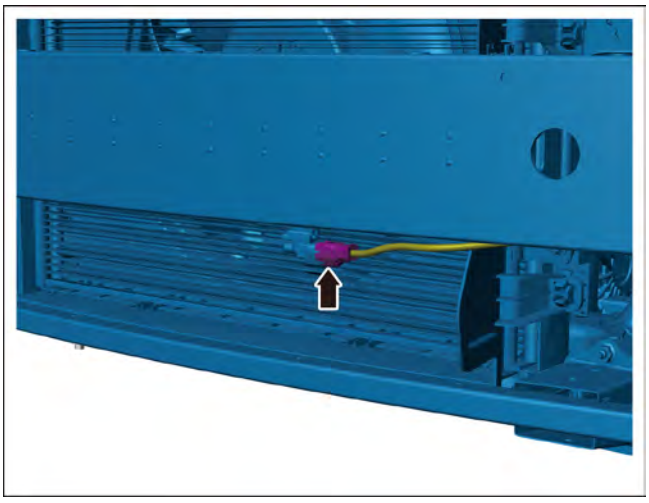
a. Disconnect Left Front Wheel Speed Sensor Assembly wiring harness connector.

b. Disconnect left front Crash Sensor wiring harness connector.

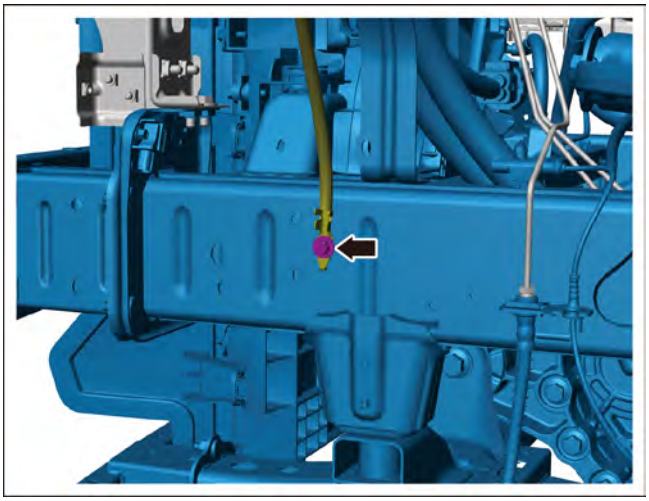
c. Release 3 front compartment wiring harness retaining clips.



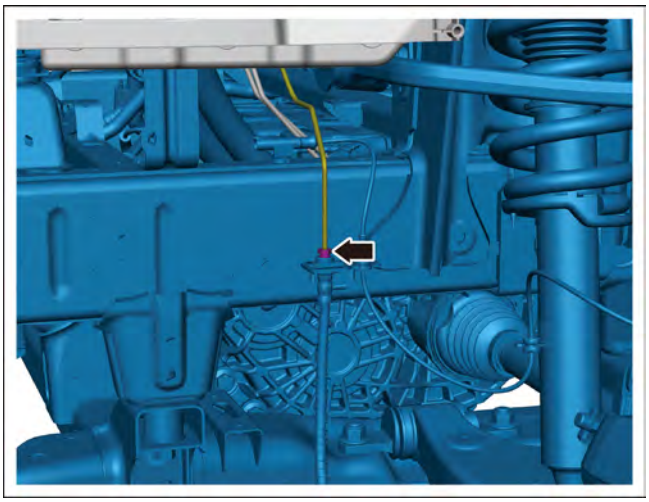
42 Release 3 front compartment wiring harness retaining clips.



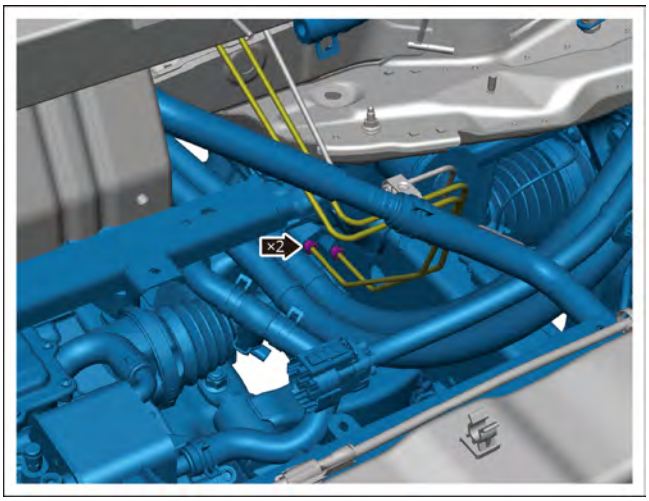
43 Disconnect Ambient Temperature Sensor wiring harness connector.



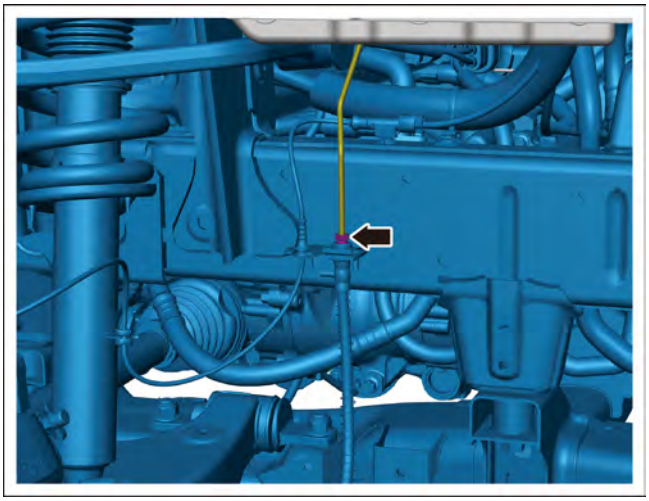
44 Remove frame ground wiring harness retaining bolt.



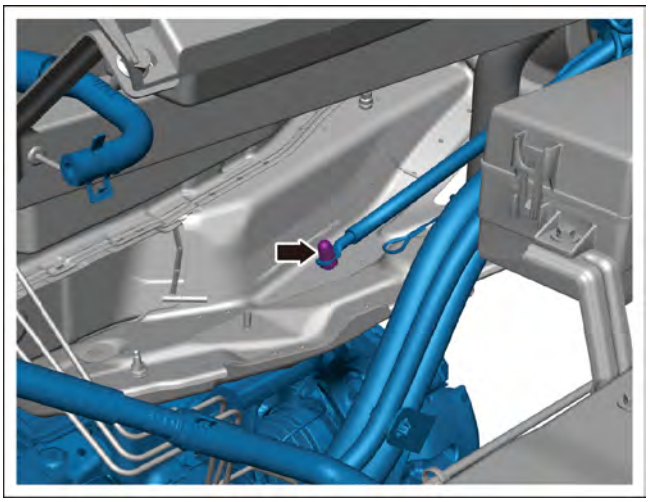
45 Remove left front brake hard line assembly pipe fitting.



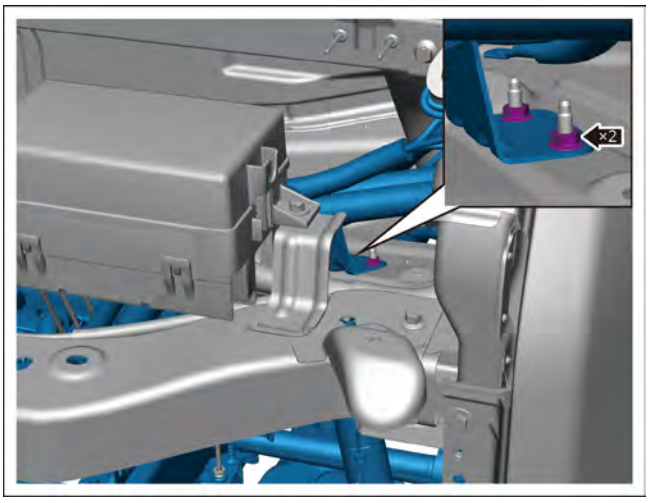
46 Remove left rear brake pipe Ⅰ assembly, right rear brake pipe Ⅰ assembly pipe fitting.



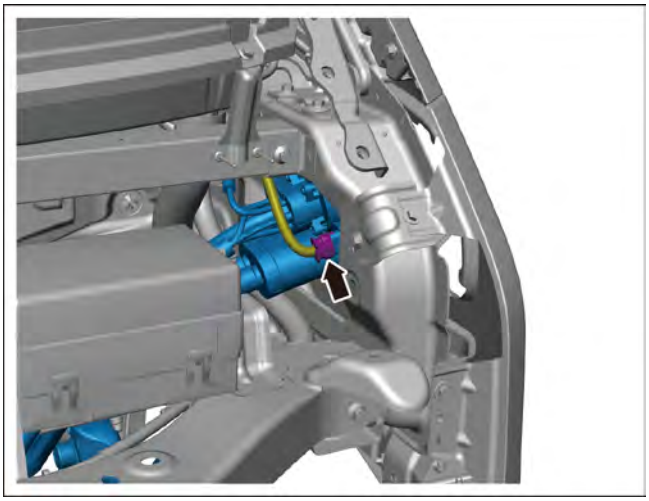
47 Remove right front brake hard line assembly pipe fitting.



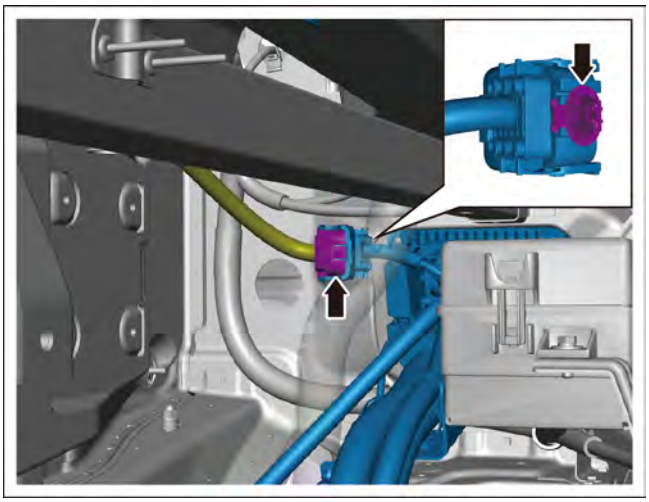
48 Remove AC/DC Charging Inlet Assembly retaining nut.



49 Remove AC/DC Charging Inlet Assembly 2 retaining nut.



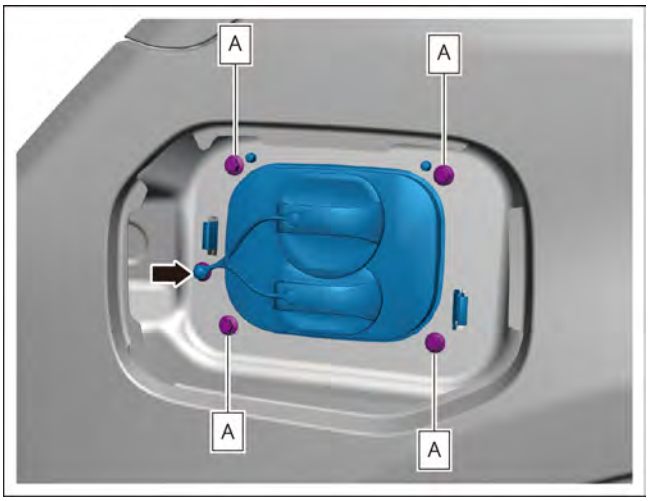
50 Disconnect AC/DC Charging Inlet Assembly wiring harness connector.



51 Release AC/DC Charging Inlet Assembly retaining clip.

a. Disconnect AC/DC Charging Inlet Assembly wiring harness connector.

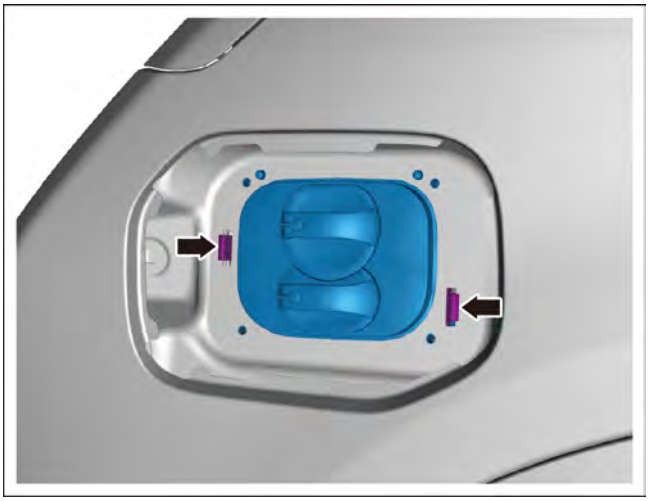
b. Release AC/DC Charging Inlet Assembly retaining clip.



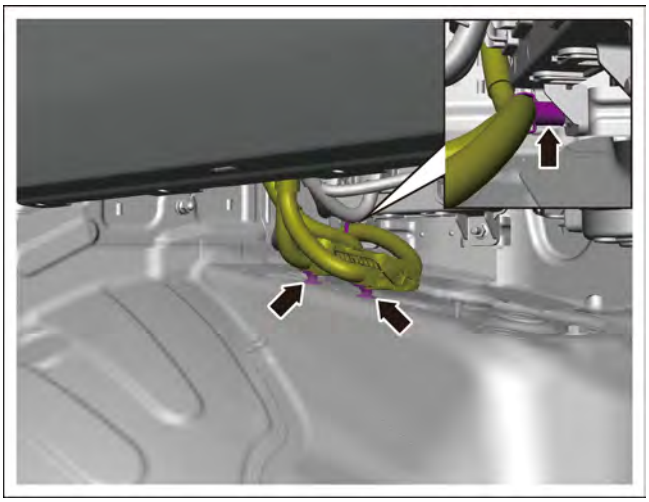
52 Remove AC/DC Charging Inlet Assembly retaining bolt.

a. Release Charging Port Dust Cover retaining clip.

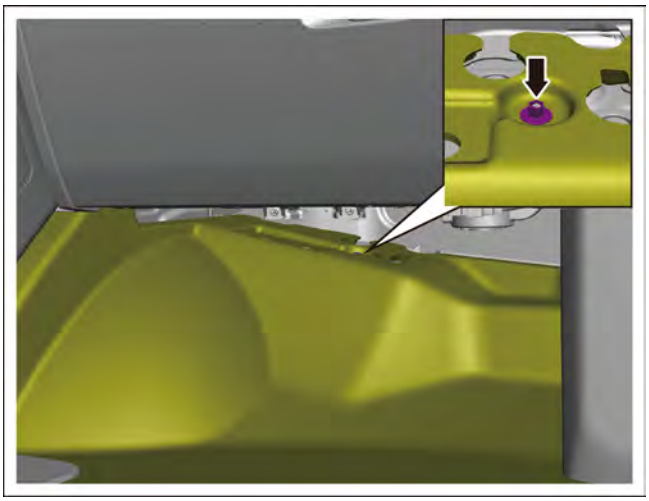
b. Remove AC/DC Charging Inlet Assembly 4 retaining bolt A.



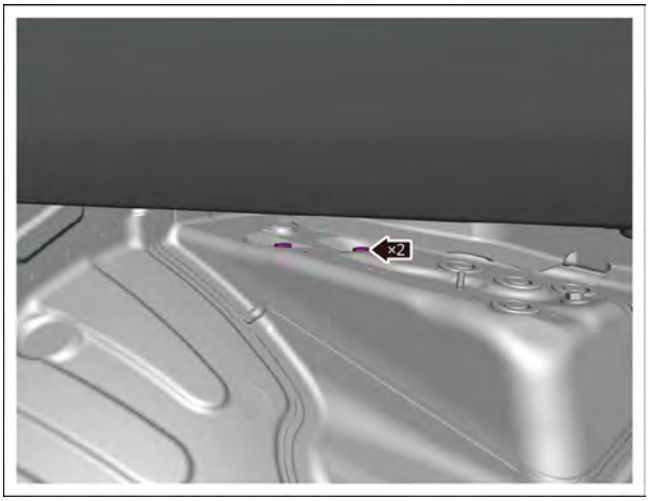
53 Release 2 AC/DC Charging Inlet Assembly retaining clips.



54 Release 3 instrument panel wiring harness retaining clips.

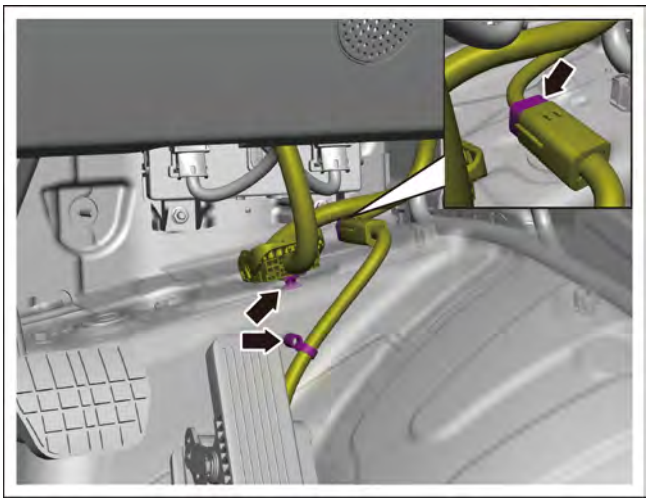


55 Remove plastic nut, lift/open driving compartment carpet.



56 Remove integral frame (low cargo deck short shaft) left 2 retaining bolt.

Torque:xxx±xxN·m

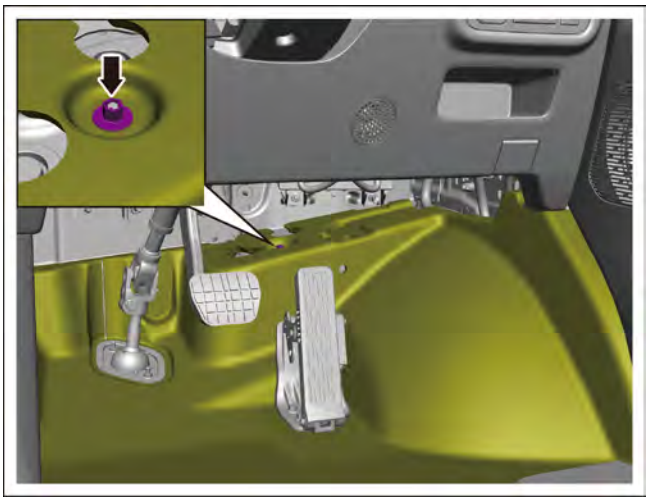


57 Release instrument panel wiring harness retaining clip.

a. Disconnect electronic oil door pedal assembly wiring harness connector.

b. Release electronic oil door pedal assembly wiring harness retaining clip.

c. Release instrument panel wiring harness retaining clip.

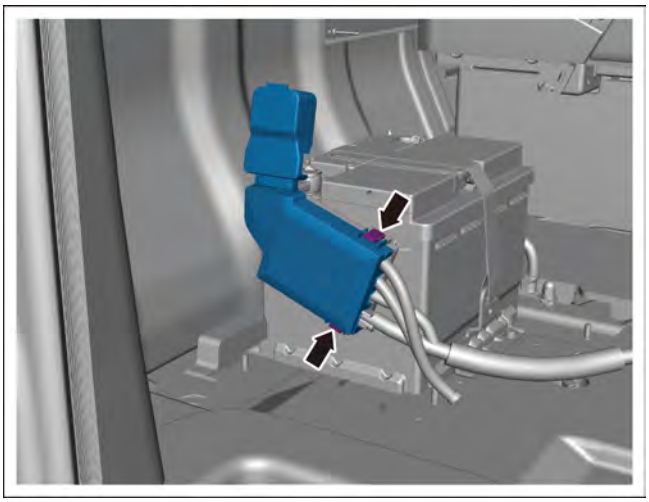


58 Remove plastic nut, lift/open driving compartment carpet.



59 Remove integral frame (low cargo deck short shaft) right 2 retaining bolt.

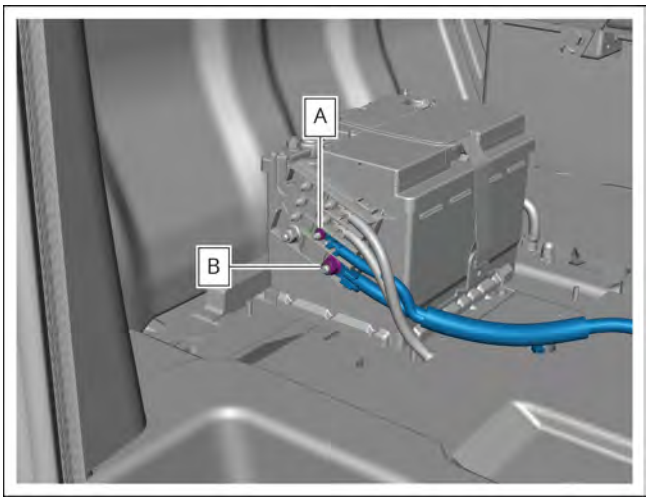
Torque:xxx±xxN·m



60 Remove positive terminal power distribution box - upper cover.

a. open battery positive terminal protection cover.

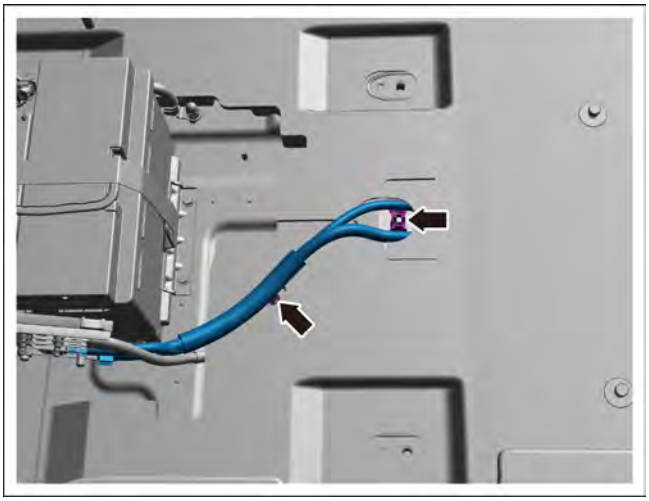
b. press retaining clip, remove positive terminal power distribution box upper cover.



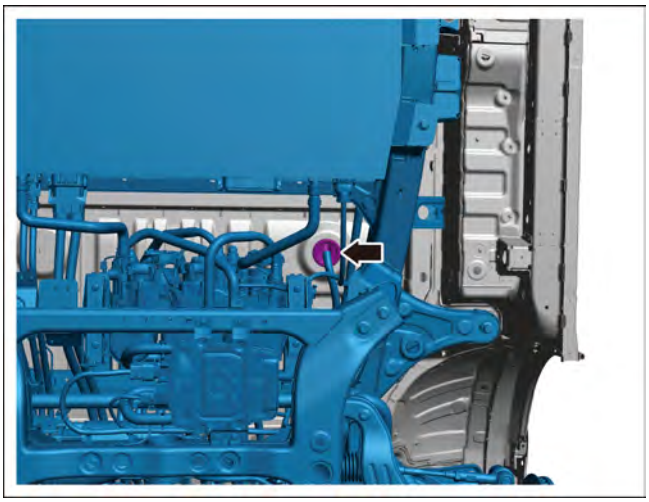
61 Remove battery positive cable retaining nut.

a. Remove battery positive cable retaining nut A.

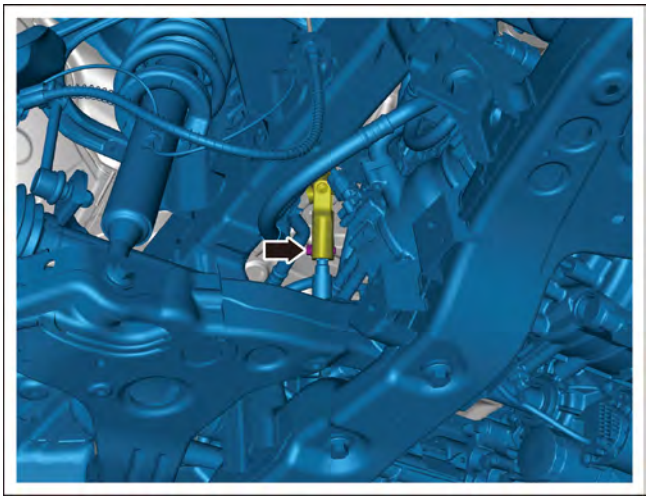
b. Remove battery positive cable retaining nut B.



62 Release 2 battery positive cable retaining clips.



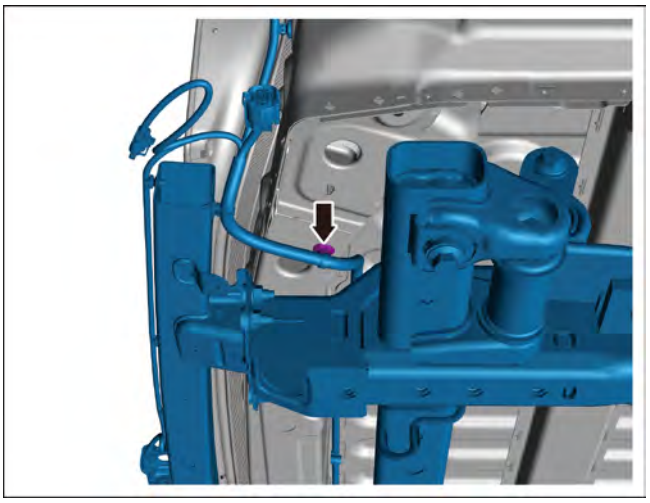
63 release battery positive cable retaining adhesive sleeve.



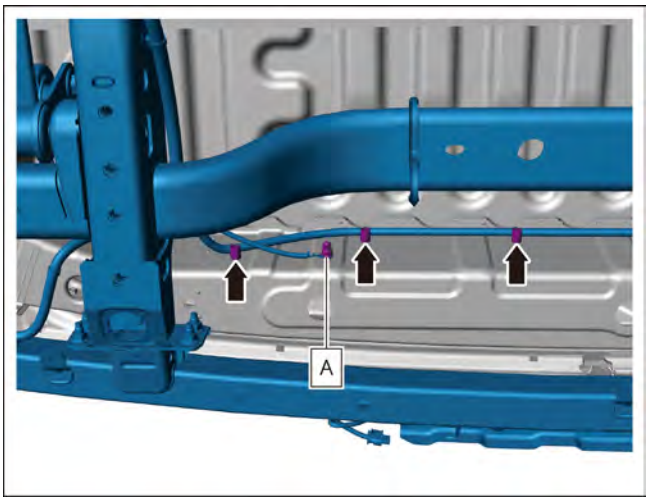
64 Remove retaining bolt, release steering lower shaft assembly and power gear rack steering gear with tie rod assembly connect.



65 Release 2 chassis wiring harness retaining clips.



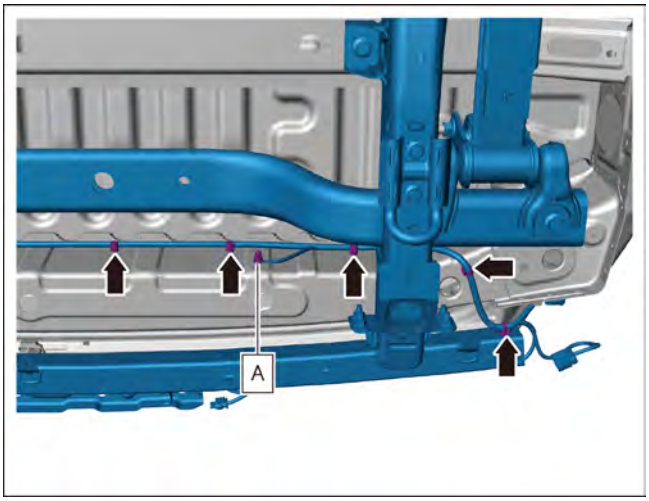
66 Release chassis wiring harness retaining clip.



67 Release chassis wiring harness retaining clip.

a. Remove chassis wiring harness ground cable retaining nut A.
Torque:xxx±xxN·m

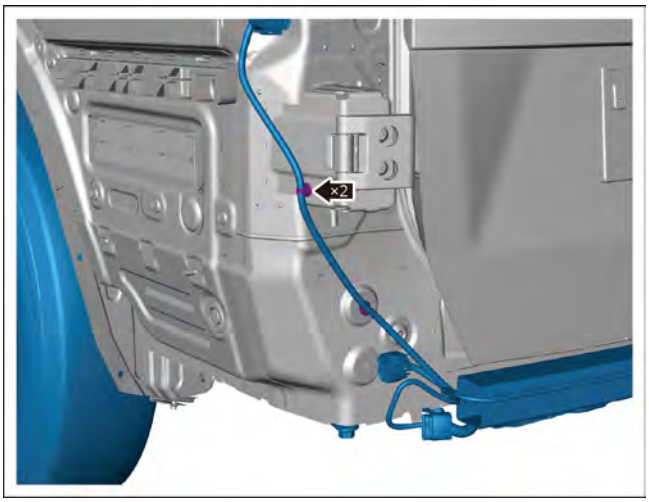
b. Release 3 chassis wiring harness retaining clips.



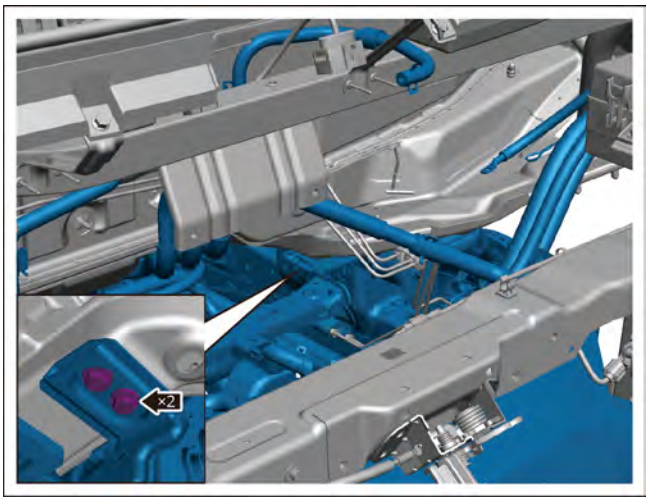
68 Release chassis wiring harness retaining clip.

a. Remove chassis wiring harness ground cable retaining nut A.
Torque:xxx±xxN·m

b. Release 5 chassis wiring harness retaining clips.

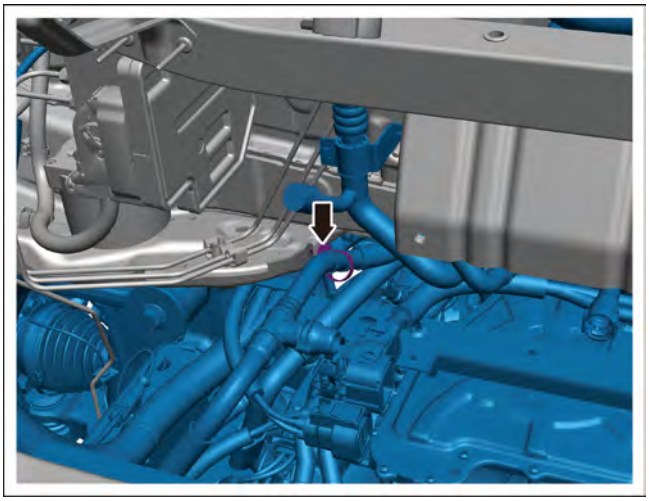


69 Release 2 chassis wiring harness retaining clips.

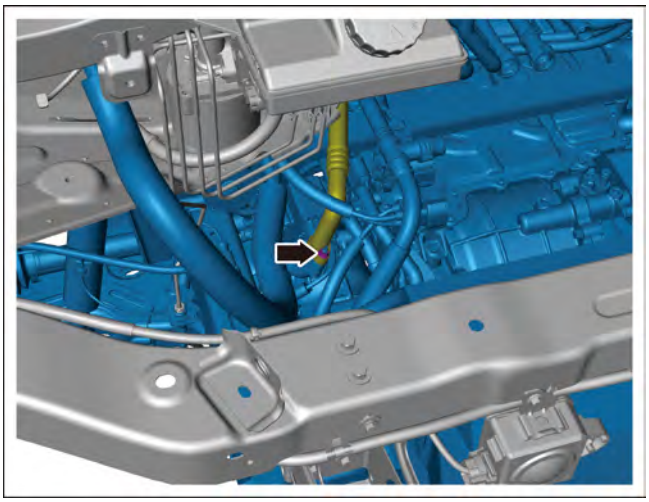


70 Remove integral frame (low cargo deck short shaft) left 2 retaining bolt.

Torque:xxx±xxN·m



71 release Low-temperature Radiator Outlet Hose Assembly retaining clip (this steps suitable use at Heat-pump A/C Vehicle).

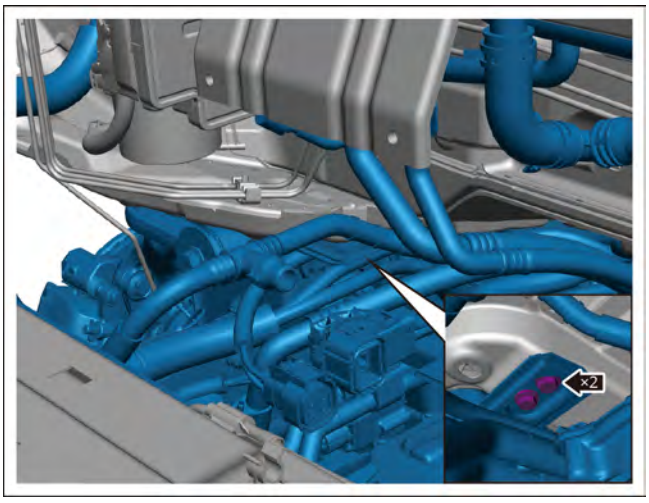


72 Remove retaining nut, release Compressor Suction Pipe Assembly.

Torque:xxx±xxN·m

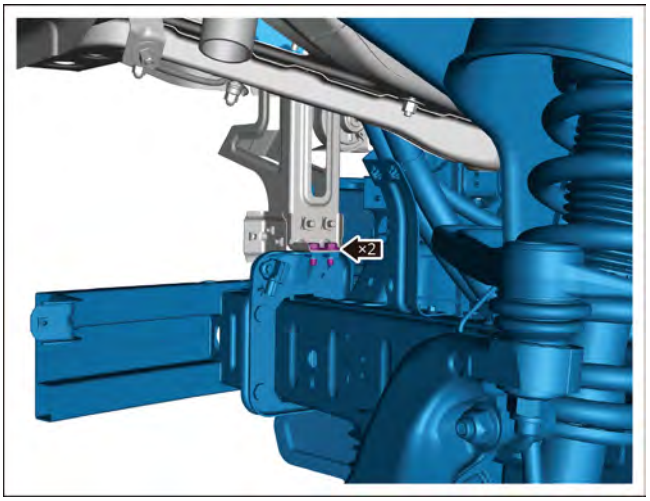
Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



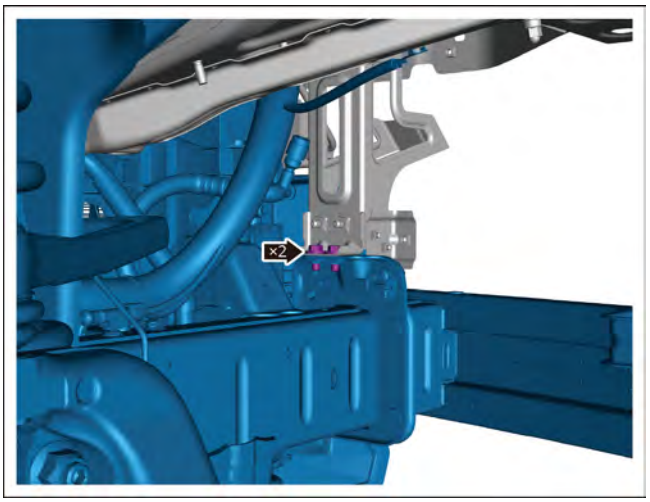
73 Remove integral frame (low cargo deck short shaft) right 2 retaining bolt.

Torque:xxx±xxN·m



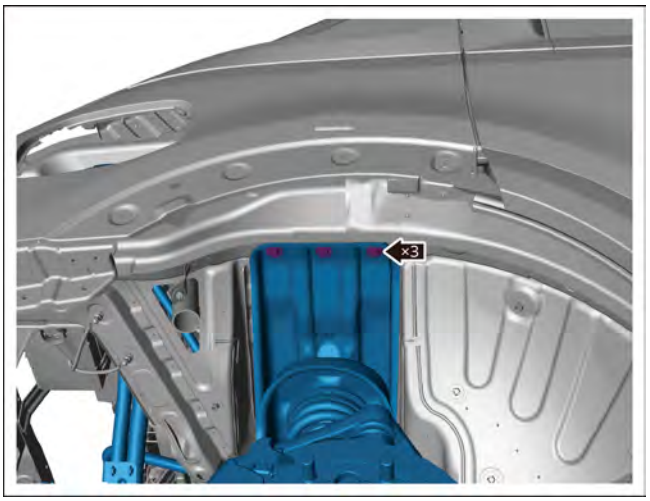
74 Remove radiator support crossmember left support panel 2 retaining bolt.

Torque:xxx±xxN·m



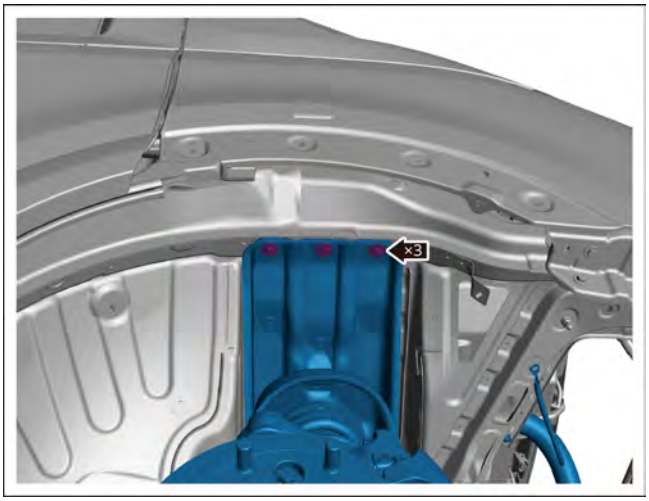
75 Remove radiator support crossmember right support panel 2 retaining bolt.

Torque:xxx±xxN·m



76 Remove integral frame (low cargo deck short shaft) left 3 retaining bolt.

Torque:xxx±xxN·m

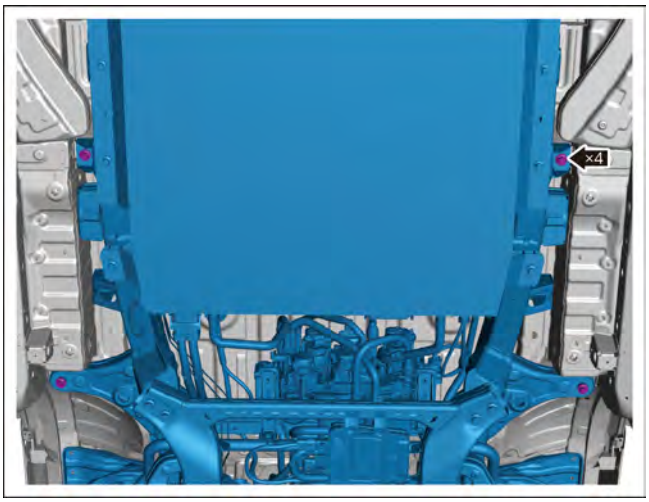


77 Remove integral frame (low cargo deck short shaft) right 3 retaining bolt.

Torque:xxx±xxN·m

78 Install left, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

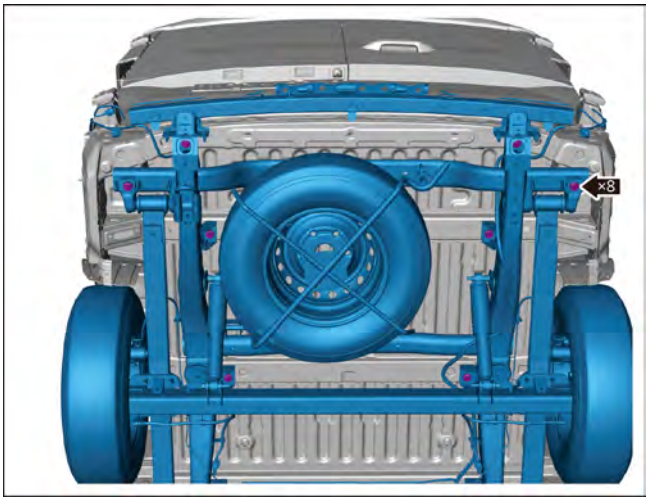
79 lower low raise unit, direct to tyre completely connect contact ground surface.



80 Remove integral frame (low cargo deck short shaft) front 4 retaining bolt.

Tips

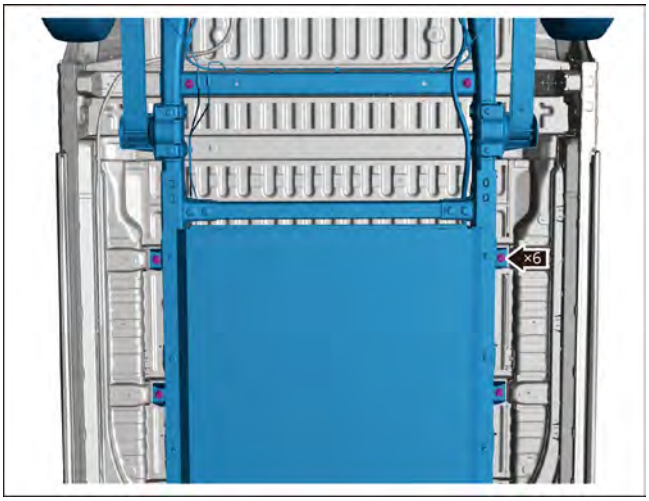
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



81 Remove integral frame (low cargo deck short shaft) rear 8 retaining bolt.

Tips

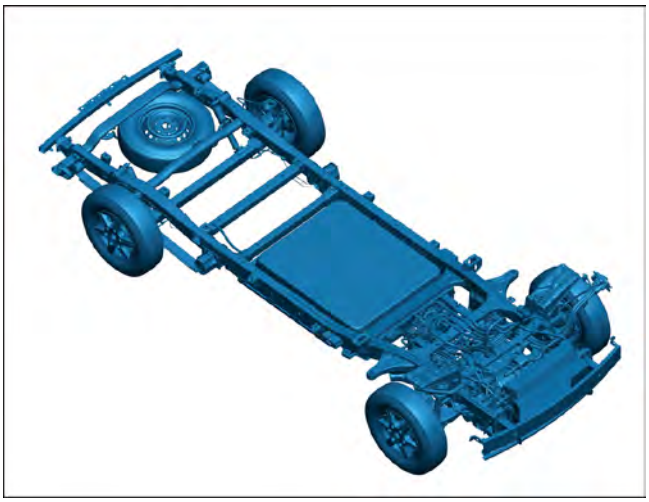
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



82 Remove integral frame (low cargo deck short shaft) center part 6 retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



83 operation raise unit, make passenger compartment slow constant speed upper raise, section away passenger compartment and integral frame (low cargo deck short shaft).

Caution

Remove when, be sure to confirm all accessory and body no dry involve, No then may will cause component damage, even hazard and person body safety.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 Install process center, ensure wiring harness connect secure, Location correct, and no interaction fork, surround, No then may will cause vehicle fault or electrical safety hazard.

4 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

5 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

6 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

7 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

8 After installation, perform wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft)- Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

5 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

6 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

7 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling

8 Remove left, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

9 Remove left, Right Rear Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

10 Remove left, right front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

11 Remove left, right front wheelhouse assembly. Refer to:Left Front Wheel Cover Assembly, Repair Procedure

12 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

13 Remove left, Right Front Combination Lamp assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

14 Remove Crash Sensor - left front, right front. Refer to:Crash Sensor - Front, Repair Procedure

15 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

16 Remove front anti-collision beam assembly. Refer to:Front Anti-Collision Beam Assembly, Repair Procedure

17 Remove subframe collision avoidance assembly. Refer to:Subframe Collision Avoidance Assembly, Repair Procedure

18 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

19 Remove tweeter. Refer to:Tweeter, Repair Procedure

20 Remove front frame support. Refer to:Front Frame Bracket Support, Repair Procedure

21 Remove radiator assembly. Refer to:Radiator Assembly, Removal and Installation

22 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

23 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure

24 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

25 Remove left, Right Front Wheel Speed Sensor assembly. Refer to:Left Front Wheel Speed Sensor Assembly, Repair Procedure

26 Remove left, right front brake hose. Refer to:Left Front Brake Hose, Repair Procedure

27 Remove left, right front brake caliper. Refer to:Left Front Brake Caliper, Repair Procedure

28 Remove left, right front brake pad assembly. Refer to:Left Front Brake Pad Assembly, Repair Procedure

29 Remove left, right front brake caliper bracket. Refer to:Front Brake Caliper Bracket, Repair Procedure

30 Remove left, right front link assembly. Refer to:Front Link Assembly, Repair Procedure

31 Remove wheel hub bearing unit - left front, right front. Refer to:Wheel Hub Bearing Unit - Front, Removal and Installation

32 Remove left, right front steering knuckle assembly. Refer to:Left Front Steering Knuckle Assembly, Repair Procedure

33 Remove left, right front upper control arm assembly. Refer to:Left Front Upper Control Arm Assembly, Repair Procedure

34 Remove left, right front Strut Assembly. Refer to:Left Front Strut Assembly, Repair Procedure

35 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure

36 Remove right constant velocity drive shaft assembly. Refer to:Right Constant Velocity Drive Shaft Assembly, Repair Procedure

37 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

38 Remove heater water pump assembly - Non-heat-pump A/C. Refer to:Heater Water Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

39 Remove battery coolant pump assembly - Non-heat-pump A/C. Refer to:Battery Coolant Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

40 Remove electric drive coolant pump assembly - Non-heat-pump A/C. Refer to:Electric Drive Coolant Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

41 Remove PTC inlet pipe assembly - Non-heat-pump A/C. Refer to:PTC Inlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

42 Remove Low-temperature Radiator Outlet Hose Assembly - Non-heat-pump A/C. Refer to:Low-Temperature Radiator Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

43 Remove front Subframe Assembly. Refer to:Front Subframe Assembly, Removal and Installation

44 Remove front stabilizer bar assembly. Refer to:Front Stabilizer Bar Assembly, Repair Procedure

45 Remove Condenser Outlet Pipe Assembly - Non-heat-pump A/C. Refer to:Condenser Outlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

46 Remove Compressor Suction Pipe Assembly - Non-heat-pump A/C. Refer to:Compressor Suction Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

47 Remove Compressor Discharge Pipe Assembly - Non-heat-pump A/C. Refer to:Compressor Discharge Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

48 Remove electric drive inlet hose assembly - Non-heat-pump A/C. Refer to:Electric Drive Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

49 Remove electric drive outlet hose assembly - Non-heat-pump A/C. Refer to:Electric Drive Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

50 Remove Heater Inlet Hose Assembly - Non-heat-pump A/C. Refer to:Heater Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

51 Remove Battery Inlet Hose Assembly - Non-heat-pump A/C. Refer to:Battery Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

52 Remove Battery Outlet Hose Assembly - Non-heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

53 Remove Three-way Valve-to-Chiller Hose Assembly - Non-heat-pump A/C. Refer to:Three-Way Valve-to-Chiller Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

54 Remove chiller to water pump inlet pipe assembly - Non-heat-pump A/C. Refer to:Chiller to Water Pump Inlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

55 Remove PTC outlet pipe assembly - Non-heat-pump A/C. Refer to:PTC Outlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

56 Remove Electric Drive Expansion Tank Fill Hose Assembly - Non-heat-pump A/C. Refer to:Electric Drive Expansion Tank Fill Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

57 Remove Heater Expansion Tank Fill Hose Assembly - Non-heat-pump A/C. Refer to:Heater Expansion Tank Fill Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

58 Remove Low-temperature Radiator Vent Hose Assembly - Non-heat-pump A/C. Refer to:Low-Temperature Radiator Vent Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

59 Remove 3-in-1 Inlet Hose Assembly - Non-heat-pump A/C. Refer to:3-in-1 Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

60 Remove Three-way Coolant Valve Assembly - Non-heat-pump A/C. Refer to:Three-Way Coolant Valve Bracket - Non-Heat-Pump A/C, Repair Procedure

61 Remove Three-way Coolant Valve Bracket - Non-heat-pump A/C. Refer to:Three-Way Coolant Valve Bracket - Non-Heat-Pump A/C, Repair Procedure

62 Remove chiller assembly - Non-heat-pump A/C. Refer to:Chiller Assembly - Non-Heat-Pump A/C, Repair Procedure

63 Remove CDU to PTC& compressor line. Refer to:CDU to PTC& Compressor Line, Repair Procedure

64 Remove CDU to battery pack line. Refer to:CDU to Battery Pack Line, Repair Procedure

65 Remove Charging Port Cover. Refer to:Charging Port Cover Assembly, Repair Procedure

66 Remove AC/DC Charging Inlet Assembly.
Refer to:AC/DC Charging Inlet Assembly, Repair Procedure

67 Remove motor negative ground harness.
Refer to:Motor Negative Ground Harness, Repair Procedure

68 Remove 3-in-1 Negative Ground Harness 1.
Refer to:3-in-1 Negative Ground Harness 1, Repair Procedure

69 Remove subframe ground wiring harness.
Refer to:Subframe Ground Wiring Harness, Repair Procedure

70 Remove battery pack negative ground wiring harness. Refer to:Battery Pack Negative Ground Wiring Harness, Repair Procedure

71 Remove traction battery pack assembly.
Refer to:Traction Battery Pack Assembly, Repair Procedure

72 Remove IV communication fitting - front.
Refer to:IV Communication Fitting - Front, Repair Procedure

73 Remove left rear brake pipe Ⅱ assembly.
Refer to:Left Rear Brake Pipe Ⅱ Assembly, Repair Procedure

74 Remove right rear brake pipe Ⅱ assembly.
Refer to:Left Rear Brake Pipe Ⅱ Assembly, Repair Procedure

75 Remove IV communication fitting - rear.
Refer to:Left Rear Brake Pipe Ⅲ Assembly, Repair Procedure

76 Remove left rear brake pipe Ⅲ assembly.
Refer to:Left Rear Brake Pipe Ⅲ Assembly, Repair Procedure

77 Remove right rear brake pipe Ⅲ assembly.
Refer to:Right Rear Brake Pipe Ⅲ Assembly, Repair Procedure

78 Remove left, right rear brake hose. Refer to:Left Rear Brake Hose, Repair Procedure

79 Remove left, right rear shock absorber assembly. Refer to:Rear Shock Absorber Assembly, Repair Procedure

80 Remove left, Right Rear Wheel Speed Sensor assembly. Refer to:Left Rear Wheel Speed Sensor Assembly, Repair Procedure

81 Remove rear axle assembly. Refer to:Rear Axle Assembly, Removal and Installation

82 Remove left, right leaf spring assembly. Refer to:Leaf Spring Assembly, Repair Procedure

83 Remove front shackle assembly left, right. Refer to:Front Shackle Assembly (Left), Repair Procedure

84 Remove rear shackle assembly left, right. Refer to:Rear Shackle Assembly, Repair Procedure

85 Remove rear tow hook assembly. Refer to:Rear Tow Hook Assembly, Repair Procedure

86 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

87 Remove left, right rear Body Side Exterior Trim Panel Assembly. Refer to:Left Rear Body Side Exterior Trim Panel Assembly, Repair Procedure

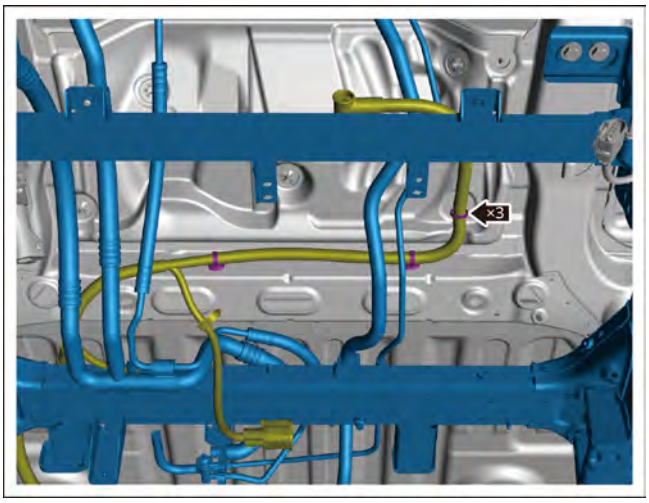
88 Remove rear bumper left, right lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

89 Remove rear anti-collision beam assembly. Refer to:Rear Anti-Collision Beam Assembly, Repair Procedure

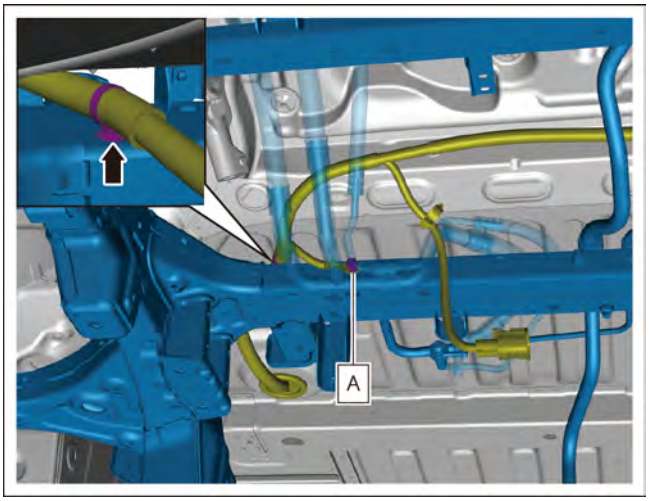
90 Remove rear bumper left, right upper body assembly. Refer to:Rear Bumper Left Upper Body Assembly, Repair Procedure

91 Remove left, Right Rear Combination Lamp assembly. Refer to:Left Rear Combination Lamp Assembly, Repair Procedure

92 Remove chassis wiring harness. Refer to:Chassis Wiring Harness, Repair Procedure



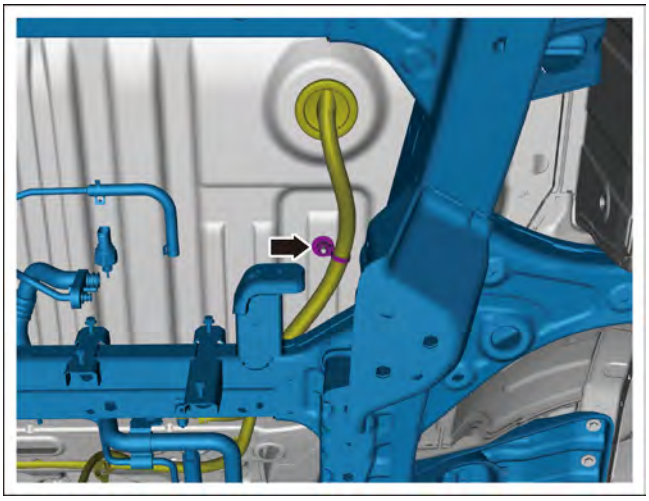
93 Release 3 battery positive cable retaining clips.



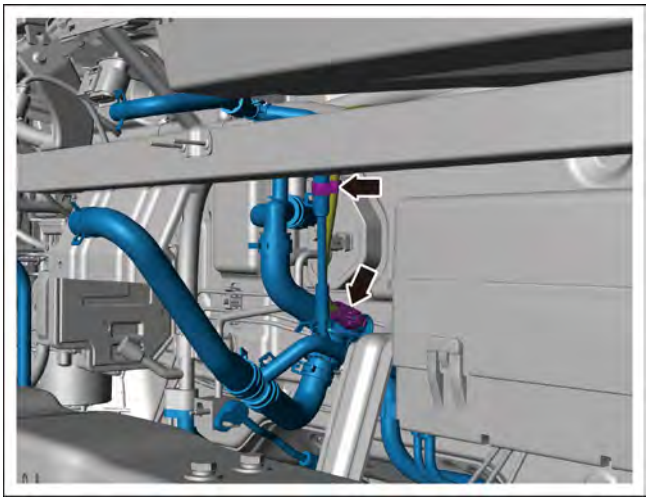
94 Release battery positive cable retaining clip.

a. Remove battery positive cable retaining nut A.

b. Release battery positive cable retaining clip.



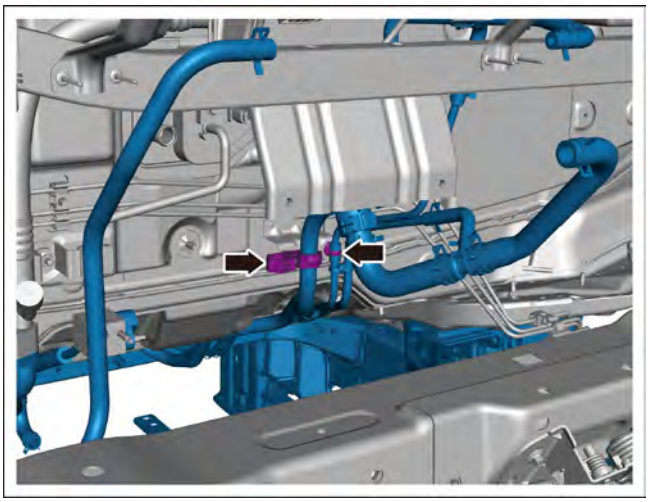
95 Release battery positive cable retaining clip.



96 Disconnect Heater Outlet Hose Assembly wiring harness connector.

a. Release front compartment wiring harness retaining clip.

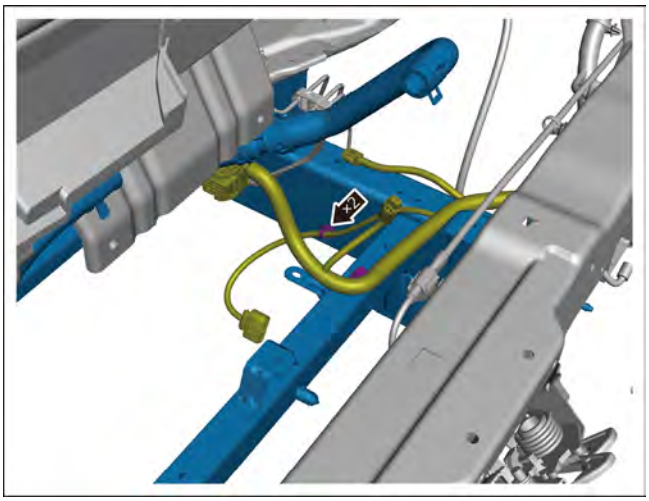
b. Disconnect Heater Outlet Hose Assembly wiring harness connector.



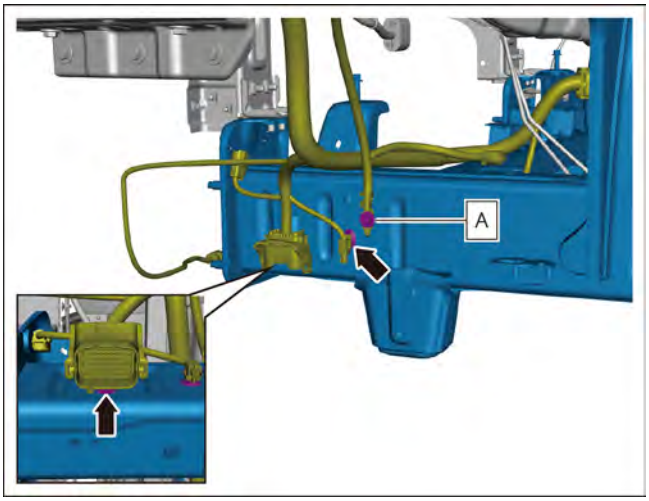
97 release cooling line retaining part.

a. release Heater Outlet Hose Assembly retaining hose clamp.

b. Release Battery Circuit Vent Hose Assembly retaining clip.



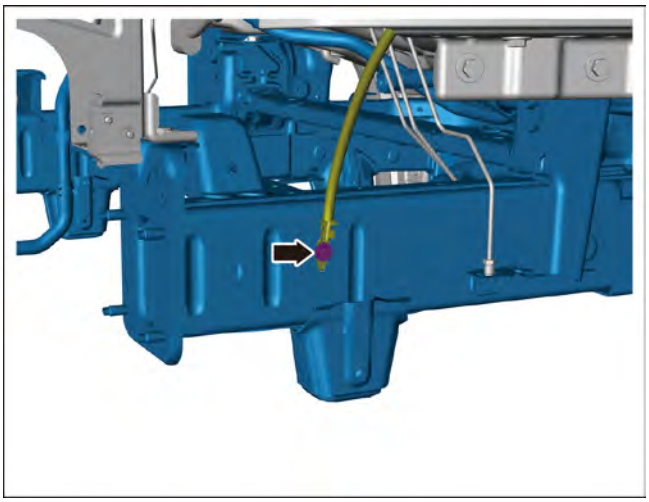
98 Release 2 front compartment wiring harness retaining clips.



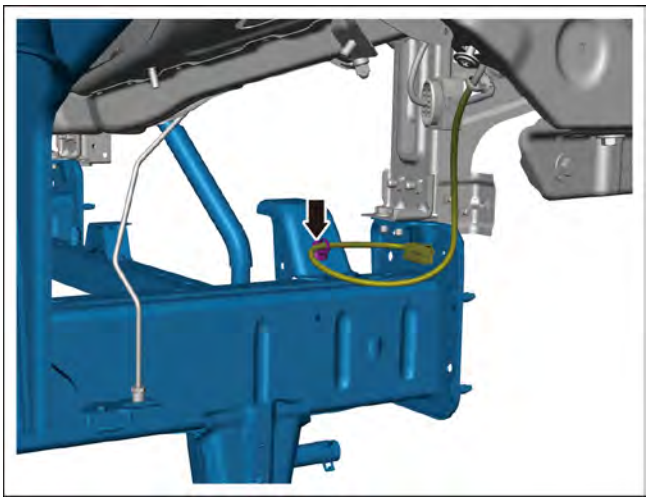
99 Release 3 front compartment wiring harness retaining clips.

a. Remove frame ground wiring harness retaining bolt A.

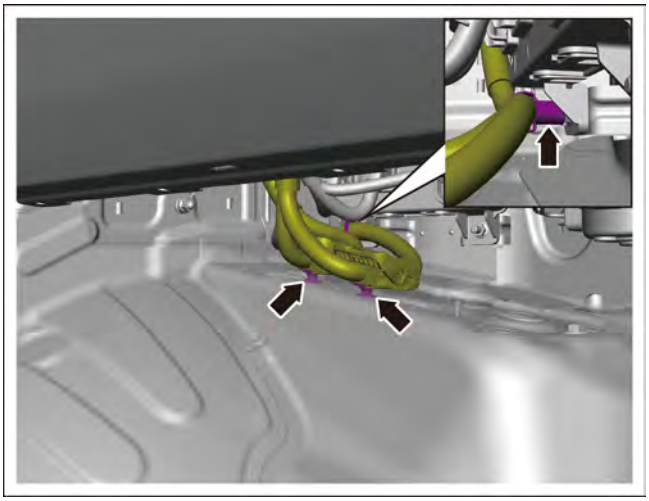
a. Release 2 front compartment wiring harness retaining clips.



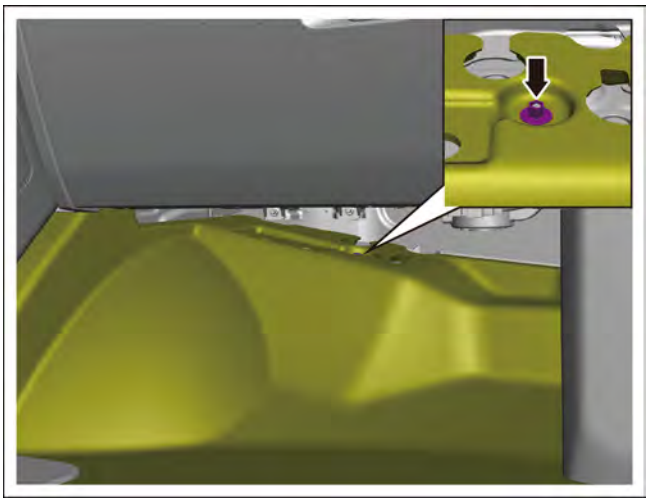
100 Remove frame ground wiring harness retaining bolt.



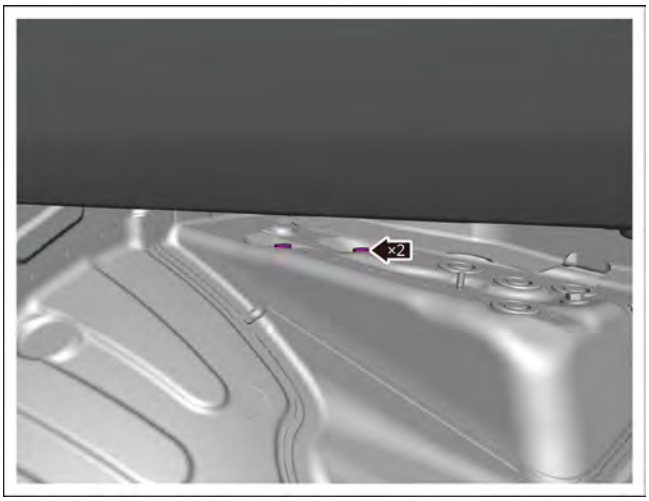
101 Release front compartment wiring harness retaining clip.



102 Release 3 instrument panel wiring harness retaining clips.

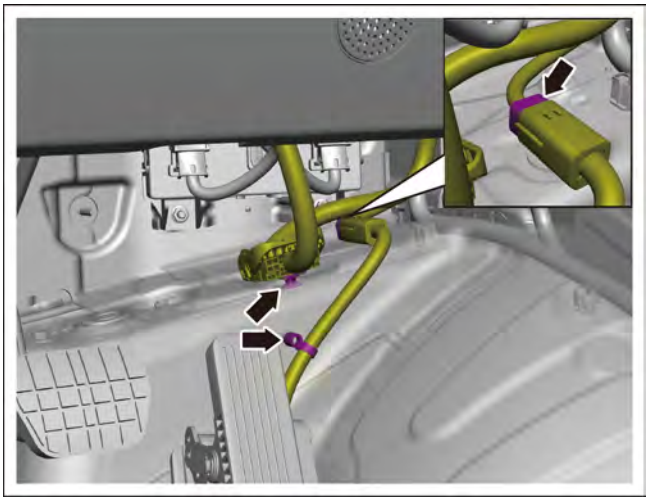


103 Remove plastic nut, lift/open driving compartment carpet.



104 Remove integral frame (low cargo deck short shaft) left 2 retaining bolt.

Torque:xxx±xxN·m

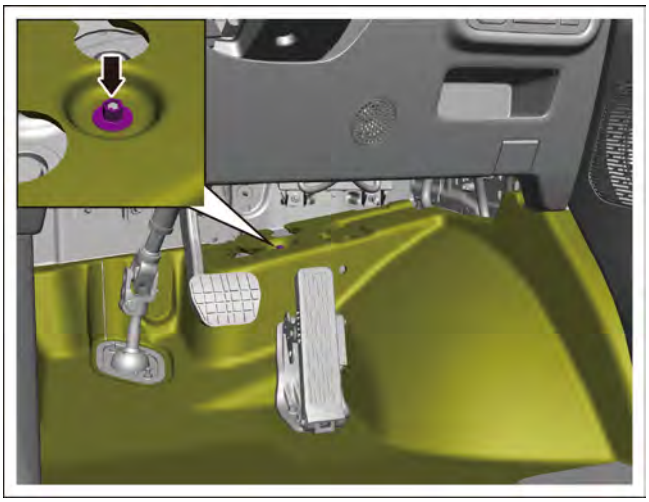


105 Release instrument panel wiring harness retaining clip.

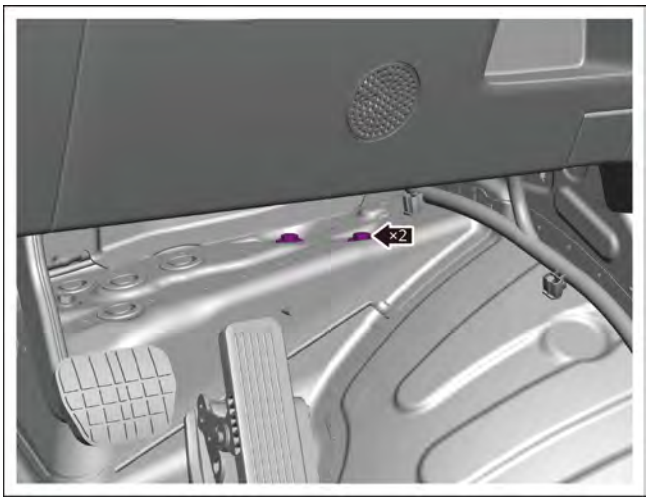
a. Disconnect electronic oil door pedal assembly wiring harness connector.

b. Release electronic oil door pedal assembly wiring harness retaining clip.

c. Release instrument panel wiring harness retaining clip.

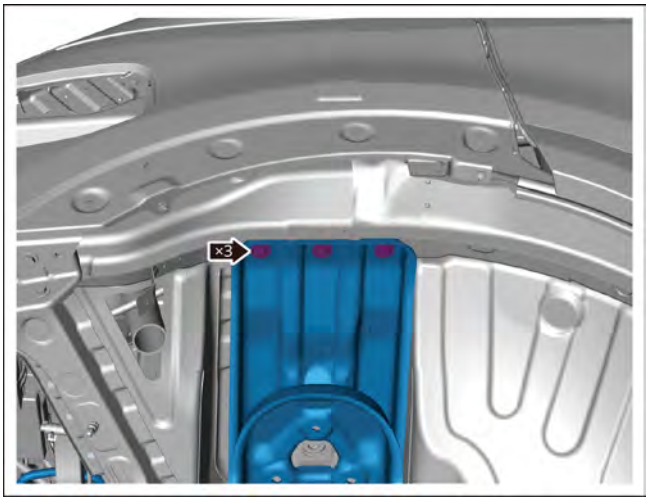


106 Remove plastic nut, lift/open driving compartment carpet.



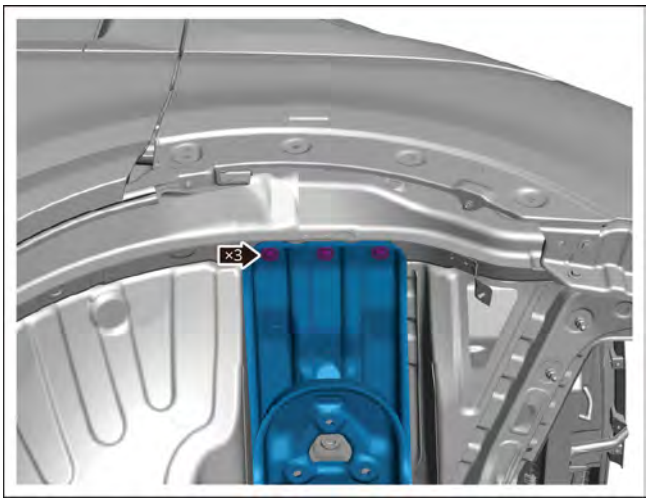
107 Remove integral frame (low cargo deck short shaft) right 2 retaining bolt.

Torque:xxx±xxN·m



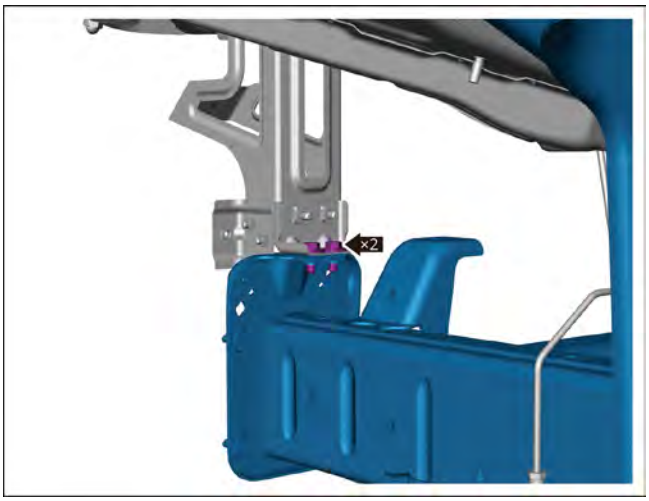
108 Remove integral frame (low cargo deck short shaft) left 3 retaining bolt.

Torque:xxx±xxN·m



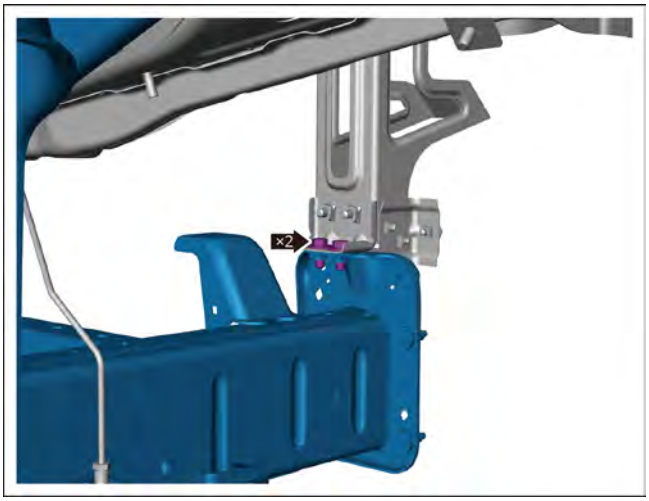
109 Remove integral frame (low cargo deck short shaft) right 3 retaining bolt.

Torque:xxx±xxN·m



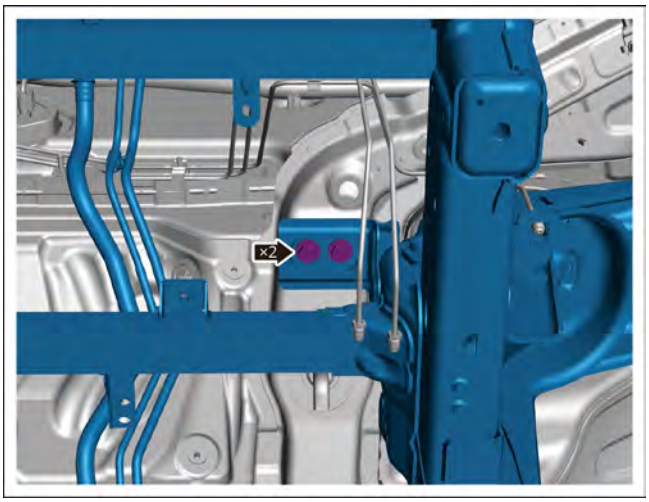
110 Remove radiator support crossmember left support panel 2 retaining bolt.

Torque:xxx±xxN·m



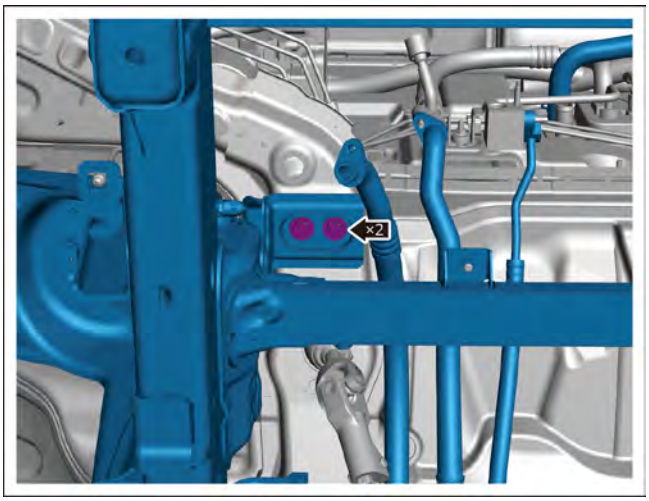
111 Remove radiator support crossmember right support panel right 2 retaining bolt.

Torque:xxx±xxN·m



112 Remove integral frame (low cargo deck short shaft) left 2 retaining bolt.

Torque:xxx±xxN·m

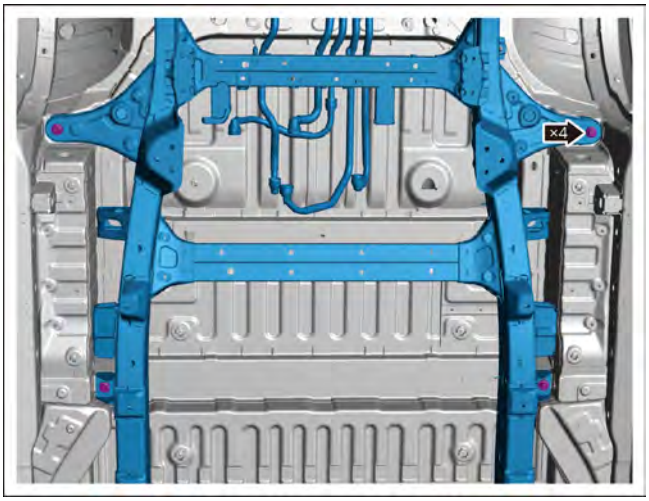


113 Remove integral frame (low cargo deck short shaft) right 2 retaining bolt.

Torque:xxx±xxN·m

114 Support bracket for called place in frame side member bottom part.

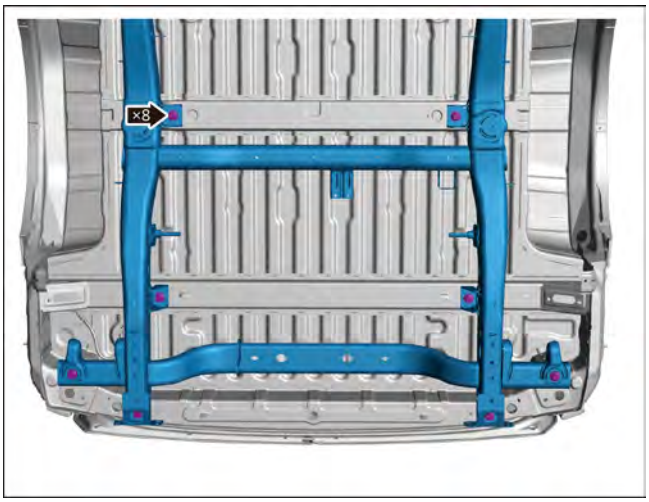
115 Slow lower lower raise unit, make frame stable connect contact support bracket.



116 Remove integral frame (low cargo deck short shaft) front 4 retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



117 Remove integral frame (low cargo deck short shaft) rear 8 retaining bolt.

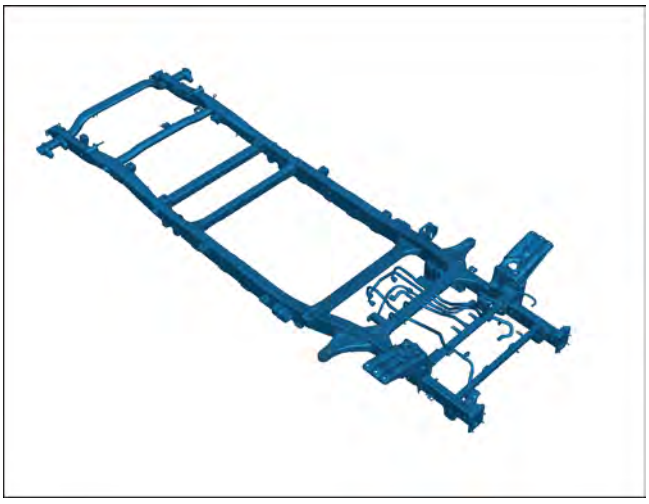
Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.

118 Remove integral frame (low cargo deck short shaft) center part 6 retaining bolt.

Tips

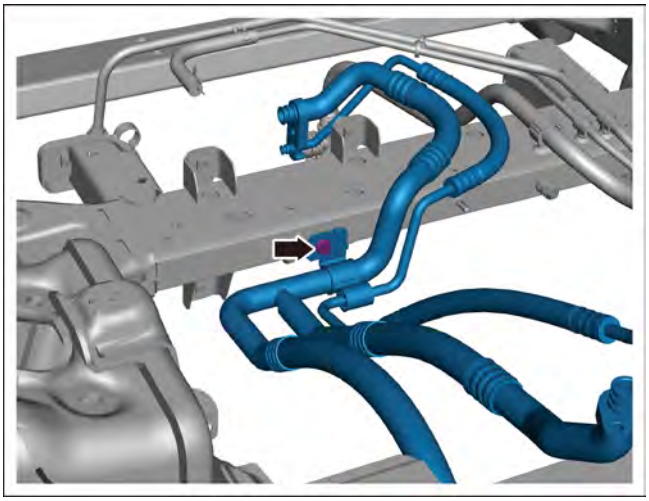
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



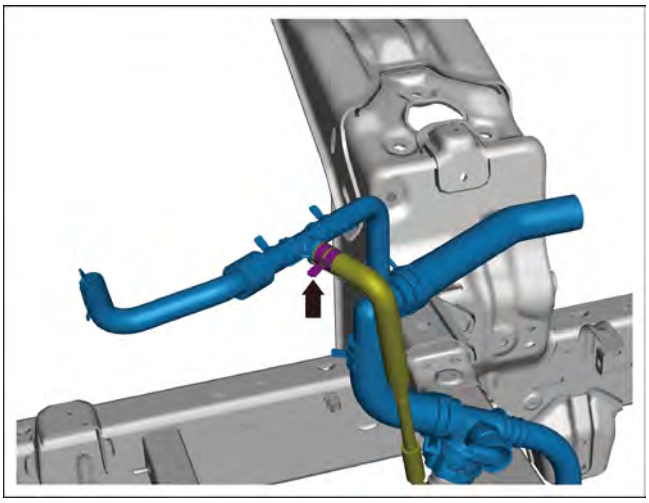
119 control raise unit, make passenger compartment slow constant speed upper raise, section away passenger compartment and integral frame (low cargo deck short shaft).

Caution

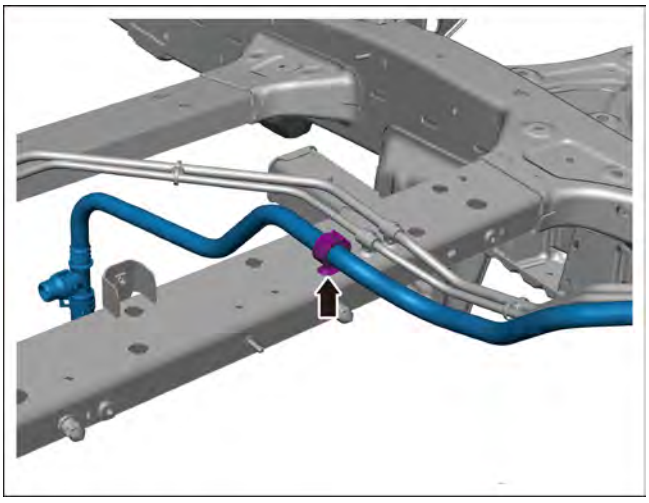
Remove when, be sure to confirm all accessory and body no dry involve, No then may will cause component damage, even hazard and person body safety.



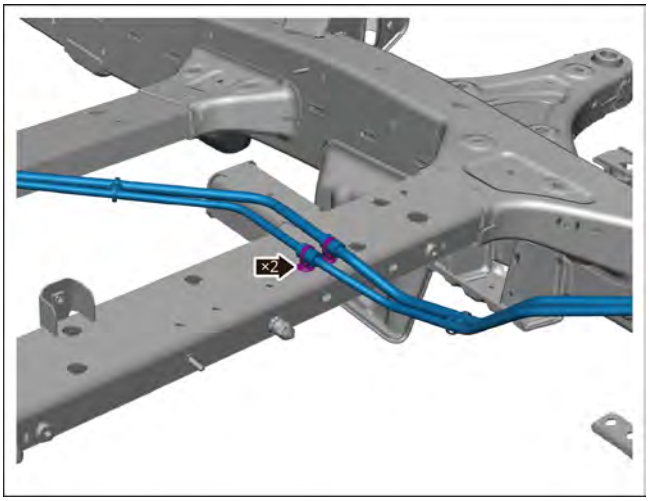
120 Remove retaining bolt, remove chiller inlet output pipe assembly.



121 Remove retaining clamp, release Battery Circuit Vent Hose Assembly.



122 Release retaining hose clamp, remove Heater Outlet Hose Assembly.



123 Release retaining clip, remove Battery Circuit Vent Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 Install process center, ensure wiring harness connect secure, Location correct, and no interaction fork, surround, No then may will cause vehicle fault or electrical safety hazard.

4 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

5 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

6 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

7 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

8 After installation, perform wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft)- Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

5 Drain the transmission fluid. Refer to:Transmission Fluid Draining and Filling

6 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

7 Drain the brake fluid. Refer to:Brake Fluid Draining and Filling

8 Remove left, Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

9 Remove left, Right Rear Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

10 Remove left, right front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

11 Remove left, right front wheelhouse assembly. Refer to:Left Front Wheel Cover Assembly, Repair Procedure

12 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

13 Remove left, Right Front Combination Lamp assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

14 Remove Crash Sensor - left front, right front. Refer to:Crash Sensor - Front, Repair Procedure

15 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

16 Remove front anti-collision beam assembly. Refer to:Front Anti-Collision Beam Assembly, Repair Procedure

17 Remove subframe collision avoidance assembly. Refer to:Subframe Collision Avoidance Assembly, Repair Procedure

18 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

19 Remove tweeter. Refer to:Tweeter, Repair Procedure

20 Remove front frame support. Refer to:Front Frame Bracket Support, Repair Procedure

21 Remove radiator assembly. Refer to:Radiator Assembly, Removal and Installation

22 Remove coolant expansion tank assembly. Refer to:Coolant Expansion Tank Assembly, Repair Procedure

23 Remove 3-in-1 DC Charging Power Distribution Assembly. Refer to:3-in-1 DC Charging Power Distribution Assembly (400V), Repair Procedure/3-in-1 DC Charging Power Distribution Assembly (800V), Repair Procedure

24 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

25 Remove left, Right Front Wheel Speed Sensor assembly. Refer to:Left Front Wheel Speed Sensor Assembly, Repair Procedure

26 Remove left, right front brake hose. Refer to:Left Front Brake Hose, Repair Procedure

27 Remove left, right front brake caliper. Refer to:Left Front Brake Caliper, Repair Procedure

28 Remove left, right front brake pad assembly. Refer to:Left Front Brake Pad Assembly, Repair Procedure

29 Remove left, right front brake caliper. Refer to:Left Front Brake Caliper, Repair Procedure

30 Remove wheel hub bearing unit - left front, right front. Refer to:Wheel Hub Bearing Unit - Front, Removal and Installation

31 Remove left, right front link assembly. Refer to:Front Link Assembly, Repair Procedure

32 Remove left, right front steering knuckle assembly. Refer to:Left Front Steering Knuckle Assembly, Repair Procedure

33 Remove left, right front upper control arm assembly. Refer to:Left Front Upper Control Arm Assembly, Repair Procedure

34 Remove left, right front Strut Assembly. Refer to:Left Front Strut Assembly, Repair Procedure

35 Remove left constant velocity drive shaft assembly. Refer to:Left Constant Velocity Drive Shaft Assembly, Repair Procedure

36 Remove right constant velocity drive shaft assembly. Refer to:Right Constant Velocity Drive Shaft Assembly, Repair Procedure

37 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure

38 Remove front Subframe Assembly. Refer to:Front Subframe Assembly, Removal and Installation

39 Remove front stabilizer bar assembly. Refer to:Front Stabilizer Bar Assembly, Repair Procedure

40 Remove Compressor Discharge Pipe Assembly - Heat-pump A/C. Refer to:Compressor Discharge Pipe Assembly - Heat-Pump A/C, Repair Procedure

41 Remove Condenser Inlet Pipe Assembly - Heat-pump A/C. Refer to:Condenser Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

42 Remove Condenser Outlet Pipe Assembly - Heat-pump A/C. Refer to:Condenser Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

43 Remove Compressor Suction Pipe Assembly - Heat-pump A/C. Refer to:Compressor Suction Pipe Assembly - Heat-Pump A/C, Repair Procedure

44 Remove Compressor Suction Pipe Assembly II - Heat-pump A/C. Refer to:Compressor Suction Pipe Assembly II - Heat-Pump A/C, Repair Procedure

45 Remove Front A/C Inlet/Outlet Pipe Assembly - Heat-pump A/C. Refer to:Front A/C Inlet/Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

46 Remove Electric Drive Expansion Tank Fill Hose Assembly - Heat-pump A/C. Refer to:Electric Drive Expansion Tank Fill Hose Assembly - Heat-Pump A/C, Repair Procedure

47 Remove Low-temperature Radiator Inlet Hose Assembly - Heat-pump A/C. Refer to:Low-Temperature Radiator Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

48 Remove electric drive inlet hose assembly - Heat-pump A/C. Refer to:Electric Drive Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

49 Remove Battery Inlet Hose Assembly - Heat-pump A/C. Refer to:Battery Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

50 Remove Battery Outlet Hose Assembly - Heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

51 Remove PTC inlet pipe assembly - Heat-pump A/C. Refer to:PTC Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

52 Remove PTC outlet pipe assembly - Heat-pump A/C. Refer to:PTC Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

53 Remove integrated thermal management module. Refer to:Integrated Thermal Management Module, Repair Procedure

54 Remove CDU to PTC& compressor line. Refer to:CDU to PTC& Compressor Line, Repair Procedure

55 Remove CDU to battery pack line. Refer to:CDU to Battery Pack Line, Repair Procedure

56 Remove Charging Port Cover. Refer to:Charging Port Cover Assembly, Repair Procedure

57 Remove AC/DC Charging Inlet Assembly.
Refer to:AC/DC Charging Inlet Assembly, Repair Procedure

58 Remove motor negative ground harness.
Refer to:Motor Negative Ground Harness, Repair Procedure

59 Remove 3-in-1 Negative Ground Harness 1.
Refer to:3-in-1 Negative Ground Harness 1, Repair Procedure

60 Remove subframe ground wiring harness.
Refer to:Subframe Ground Wiring Harness, Repair Procedure

61 Remove battery pack negative ground wiring harness. Refer to:Battery Pack Negative Ground Wiring Harness, Repair Procedure

62 Remove traction battery pack assembly.
Refer to:Traction Battery Pack Assembly, Repair Procedure

63 Remove IV communication fitting - front.
Refer to:IV Communication Fitting - Front, Repair Procedure

64 Remove left rear brake pipe Ⅱ assembly.
Refer to:Left Rear Brake Pipe Ⅱ Assembly, Repair Procedure

65 Remove right rear brake pipe Ⅱ assembly.
Refer to:Left Rear Brake Pipe Ⅱ Assembly, Repair Procedure

66 Remove IV communication fitting - rear.
Refer to:Left Rear Brake Pipe Ⅲ Assembly, Repair Procedure

67 Remove left rear brake pipe Ⅲ assembly.
Refer to:Left Rear Brake Pipe Ⅲ Assembly, Repair Procedure

68 Remove right rear brake pipe Ⅲ assembly.
Refer to:Right Rear Brake Pipe Ⅲ Assembly, Repair Procedure

69 Remove right rear brake pipe III assembly. Refer to:Right Rear Brake Pipe III Assembly, Repair Procedure

70 Remove spare wheel assembly. Refer to:Spare Wheel Assembly, Removal and Installation

71 Remove backup tire bracket assembly. Refer to:Backup Tire Bracket Assembly, Repair Procedure

72 Remove left, right rear shock absorber assembly. Refer to:Rear Shock Absorber Assembly, Repair Procedure

73 Remove left, Right Rear Wheel Speed Sensor assembly. Refer to:Left Rear Wheel Speed Sensor Assembly, Repair Procedure

74 Remove rear axle assembly. Refer to:Rear Axle Assembly, Removal and Installation

75 Remove left, right leaf spring assembly. Refer to:Leaf Spring Assembly, Repair Procedure

76 Remove front shackle assembly left, right. Refer to:Front Shackle Assembly (Left), Repair Procedure

77 Remove rear shackle assembly left, right. Refer to:Rear Shackle Assembly, Repair Procedure

78 Remove rear tow hook assembly. Refer to:Rear Tow Hook Assembly, Repair Procedure

79 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

80 Remove left, right rear Body Side Exterior Trim Panel Assembly. Refer to:Left Rear Body Side Exterior Trim Panel Assembly, Repair Procedure

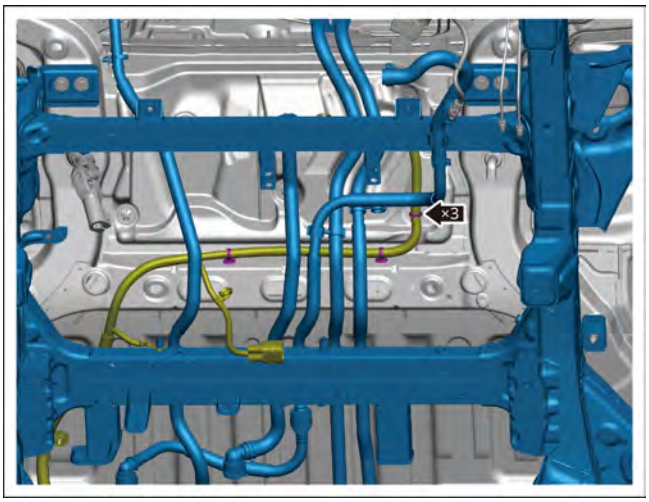
81 Remove rear bumper left, right lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

82 Remove rear anti-collision beam assembly. Refer to:Rear Anti-Collision Beam Assembly, Repair Procedure

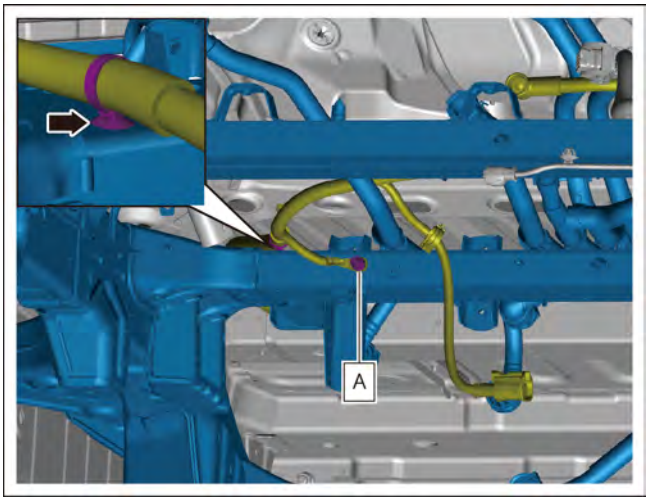
83 Remove rear bumper left, right upper body assembly. Refer to:Rear Bumper Left Upper Body Assembly, Repair Procedure

84 Remove left, Right Rear Combination Lamp assembly. Refer to:Left Rear Combination Lamp Assembly, Repair Procedure

85 Remove chassis wiring harness. Refer to:Chassis Wiring Harness, Repair Procedure



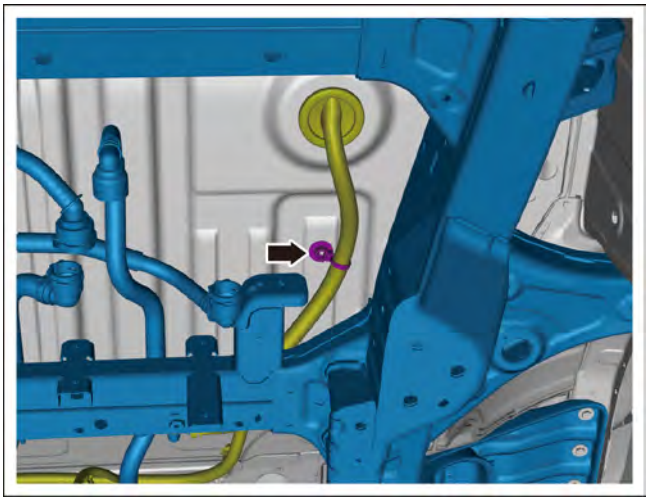
86 Release 3 battery positive cable retaining clips.



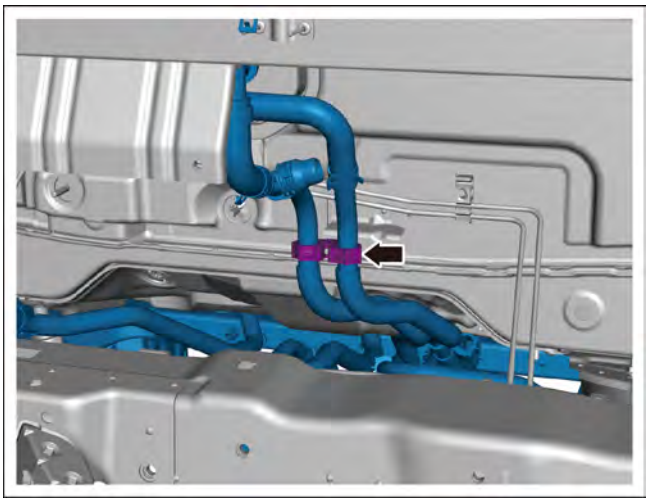
87 Release battery positive cable retaining clip.

a. Remove battery positive cable retaining nut A.

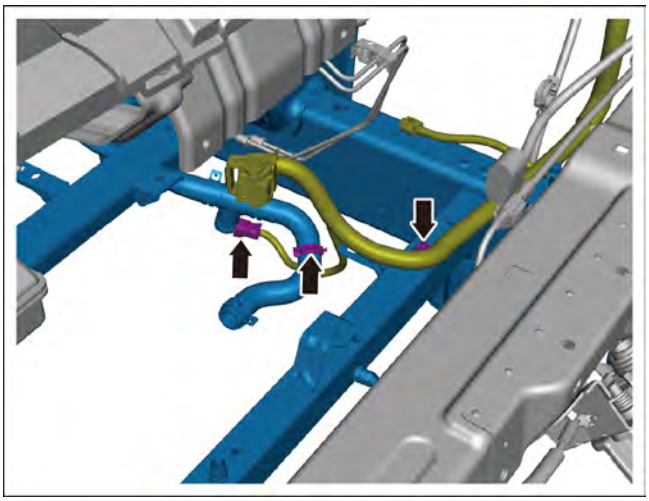
b. Release battery positive cable retaining clip.



88 Release battery positive cable retaining clip.



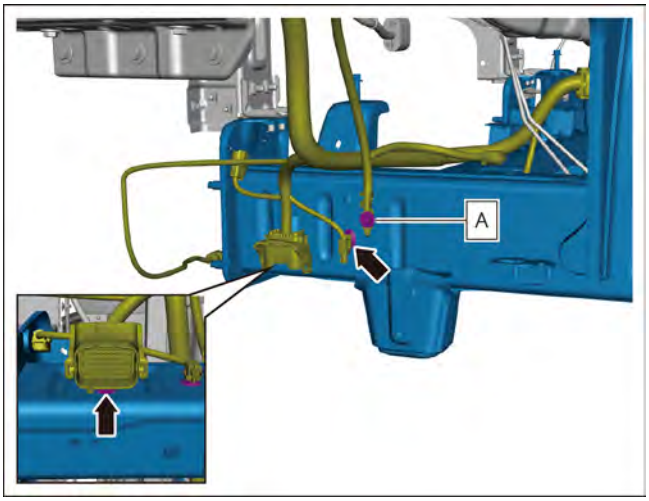
89 release Heater Inlet Hose Assembly, Heater Outlet Hose Assembly retaining hose clamp.



90 Release front compartment wiring harness retaining clip.

a. Disconnect electric drive outlet hose assembly wiring harness connector.

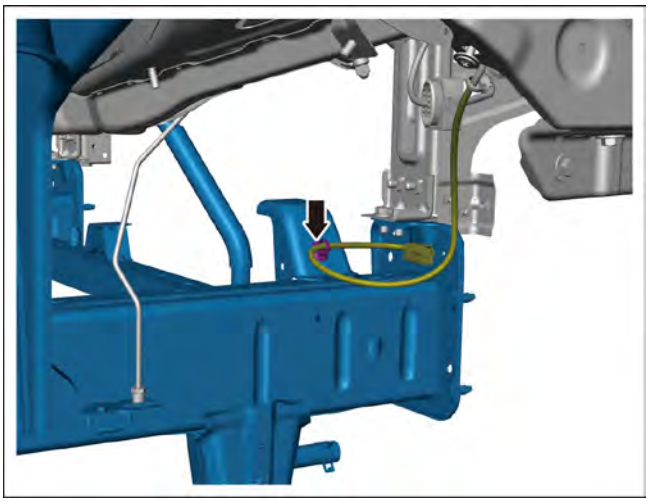
b. Release 2 front compartment wiring harness retaining clips.



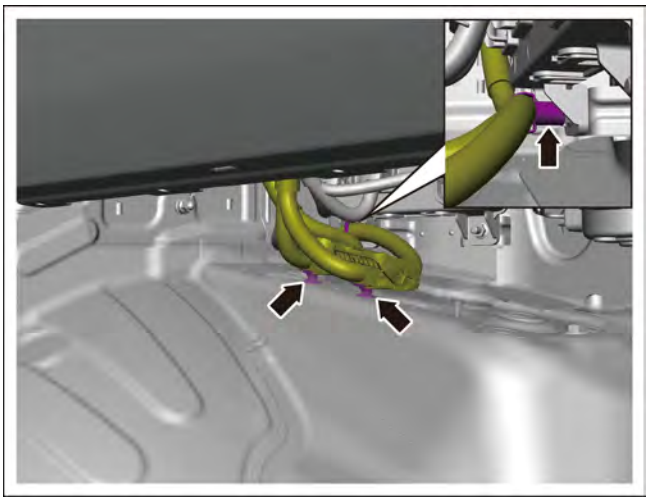
91 Release 3 front compartment wiring harness retaining clips.

a. Remove frame ground wiring harness retaining bolt A.

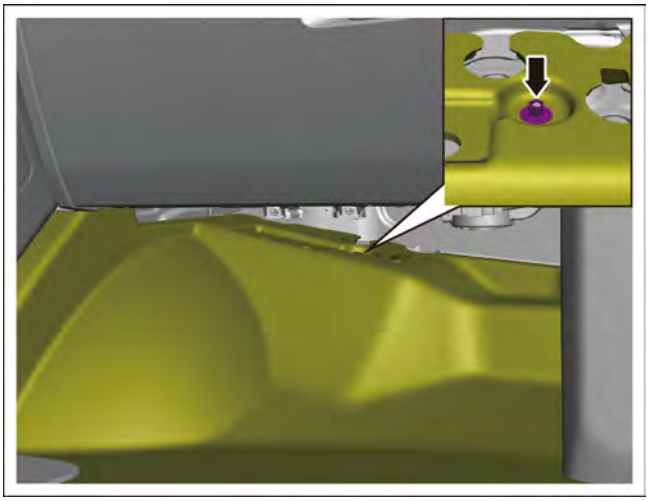
a. Release 2 front compartment wiring harness retaining clips.



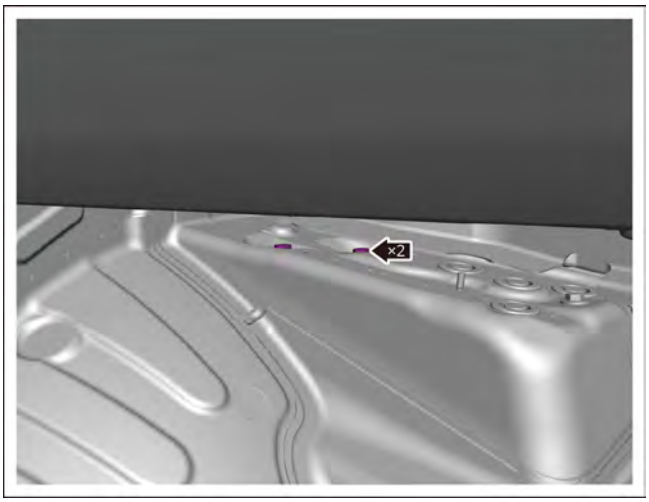
92 Release front compartment wiring harness retaining clip.



93 Release 3 instrument panel wiring harness retaining clips.

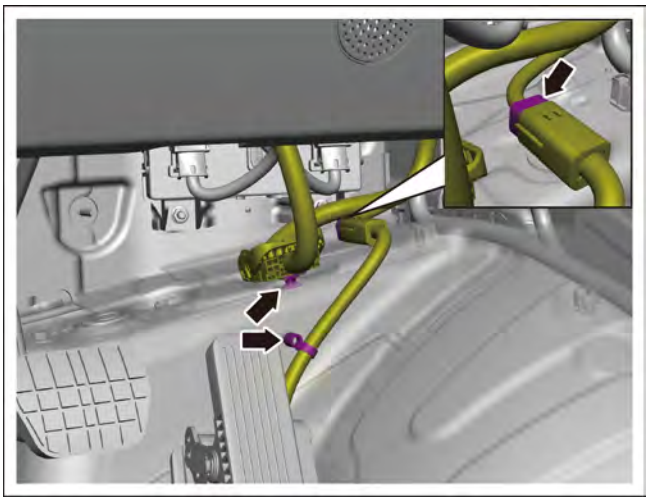


94 Remove plastic nut, lift/open driving compartment carpet.



95 Remove integral frame (low cargo deck short shaft) left 2 retaining bolt.

Torque:xxx±xxN·m

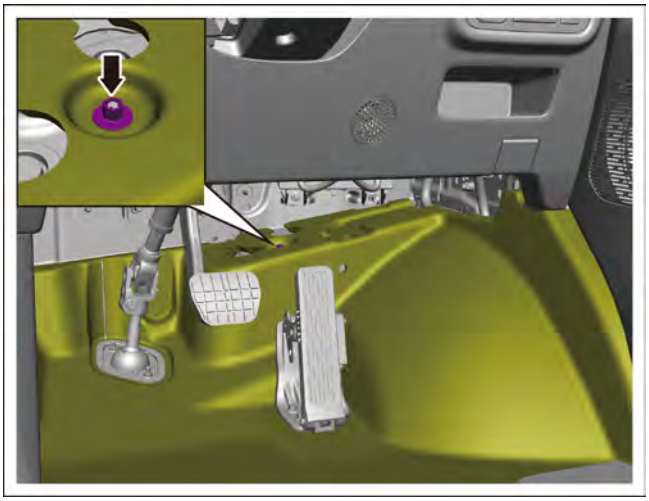


96 Release instrument panel wiring harness retaining clip.

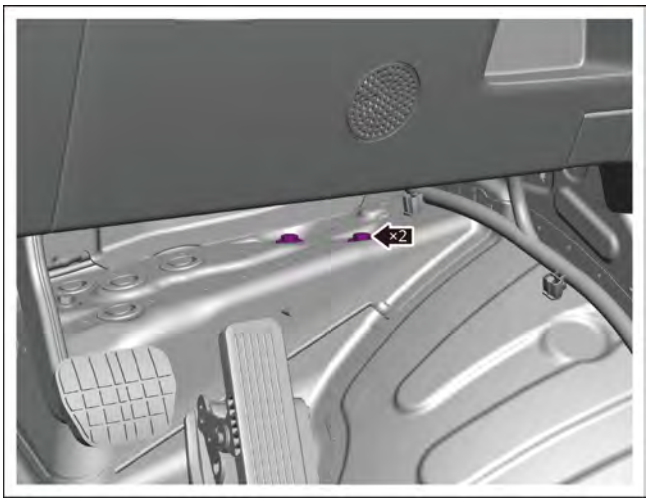
a. Disconnect electronic oil door pedal assembly wiring harness connector.

b. Release electronic oil door pedal assembly wiring harness retaining clip.

c. Release instrument panel wiring harness retaining clip.

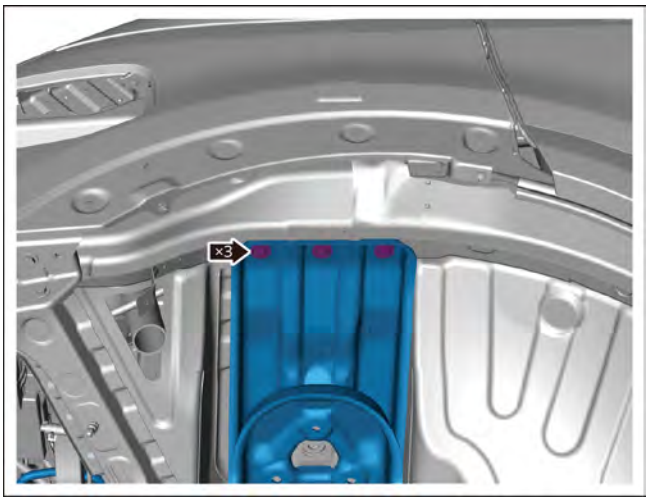


97 Remove plastic nut, lift/open driving compartment carpet.



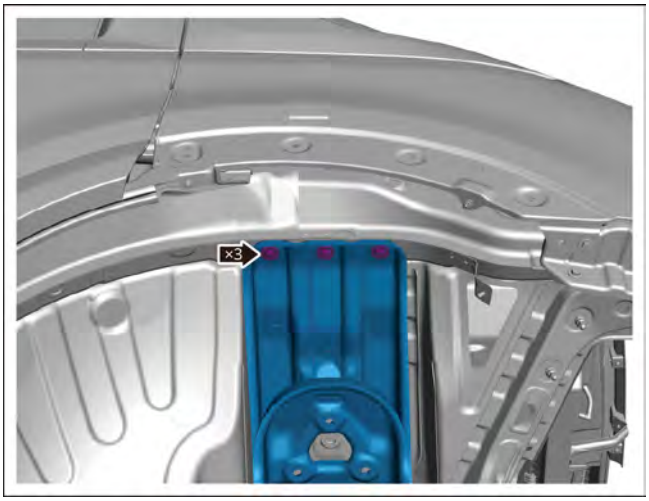
98 Remove integral frame (low cargo deck short shaft) right 2 retaining bolt.

Torque:xxx±xxN·m



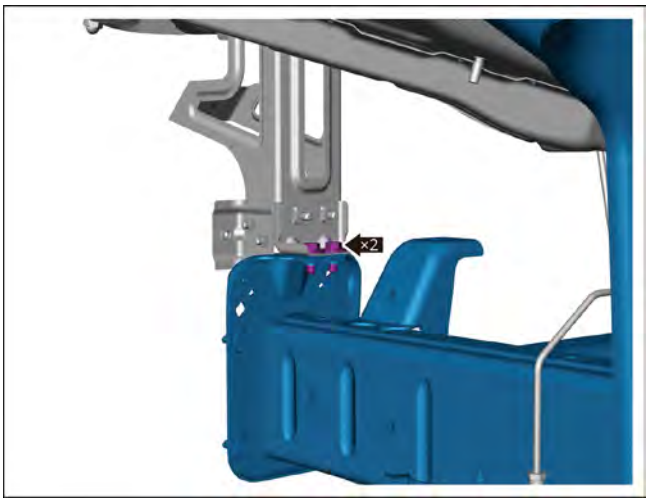
99 Remove integral frame (low cargo deck short shaft) left 3 retaining bolt.

Torque:xxx±xxN·m



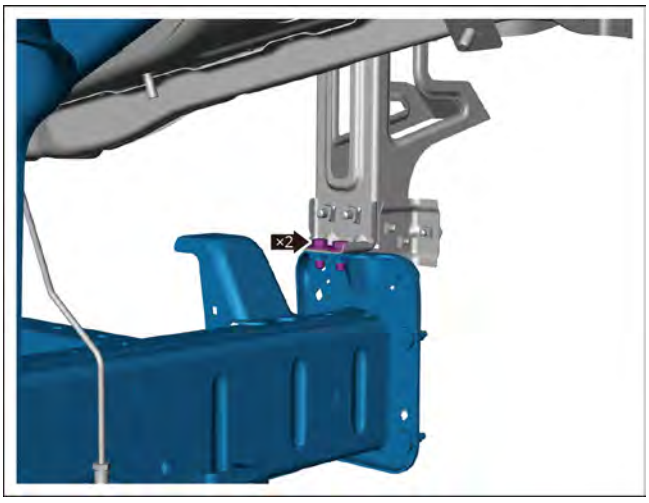
100 Remove integral frame (low cargo deck short shaft) right 3 retaining bolt.

Torque:xxx±xxN·m



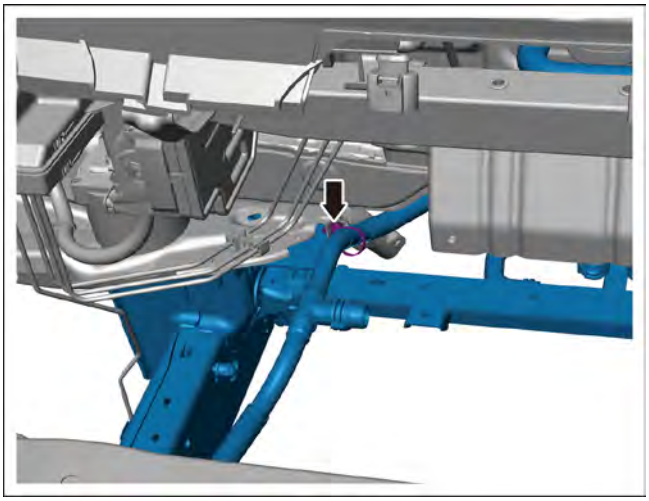
101 Remove radiator support crossmember left support panel 2 retaining bolt.

Torque:xxx±xxN·m

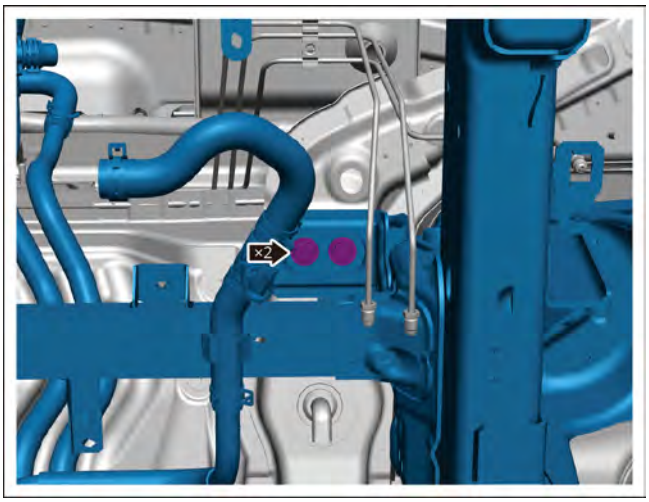


102 Remove radiator support crossmember right support panel right 2 retaining bolt.

Torque:xxx±xxN·m

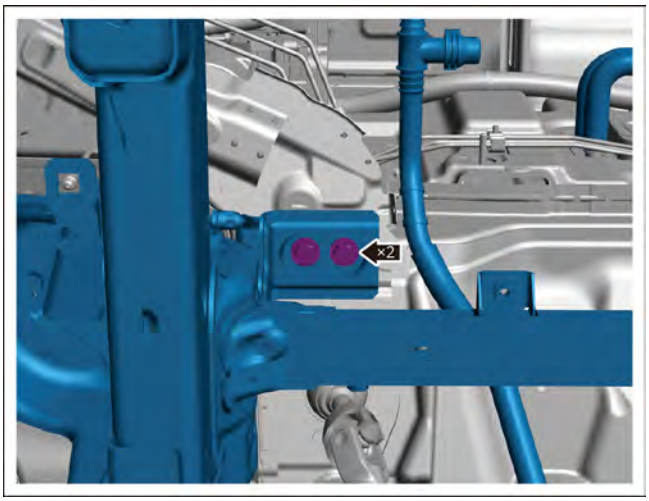


103 Release Low-temperature Radiator Outlet Hose Assembly retaining clip.



104 Remove integral frame (low cargo deck short shaft) left 2 retaining bolt.

Torque:xxx±xxN·m

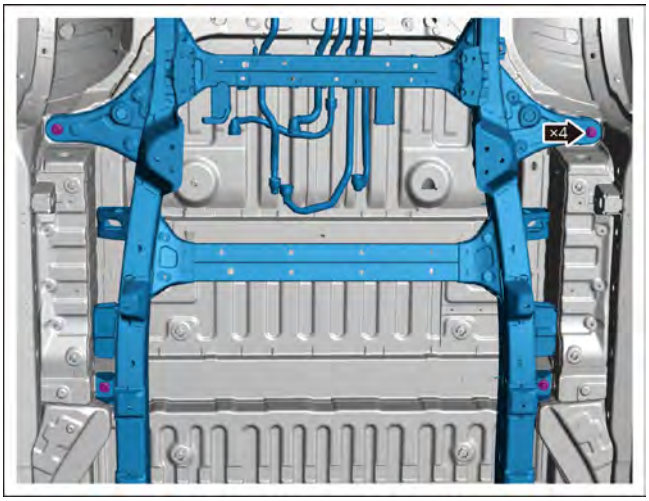


105 Remove integral frame (low cargo deck short shaft) right 2 retaining bolt.

Torque:xxx±xxN·m

106 Support bracket for called place in frame side member bottom part.

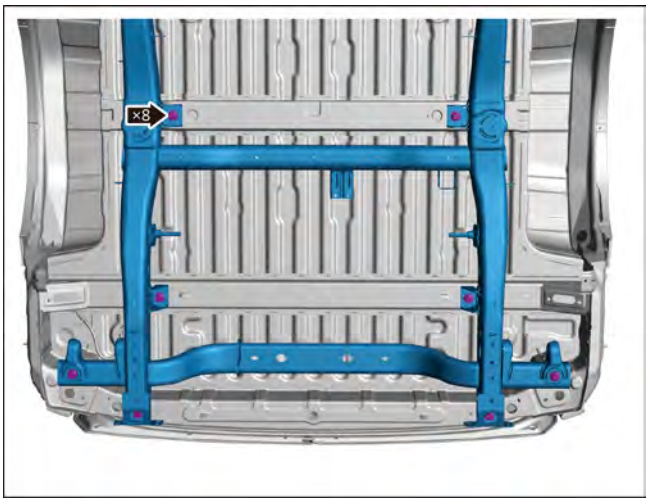
107 Slow lower lower raise unit, make frame stable connect contact support bracket.



108 Remove integral frame (low cargo deck short shaft) front 4 retaining bolt.

Tips

this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



109 Remove integral frame (low cargo deck short shaft) rear 8 retaining bolt.

Tips

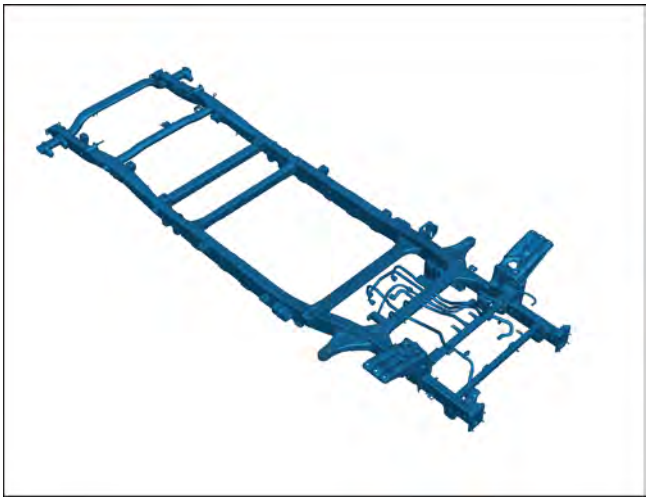
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



110 Remove integral frame (low cargo deck short shaft) center part 6 retaining bolt.

Tips

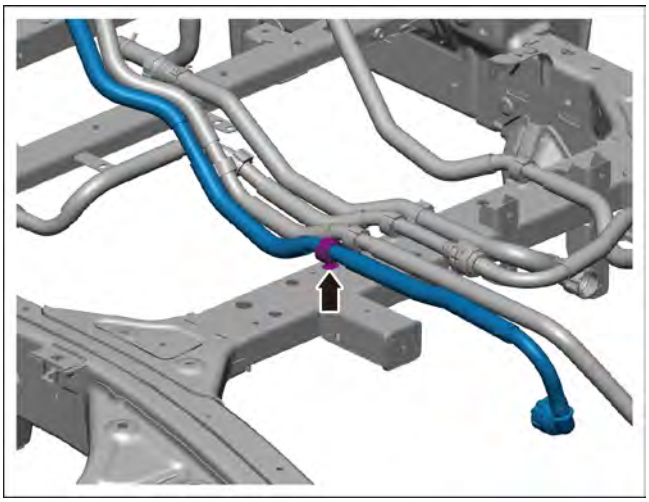
this retaining bolt for I times characteristic part, remove rear need replace new retaining bolt.



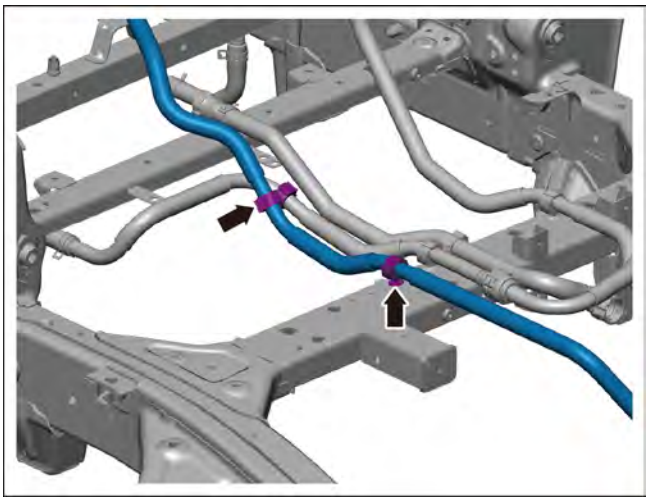
11 1operation raise unit, make passenger compartment slow constant speed upper raise, section away passenger compartment and integral frame (low cargo deck short shaft).

Caution

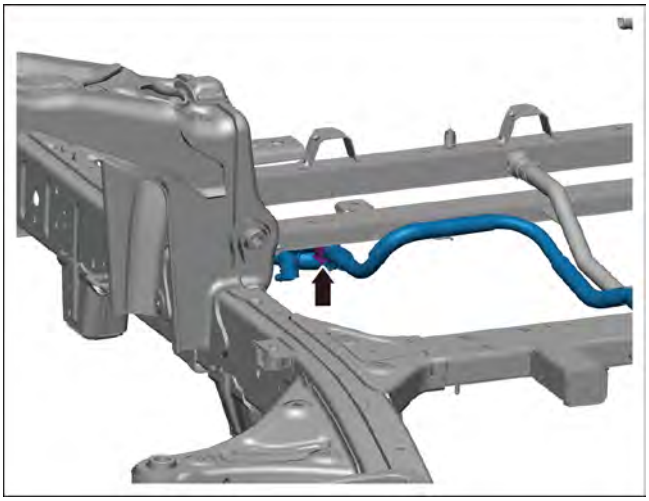
Remove when, be sure to confirm all accessory and body no dry involve, No then may will cause component damage, even hazard and person body safety.



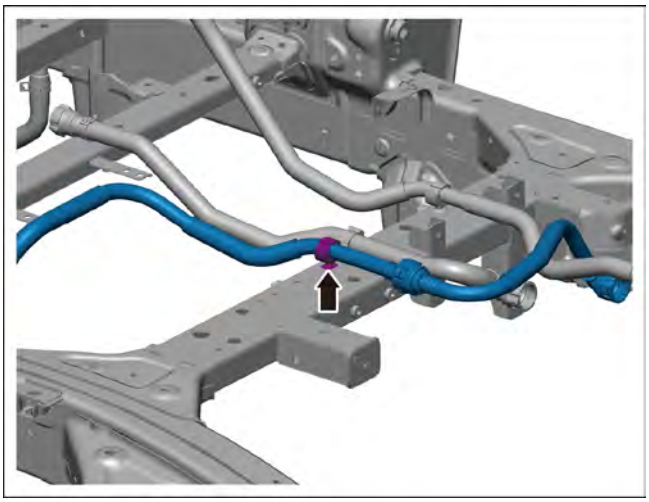
11 2elease retaining hose clamp, remove Heater Inlet Hose Assembly.



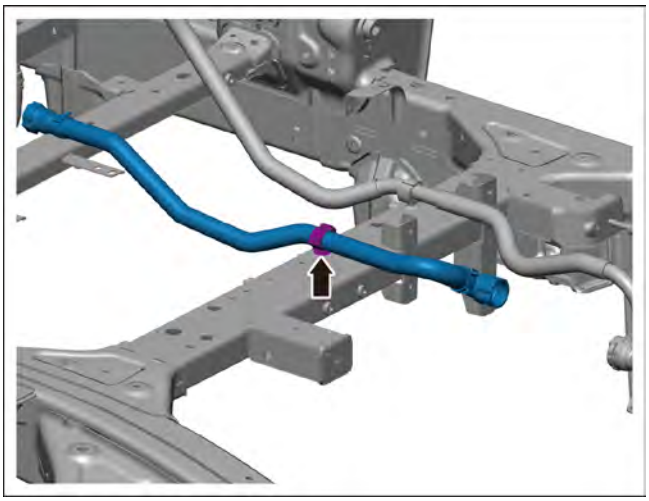
11 3elease 2 retaining hose clamp, remove Heater Outlet Hose Assembly.



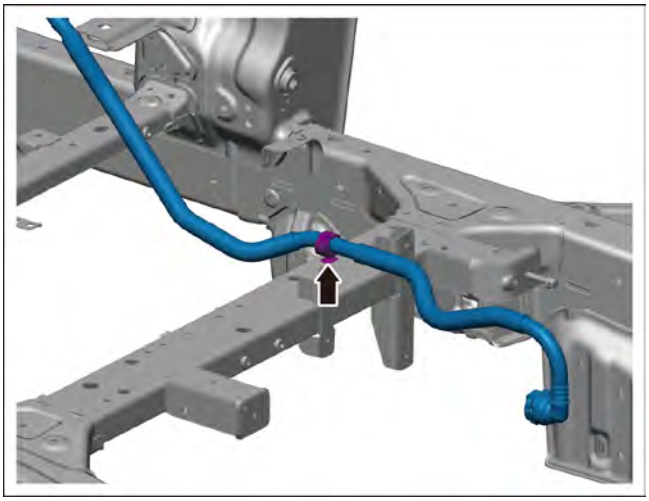
114 release electric drive outlet hose assembly retaining hose clamp.



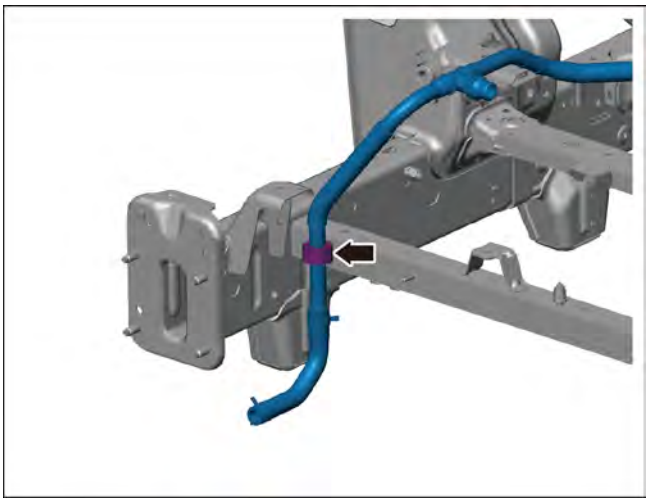
115 release retaining hose clamp, remove electric drive outlet hose assembly.



116 release retaining hose clamp, remove 3-in-1 Inlet Hose Assembly.



117 Release Low-temperature Radiator Outlet Hose Assembly retaining hose clamp.



118 Release retaining hose clamp, remove Low-temperature Radiator Outlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 Install process center, ensure wiring harness connect secure, Location correct, and no interaction fork, surround, No then may will cause vehicle fault or electrical safety hazard.

4 Install pipe fitting when, must first use hand nut item enter at least 2 ~ 3 turn with confirm screw thread for positive, side can Use wrench maximum item tighten, No then easy damage screw thread.

5 Fill the brake fluid and bleed the brake system. Refer to:Brake Fluid Draining and Filling

6 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

7 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

8 After installation, perform wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

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Repair Procedure.....787

Right Domain Controller Assembly, Repair Procedure..... 787

cooling system

System Overview

Cooling System Overview

System Principle

thermal pump

thermal pump enable electric drive remaining thermal recover, battery remaining thermal recover, battery / electric drive link combined remaining thermal recover III type thermal pump work mode water pump control; vehicle complete power up for Function generate valid basic condition, Left Front Zone Control Unit (FLZCU) and Right Front Zone Control Unit (FRZCU) through GL_CAN bus complete high-voltage ready, battery Status, motor rotor temperature, inverter unit sampling temperature etc. related button signal interaction, based on thermal pump work mode drive electric drive coolant pump, battery coolant pump, Output target flow amount item ratio; when meet sufficient corresponding temperature exit threshold condition rear, system exit when front remaining thermal recover work mode.

III power Thermal Management system with integrated type Thermal Management controller for core, through multiple coolant circuit coupling combined cycle for traction battery, Drive Motor, electronic control assembly perform heat, cooling and remaining thermal recover, allow III power component long-term be in maximum item work temperature, balance high-voltage safety, powertrain Output valid rate and vehicle continue navigation performance.

electric drive coolant pump

Power Up the Vehicle High-voltage System ready, vehicle Control Unit (VCU) HV ready when, electric drive coolant pump according to vehicle operate vehicle and charging not same operating condition perform difference -based control: operate vehicle non- charging operating condition lower, Battery Management System (BMS) high-voltage battery Status not for pre- charging, AC charging, DC charging, boost charging any I mode, when motor rotor temperature large at 90℃, IGBT temperature large at 65℃, Charge/Discharge Power Distribution Unit (CDU) inner part temperature large at 50℃ or vehicle Control Unit (VCU) transmit Powertrain cooling request level for (1, 2, 3, 4) when, Right Front Zone Control Unit (FRZCU) Use PWM side type control electric drive coolant pump operation, if meet sufficient motor rotor temperature low at 85℃, IGBT temperature low at 60℃, Charge/Discharge Power Distribution Unit (CDU) inner part temperature low at 45℃ III item condition same when true, or vehicle Control Unit (VCU) Powertrain cooling request level for 0 when, water pump stop work.

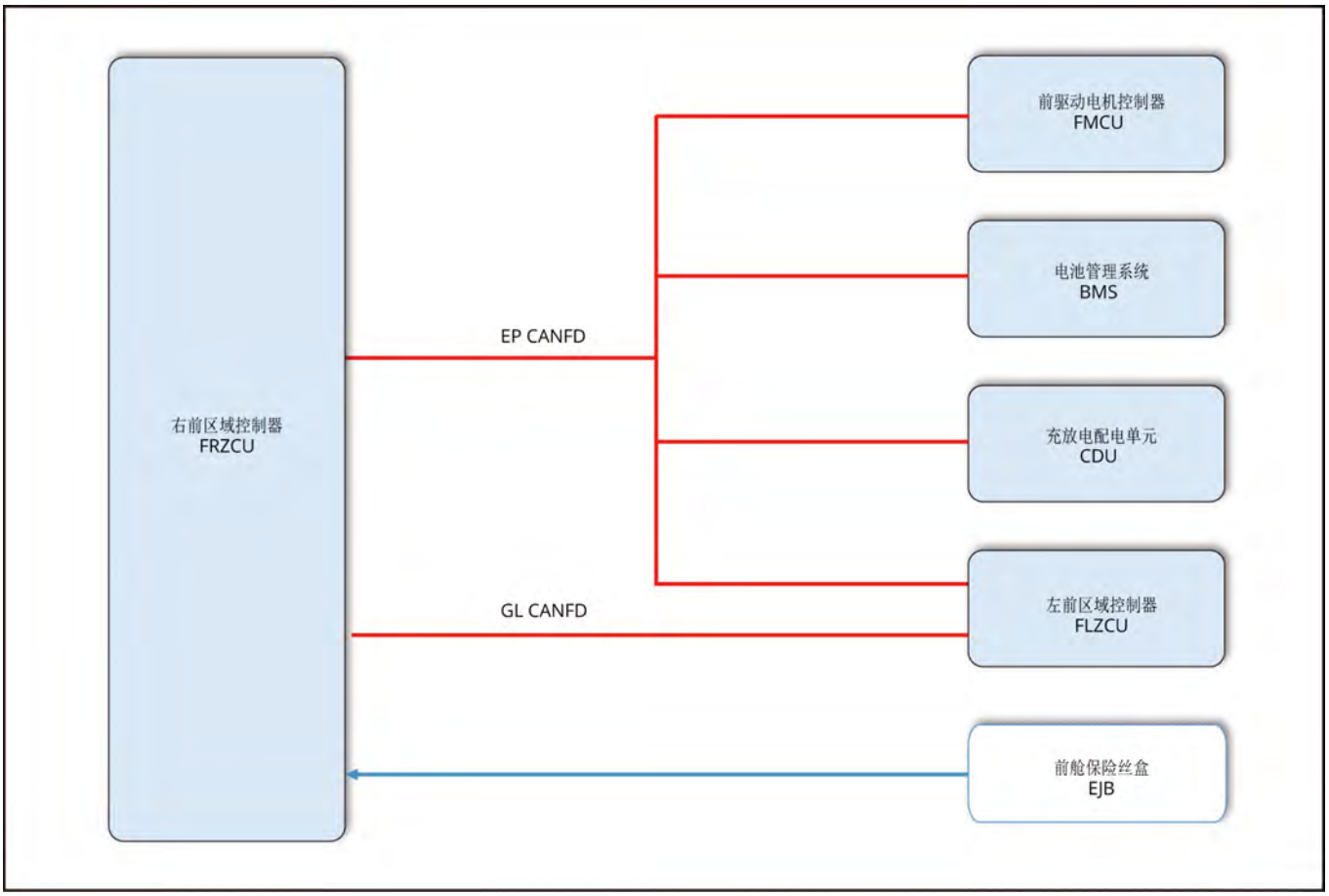
vehicle charging operating condition lower, when Battery Management System (BMS) high-voltage battery Status be in pre- charging, AC charging, DC charging, boost charging any I mode, when Charge/Discharge Power Distribution Unit (CDU) inner part temperature large at 50℃ or vehicle Control Unit (VCU) transmit Powertrain cooling request level for (1, 2, 3, 4) when, Right Front Zone Control Unit (FRZCU) Use PWM side type again control electric drive coolant pump open. two type operating condition lower, electric drive coolant pump open rear, all based on vehicle Control Unit (VCU) transmit powertrain cooling request level, through check meter matching corresponding water pump work duty cycle.

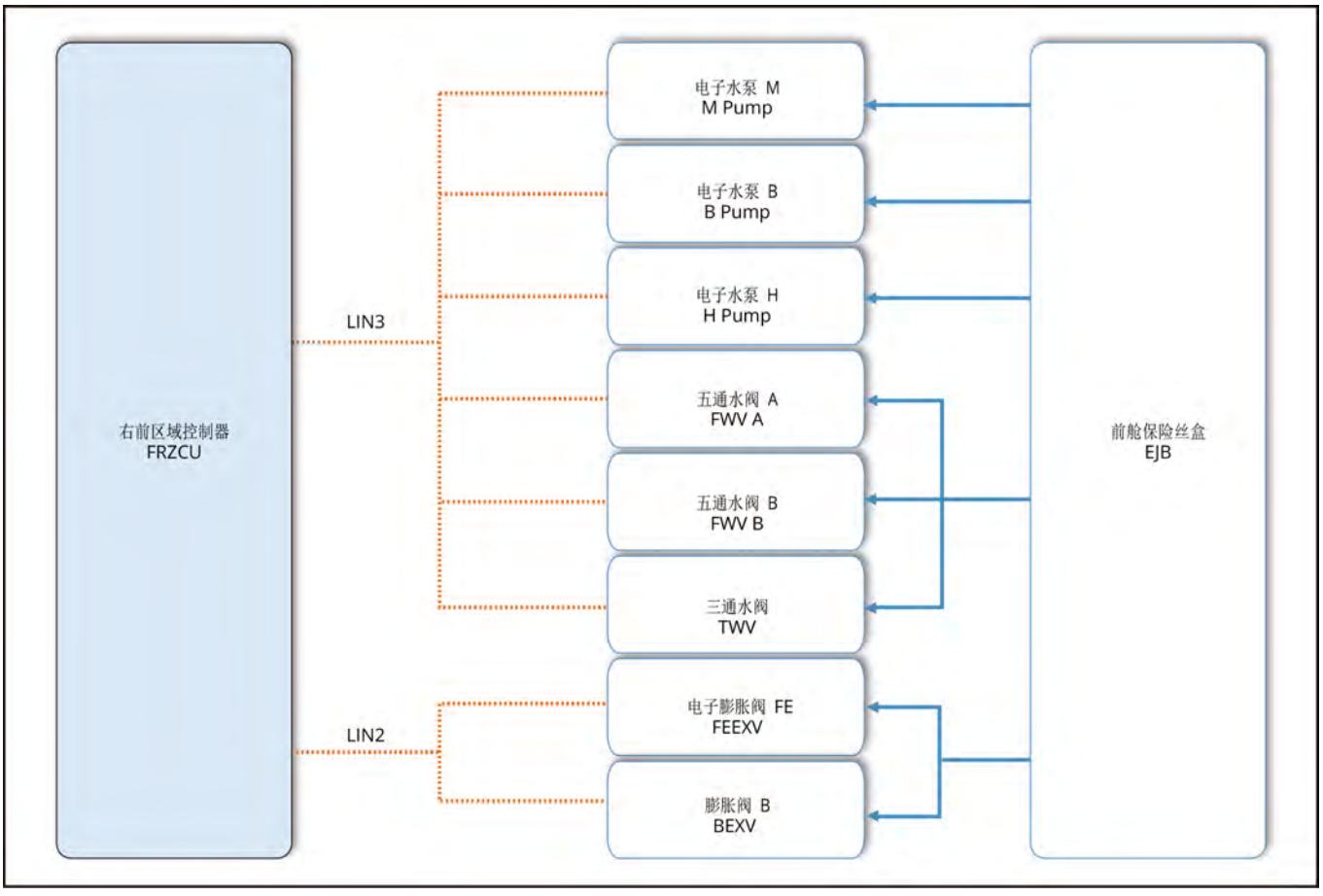
Electric Cooling Fan

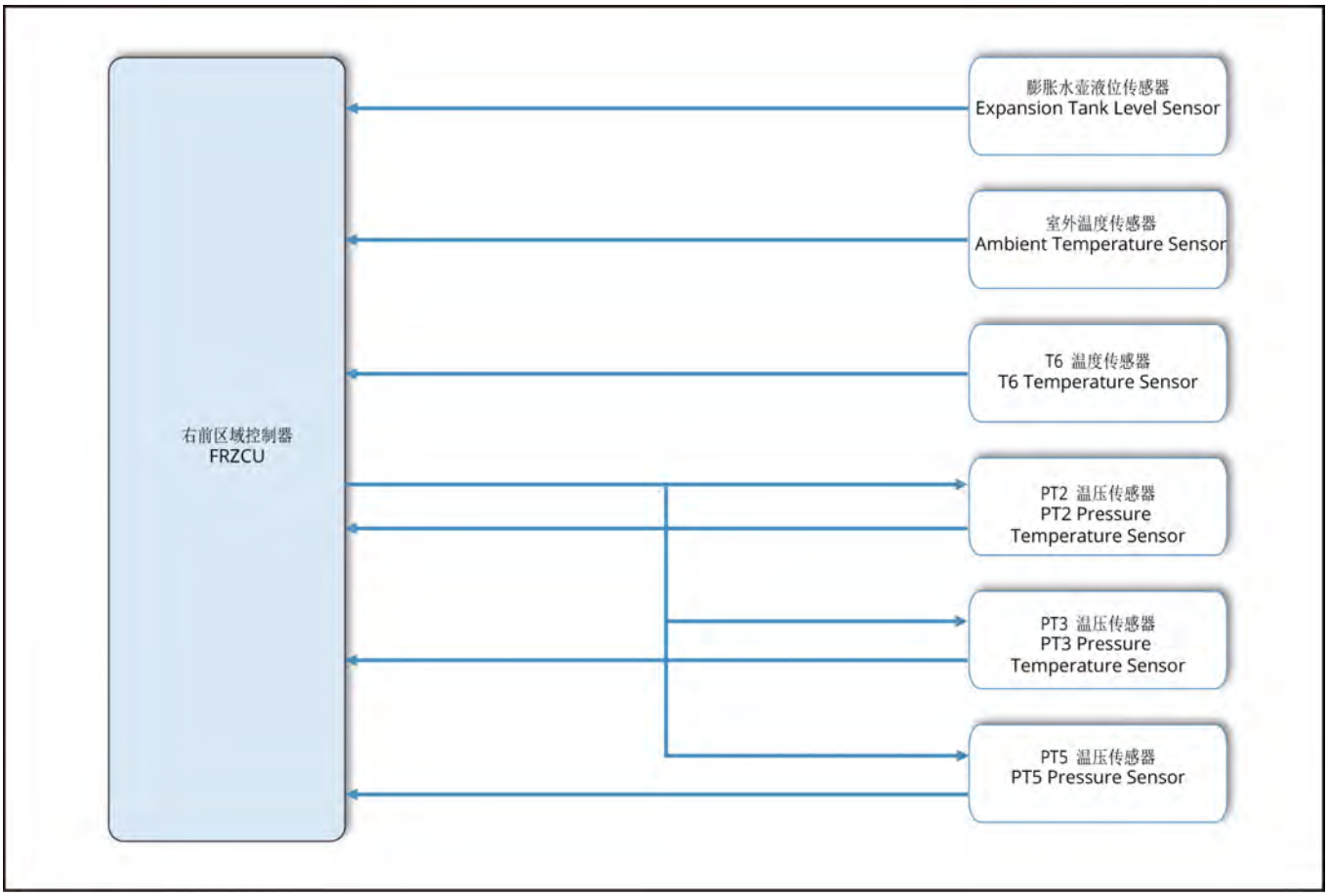
Electric Cooling Fan cooling Function with Power Up the Vehicle High-voltage System for front position, can by III power system (motor rotor temperature ≥90℃, IGBT temperature ≥65℃, CDU inner part temperature ≥50℃) or A/C compressor need request trigger start; Fan duty cycle through III power water outlet temperature, Vehicle Speed, A/C high-voltage pressure, ambient temperature multiple maintain check meter coupling combined calculate obtain output. normal specification operating condition need coolant temperature return drop to 52℃ below and A/C disabled side can shutdown; if this front occur III power overheating, then according to water outlet temperature perform 30s–120s not etc. 65% duty cycle delay when heat dissipation, fully release system remaining thermal, ensure electric drive and electronic control component can rely on characteristic.

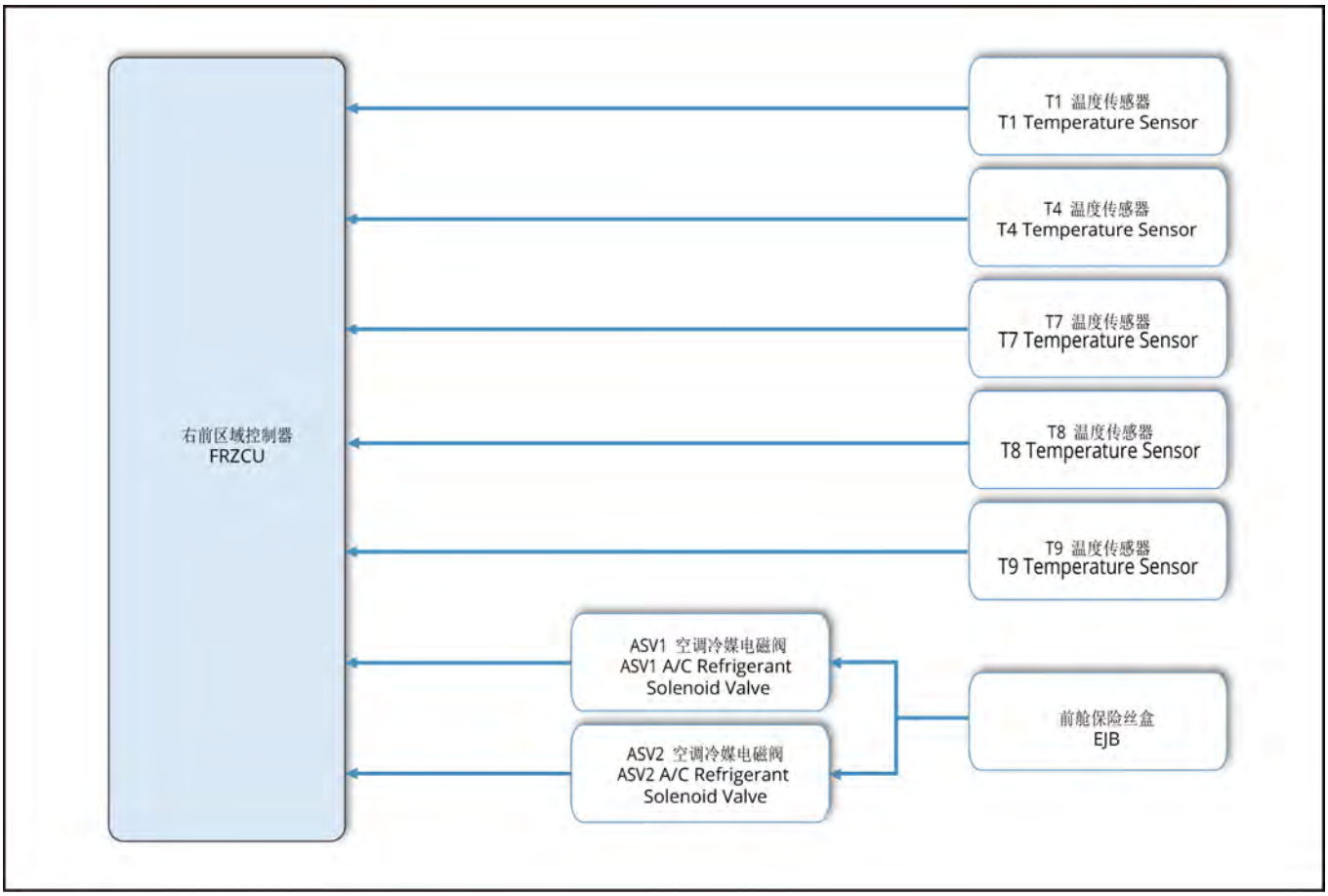
Electrical Schematic Diagram

thermal pump


右前区域控制器
FRZCU
EP CANFD
GL CANFD
前驱动电机控制器
FMCU
电池管理系统
BMS
充放电配电单元
CDU
左前区域控制器
FLZCU
前舱保险丝盒
EJB

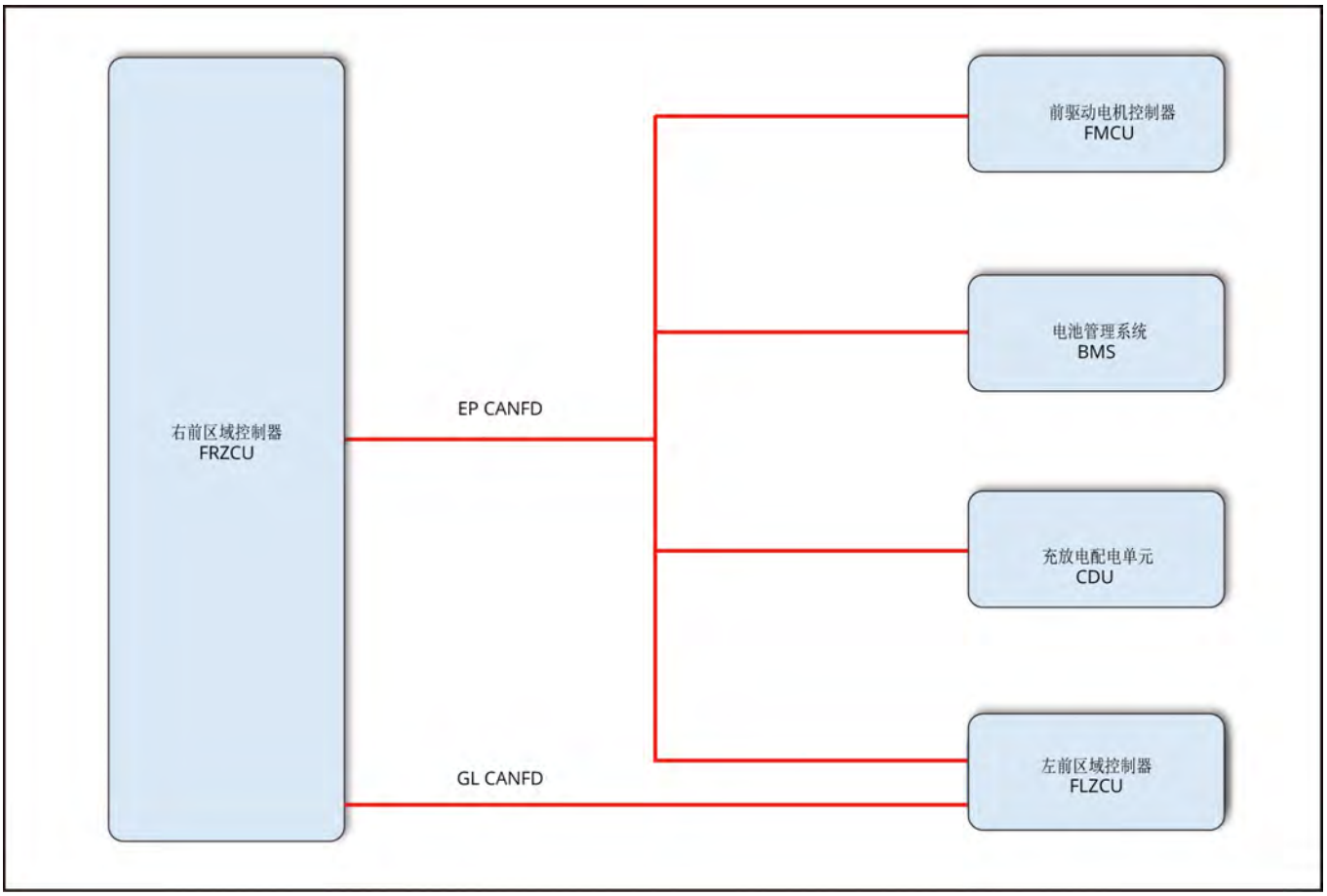

右前区域控制器
FRZCU
LIN3
LIN2
电子水泵 M
M Pump
电子水泵 B
B Pump
电子水泵 H
H Pump
五通水阀 A
FWV A
五通水阀 B
FWV B
三通水阀
TWV
电子膨胀阀 FE
FEEXV
膨胀阀 B
BEXV
前舱保险丝盒
EJB

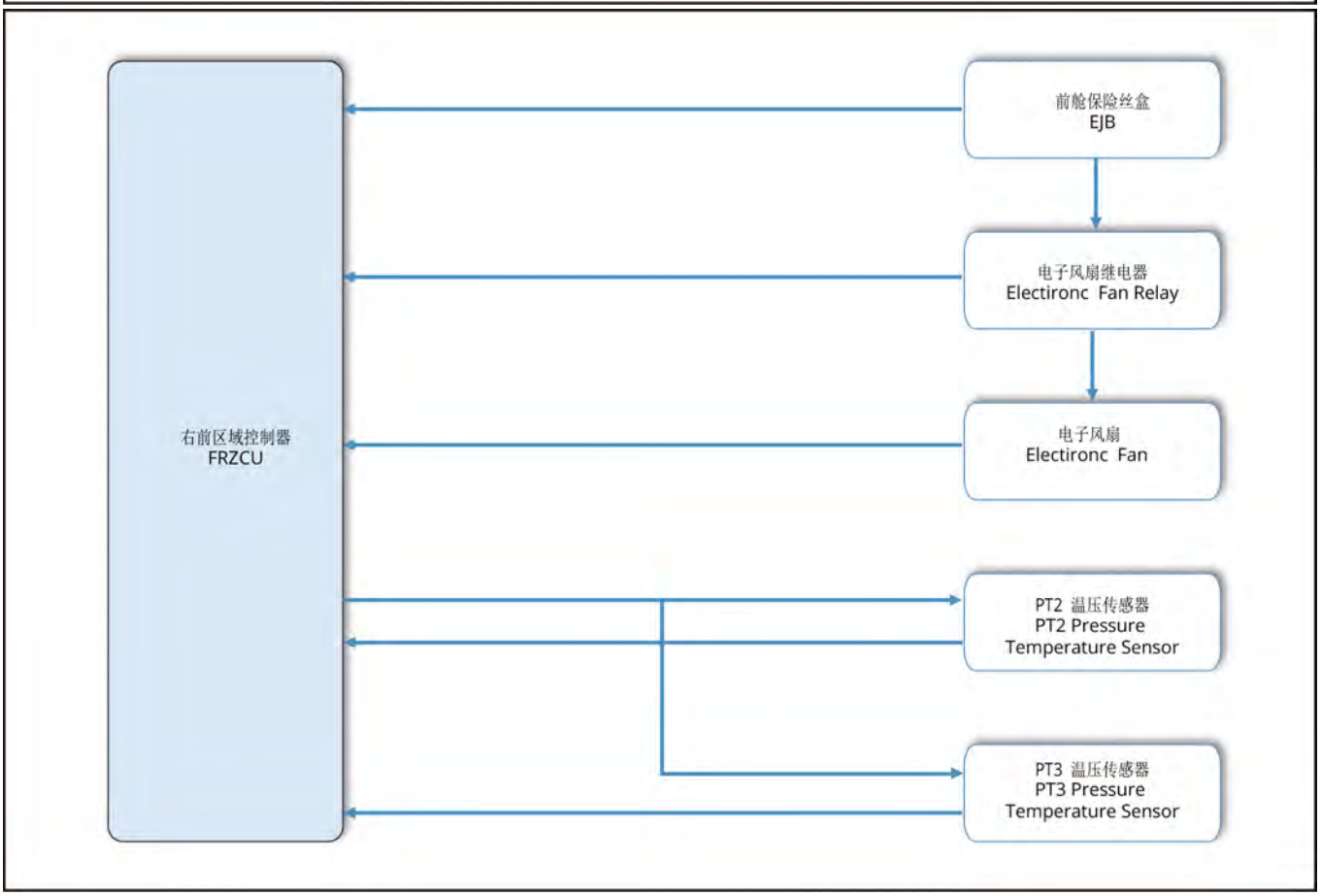

右前区域控制器
FRZCU
膨胀水壶液位传感器
Expansion Tank Level Sensor
室外温度传感器
Ambient Temperature Sensor
T6 温度传感器
T6 Temperature Sensor
PT2 温压传感器
PT2 Pressure
Temperature Sensor
PT3 温压传感器
PT3 Pressure
Temperature Sensor
PT5 温压传感器
PT5 Pressure Sensor

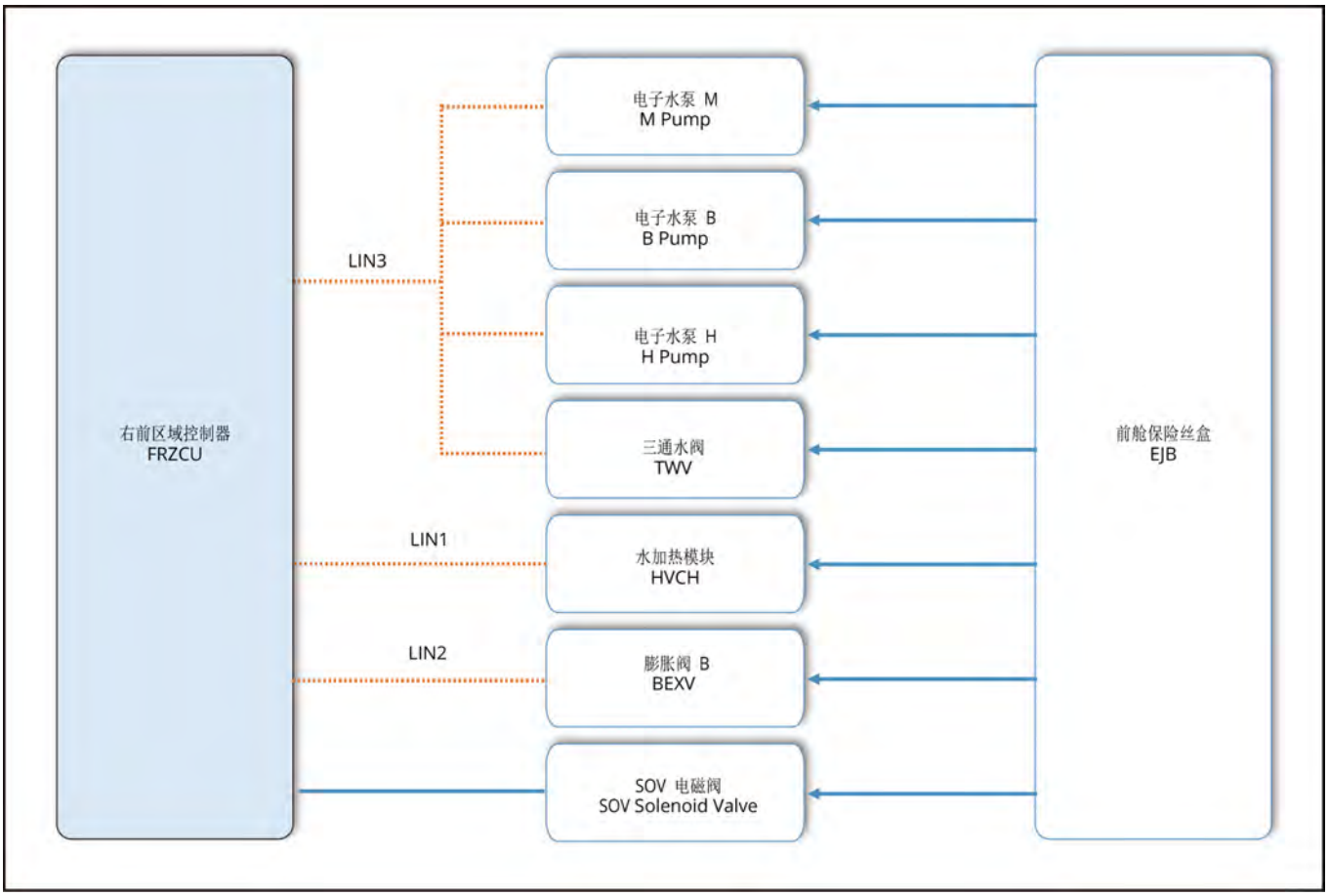

右前区域控制器
FRZCU
T1 温度传感器
T1 Temperature Sensor
T4 温度传感器
T4 Temperature Sensor
T7 温度传感器
T7 Temperature Sensor
T8 温度传感器
T8 Temperature Sensor
T9 温度传感器
T9 Temperature Sensor
ASV1 空调冷媒电磁阀
ASV1 A/C Refrigerant
Solenoid Valve
ASV2 空调冷媒电磁阀
ASV2 A/C Refrigerant
Solenoid Valve
前舱保险丝盒
EJB

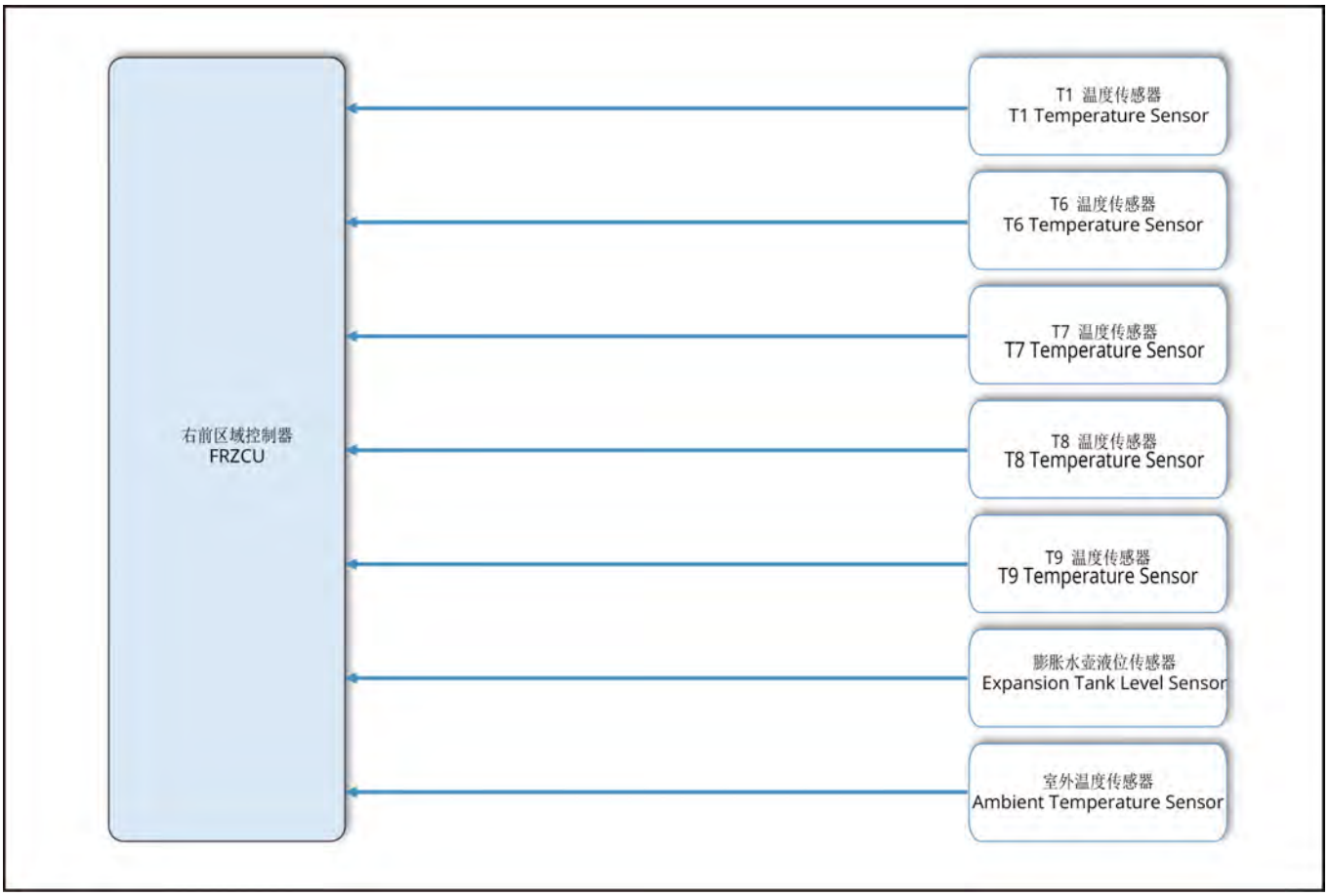

电空调压缩机
EAC
LIN1
水加热模块
HVCH

non- thermal pump









Signal Input/Output List
thermal pump

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	sensor 5V power supply Output
	Hardwired	Level Signal	coolant expansion tank Level Signal Input
	Hardwired	Temperature Signal	Ambient Temperature Sensor Temperature Signal Input
	Hardwired	Temperature Signal	T6 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	PT2 temperature pressure sensor Temperature Signal Input
	Hardwired	Temperature Signal	PT3 temperature pressure sensor Temperature Signal Input
	Hardwired	Temperature Signal	T1 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	T4 temperature sensor Temperature Signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Temperature Signal	T7 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	T8 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	T9 temperature sensor Temperature Signal Input
	Hardwired	Pressure Signal	PT2 temperature pressure sensor Pressure Signal Input
	Hardwired	Pressure Signal	PT3 temperature pressure sensor Pressure Signal Input
	Hardwired	Pressure Signal	PT5 temperature pressure sensor Pressure Signal Input
	Hardwired	Control Signal	ASV1 A/C refrigerant solenoid valve Control Signal Output
	Hardwired	Control Signal	ASV2 A/C refrigerant solenoid valve Control Signal Output
	Hardwired	Control Signal	Electric Cooling Fan duty cycle Control Signal Input
	Hardwired	Control Signal	Electric Cooling Fan relay control signal Input
Front Drive Motor Controller	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Battery Management System	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Charge/Discharge Power Distribution Unit	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Front Compartment Fuse Box	Hardwired	Power Supply	Right Front Zone Control Unit power supply Output
	Hardwired	Power Supply	electronic expansion valve FE power supply Output
	Hardwired	Power Supply	electronic expansion valve B power supply Output
	Hardwired	Power Supply	electronic water pump M power supply Output
	Hardwired	Power Supply	electronic water pump B power supply Output
	Hardwired	Power Supply	electronic water pump H power supply Output
	Hardwired	Power Supply	five channel water valve A power supply Output
	Hardwired	Power Supply	five channel water valve B power supply Output
	Hardwired	Power Supply	III channel water valve power supply Output
	Hardwired	Power Supply	ASV1 A/C refrigerant solenoid valve power supply Output
	Hardwired	Power Supply	ASV2 A/C refrigerant solenoid valve power supply Output
	Hardwired	Power Supply	power A/C compressor power supply Output
	Hardwired	Power Supply	coolant heating unit module power supply Output
	Hardwired	Power Supply	rear heater module power supply Output
	Hardwired	Power Supply	electronic expansion valve O power supply Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Power Supply	electronic expansion valve R power supply Output
	Hardwired	Power Supply	Electric Cooling Fan relay power supply Output
electronic expansion valve FE	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic expansion valve B	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic water pump M	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic water pump B	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic water pump H	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
five channel water valve A	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
five channel water valve B	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
III channel water valve	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
coolant expansion tank fluid level sensor	Hardwired	Level Signal	Right Front Zone Control Unit Level Signal Output
Ambient Temperature Sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit compartment outer Temperature Signal Output
T6 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T6 Temperature Signal Output
PT2 temperature pressure sensor	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Input
	Hardwired	Temperature Signal	Right Front Zone Control Unit PT2 Temperature Signal Output
	Hardwired	Pressure Signal	Right Front Zone Control Unit PT2 Pressure Signal Output
PT3 temperature pressure sensor	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Input
	Hardwired	Temperature Signal	Right Front Zone Control Unit PT3 Temperature Signal Output
	Hardwired	Pressure Signal	Right Front Zone Control Unit PT3 Pressure Signal Output
PT5 temperature pressure sensor	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Input
	Hardwired	Pressure Signal	Right Front Zone Control Unit PT5 Pressure Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
T1 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T1 Temperature Signal Output
T4 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T4 Temperature Signal Output
T7 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T7 Temperature Signal Output
T8 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T8 Temperature Signal Output
T9 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T9 Temperature Signal Output
ASV1 A/C refrigerant solenoid valve	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
ASV2 A/C refrigerant solenoid valve	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
power A/C compressor	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Coolant Heater Module	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
rear heat module	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
electronic expansion valve O	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic expansion valve R	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Electric Cooling Fan relay	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Output
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	Electric Cooling Fan power supply Output
Electric Cooling Fan	Hardwired	Power Supply	Electric Cooling Fan relay power supply Input
	Hardwired	Control Signal	Right Front Zone Control Unit duty cycle Control Signal Output

non- thermal pump

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	sensor 5V power supply Output
	Hardwired	Level Signal	coolant expansion tank Level Signal Input
	Hardwired	Temperature Signal	Ambient Temperature Sensor Temperature Signal Input
	Hardwired	Temperature Signal	PT3 temperature pressure sensor Temperature Signal Input
	Hardwired	Temperature Signal	T1 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	T6 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	T7 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	T8 temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	T9 temperature sensor Temperature Signal Input
	Hardwired	Pressure Signal	PT2 temperature pressure sensor Pressure Signal Input
	Hardwired	Pressure Signal	PT3 temperature pressure sensor Pressure Signal Input
	Hardwired	Control Signal	SOV valve Control Signal Output
	Hardwired	Control Signal	Electric Cooling Fan duty cycle Control Signal Input
	Hardwired	Control Signal	Electric Cooling Fan relay control signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Front Drive Motor Controller	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Battery Management System	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Charge/Discharge Power Distribution Unit	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Left Front Zone Control Unit	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Front Compartment Fuse Box	Hardwired	Power Supply	Right Front Zone Control Unit power supply Output
	Hardwired	Power Supply	electronic expansion valve B power supply Output
	Hardwired	Power Supply	electronic water pump M power supply Output
	Hardwired	Power Supply	electronic water pump B power supply Output
	Hardwired	Power Supply	electronic water pump H power supply Output
	Hardwired	Power Supply	III channel water valve power supply Output
	Hardwired	Power Supply	SOV solenoid valve power supply Output
	Hardwired	Power Supply	coolant heating unit module power supply Output
	Hardwired	Power Supply	Electric Cooling Fan relay power supply Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
electronic expansion valve B	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic water pump M	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic water pump B	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic water pump H	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
III channel water valve	LIN3	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
coolant expansion tank fluid level sensor	Hardwired	Level Signal	Right Front Zone Control Unit Level Signal Output
Ambient Temperature Sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit compartment outer Temperature Signal Output
PT2 temperature pressure sensor	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Input
	Hardwired	Temperature Signal	Right Front Zone Control Unit PT2 Temperature Signal Output
	Hardwired	Pressure Signal	Right Front Zone Control Unit PT2 Pressure Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
PT3 temperature pressure sensor	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Input
	Hardwired	Pressure Signal	Right Front Zone Control Unit PT3 Pressure Signal Output
T1 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T1 Temperature Signal Output
T6 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T6 Temperature Signal Output
T7 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T7 Temperature Signal Output
T8 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T8 Temperature Signal Output
T9 temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit T9 Temperature Signal Output
SOV A/C refrigerant solenoid valve	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
Coolant Heater Module	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Electric Cooling Fan relay	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Output
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	Electric Cooling Fan power supply Output
Electric Cooling Fan	Hardwired	Power Supply	Electric Cooling Fan relay power supply Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Right Front Zone Control Unit duty cycle Control Signal Output

Component Description

coolant expansion tank assembly

belongs to at vehicle III power cooling system core storage pressure compensation fluid component. item temperature change characteristic plastic injection-moulded housing, section upper housing, lower housing ultrasonic welding form type, inner part with add strength item, air guide isolate cavity, except air overflow flow channel; outer wall moment print MIN maximum low fluid level, MAX maximum high fluid level moment degree line, pre- retain line plug connect fitting, vehicle sheet metal retaining bracket / clip.

package including sensor bottom seat, dry spring pipe / Hall sensing should probe head, floating movement magnetic loop floating sub-; fluid level low at threshold when direction VCU / Instrument Pack transmit low fluid level alarm signal, missing water elastic window remind.

Electric Cooling Fan assembly

new can source vehicle same when use at motor, electronic control, traction battery circuit heat dissipation. I body type injection-moulded air guide frame bracket, wrap Fan impeller, approximately harness air flow side direction, improve air pressure and heat dissipation valid rate, pre- retain radiator support retaining clip, motor install support seat, damping buffer point position.

water warm power heat assembly

water warm type PTC power heater assembly (coolant PTC heat assembly) should use scenario: vehicle item item for traction battery, Drive Motor, electronic control system, driving compartment Heater circuit heat protection freeze fluid, replace burn oil vehicle engine remaining thermal heating.

electronic water pump

coolant no flash electronic water pump assembly section category: traction battery circuit electronic water pump, electric drive movement system circuit electronic water pump, thermal pump circuit assist electronic water pump.

electronic control five communication coolant valve

III power Thermal Management system coolant circuit section flow perform component, use at switch replace traction battery cooling circuit, electric drive movement high temperature circuit, PTC heat circuit, radiator circuit, thermal pump Chiller replace thermal circuit coolant flow direction and flow amount distribution.

coolant temperature sensor

electric drive cooling circuit, traction battery water cold circuit, integrated thermal management module coolant circuit measure point, acquire protection freeze fluid actual when temperature, to ECU/VCU/ Thermal Management controller provide temperature control closed loop based on.

PT sensor

PT(temperature pressure I body P+T) sensor complete complete component technical item description, should use Location: Thermal Management five communication valve / 8 communication valve valve body, electronic water pump inlet water outlet port, radiator line, panel type Chiller replace thermal unit, traction battery cooling circuit pipe channel, synchronization acquire coolant circuit pressure and item substance temperature.

Repair Procedure

Coolant Expansion Tank Assembly, Repair Procedure

Warning

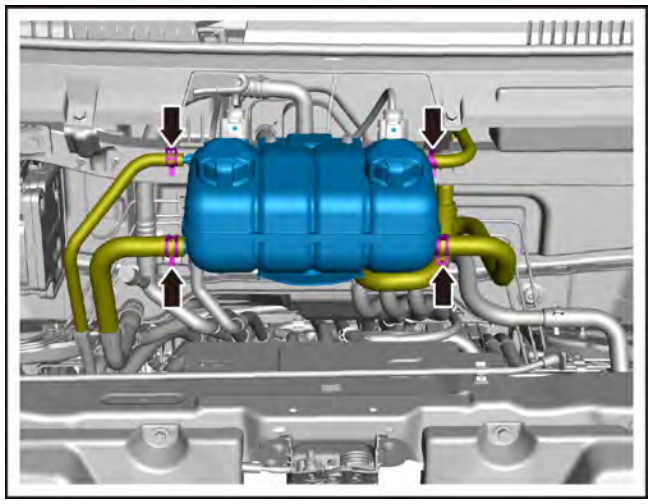
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

for avoid is item injury, in cooling system not cooling front, not obtain remove coolant expansion tank cover. if result in Drive Motor and radiator not cooling when, remove coolant expansion tank cover, cooling system will release roll item high-voltage fluid body and evaporate vehicle, may will cause person person item injury.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



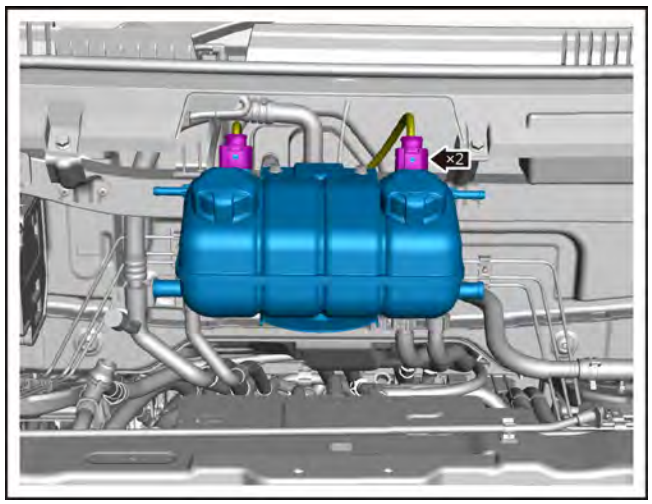
2 release coolant expansion tank assembly connect coolant hose.

a. evacuate coolant expansion tank assembly coolant.

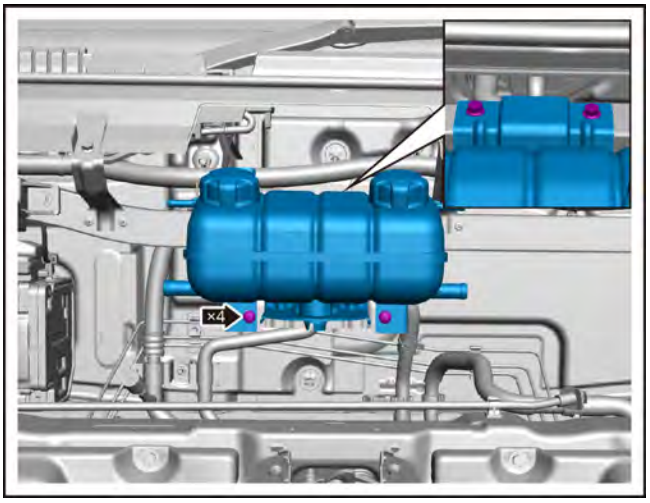
b. Remove 4 retaining clamp, release coolant expansion tank assembly connect coolant hose.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



3 Disconnect 2 coolant expansion tank assembly wiring harness connectors.



4 Remove 4 retaining bolt, remove coolant expansion tank assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

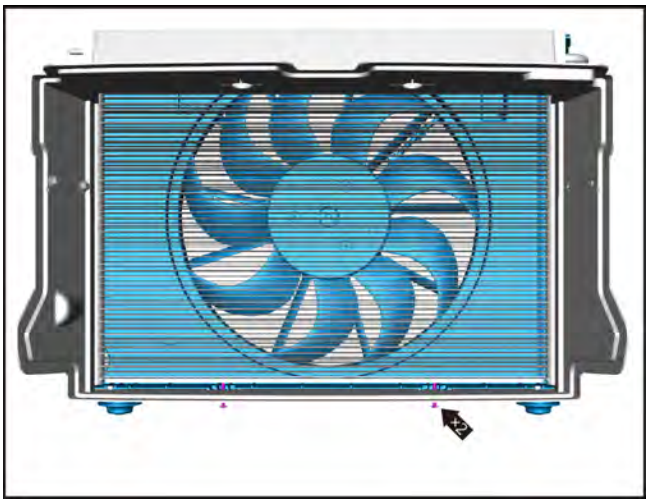
2 fill coolant. refer to:Coolant Draining and Filling

Electric Cooling Fan Assembly, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps



1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

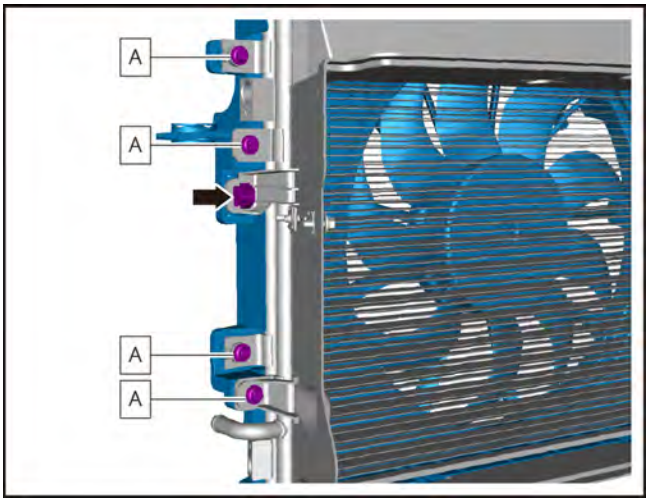
3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Drain the coolant. Refer to:coolant drain with fill

5 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

6 Remove radiator assembly. Refer to:Radiator Assembly, Removal and Installation

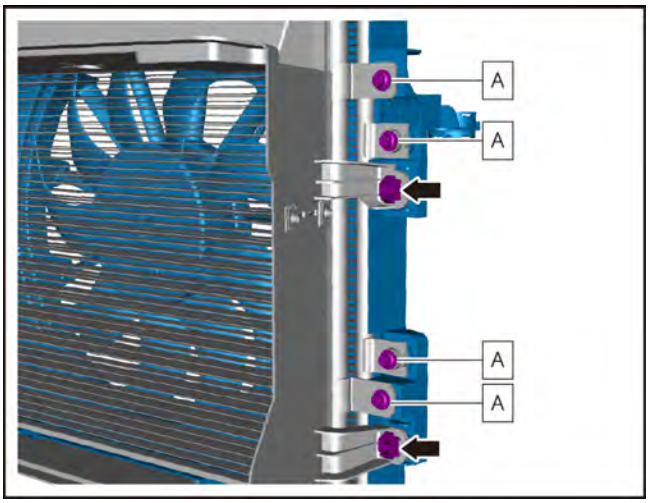
7 Remove Electric Cooling Fan assembly 2 retaining clip.



8 Remove Electric Cooling Fan assembly right fastener.

a. Remove power Fan assembly right 4 retaining bolt A.

b. Release Electric Cooling Fan assembly right retaining clip.



9 remove Electric Cooling Fan assembly.

a. Remove Electric Cooling Fan assembly left 4 retaining bolt A.

b. release left 2 retaining clip, remove Electric Cooling Fan assembly.

install procedure

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Radiator Assembly, Removal and Installation

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Drain the coolant. Refer to:Coolant Draining and Filling

5 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

6 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

7 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

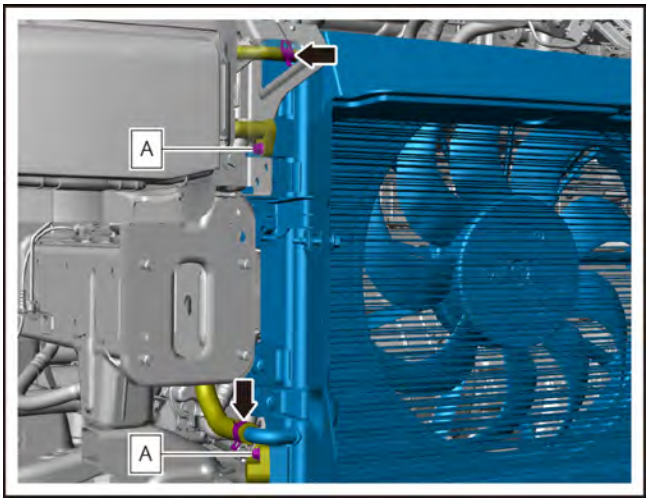
8 Remove front anti-collision beam assembly. Refer to:Front Anti-Collision Beam Assembly, Repair Procedure

9 Remove subframe collision avoidance assembly. Refer to:Subframe Collision Avoidance Assembly, Repair Procedure

10 Remove tweeter. Refer to:Tweeter, Repair Procedure

11 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

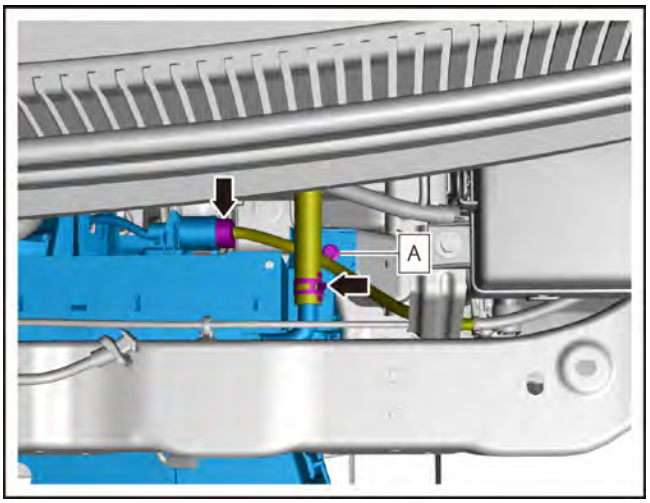
12 Remove front end support bracket. Refer to:Front Frame Bracket Support, Repair Procedure



13 release radiator assembly line.

a. Remove 2 retaining bolt A, release condenser connect line.

b. Remove 2 retaining clamp, release radiator assembly connect coolant hose.

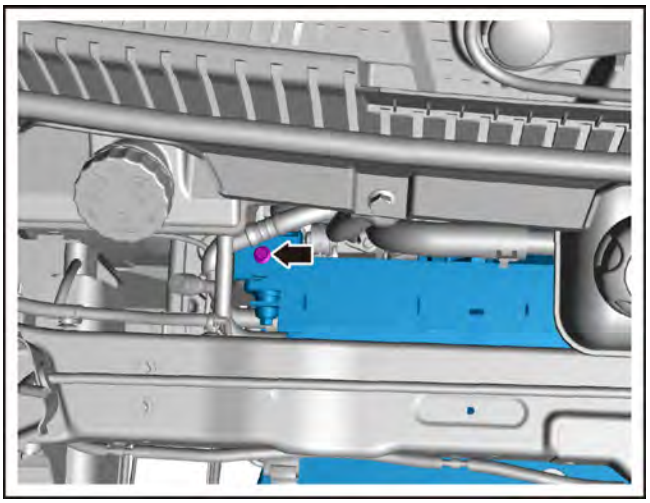


14 Disconnect radiator assembly wiring harness connector.

a. Remove retaining clamp, release Low-temperature Radiator Inlet Hose Assembly.

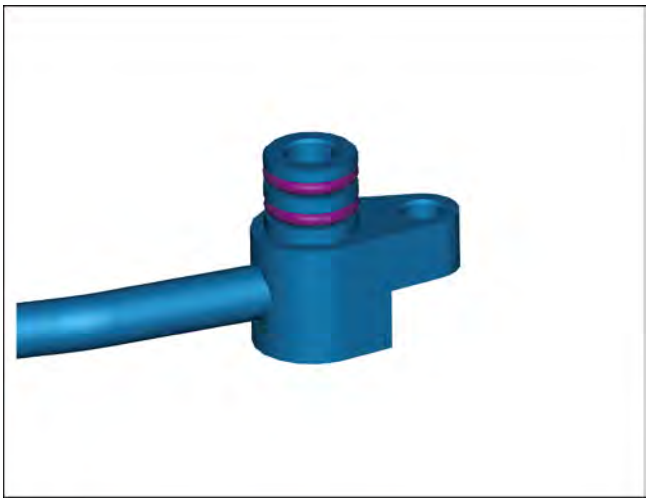
b. Disconnect radiator assembly wiring harness connector.

c. Remove radiator assembly retaining bolt A.



15 Remove retaining bolt, remove radiator assembly.

Installation Steps



1 Observe the following points, then install in the reverse order of removal.

2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Radiator Assembly, Repair Procedure

Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the coolant. Refer to:Coolant Draining and Filling

4 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

5 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

6 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

7 Remove front anti-collision beam assembly. Refer to:Front Anti-Collision Beam Assembly, Repair Procedure

8 Remove subframe collision avoidance assembly. Refer to:Subframe Collision Avoidance Assembly, Repair Procedure

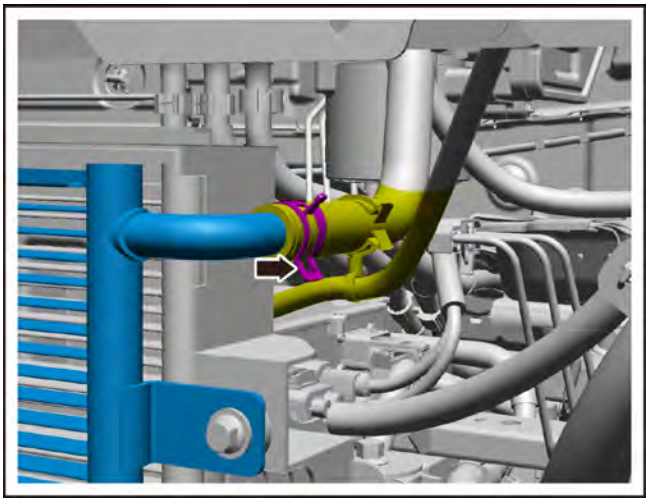
9 Remove tweeter. Refer to:Tweeter, Repair Procedure

10 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

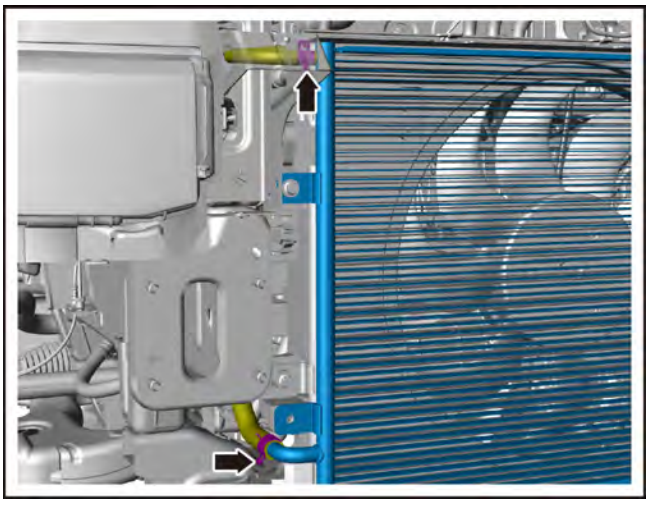
11 Remove front frame bracket support. Refer to:Front Frame Bracket Support, Repair Procedure

12 Remove air guide cover assembly 1. Refer to:Air Guide Cover Assembly 1, Repair Procedure

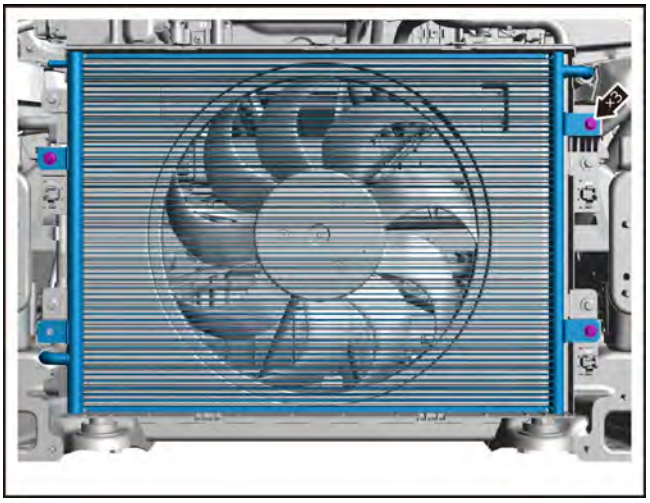
13 Remove air guide cover assembly 2. Refer to:Air Guide Cover Assembly 2, Repair Procedure



14 Remove retaining clamp, release Low-temperature Radiator Inlet Hose Assembly.



15 Remove 2 retaining clamp, release radiator assembly upper lower connect coolant hose.



16 Remove 3 retaining bolt, remove radiator assembly.

install procedure

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Air Guide Cover Assembly 1, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

4 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

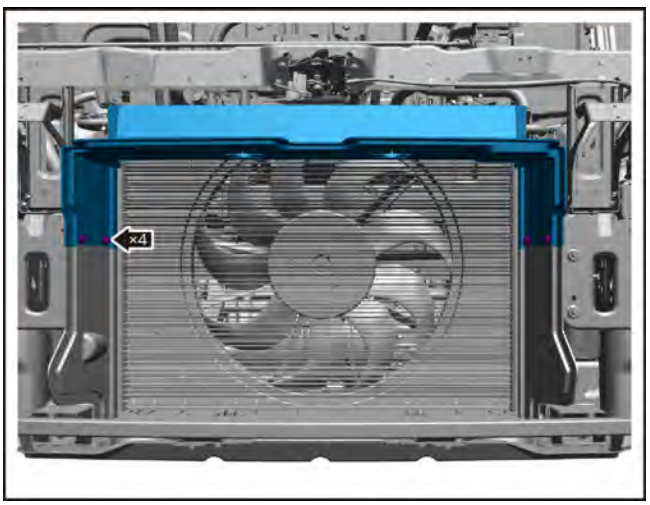
5 Remove tweeter. Refer to:Tweeter, Repair Procedure

6 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

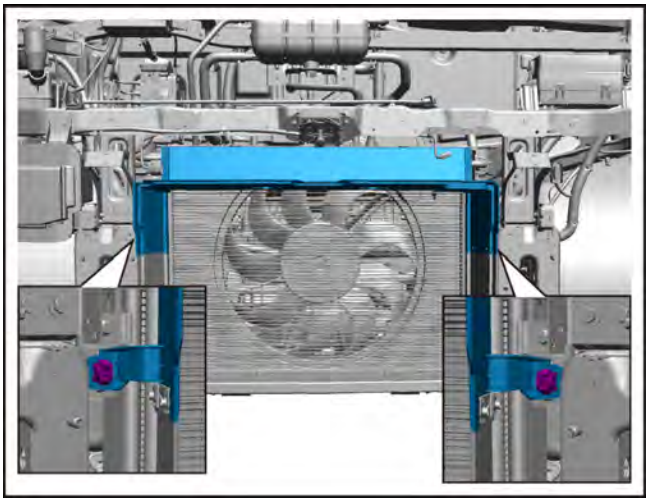
7 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

8 Remove front anti-collision beam assembly. Refer to:Front Anti-Collision Beam Assembly, Repair Procedure

9 Remove front frame bracket support. Refer to:Front Frame Bracket Support, Repair Procedure



10 Remove air guide cover assembly 1(4) retaining bolt.



11 release 2 retaining clip, remove air guide cover assembly 1.

install procedure

1 Install in the reverse order of removal.

Air Guide Cover Assembly 2, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

4 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

5 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

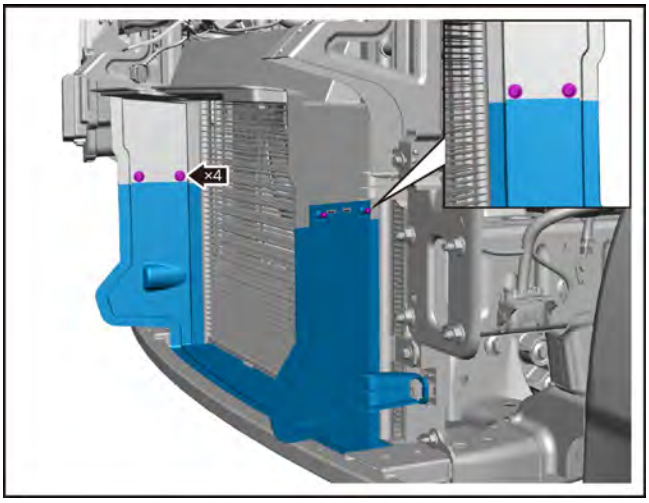
6 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

7 Remove front anti-collision beam assembly. Refer to:Front Anti-Collision Beam Assembly, Repair Procedure

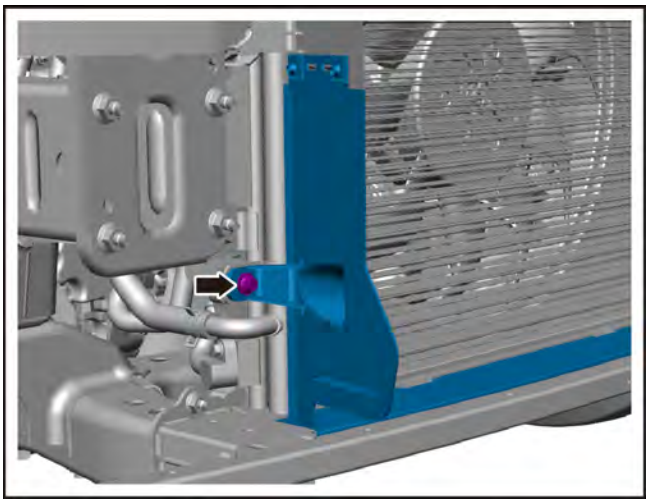
8 Remove tweeter. Refer to:Tweeter, Repair Procedure

9 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

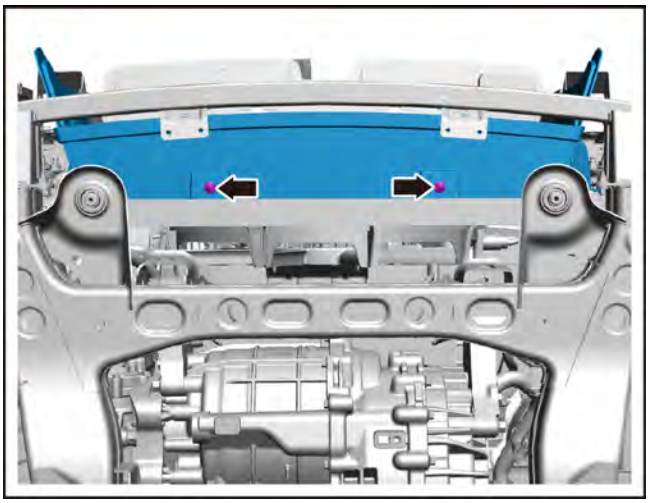
10 Remove front frame bracket support. Refer to:Front Frame Bracket Support, Repair Procedure



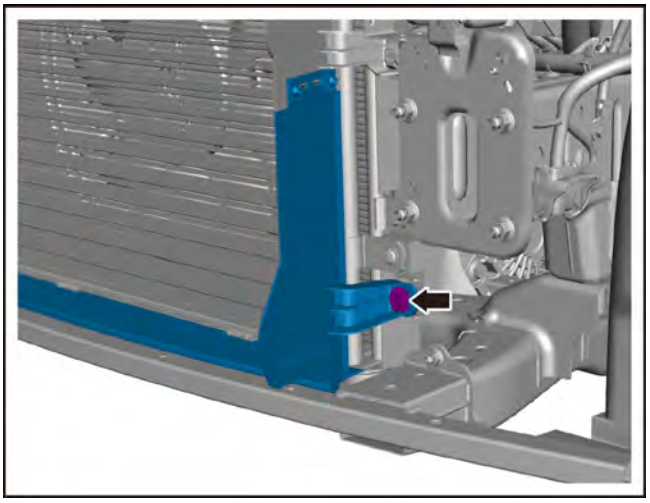
11 Remove air guide cover assembly 2(4) retaining bolt.



12 Remove air guide cover assembly 2 retaining bolt.



13 Remove air guide cover assembly 2(2) retaining clip.



14 release retaining clip, remove air guide cover assembly 2.

Installation Steps

1 Install in the reverse order of removal.

Water Warm Power Heat Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

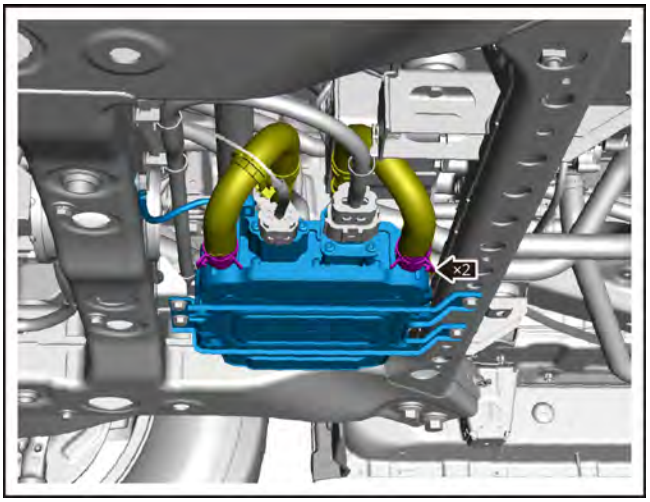
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure



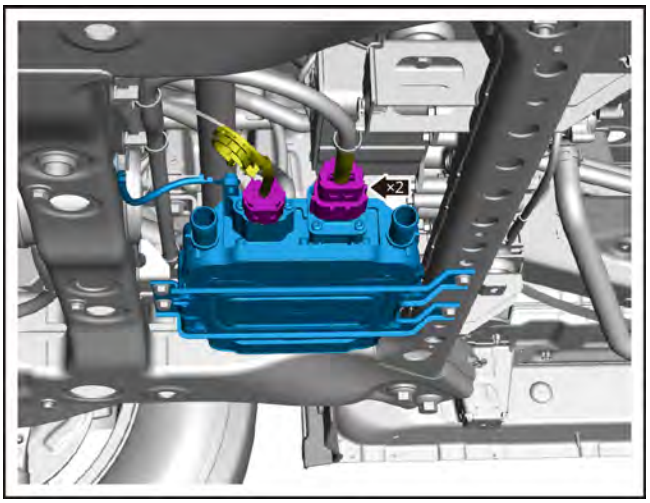
4 release water warm power heat assembly connect coolant hose.

a. Remove water warm power heat assembly connect coolant hose 2 clamp.

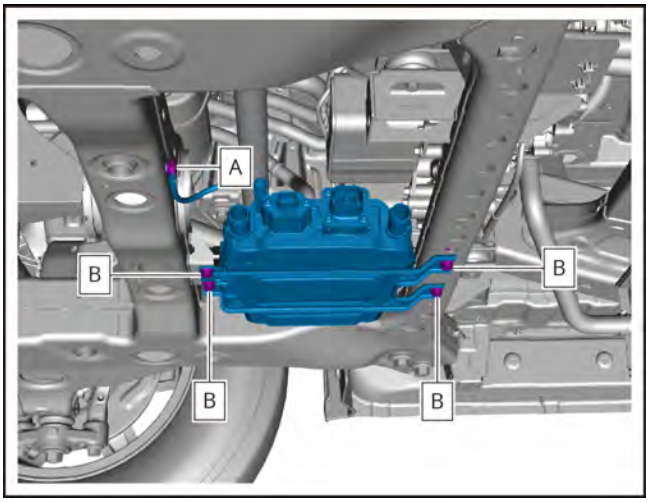
b. UseHose Pinch-off Pliersclamp hold water warm power heat assembly connect coolant hose.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



5 Disconnect 2 water warm power heat assembly wiring harness connectors.



6 remove water warm power heat assembly.

a. Remove water warm power heat assembly negative ground wiring harness retaining bolt A.
Torque:xxx±xxN·m

b. Remove 4 retaining bolt B, remove water warm power heat assembly.
Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Follow-up Work:

Install complete rear, power up test water warm power heat Function, confirm heat valid result normal.

Integrated Thermal Management Module, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

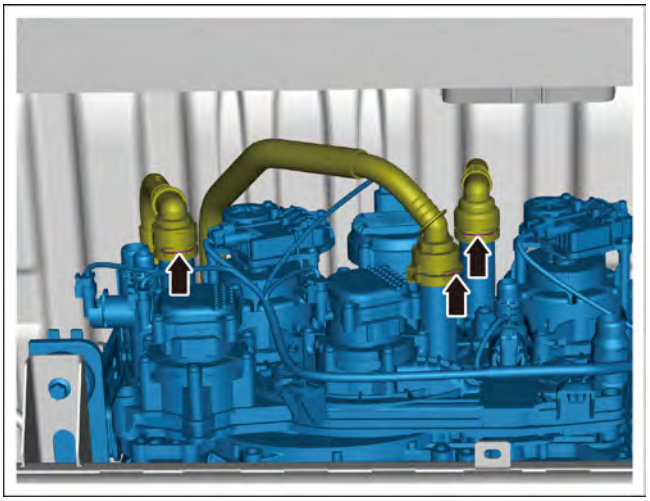
5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

6 Remove Battery Inlet Hose Assembly - Heat-pump A/C. Refer to:Battery Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

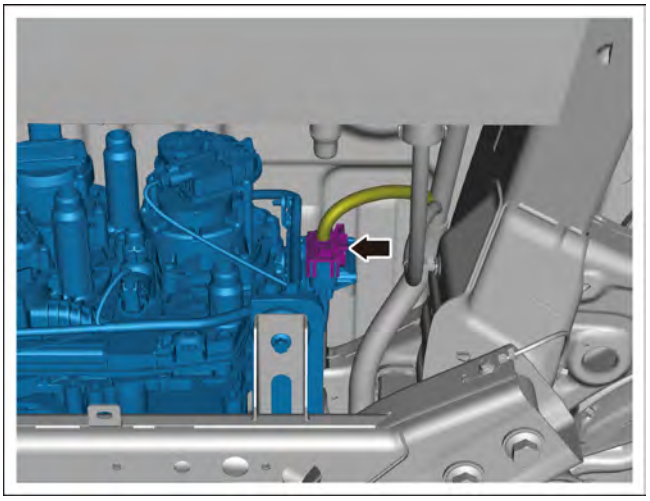
7 Remove Battery Outlet Hose Assembly - Heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

8 Remove PTC inlet pipe assembly - Heat-pump A/C. Refer to:PTC Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

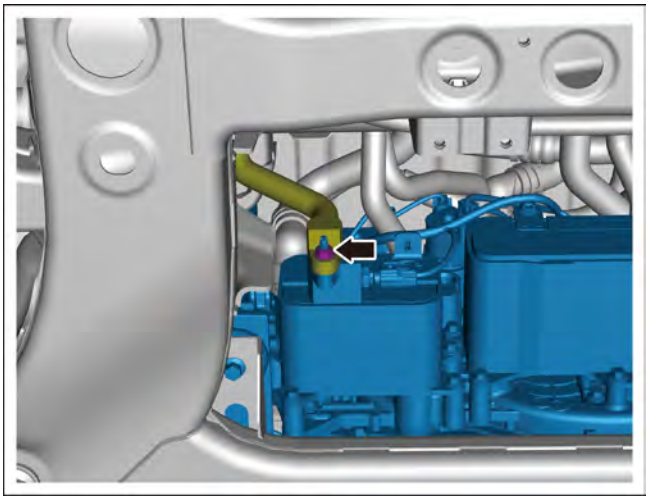
9 Remove PTC outlet pipe assembly - Heat-pump A/C. Refer to:PTC Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure



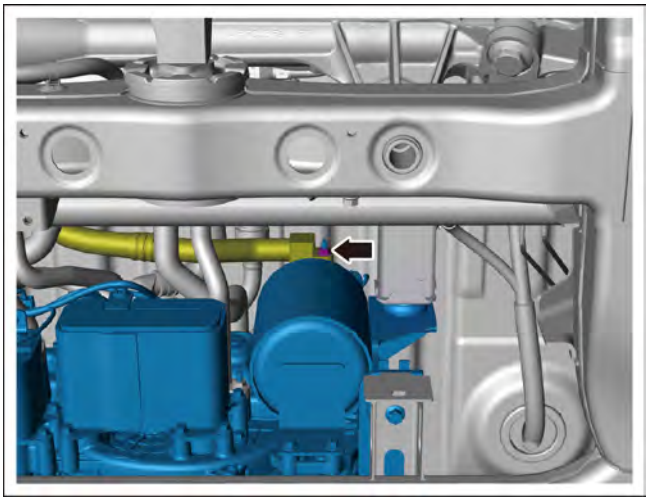
10 release 3 retaining ring, release integrated thermal management module connect coolant hose.



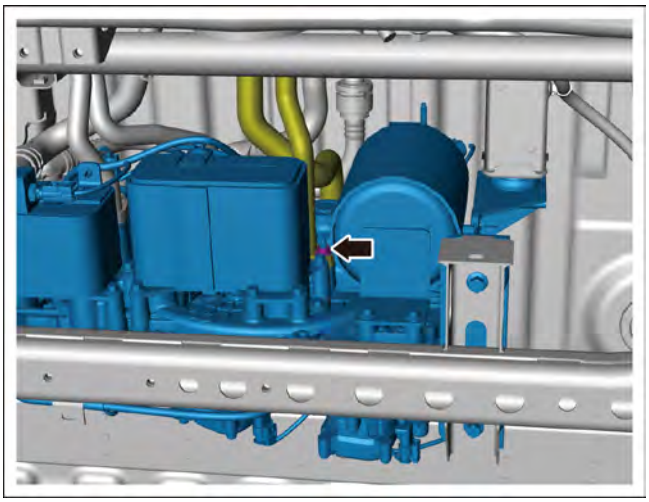
11 Disconnect integrated thermal management module wiring harness connector.



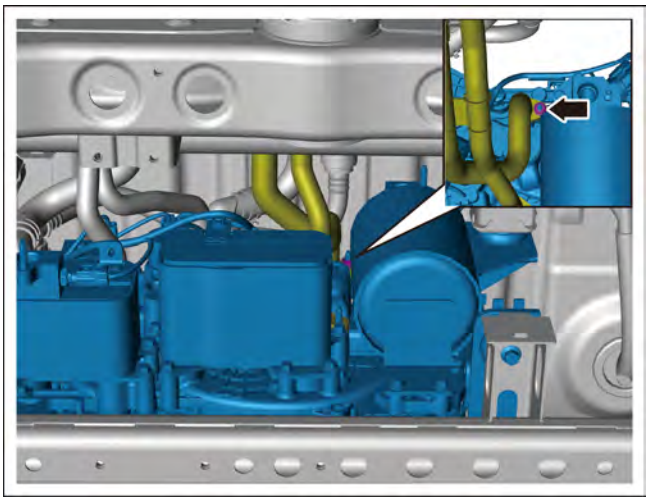
12 Remove retaining nut, release Compressor Discharge Pipe Assembly.



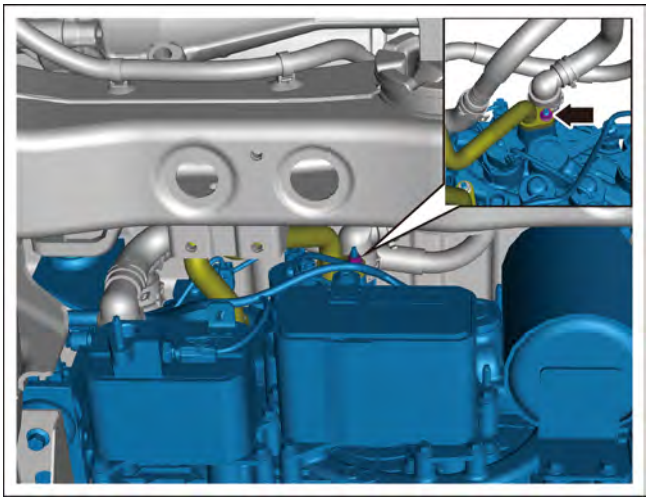
13 Remove retaining bolt, release Compressor Suction Pipe Assembly.



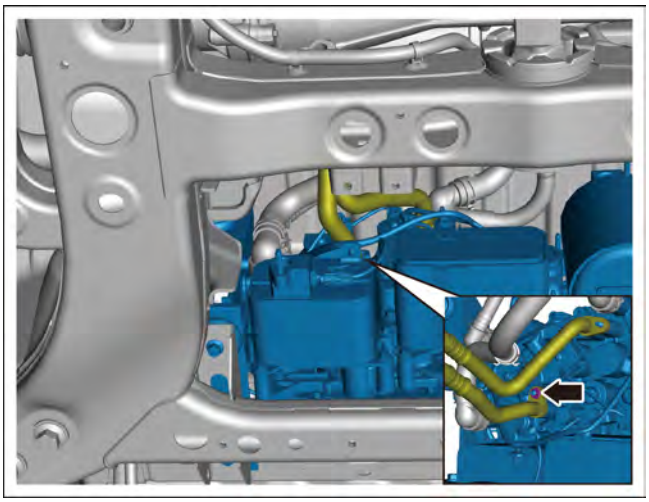
14 Remove retaining nut, release Front A/C Inlet/Outlet Pipe Assembly.



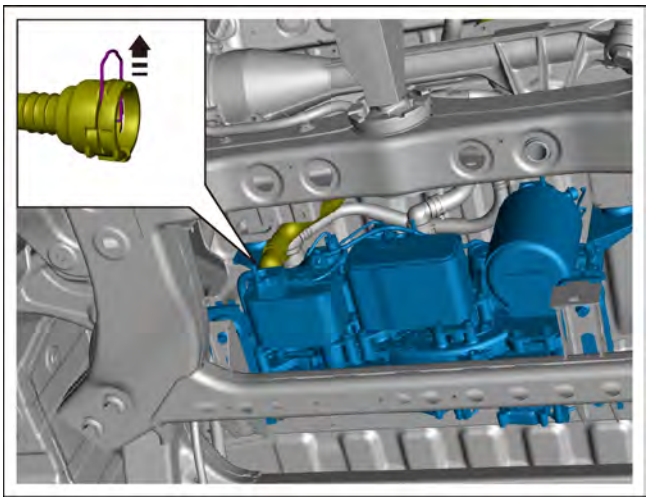
15 Remove retaining nut, release Front A/C Inlet/Outlet Pipe Assembly.



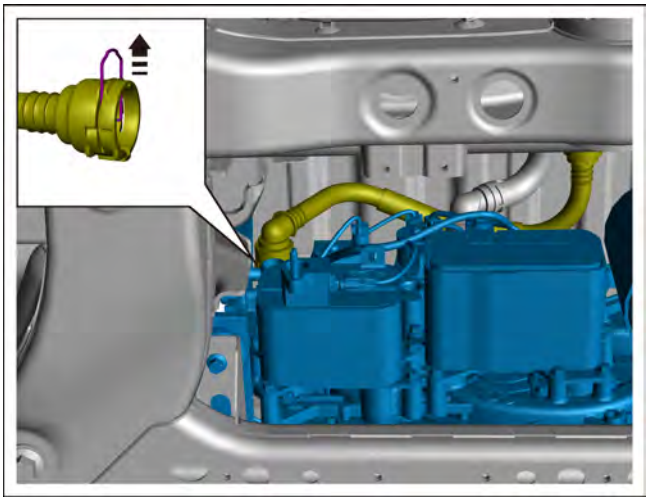
16 Remove retaining nut, release Condenser Inlet Pipe Assembly.



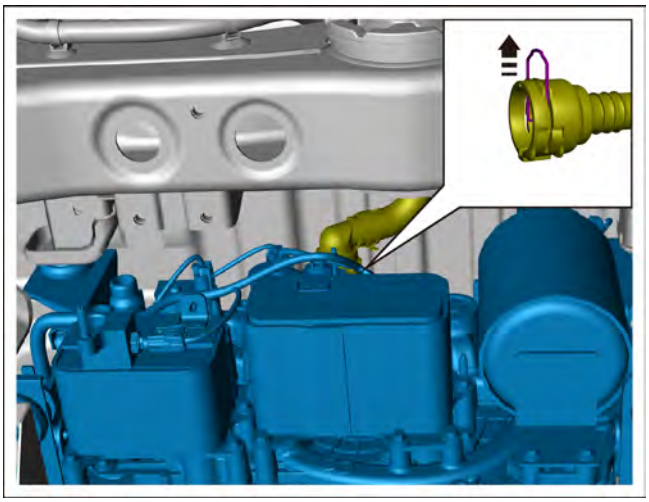
17 Remove retaining nut, release Condenser Inlet Pipe Assembly.



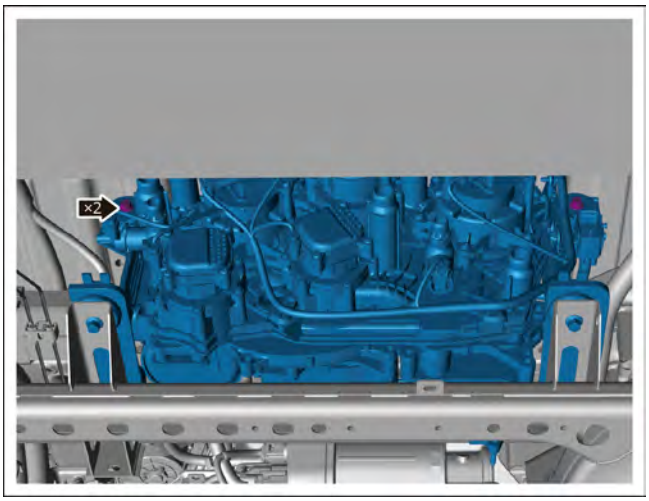
18 release retaining ring, release Low-temperature Radiator Inlet Hose Assembly.



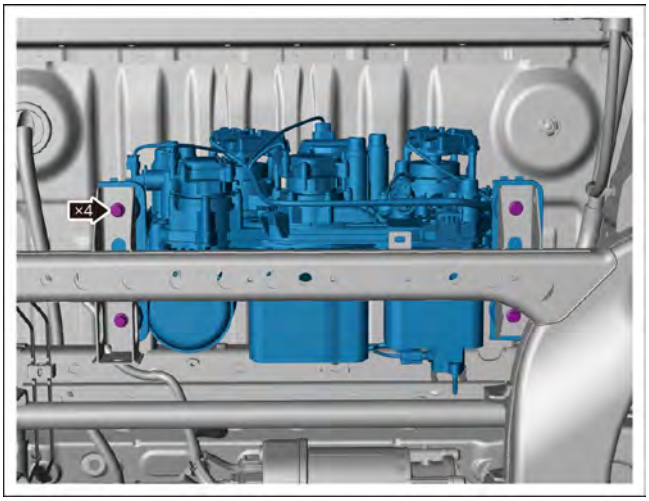
19 release retaining ring, release Low-temperature Radiator Inlet Hose Assembly.



20 release retaining ring, release 3-in-1 Inlet Hose Assembly.



21 Remove integrated thermal management module 2 retaining bolt.



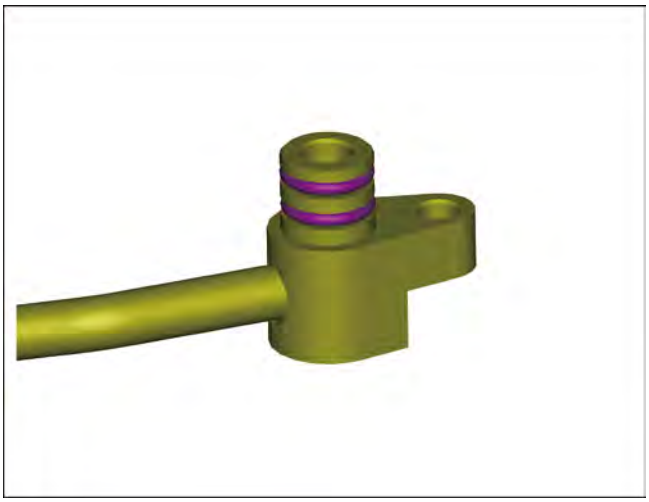
22 Remove integrated thermal management module.

a. Remove integrated thermal management module 4 retaining bolt.

b. in another I technician coordinate assist lower, remove integrated thermal management module.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Electronic Water Pump -80W- Heater Coolant Pump, Repair Procedure

Warning

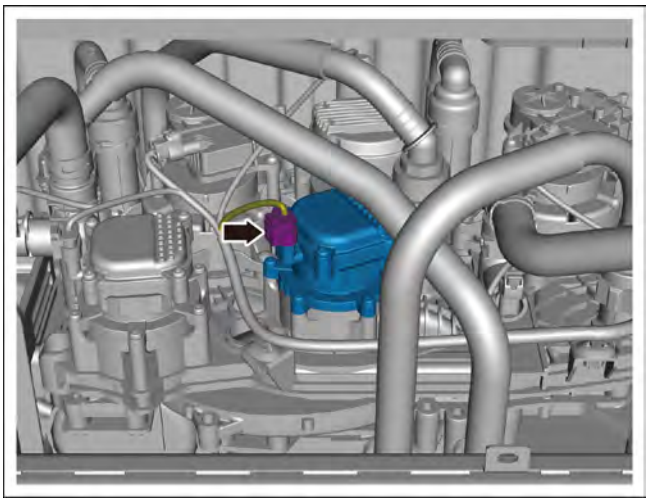
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

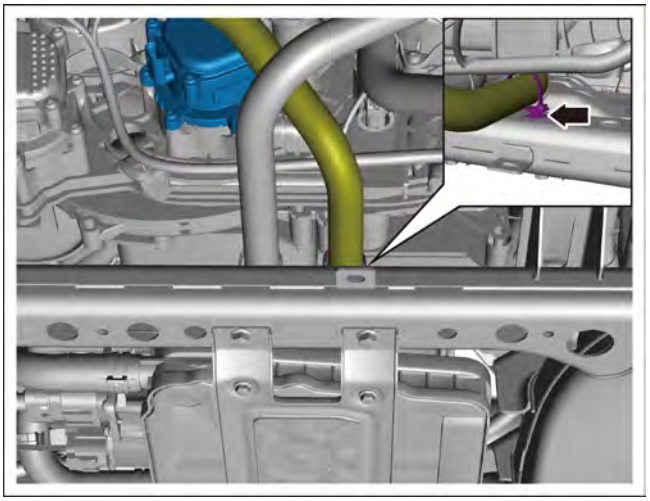
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

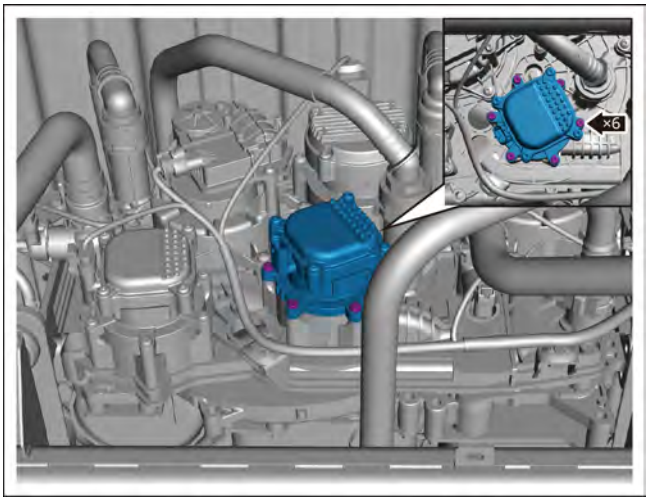
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 Disconnect electronic water pump -80W wiring harness connector.



5 Release PTC Outlet Hose Assembly retaining clip.



6 Remove 6 retaining bolt, remove electronic water pump -80W.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Electronic Water Pump -120W- Motor Water Pump, Repair Procedure

Warning

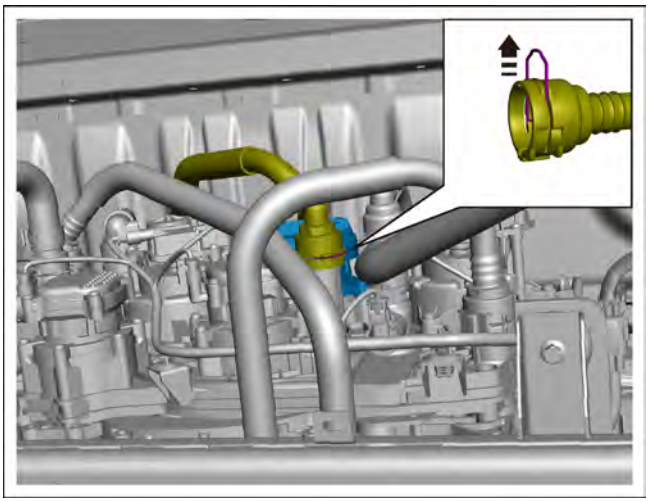
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

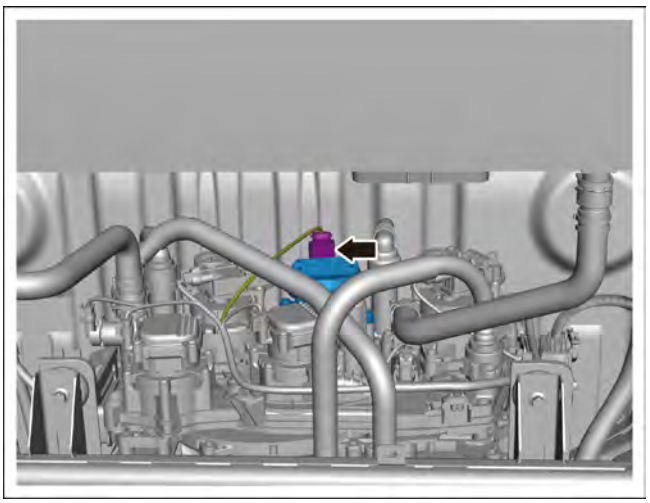
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

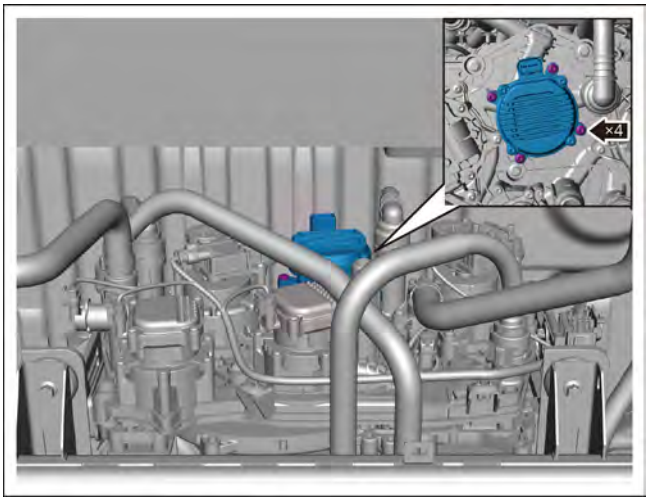
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release retaining ring, release Heater Outlet Hose Assembly.



5 Disconnect electronic water pump -120W wiring harness connector.



6 Remove 4 retaining bolt, remove electronic water pump -120W.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Electronic Water Pump -80W- Battery Coolant Pump, Repair Procedure

Warning

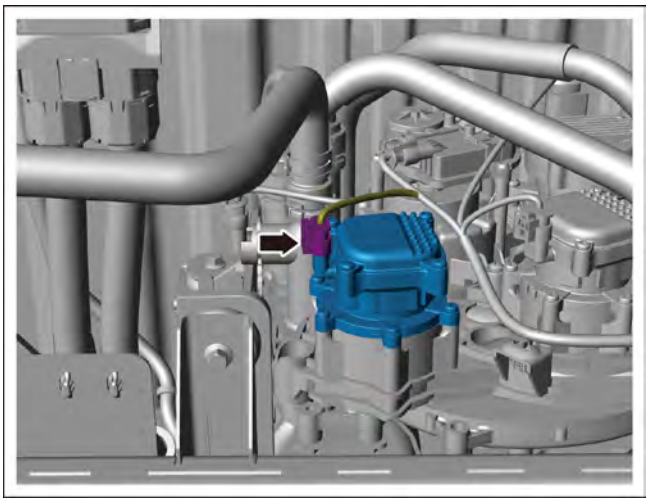
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

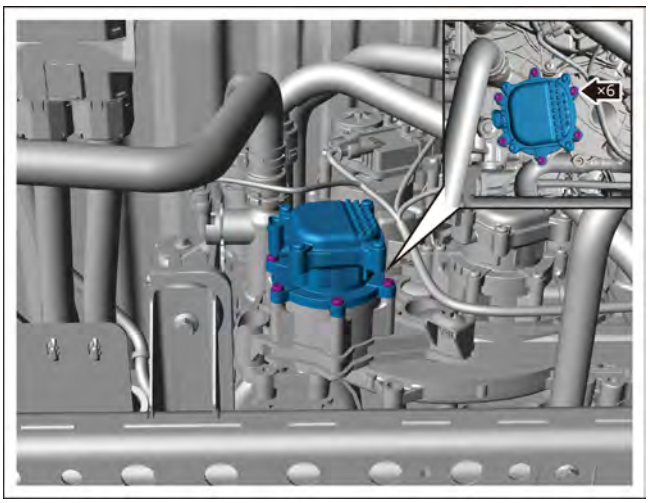
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 Disconnect electronic water pump -80W wiring harness connector.



5 Remove 6 retaining bolt, remove electronic water pump -80W.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Electronic Control Five Communication Coolant Valve -A, Repair Procedure

Warning

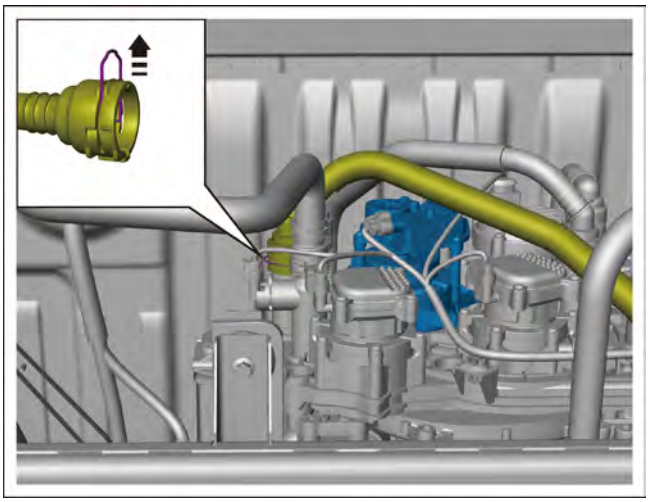
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

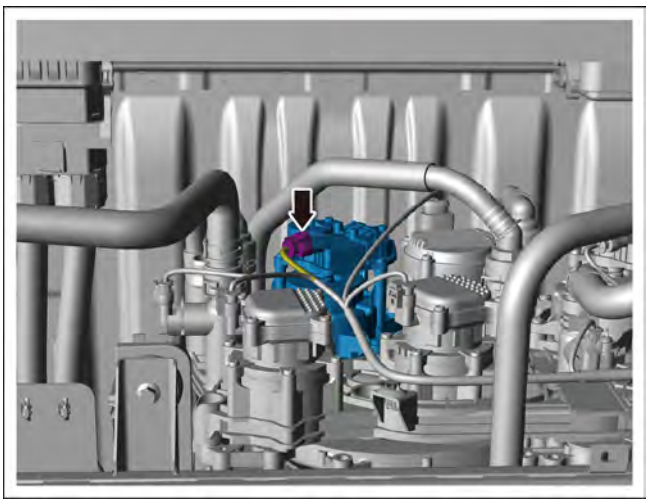
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

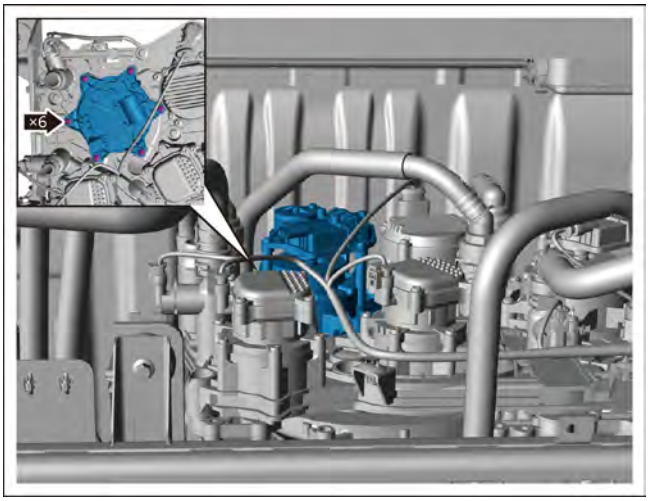
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release retaining ring, release PTC outlet pipe assembly.



5 Disconnect electronic control five communication coolant valve -A wiring harness connector.



6 Remove 6 retaining bolt, remove electronic control five communication coolant valve -A.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Electronic Control Five Communication Coolant Valve -B, Repair Procedure

Warning

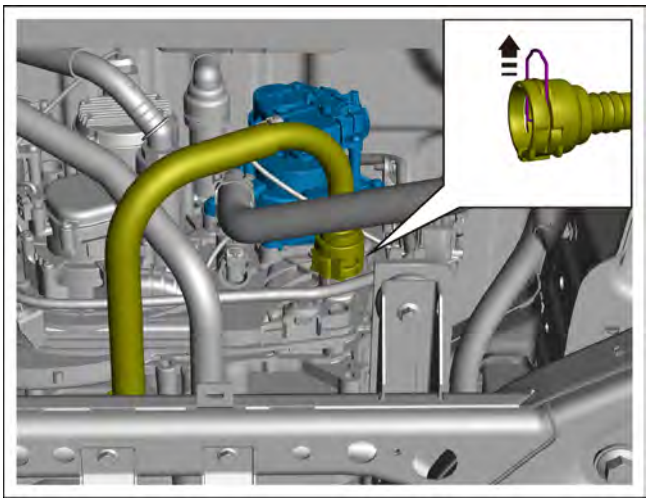
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

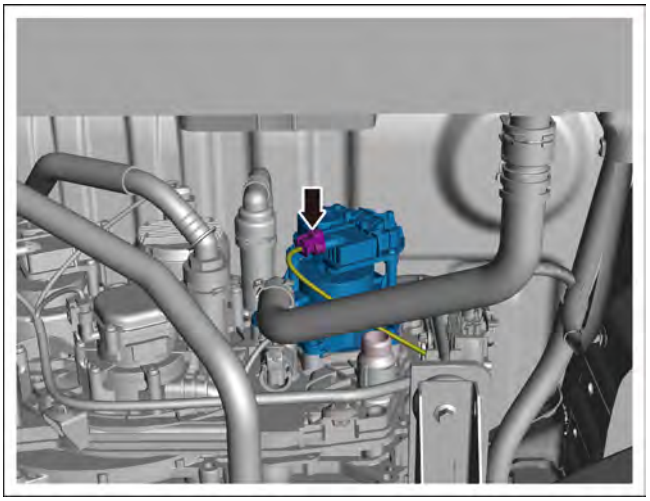
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

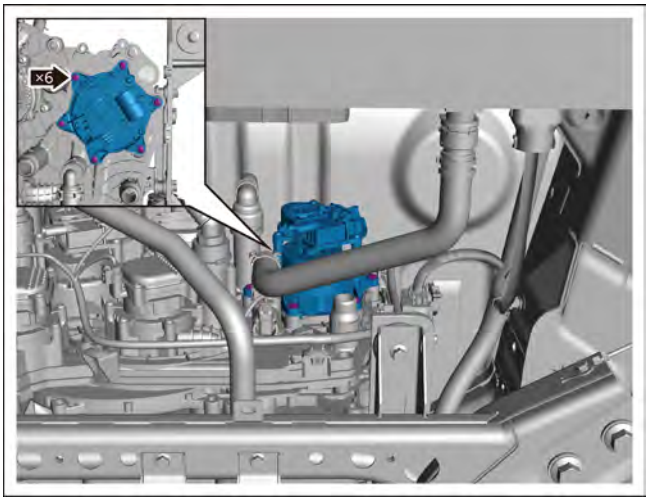
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release retaining ring, release PTC inlet pipe assembly.



5 Disconnect electronic control five communication coolant valve -B wiring harness connector.



6 Remove 6 retaining bolt, remove electronic control five communication coolant valve -B.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Coolant Temperature Sensor - Heater Inlet Pipe, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

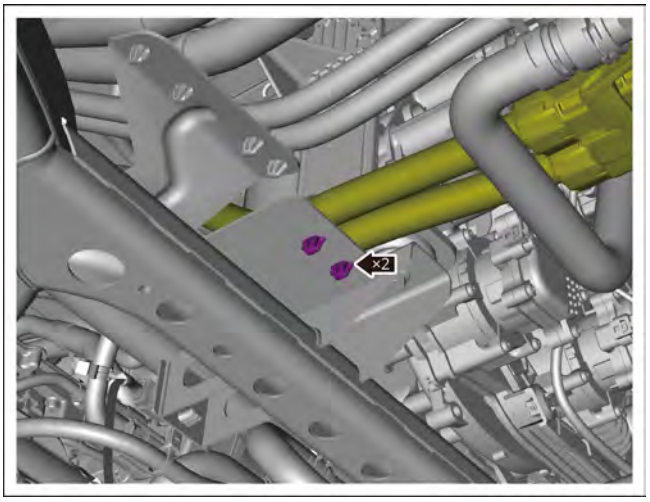
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

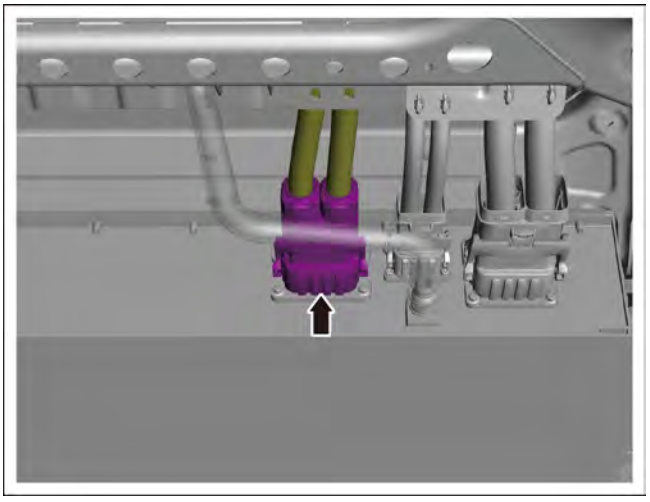
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



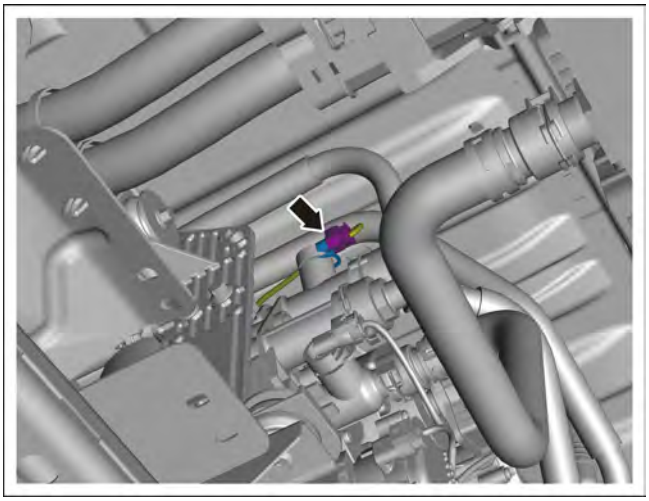
4 Release 2 MCU to battery pack line retaining clips.



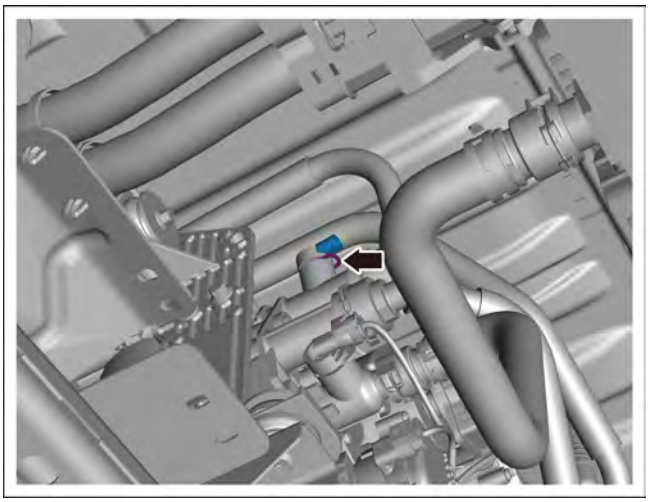
5 Disconnect MCU to battery pack line wiring harness connector.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.



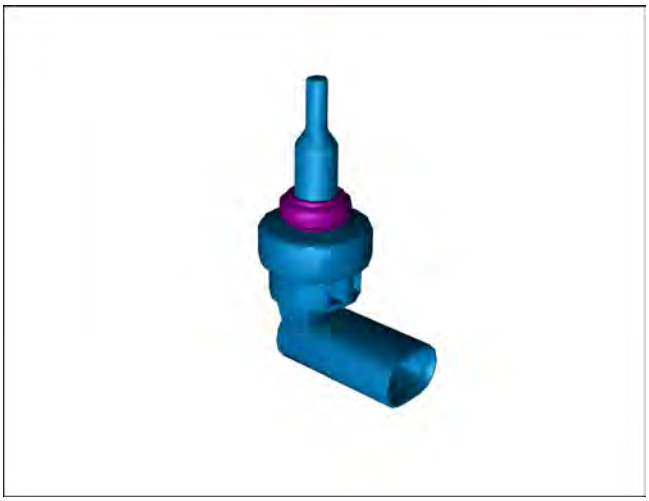
6 Disconnect coolant temperature sensor - Heater inlet pipe wiring harness connector.



7 Remove retaining ring, remove coolant temperature sensor - Heater inlet pipe.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Coolant Temperature Sensor - Battery Inlet Pipe, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

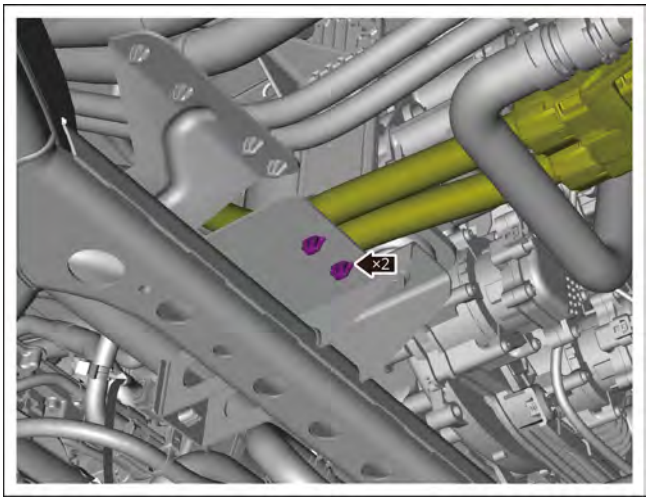
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

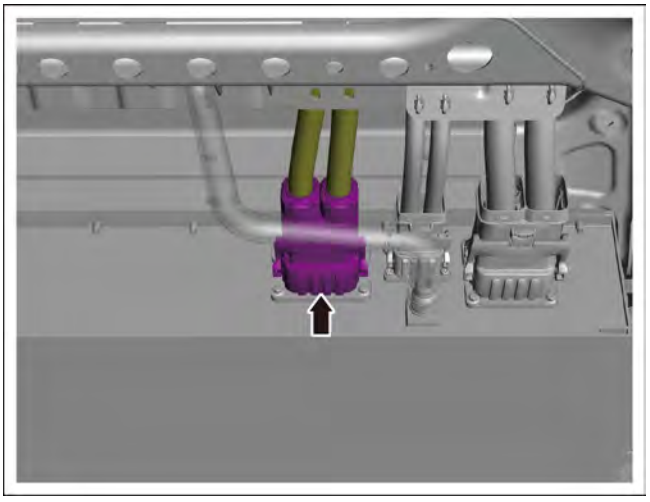
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



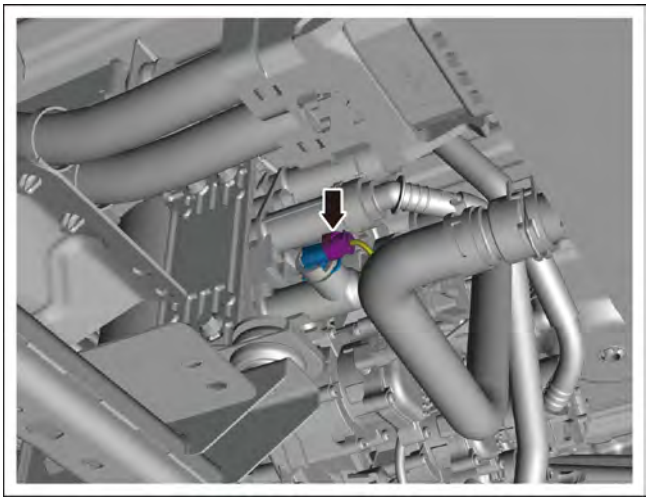
4 Release 2 MCU to battery pack line retaining clips.



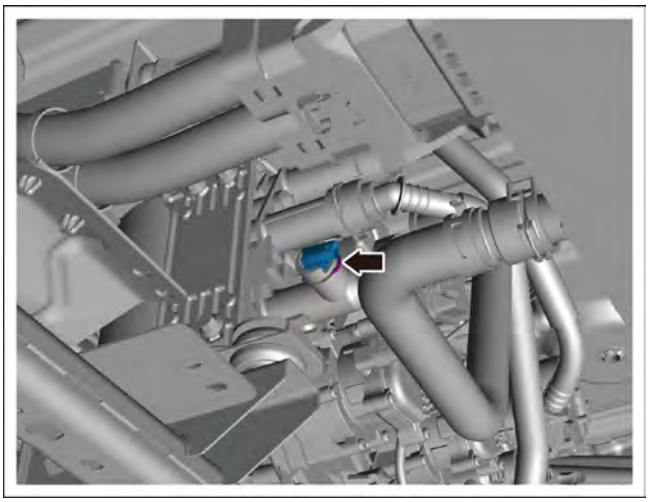
5 Disconnect MCU to battery pack line wiring harness connector.

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.



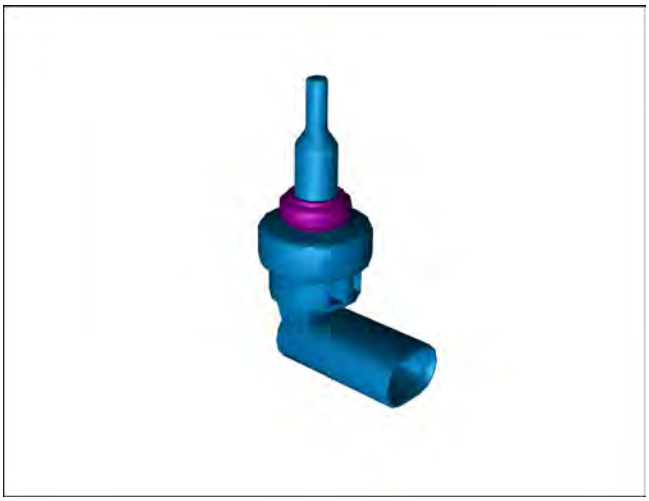
6 Disconnect coolant temperature sensor - battery inlet pipe wiring harness connector.



7 Remove retaining ring, remove coolant temperature sensor - battery inlet pipe.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Coolant Temperature Sensor - Battery Outlet Pipe, Repair Procedure

Warning

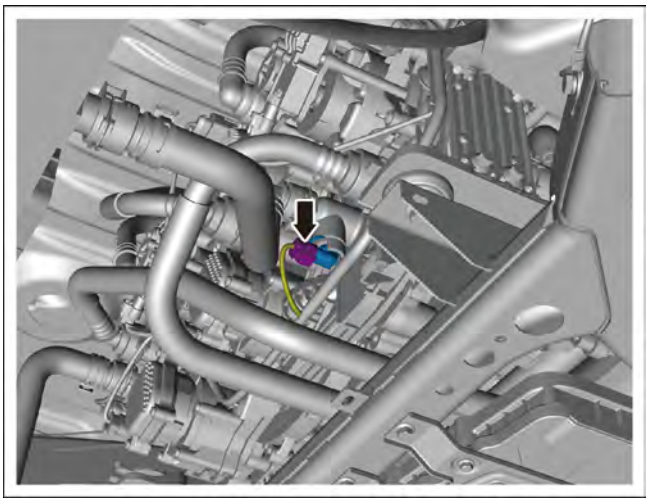
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

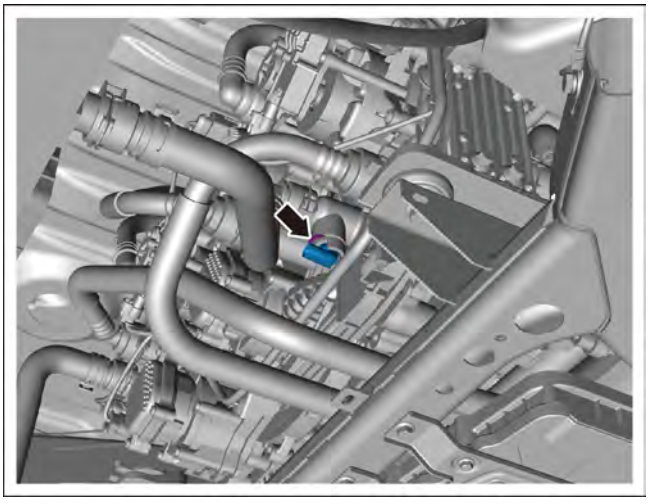
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 Disconnect coolant temperature sensor - battery outlet pipe wiring harness connector.



5 Remove retaining ring, remove coolant temperature sensor - battery outlet pipe.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

PT Sensor -1, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

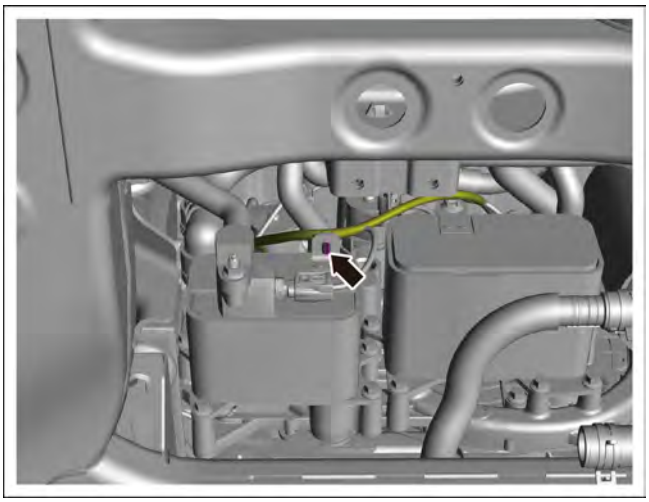
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

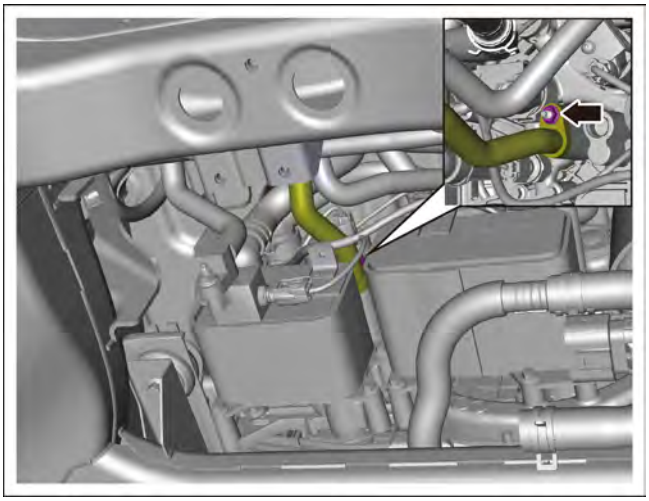
3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

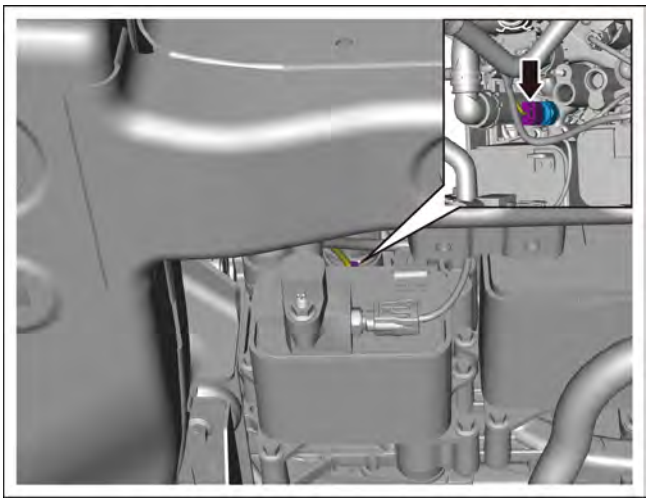


6 Release wiring harness assembly retaining clip.

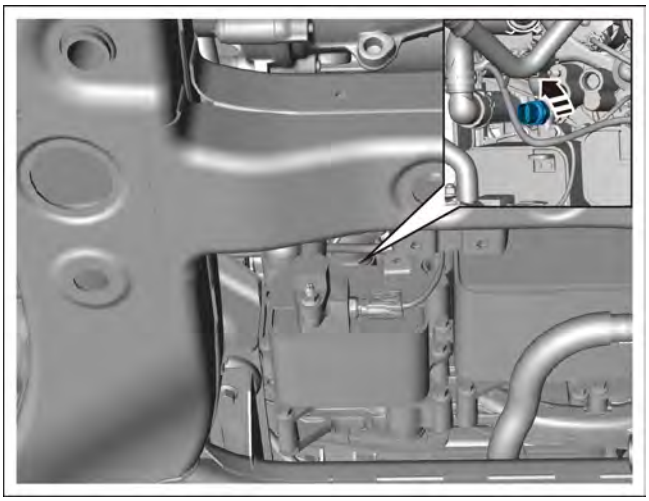


7 Remove retaining nut, release Condenser Inlet Pipe Assembly.

> ⚠ *Caution*
>
> *Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.*



8 Disconnect PT sensor -1 wiring harness connector.



9 Remove PT sensor -1.
Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

PT Sensor -2, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

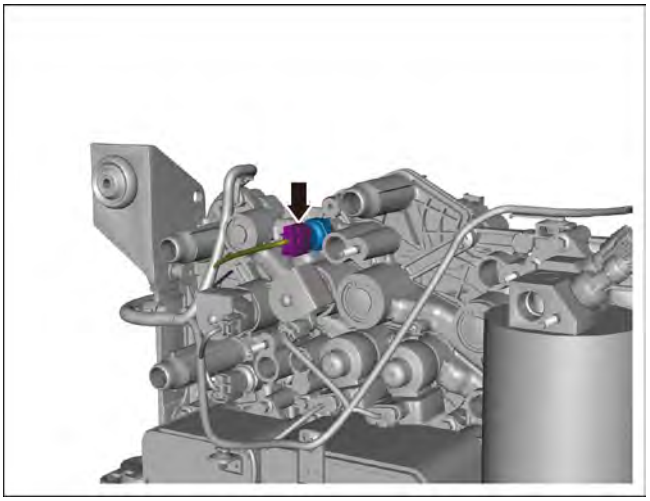
6 Remove Battery Inlet Hose Assembly - Heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

7 Remove Battery Outlet Hose Assembly - Heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

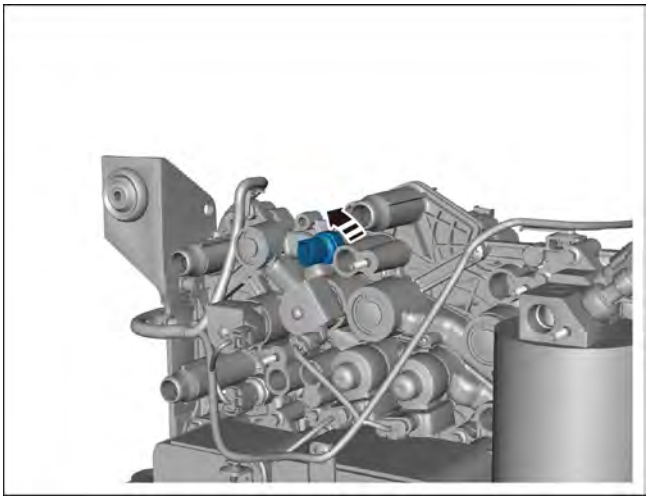
8 Remove PTC inlet pipe assembly - Heat-pump A/C. Refer to:PTC Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

9 Remove PTC outlet pipe assembly - Heat-pump A/C. Refer to:PTC Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

10 Remove integrated thermal management module. Refer to:Integrated Thermal Management Module, Repair Procedure



11 Disconnect PT sensor -2 wiring harness connector.



12 Remove PT sensor -2.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Refrigerant Temperature Sensor, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

6 Remove Battery Inlet Hose Assembly - Heat-pump A/C. Refer to:Battery Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

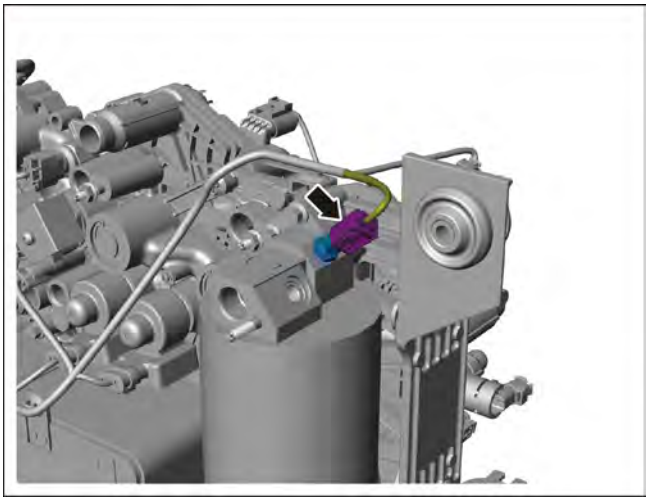
7 Remove Battery Outlet Hose Assembly - Heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

8 Remove PTC inlet pipe assembly - Heat-pump A/C. Refer to:PTC Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

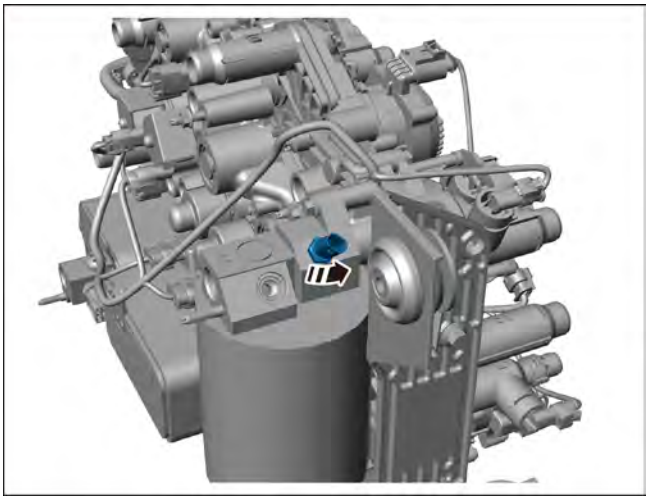
9 Remove PTC outlet pipe assembly - Heat-pump A/C. Refer to:PTC Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

10 Remove integrated thermal management module. Refer to:Integrated Thermal Management Module, Repair Procedure

11 Remove refrigerant pressure sensor - low-voltage. Refer to:Refrigerant Pressure Sensor - Low-Voltage, Repair Procedure



12 Disconnect refrigerant temperature sensor wiring harness connector.



13 Remove refrigerant temperature sensor.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Refrigerant Pressure Sensor - Low-Voltage, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

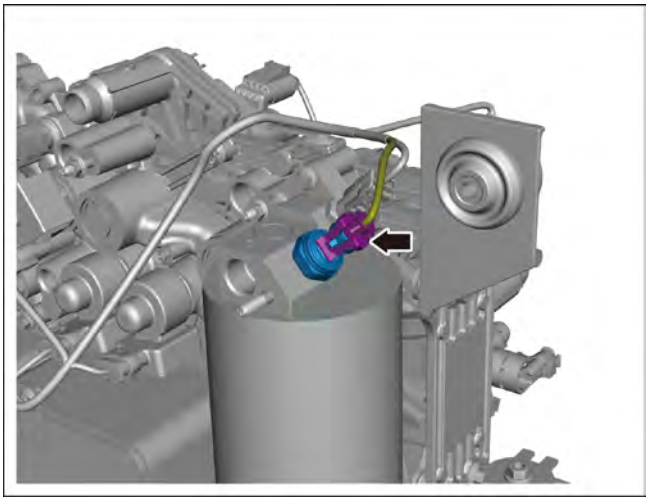
6 Remove Battery Inlet Hose Assembly - Heat-pump A/C. Refer to:Battery Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

7 Remove Battery Outlet Hose Assembly - Heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

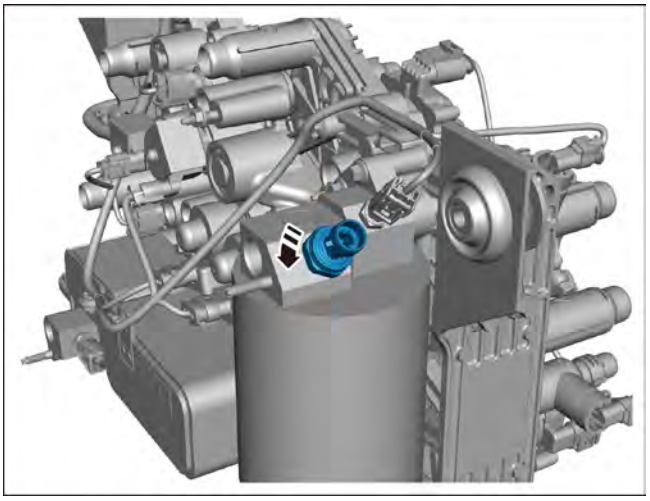
8 Remove PTC inlet pipe assembly - Heat-pump A/C. Refer to:PTC Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

9 Remove PTC outlet pipe assembly - Heat-pump A/C. Refer to:PTC Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

10 Remove integrated thermal management module. Refer to:Integrated Thermal Management Module, Repair Procedure



11 Disconnect refrigerant pressure sensor - low-voltage wiring harness connector.

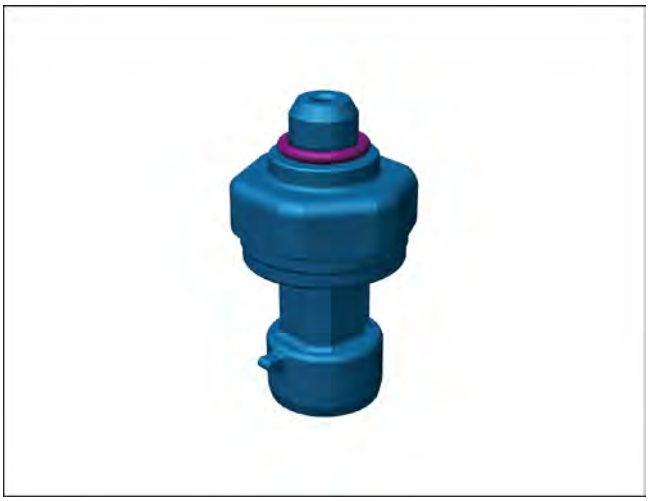


12 Remove refrigerant pressure sensor - low-voltage.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Wiring Harness Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

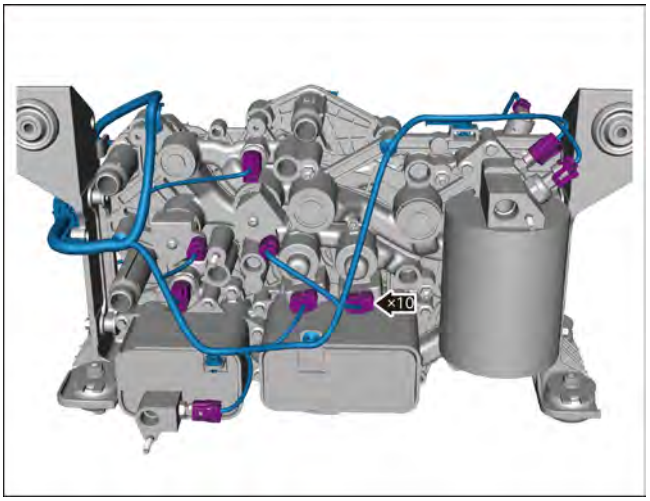
6 Remove Battery Inlet Hose Assembly - Heat-pump A/C. Refer to:Battery Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

7 Remove Battery Outlet Hose Assembly - Heat-pump A/C. Refer to:Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

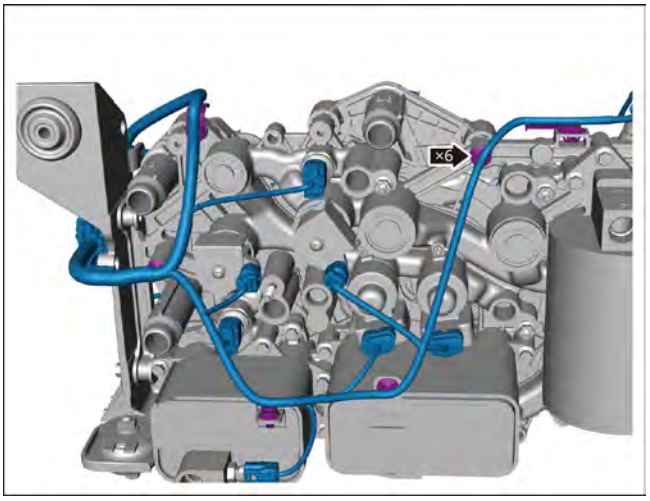
8 Remove PTC inlet pipe assembly - Heat-pump A/C. Refer to:PTC Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

9 Remove PTC outlet pipe assembly - Heat-pump A/C. Refer to:PTC Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

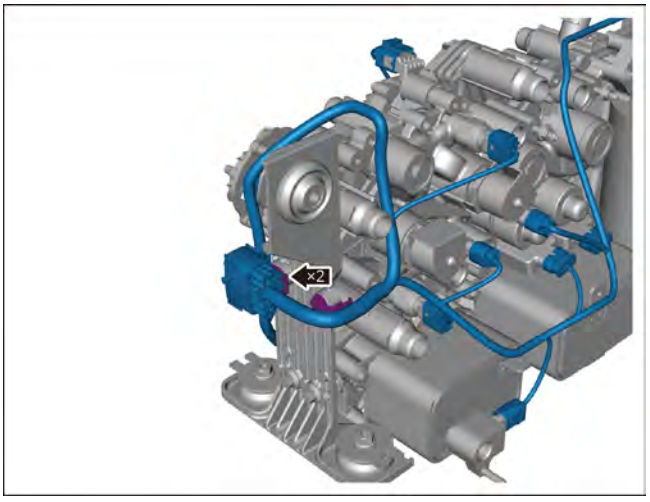
10 Remove integrated thermal management module. Refer to:Integrated Thermal Management Module, Repair Procedure



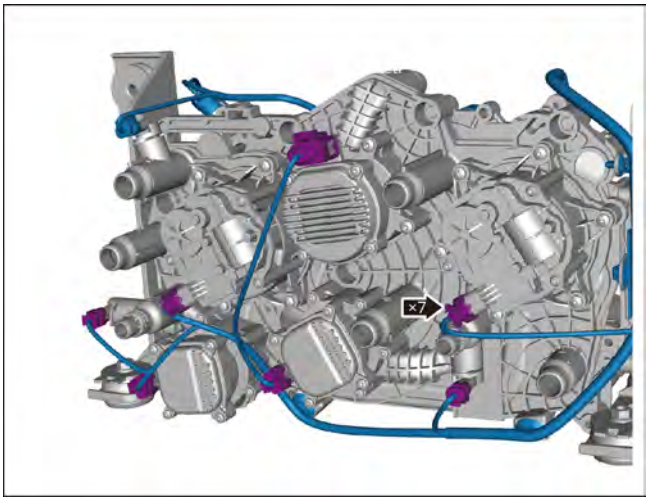
11 Disconnect 10 wiring harness assembly wiring harness connectors.



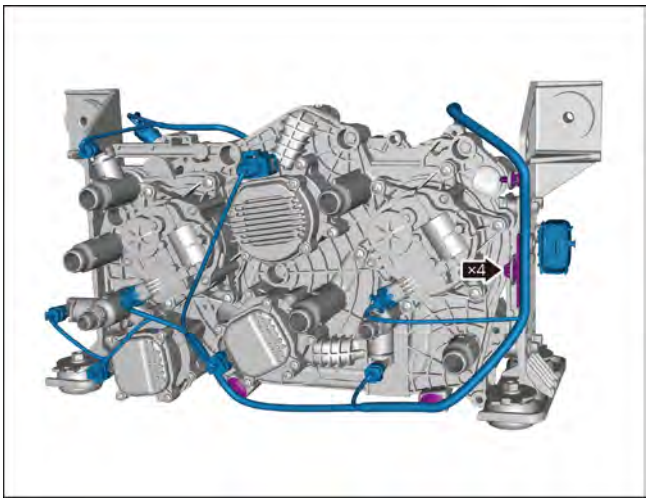
12 Release 6 wiring harness assembly retaining clips.



13 Release 2 wiring harness assembly retaining clips.



14 Disconnect 7 wiring harness assembly wiring harness connectors.



15 release retaining clip, remove wiring harness assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Install process center, ensure wiring harness connect secure, Location correct, and no interaction fork, surround, No then may will cause vehicle fault or electrical safety hazard.

5 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

6 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

3-in-1 Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

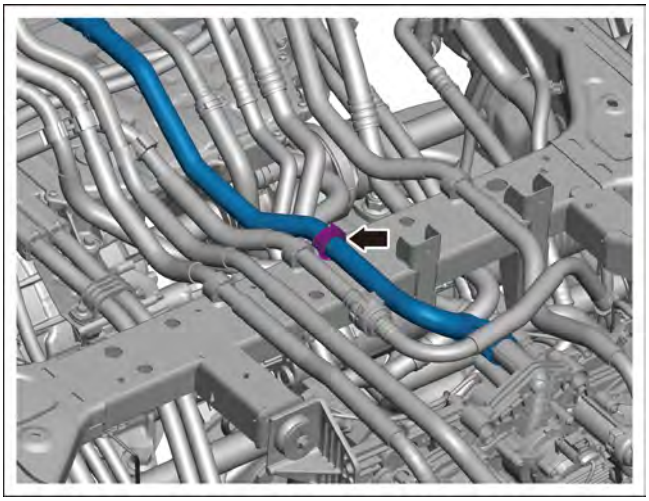
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

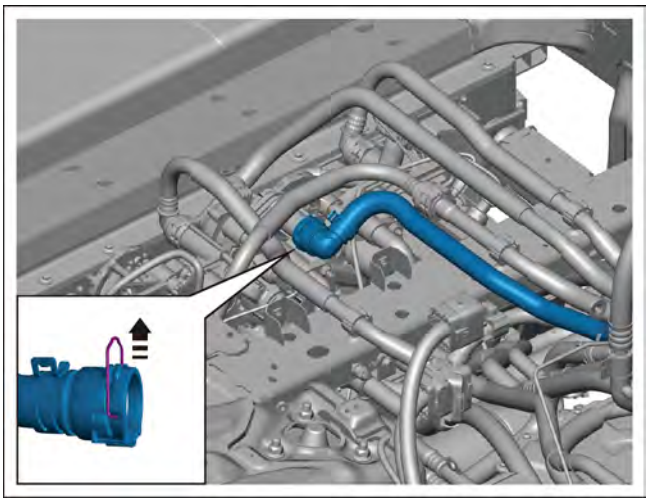
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

6 Remove trapezoidal frame assembly (low cargo deck center shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



7 release 3-in-1 Inlet Hose Assembly retaining hose clamp.



8 release retaining ring, remove 3-in-1 Inlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the brake fluid and bleed the brake system. Refer to:Hydraulic Brake System Bleeding Procedure

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Low-Temperature Radiator Vent Hose Assembly - Heat-Pump A/C, Repair Procedure

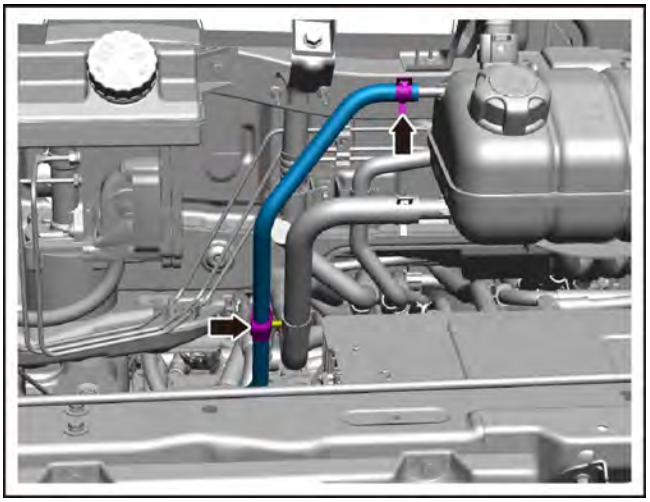
Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

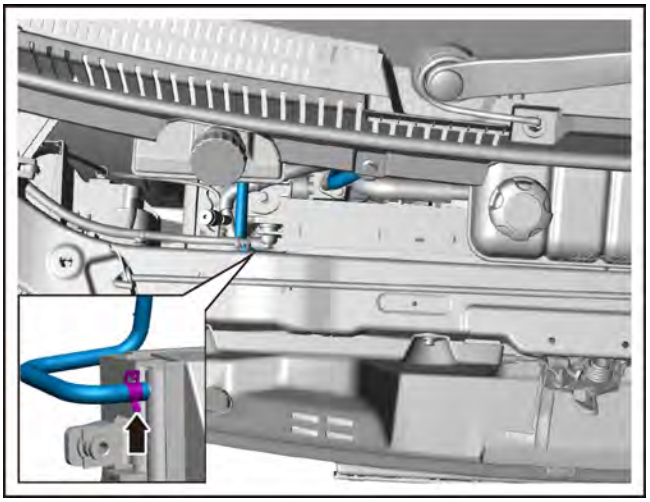
Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps



1 Remove Low-temperature Radiator Vent Hose Assembly retaining part.
   a. Remove Low-temperature Radiator Vent Hose Assembly retaining clamp.
   b. release Low-temperature Radiator Vent Hose Assembly retaining hose clamp.



2 Remove retaining clamp, remove Low-temperature Radiator Vent Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 fill coolant. refer to:Coolant Draining and Filling

Low-Temperature Radiator Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

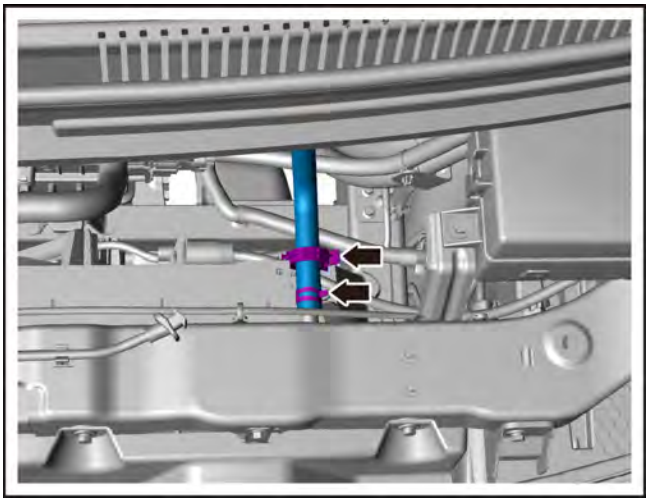
Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

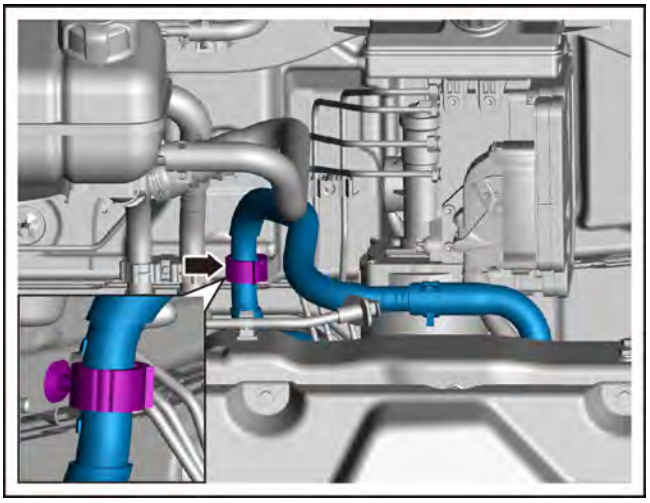
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



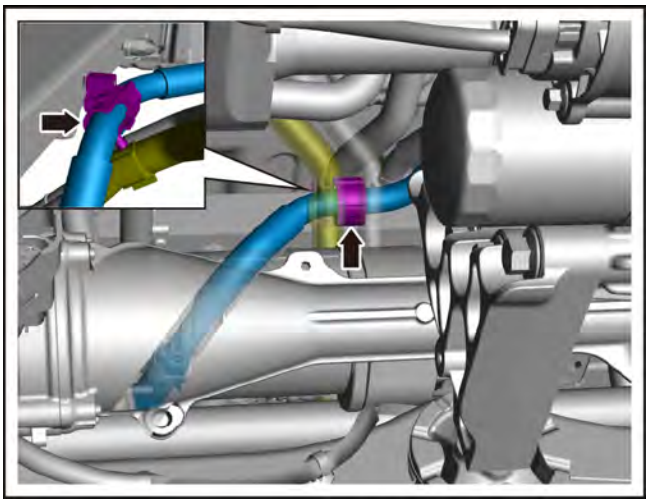
4 release Low-temperature Radiator Inlet Hose Assembly.

a. Remove Low-temperature Radiator Inlet Hose Assembly retaining clamp.

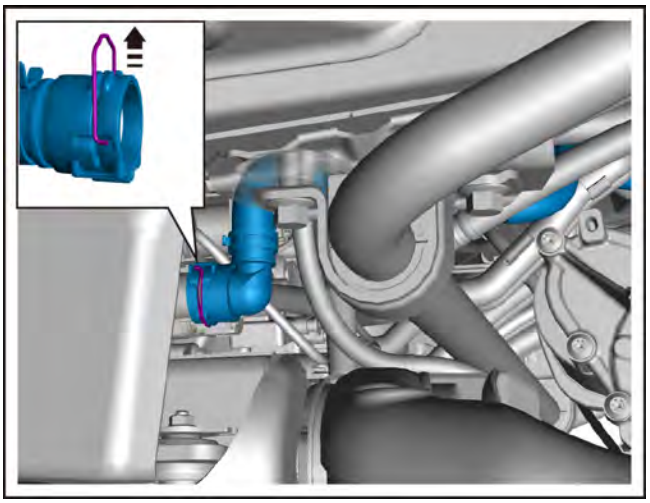
b. release retaining hose clamp, release Low-temperature Radiator Inlet Hose Assembly.



5 Release Low-temperature Radiator Inlet Hose Assembly retaining clip.



6 release Low-temperature Radiator Inlet Hose Assembly retaining hose clamp.

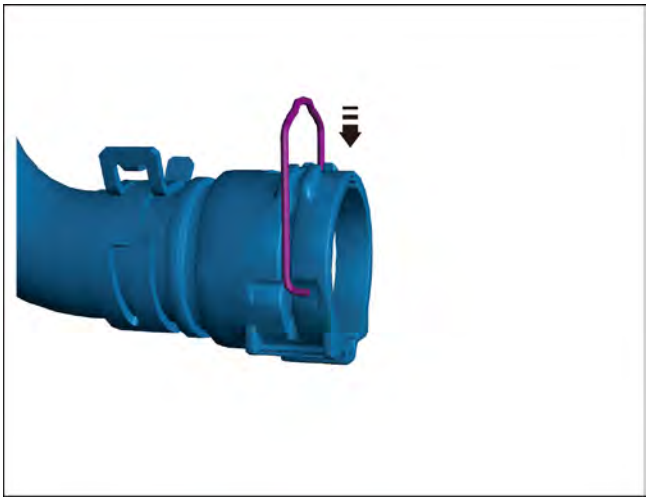


7 release retaining ring, remove Low-temperature Radiator Inlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling



3 reset retaining ring, rapid install fitting completely insert to position, and direction outer pull movement coolant hose, confirm retaining ring already valid card tight and fitting no looseness.

Low-Temperature Radiator Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

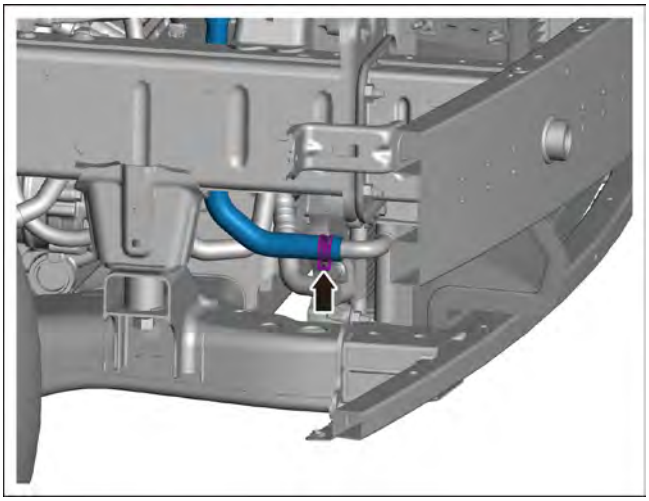
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

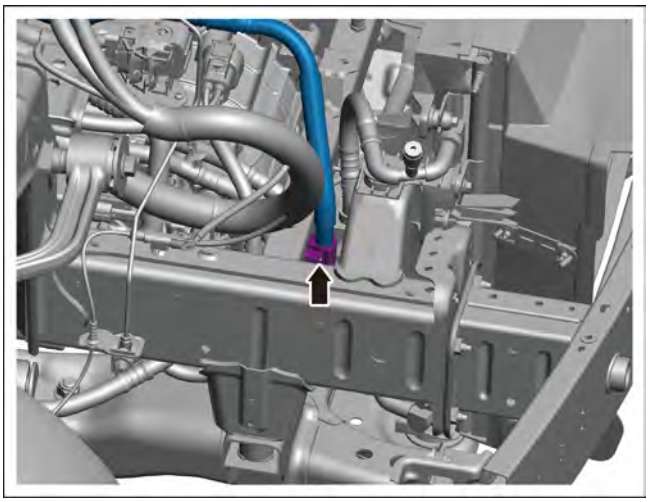
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

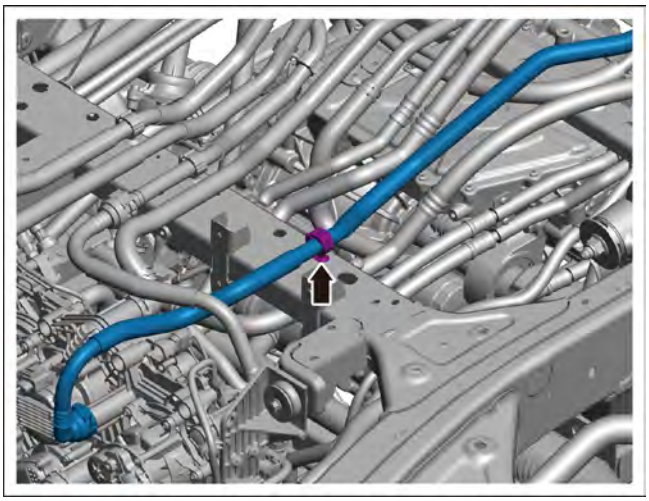
6 Remove trapezoidal frame assembly (low cargo deck center shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



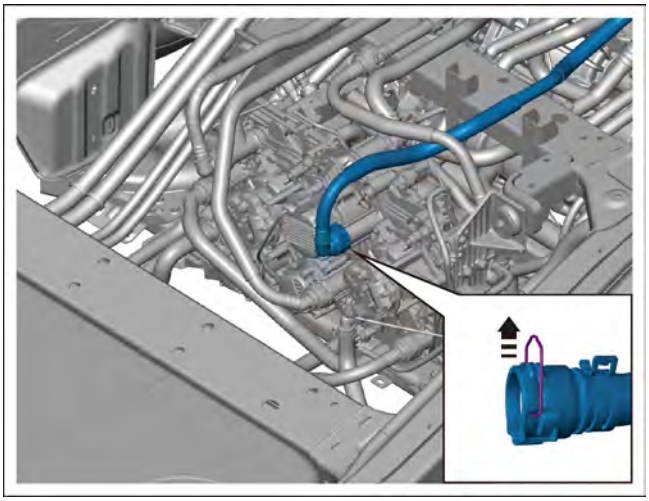
7 Remove retaining clamp, release Low-temperature Radiator Outlet Hose Assembly.



8 release Low-temperature Radiator Outlet Hose Assembly retaining hose clamp.



9 release Low-temperature Radiator Outlet Hose Assembly retaining hose clamp.



10 release retaining ring, remove Low-temperature Radiator Outlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the brake fluid and bleed the brake system. Refer to:Hydraulic Brake System Bleeding Procedure

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Electric Drive Expansion Tank Fill Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

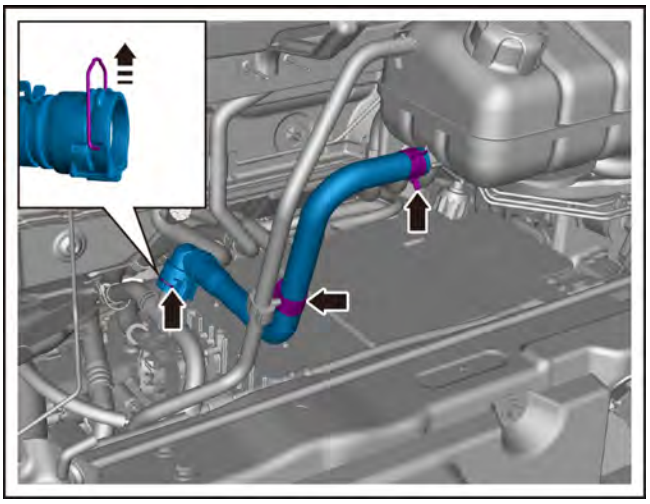
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

1 evacuate coolant expansion tank assembly coolant.



2 remove Electric Drive Expansion Tank Fill Hose Assembly.

a. Remove retaining clamp, release Electric Drive Expansion Tank Fill Hose Assembly.

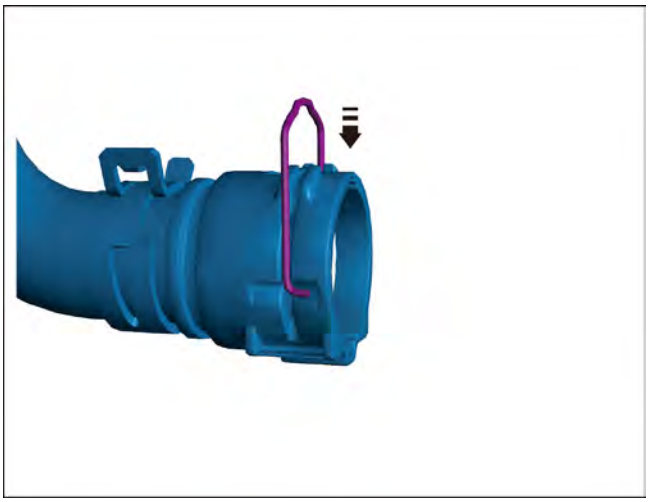
b. release Electric Drive Expansion Tank Fill Hose Assembly retaining hose clamp.

c. release retaining ring, remove Electric Drive Expansion Tank Fill Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 fill coolant. refer to:Coolant Draining and Filling



3 reset retaining ring, rapid install fitting completely insert to position, and direction outer pull movement coolant hose, confirm retaining ring already valid card tight and fitting no looseness.

Battery Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

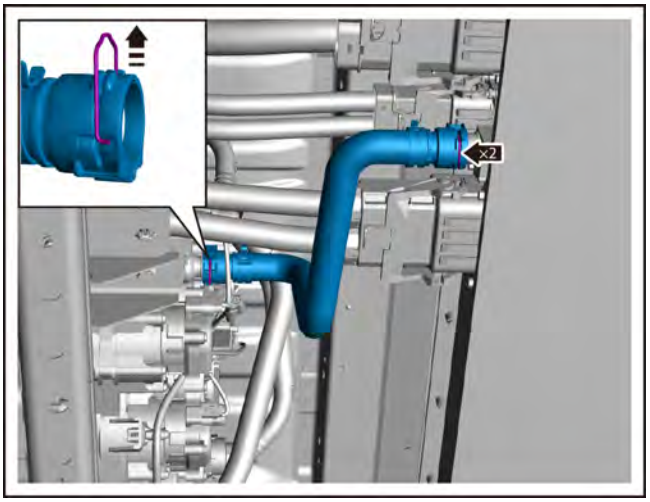
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release 2 retaining ring, remove battery inlet pipe.

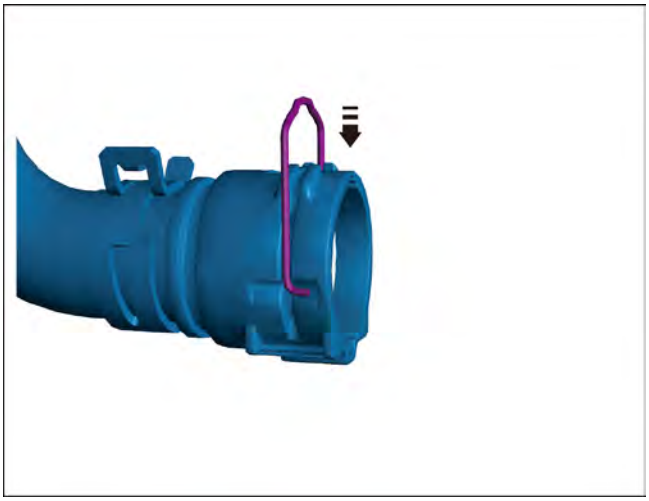
Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling



3 reset retaining ring, rapid install fitting completely insert to position, and direction outer pull movement coolant hose, confirm retaining ring already valid card tight and fitting no looseness.

Battery Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

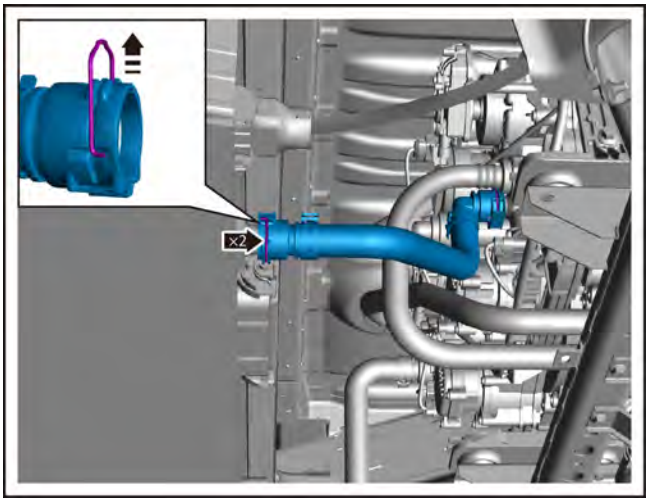
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release 2 retaining ring, remove Battery Outlet Hose Assembly.

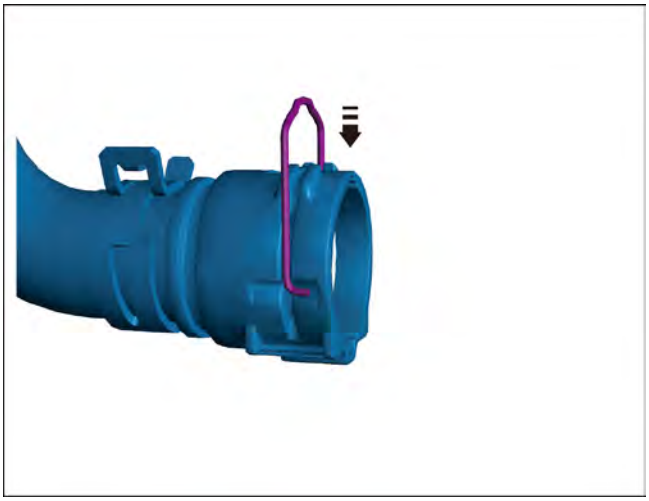
Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling



3 reset retaining ring, rapid install fitting completely insert to position, and direction outer pull movement coolant hose, confirm retaining ring already valid card tight and fitting no looseness.

PTC Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

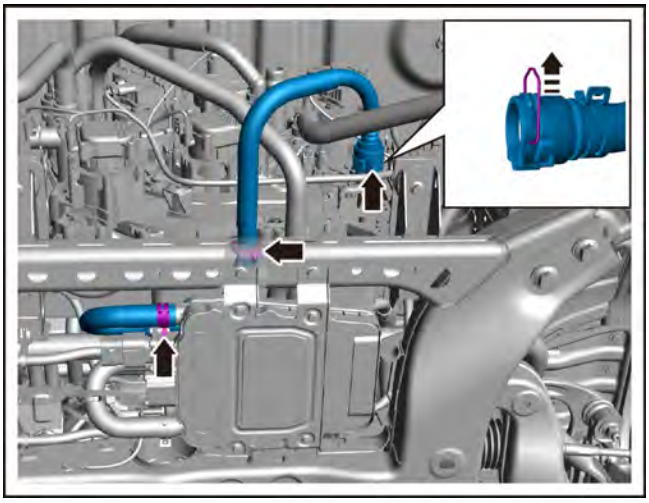
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

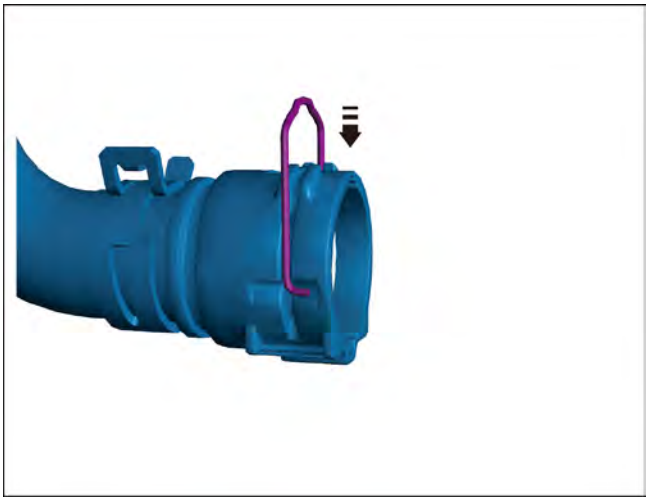


4 remove PTC inlet pipe assembly.
   a. release retaining ring, release PTC inlet pipe assembly.
   b. Release PTC Inlet Hose Assembly retaining clip.
   c. Remove retaining clamp, remove PTC inlet pipe.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling



3 reset retaining ring, rapid install fitting completely insert to position, and direction outer pull movement coolant hose, confirm retaining ring already valid card tight and fitting no looseness.

PTC Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

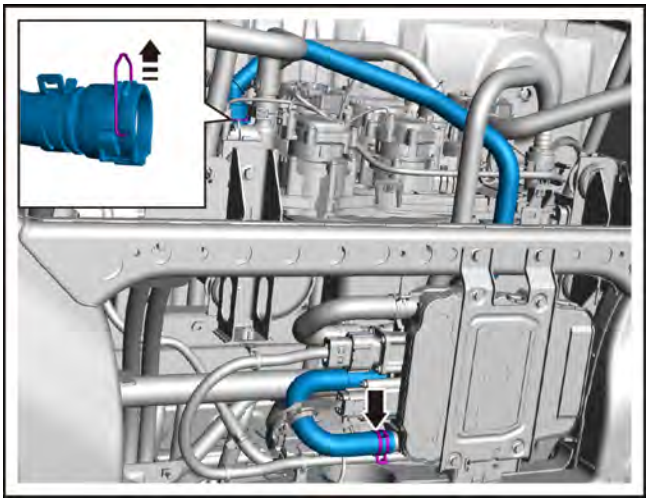
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

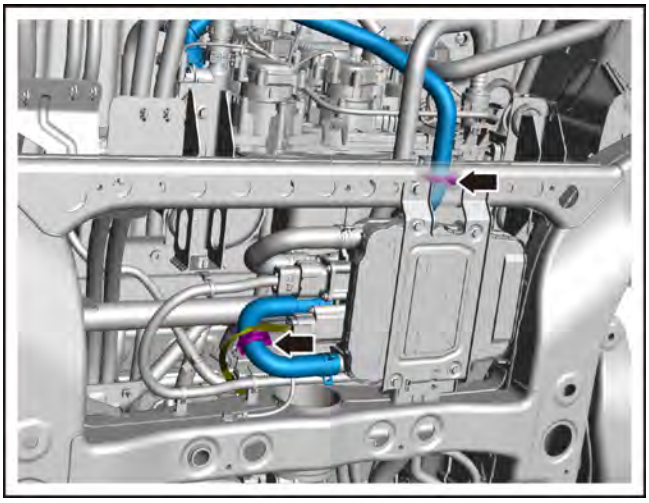
1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



4 release PTC outlet pipe assembly.
   a. release retaining ring, release PTC outlet pipe assembly.
   b. Remove retaining clamp, release PTC outlet pipe assembly.

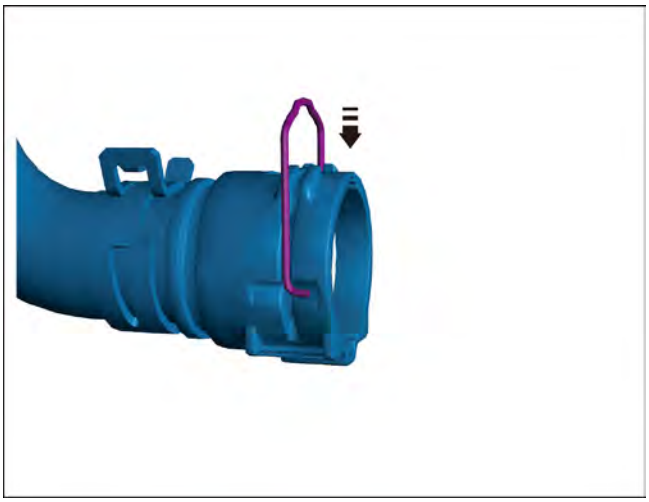


5 remove PTC outlet pipe assembly.
   a. release PTC outlet pipe assembly retaining hose clamp.
   b. release retaining clip, remove PTC outlet pipe assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling



3 reset retaining ring, rapid install fitting completely insert to position, and direction outer pull movement coolant hose, confirm retaining ring already valid card tight and fitting no looseness.

Heater Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

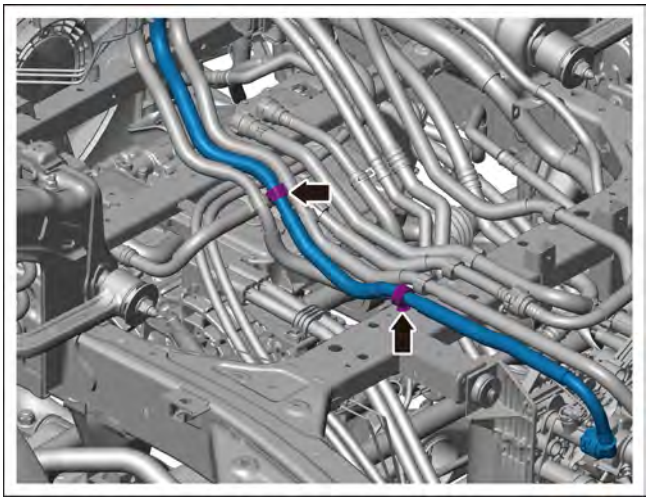
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

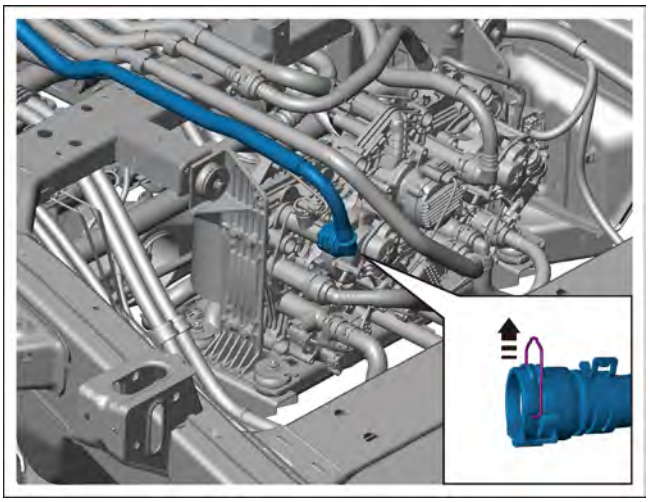
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

6 Remove trapezoidal frame assembly (low cargo deck center shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



7 release Heater Inlet Hose Assembly 2 retaining hose clamp.



8 release retaining ring, remove Heater Inlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 Install complete rear, for vehicle perform four-wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Heater Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

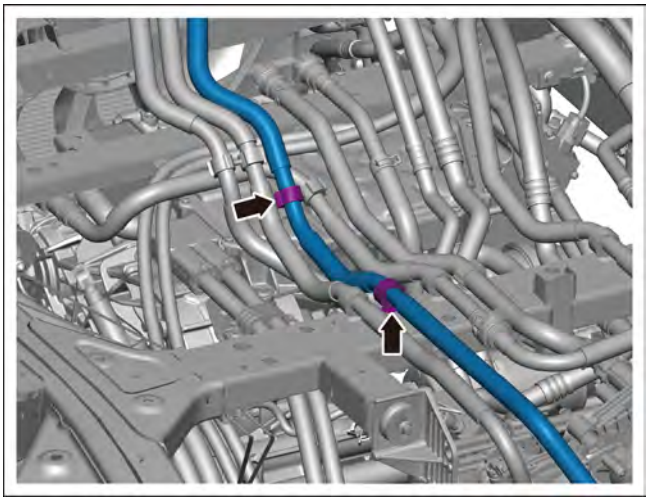
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

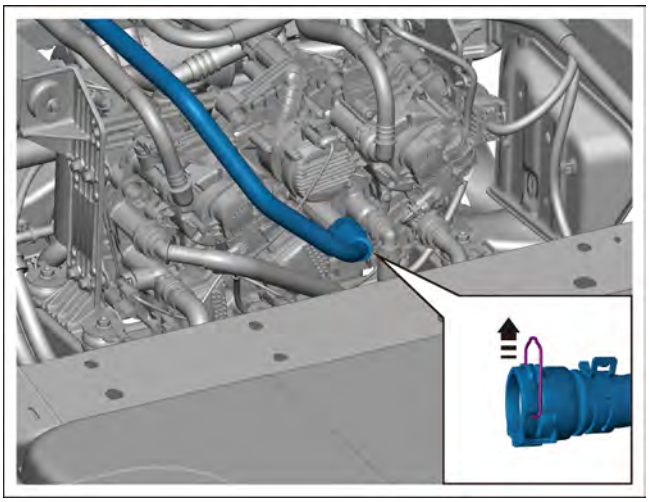
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

6 Remove trapezoidal frame assembly (low cargo deck center shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



7 release Heater Outlet Hose Assembly 2 retaining hose clamp.



8 release retaining ring, remove Heater Outlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the transmission fluid. Refer to:Transmission Fluid Draining and Filling

5 Install complete rear, for vehicle perform four-wheel alignment. Refer to:Four-Wheel Alignment, Inspection and Adjustment

Follow-up Work:

After installation, road-test the vehicle in a safe area. Make sure the vehicle runs stably without pulling and that there is no abnormal noise from the chassis.

Electric Drive Inlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

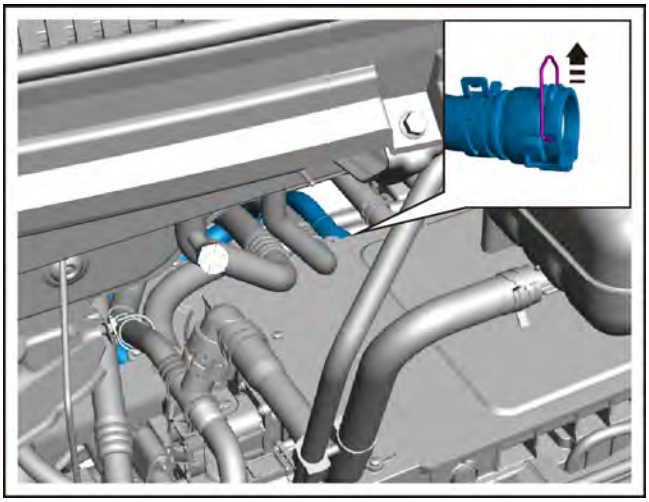
Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

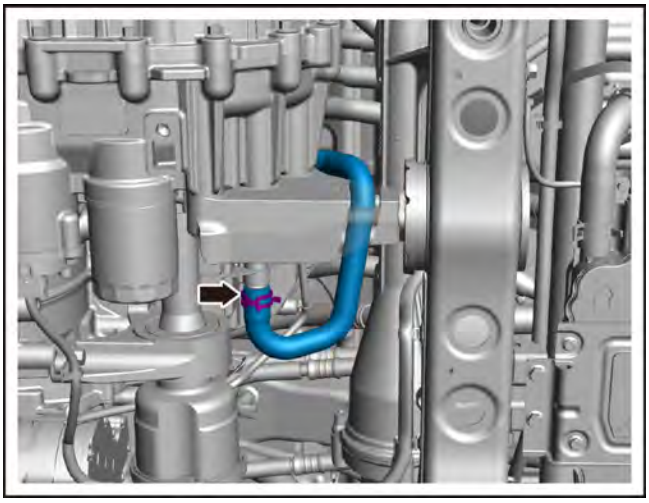


1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

4 release retaining ring, release electric drive inlet hose assembly.

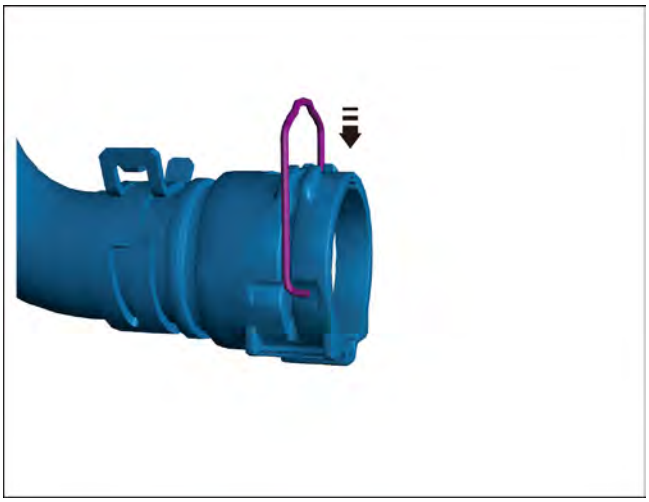


5 Remove retaining clamp, remove electric drive inlet hose assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling



3 reset retaining ring, rapid install fitting completely insert to position, and direction outer pull movement coolant hose, confirm retaining ring already valid card tight and fitting no looseness.

Electric Drive Outlet Hose Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

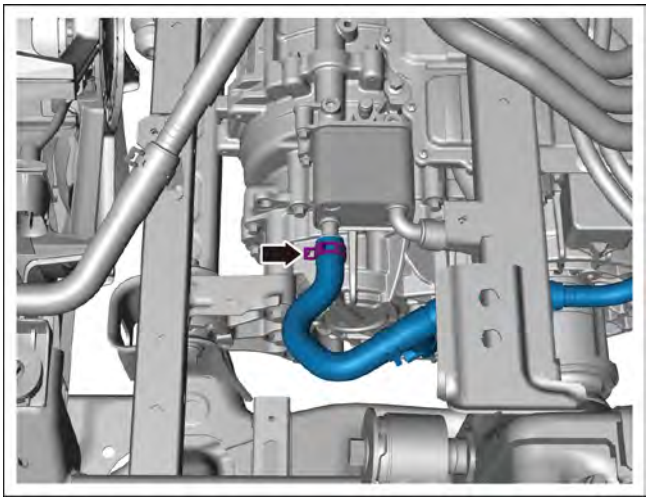
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

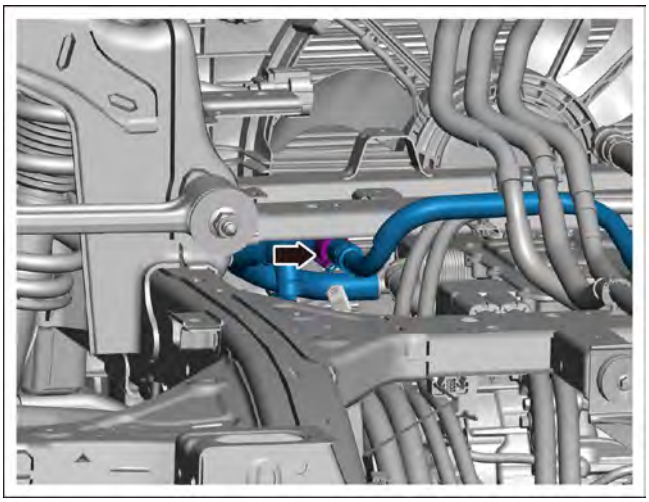
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

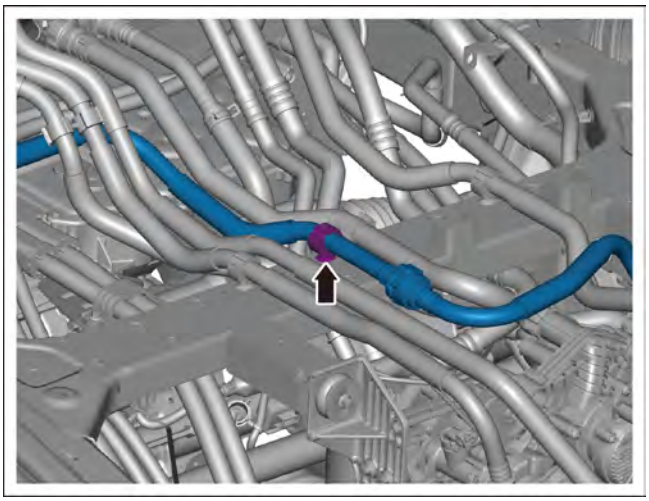
6 Remove trapezoidal frame assembly (low cargo deck center shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



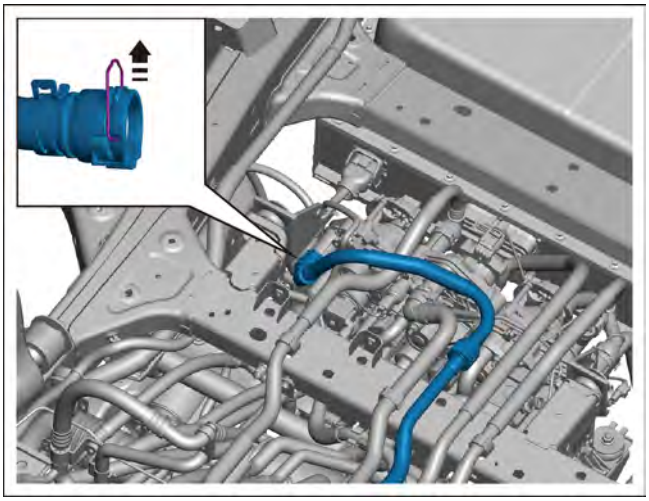
7 Remove retaining clamp, release electric drive outlet hose assembly.



8 release electric drive outlet hose assembly retaining hose clamp.



9 release electric drive outlet hose assembly retaining hose clamp.



10 release retaining ring, remove electric drive outlet hose assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3-in-1 Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

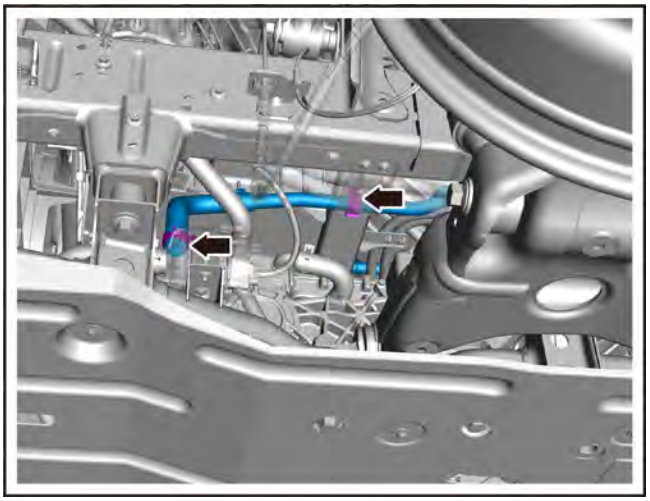
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

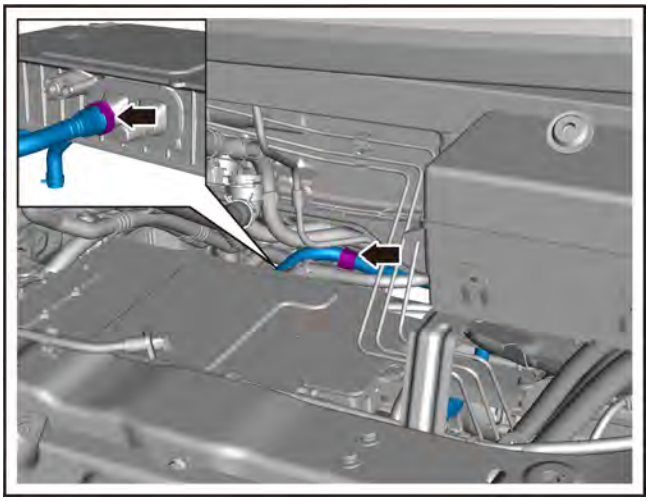
3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

5 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation



6 Remove 3-in-1 Inlet Hose Assembly fastener.
   a. Remove 3-in-1 Inlet Hose Assembly retaining clip.
   b. release 3-in-1 Inlet Hose Assembly retaining clamp.



7 Remove 3-in-1 Inlet Hose Assembly fastener.
   a. release pipe clamp, release 3-in-1 Inlet Hose Assembly.
   b. press rapid install fitting, remove 3-in-1 Inlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Low-Temperature Radiator Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

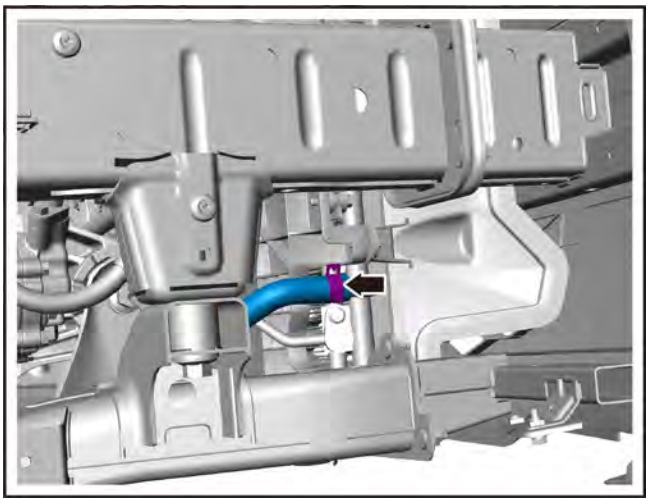
Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

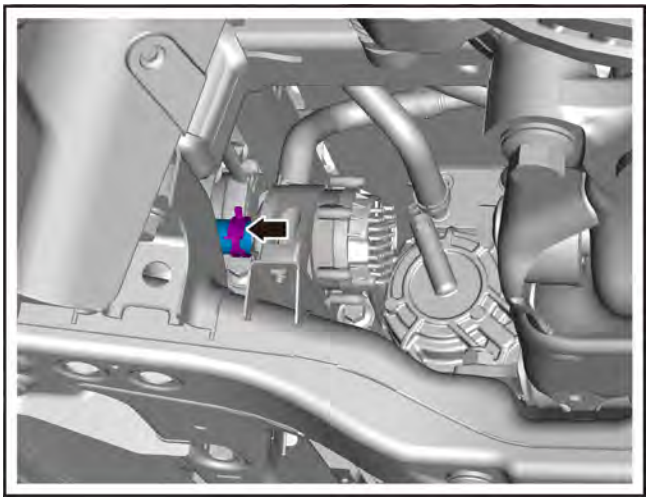
2 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

3 Remove left, right wheel assembly. Refer to:Wheel Assembly, Removal and Installation

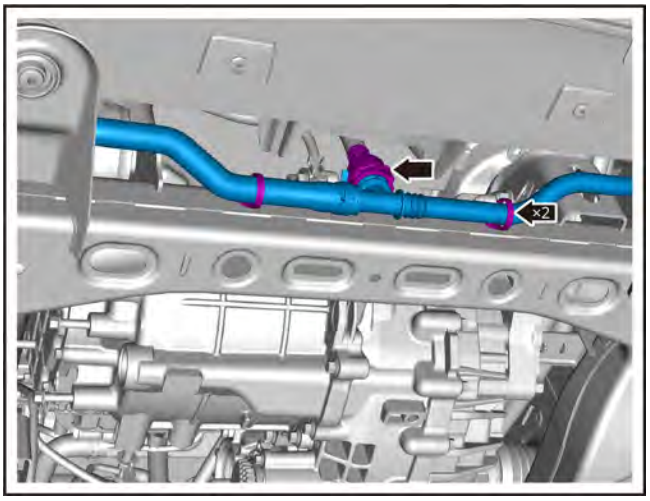
4 Remove right front wheelhouse assembly. Refer to:Left Front Wheel Cover Assembly, Repair Procedure



5 release Low-temperature Radiator Outlet Hose Assembly retaining clamp.



6 release Low-temperature Radiator Outlet Hose Assembly retaining clamp.



7 Remove Low-temperature Radiator Outlet Hose Assembly fastener.

a. release Low-temperature Radiator Outlet Hose Assembly 2 retaining clamp.

b. release coolant hose retaining ring, remove Low-temperature Radiator Outlet Hose Assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Battery Circuit Vent Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

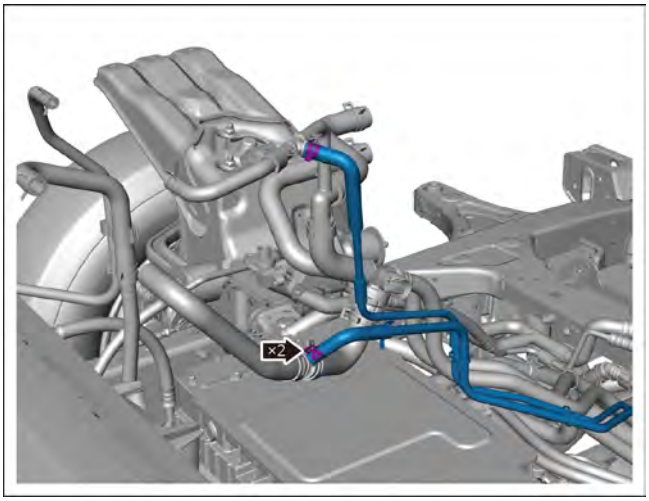
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

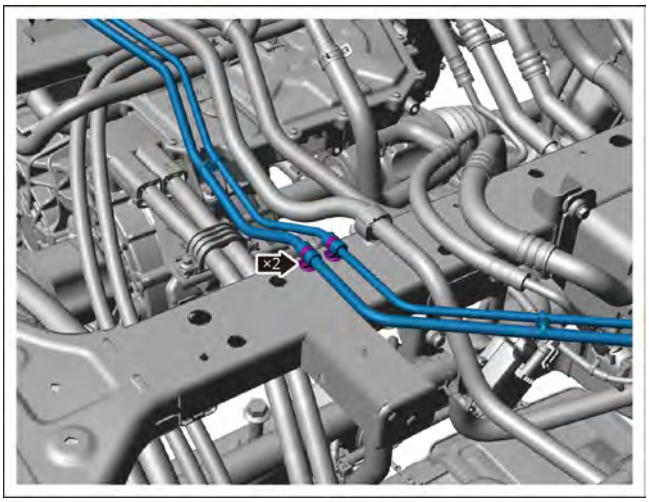
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

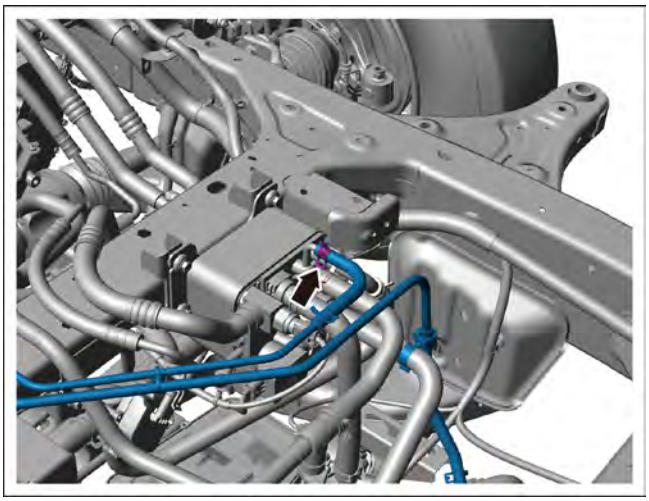
6 Remove trapezoidal frame assembly (low cargo deck center shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



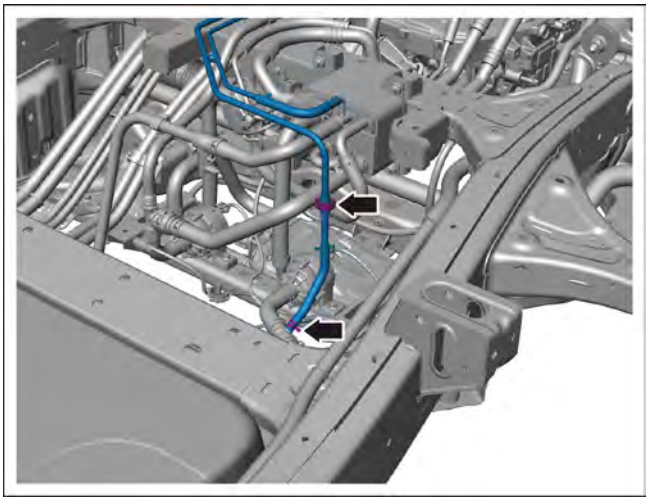
7 Remove 2 retaining clamp, release Battery Circuit Vent Hose Assembly.



8 Release 2 Battery Circuit Vent Hose Assembly retaining clips.



9 Remove retaining clamp, release Battery Circuit Vent Hose Assembly.



10 remove Battery Circuit Vent Hose Assembly.
   a. release Battery Circuit Vent Hose Assembly retaining hose clamp.
   b. remove retaining clamp, remove Battery Circuit Vent Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the brake fluid and bleed the brake system. Refer to:Hydraulic Brake System Bleeding Procedure

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Water Pump-to-Chiller Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

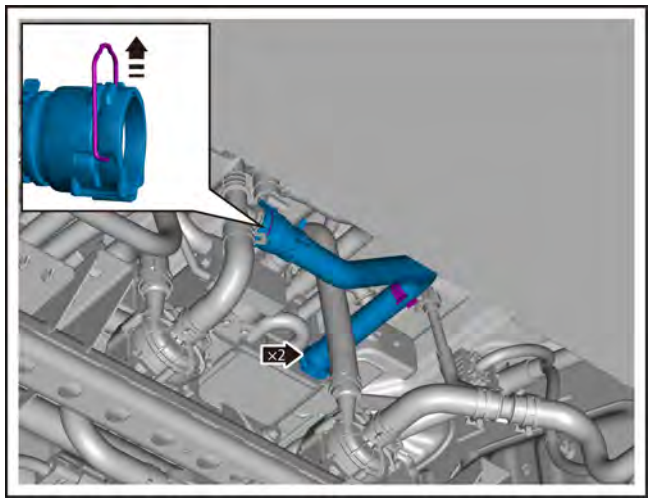
Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

remove procedure

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Drain the coolant. Refer to:Coolant Draining and Filling



3 Remove chiller to water pump inlet pipe assembly fastener.

a. release chiller to water pump inlet pipe assembly retaining hose clamp.

b. release 2 retaining ring, remove chiller to water pump inlet pipe assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

install procedure

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Chiller to Water Pump Inlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

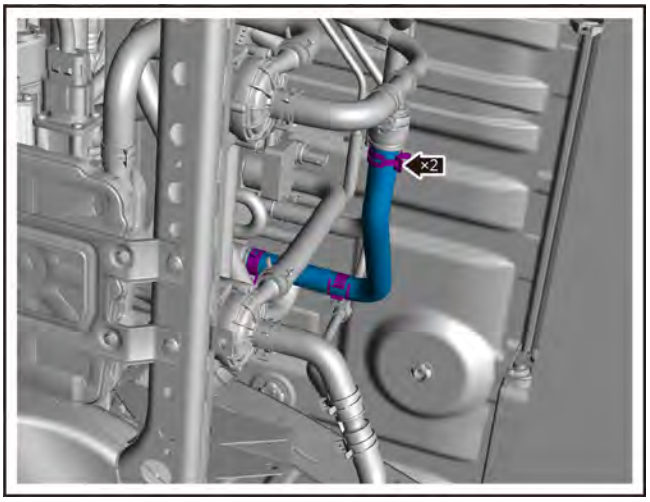
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release chiller to water pump inlet pipe assembly fastener.
   a. release chiller to water pump inlet pipe assembly 2 retaining clamp.
   b. release pipe clamp, remove chiller to water pump inlet pipe assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Three-Way Valve-to-Chiller Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

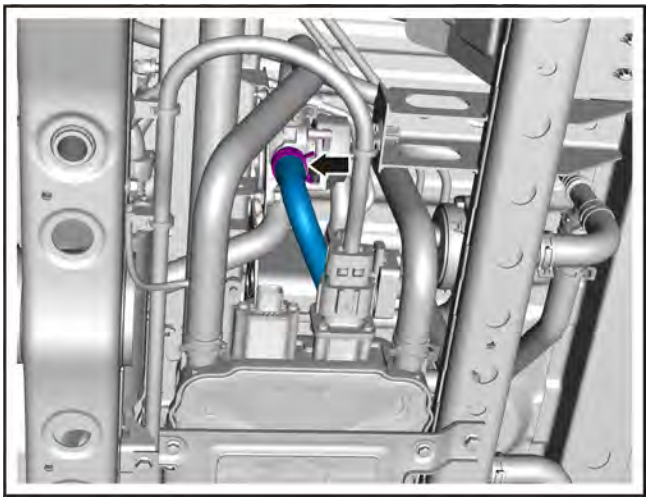
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

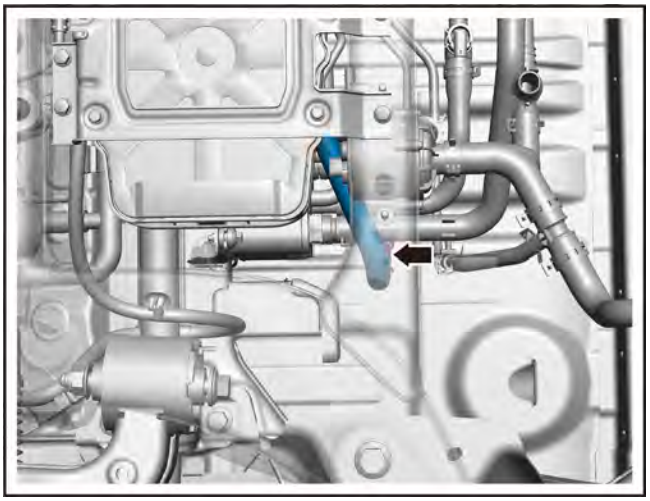
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release Three-way Valve-to-Chiller Hose Assembly retaining clamp.



5 release coolant hose retaining clamp, remove Three-way Valve-to-Chiller Hose Assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Electric Drive Expansion Tank Fill Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

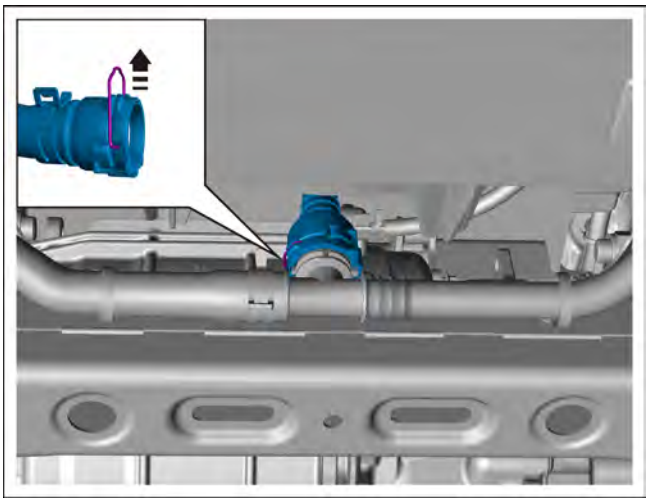
Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

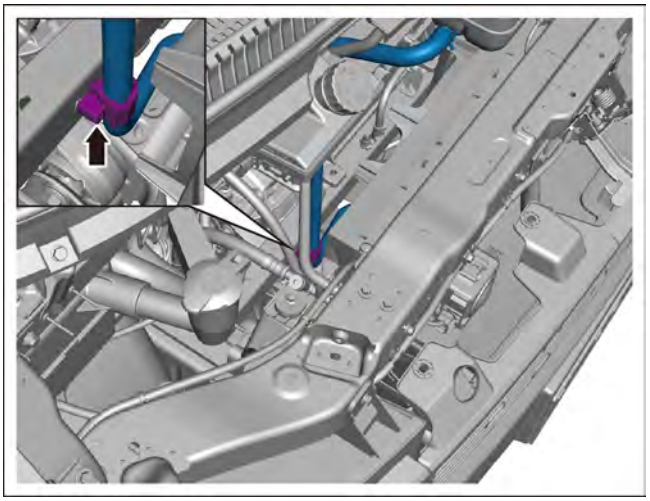
2 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



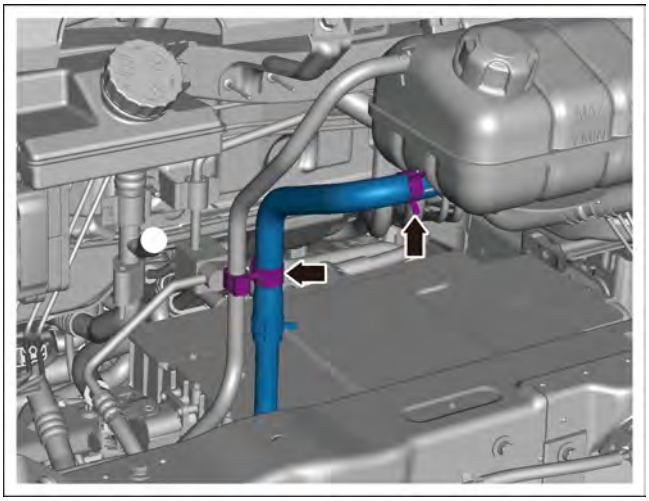
3 release retaining ring, release Electric Drive Expansion Tank Fill Hose Assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



4 release Electric Drive Expansion Tank Fill Hose Assembly retaining hose clamp.



5 remove Electric Drive Expansion Tank Fill Hose Assembly.

a. release Electric Drive Expansion Tank Fill Hose Assembly retaining hose clamp.

b. Remove retaining clamp, remove Electric Drive Expansion Tank Fill Hose Assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Heater Expansion Tank Fill Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

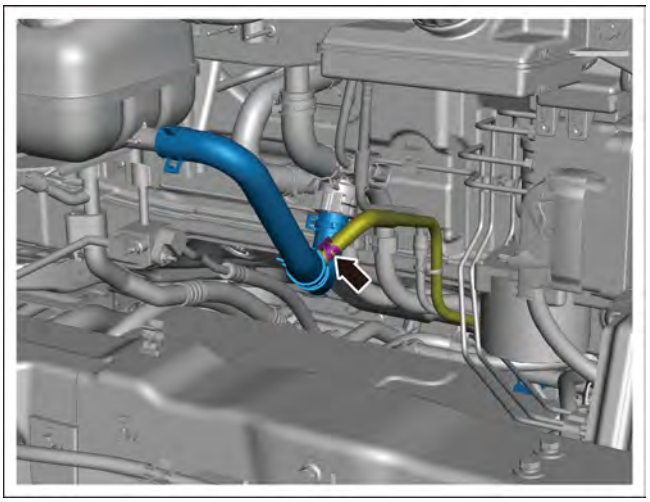
Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

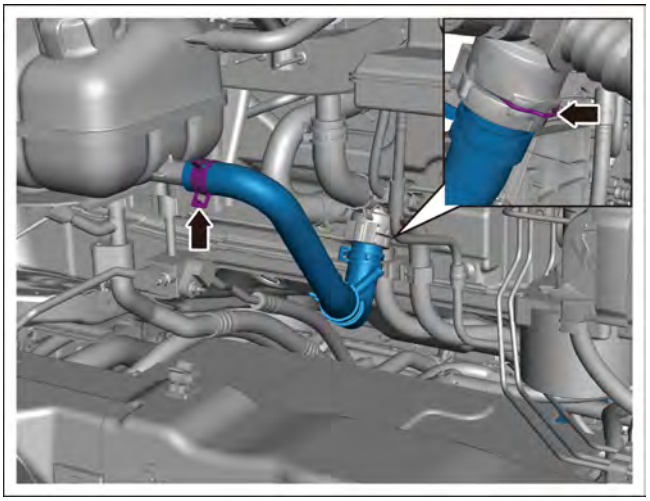
2 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



3 Remove retaining clamp, release Battery Circuit Vent Hose Assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



4 remove Heater Expansion Tank Fill Hose Assembly.

a. Remove retaining clamp, release Heater Expansion Tank Fill Hose Assembly.

b. release retaining ring, remove Heater Expansion Tank Fill Hose Assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Battery Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

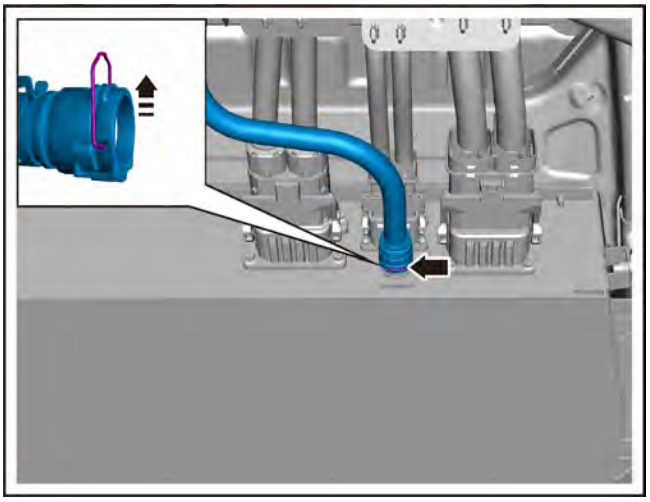
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

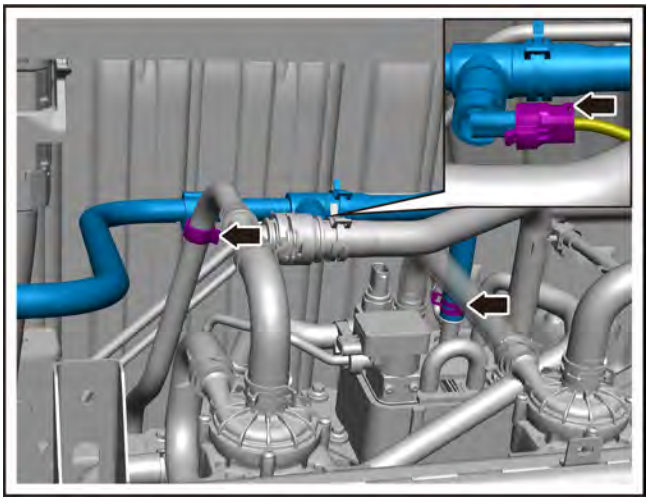
3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release battery inlet pipe retaining ring.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



5 Remove Battery Inlet Hose Assembly.

a. Disconnect Battery Inlet Hose Assembly wiring harness connector.

b. release Battery Inlet Hose Assembly retaining clamp.

c. release pipe clamp, remove Battery Inlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Battery Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

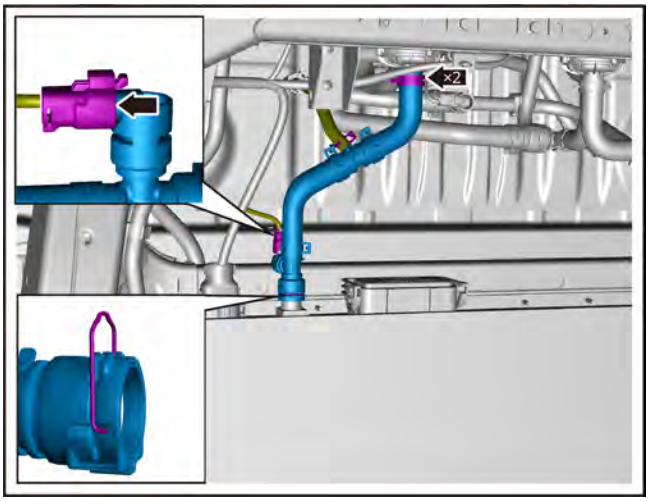
- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



4 release Battery Outlet Hose Assembly fastener.

a. Disconnect Battery Outlet Hose Assembly wiring harness connector.

b. release Battery Outlet Hose Assembly 2 retaining clamp.

c. release Battery Outlet Hose Assembly 2 retaining clamp.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

PTC Inlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

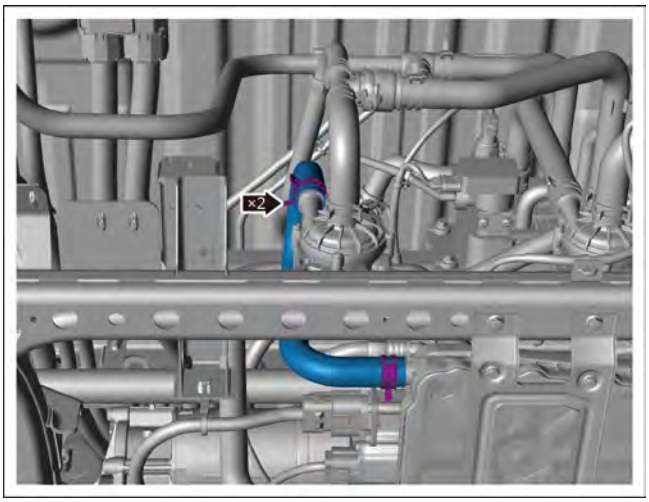
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



4 Remove 2 retaining clamp, remove PTC outlet pipe assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

PTC Outlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

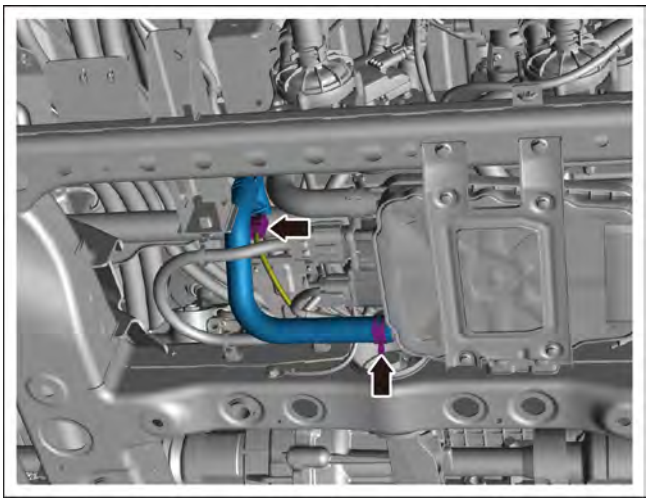
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



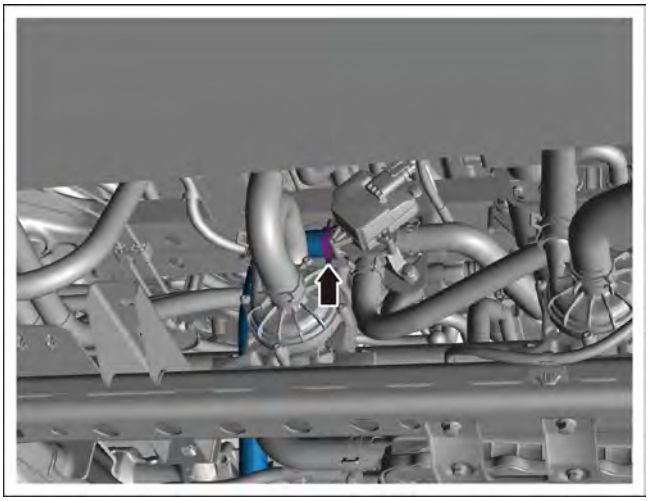
4 Disconnect PTC Outlet Hose Assembly wiring harness connector.

a. Remove retaining clamp, release PTC outlet pipe assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

b. Disconnect PTC Outlet Hose Assembly wiring harness connector.



5 Remove retaining clamp, remove PTC outlet pipe assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Heater Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

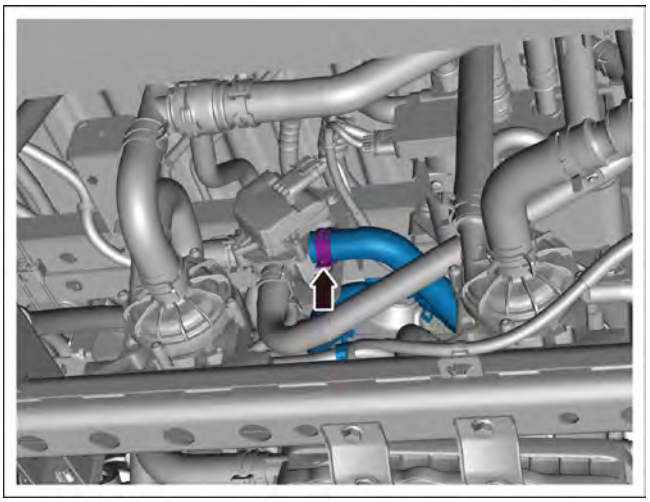
Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

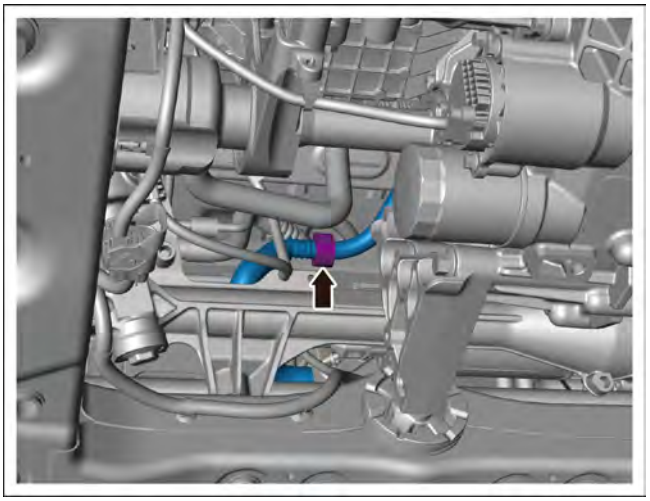
2 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



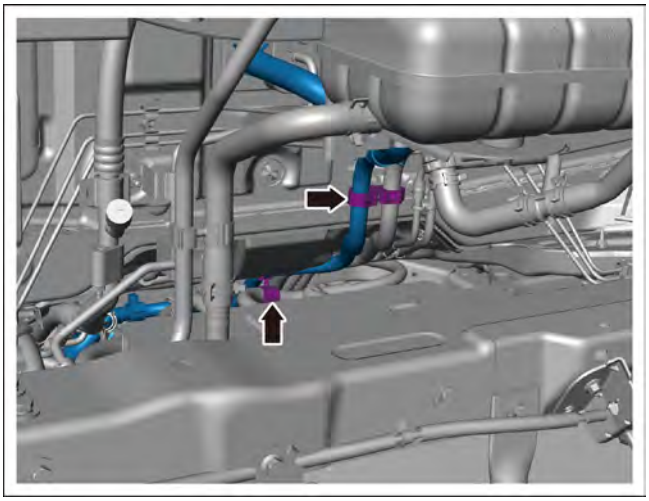
3 Remove retaining clamp, release Heater Inlet Hose Assembly.

Caution

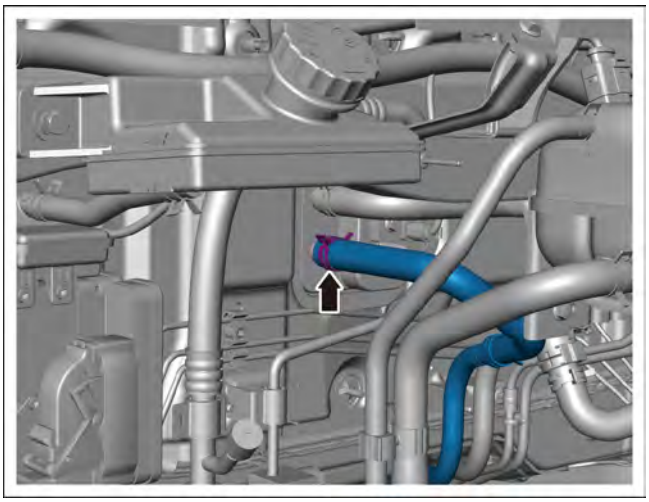
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



4 release Heater Inlet Hose Assembly retaining hose clamp.



5 release Heater Inlet Hose Assembly 2 retaining hose clamp.



6 Remove retaining clamp, remove Heater Inlet Hose Assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Heater Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

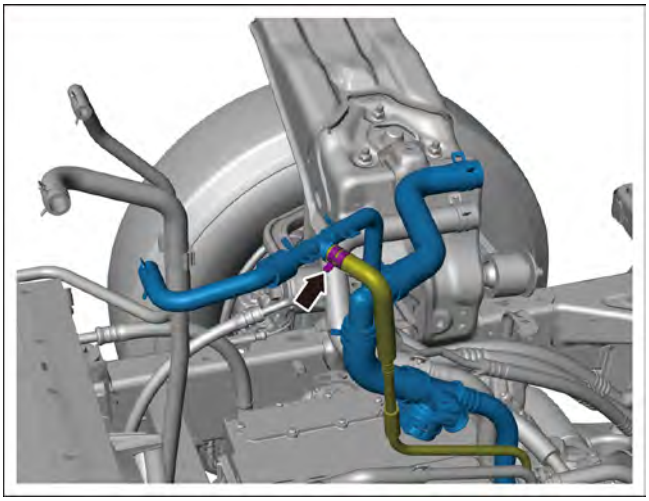
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

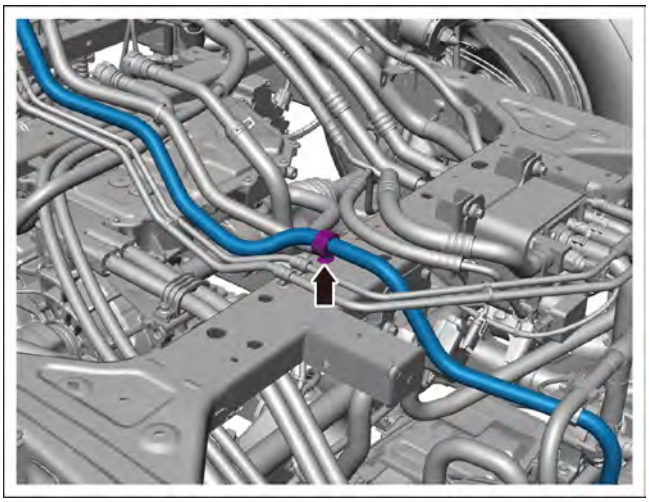
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

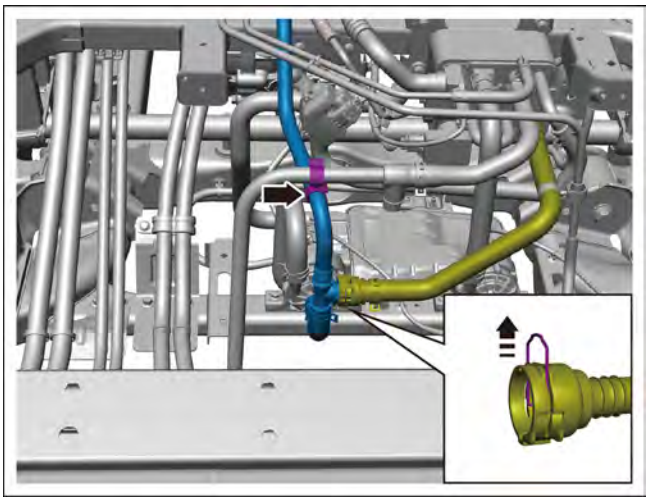
6 Remove trapezoidal frame assembly (low cargo deck center shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



7 Remove retaining clamp, release Battery Circuit Vent Hose Assembly.



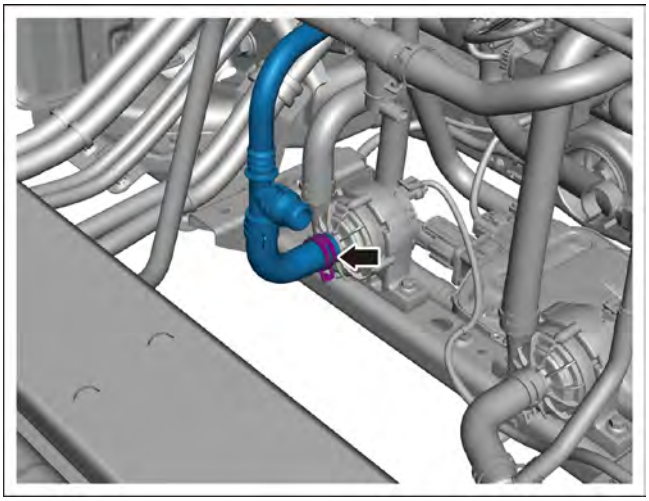
8 release Heater Outlet Hose Assembly retaining hose clamp.



9 release chiller to water pump inlet pipe assembly.

a. release Heater Outlet Hose Assembly retaining hose clamp.

b. release retaining ring, release chiller to water pump inlet pipe assembly.



10 Remove retaining clamp, remove Heater Outlet Hose Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the brake fluid and bleed the brake system. Refer to:Hydraulic Brake System Bleeding Procedure

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Electric Drive Inlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

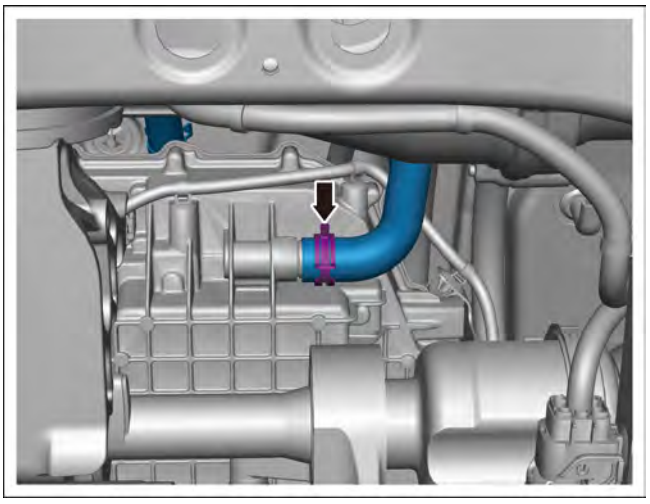
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

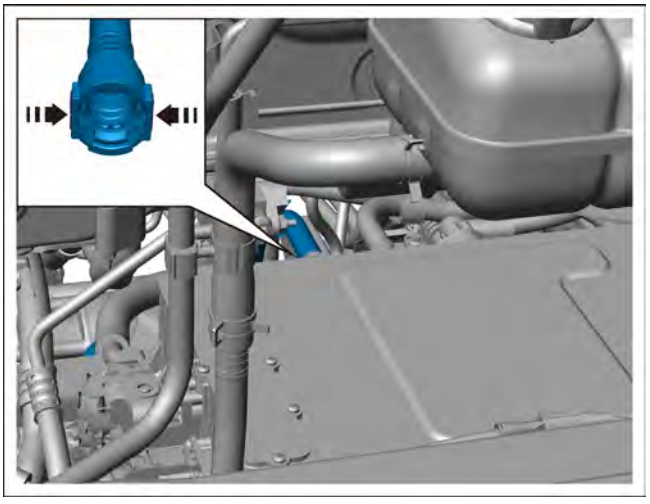
3 Drain the electric drive system coolant. Refer to:Coolant Draining and Filling



4 Remove retaining clamp, release electric drive inlet hose assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



5 press rapid install fitting, remove electric drive inlet hose assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Electric Drive Outlet Hose Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

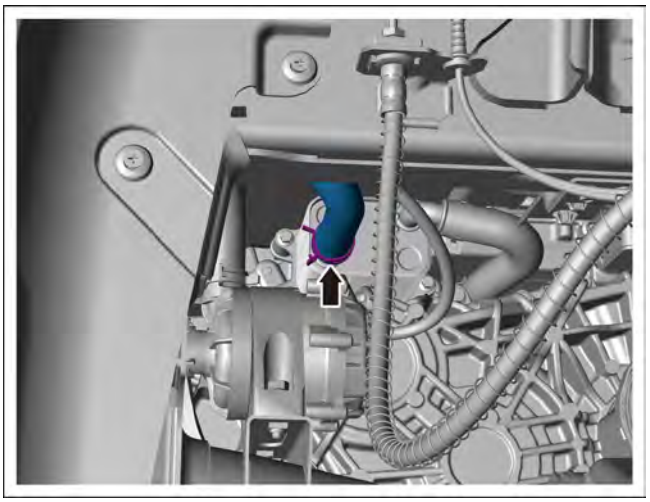
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

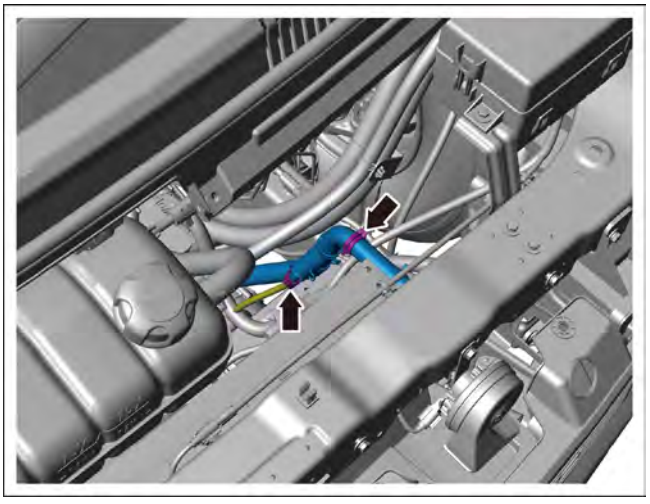
3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



4 Remove retaining clamp, release electric drive outlet hose assembly.

Caution

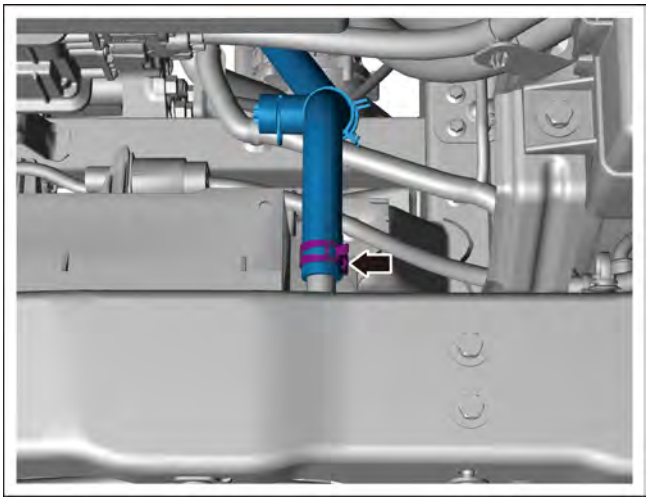
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



5 Disconnect electric drive outlet hose assembly wiring harness connector.

a. Release front compartment wiring harness retaining clip.

b. Disconnect electric drive outlet hose assembly wiring harness connector.



6 Remove retaining clamp, remove electric drive outlet hose assembly.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Three-Way Coolant Valve Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

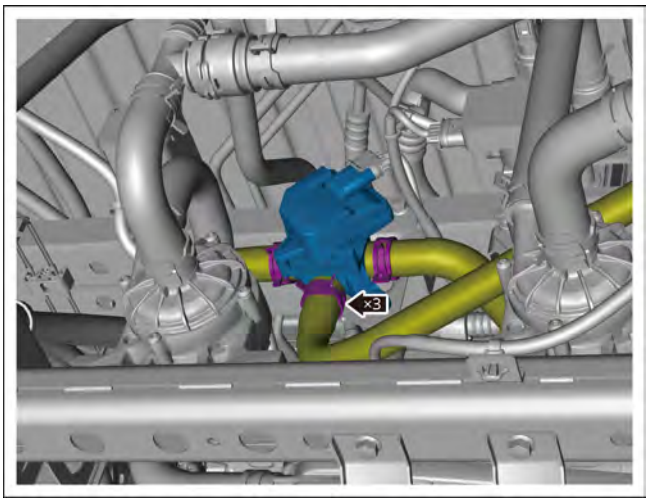
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

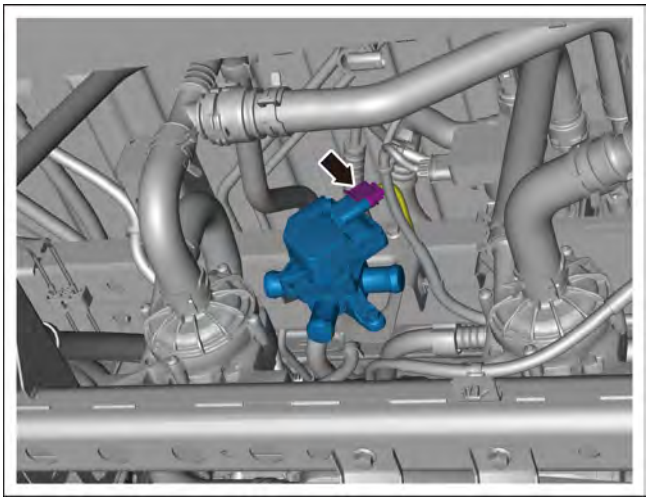
3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling



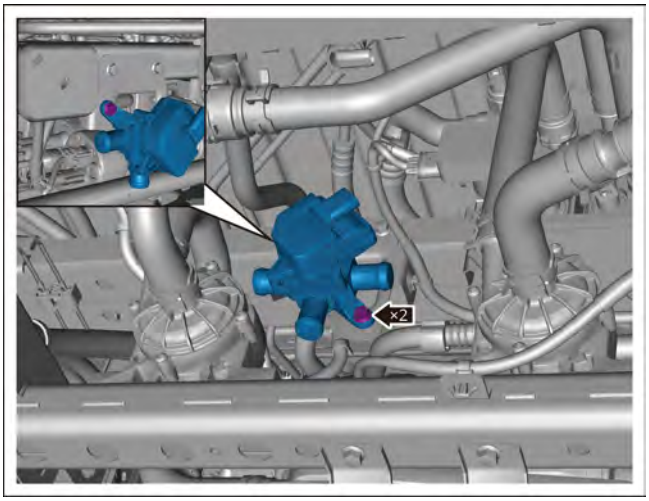
4 Remove 3 retaining clamp, release Three-way Coolant Valve Assembly connect coolant hose.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



5 Disconnect Three-way Coolant Valve Assembly wiring harness connector.



6 Remove 2 retaining bolt, remove Three-way Coolant Valve Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Three-Way Coolant Valve Bracket - Non-Heat-Pump A/C, Repair Procedure

Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

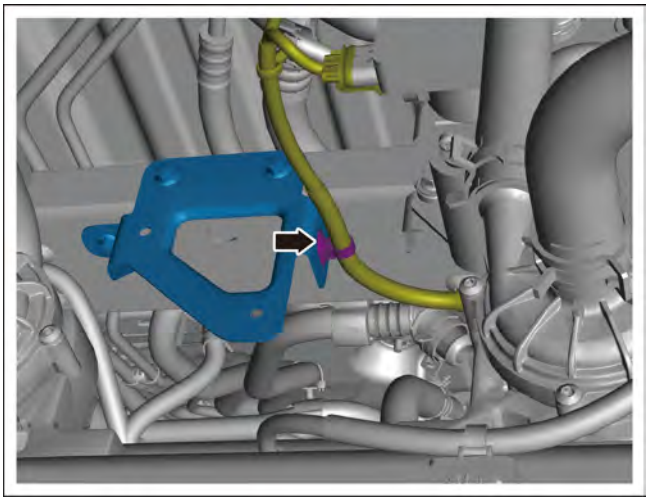
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

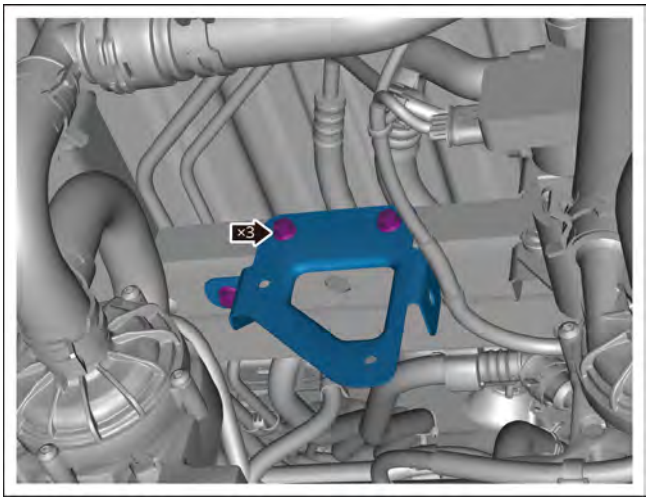
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

4 Remove Three-way Coolant Valve Assembly - Non-heat-pump A/C. Refer to:Three-Way Coolant Valve Assembly - Non-Heat-Pump A/C, Repair Procedure



5 Release chassis wiring harness retaining clip.



6 Remove 3 retaining bolt, remove Three-way Coolant Valve Bracket.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Electric Drive Coolant Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

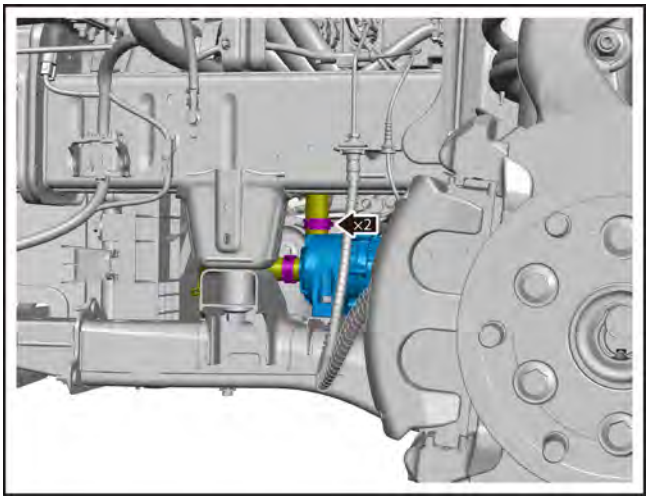
remove procedure

1 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the electric drive system coolant. Refer to:Coolant Draining and Filling

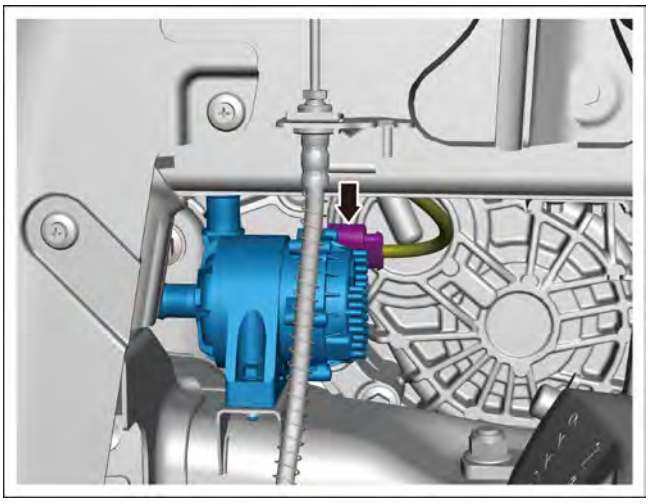
4 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation



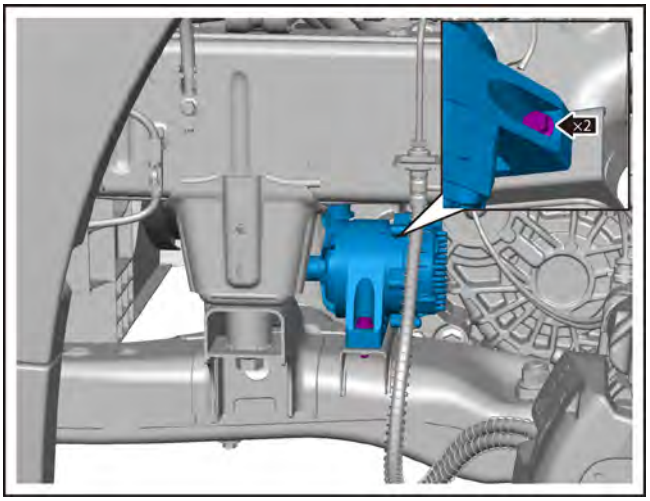
5 Remove 2 retaining clamp, release electric drive coolant pump assembly connect coolant hose.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



6 Disconnect heater water pump assembly wiring harness connector.



7 Remove 2 retaining bolt, remove electric drive coolant pump assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Battery Coolant Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

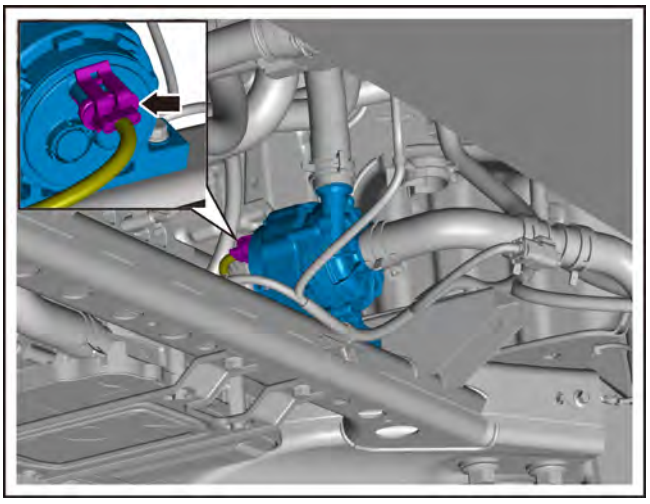
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

remove procedure

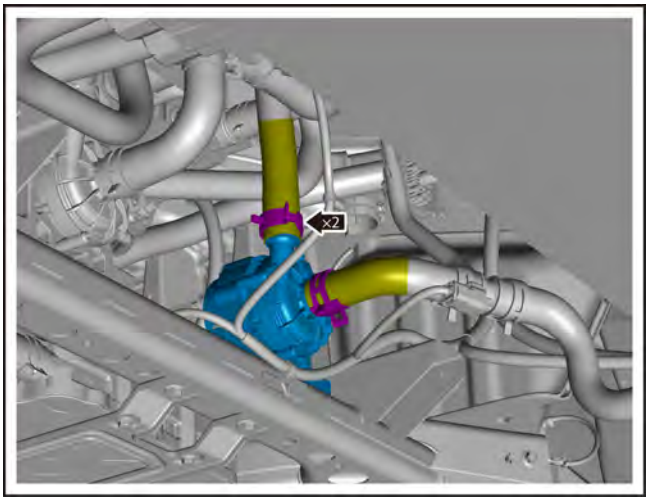
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Drain the electric drive system coolant. Refer to:Coolant Draining and Filling



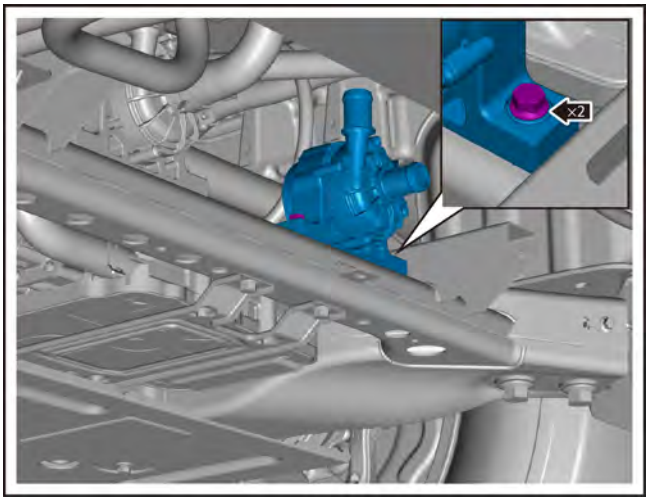
4 Disconnect battery coolant pump assembly wiring harness connector.



5 Remove 2 retaining clamp, release battery coolant pump assembly connect coolant hose.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



6 Remove 2 retaining bolt, remove battery coolant pump assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Heater Water Pump Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

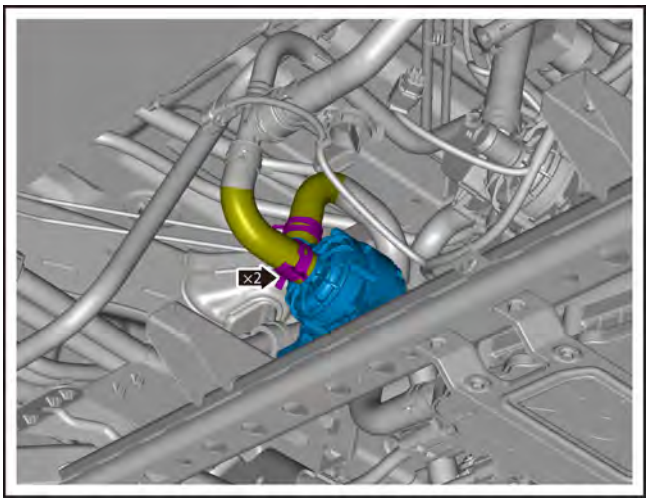
- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

remove procedure

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

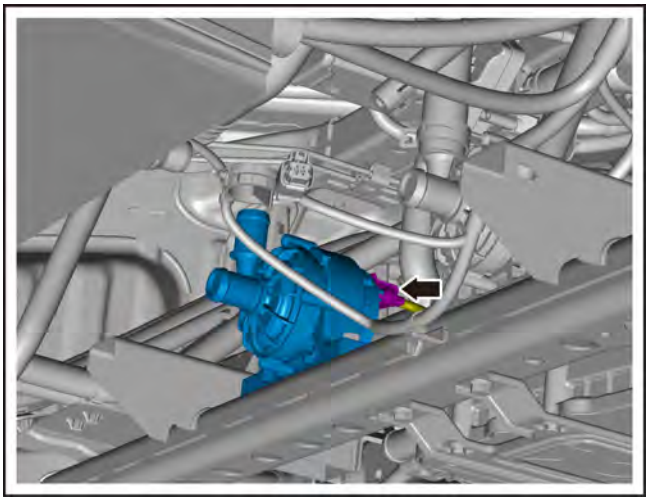
3 Drain the heater circuit coolant. Refer to:Coolant Draining and Filling



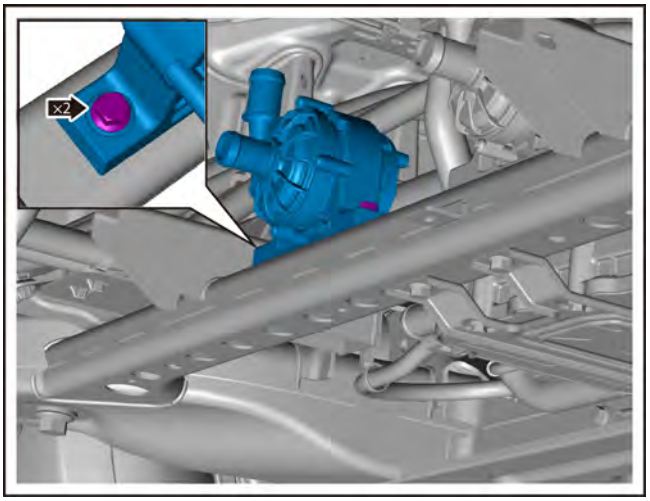
4 Remove 2 retaining clamp, release heater water pump assembly connect coolant hose.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



5 Disconnect heater water pump assembly wiring harness connector.



6 Remove 2 retaining bolt, remove heater water pump assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

air conditioning system

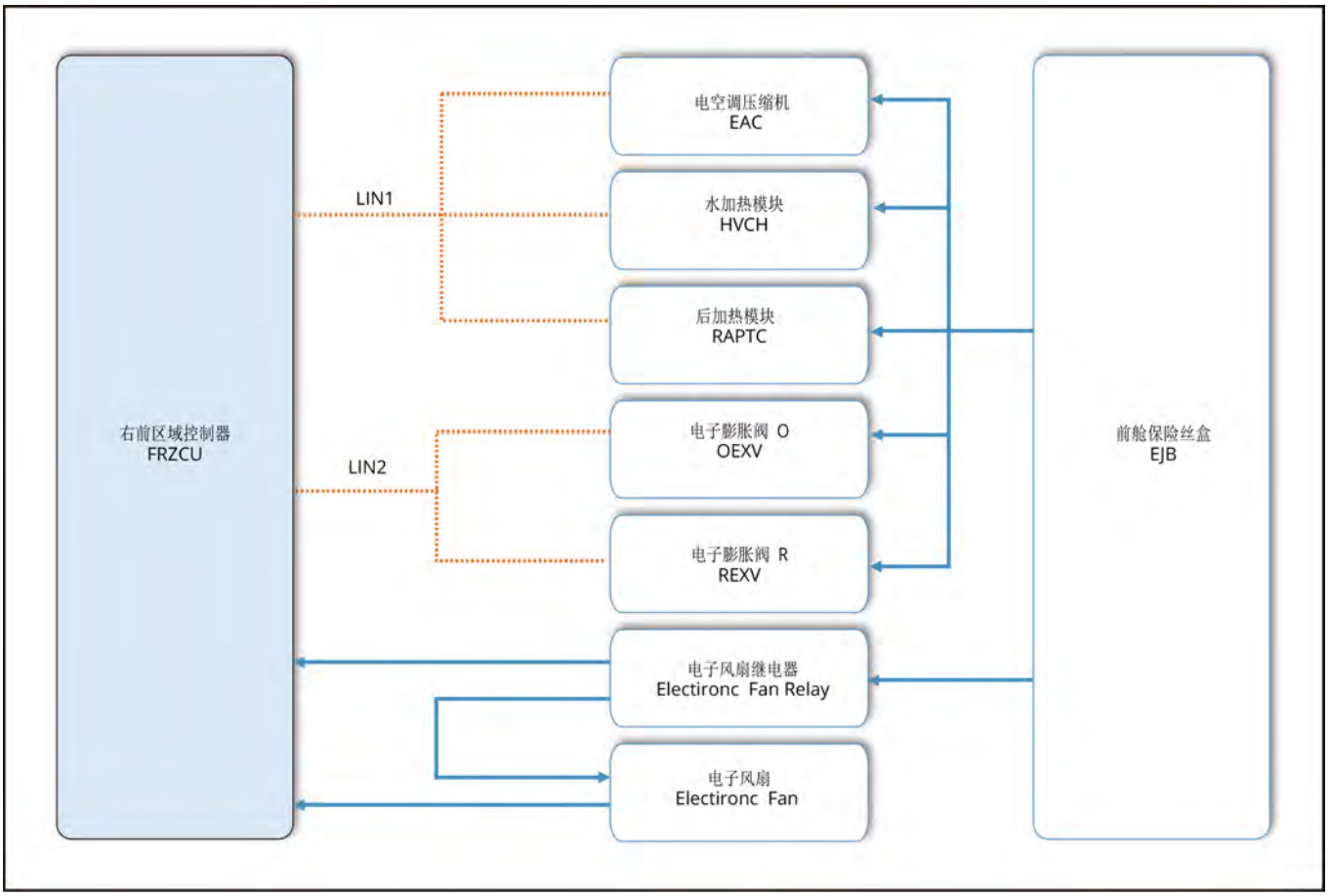
System Overview

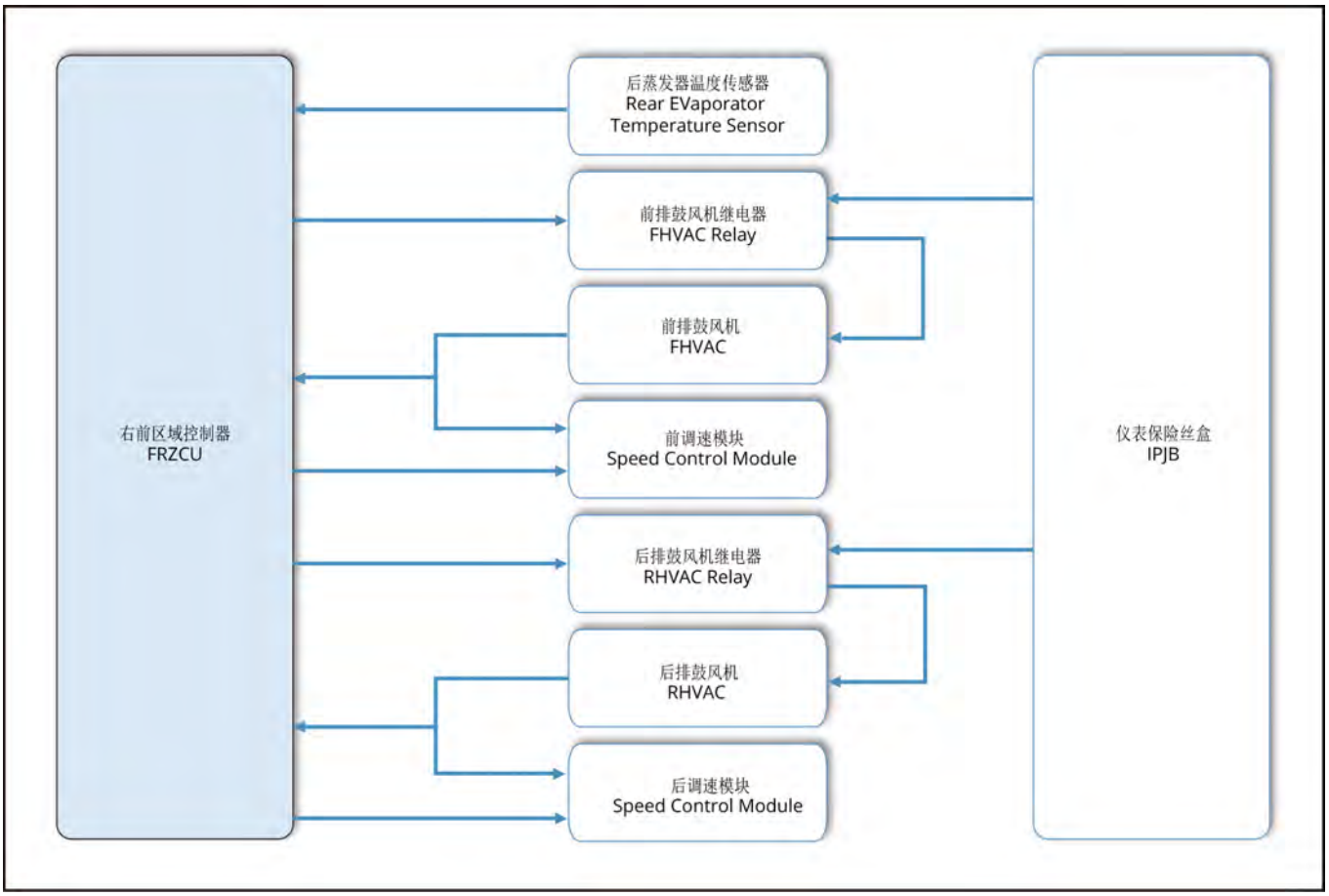
Air Conditioning System Overview

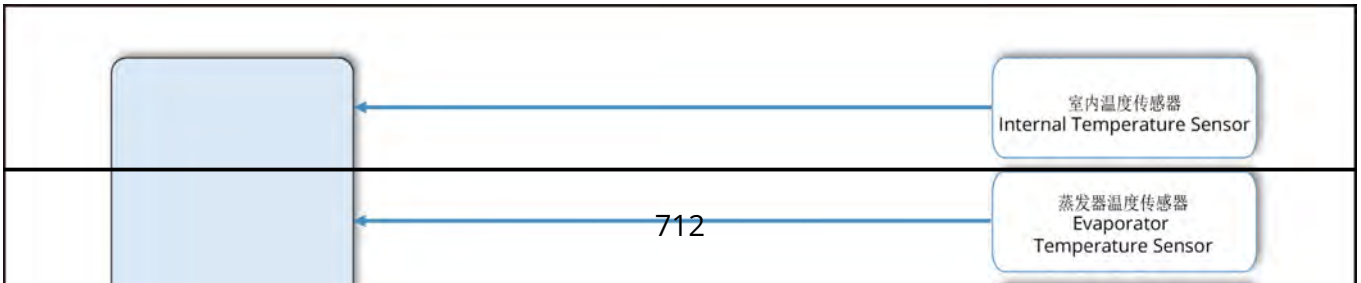
System Principle

A/C temperature sensor Yes I type use at measure vehicle inner temperature and and air conditioning system coordination work equipment, it core Function Yes ensure vehicle inner temperature accurate adjustment, improve occupant item comfort. temperature sensor use thermal item resistance type setting count, it Operating Principle base at thermal item resistance resistance value with temperature change and change characteristic, with item temperature raise high, thermal item resistance resistance value will corresponding lower low, reverse of then raise high. sensor this type resistance change conversion for power signal, and transmission to Left Front Zone Control Unit. Left Front Zone Control Unit for signal perform treatment and analysis, according to pre- setting Temperature Adjustment logic, dynamically adjust A/C operation Parameters, if airflow, cooling or heating power etc., from and enable for vehicle inner temperature precisely control.

Electrical Schematic Diagram


右前区域控制器
FRZCU
LIN1
LIN2
电空调压缩机
EAC
水加热模块
HVCH
后加热模块
RAPTC
电子膨胀阀 O
OEXV
电子膨胀阀 R
REXV
电子风扇继电器
Electironc Fan Relay
电子风扇
Electironc Fan
前舱保险丝盒
EJB


右前区域控制器
FRZCU
后蒸发器温度传感器
Rear EVaporator
Temperature Sensor
前排鼓风机继电器
FHVAC Relay
前排鼓风机
FHVAC
前调速模块
Speed Control Module
后排鼓风机继电器
RHVAC Relay
后排鼓风机
RHVAC
后调速模块
Speed Control Module
仪表保险丝盒
IPJB


室内温度传感器
Internal Temperature Sensor
蒸发器温度传感器
Evaporator
Temperature Sensor

Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Control Signal	Electric Cooling Fan relay control signal Input
	Hardwired	Control Signal	Electric Cooling Fan duty cycle Control Signal Input
	Hardwired	Control Signal	front blower relay control signal Output
	Hardwired	Feedback Signal	front blower voltage Feedback Signal Input
	Hardwired	Control Signal	front blower speed control module Control Signal Output
	Hardwired	Control Signal	rear blower relay control signal Output
	Hardwired	Feedback Signal	rear blower voltage Feedback Signal Input
	Hardwired	Control Signal	rear blower speed control module Control Signal Output
	Hardwired	Temperature Signal	compartment inner temperature sensor Temperature Signal Input
	Hardwired	Temperature Signal	evaporate send unit temperature sensor Temperature Signal Input
	Hardwired	Control Signal	driver cold warm motor Control Signal Output
	Hardwired	Power Supply	driver cold warm motor 5V Power Supply Output
	Hardwired	Feedback Signal	driver cold warm motor Feedback Signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	inner outer cycle motor Control Signal Output
	Hardwired	Power Supply	inner outer cycle motor 5V Power Supply Output
	Hardwired	Feedback Signal	inner outer cycle motor Feedback Signal Input
	Hardwired	Control Signal	front mode motor Control Signal Output
	Hardwired	Power Supply	front mode motor 5V Power Supply Output
	Hardwired	Feedback Signal	front mode motor Feedback Signal Input
	Hardwired	Control Signal	rear mode motor Control Signal Output
	Hardwired	Power Supply	rear mode motor 5V Power Supply Output
	Hardwired	Feedback Signal	rear mode motor Feedback Signal Input
	Hardwired	Control Signal	rear cold warm motor Control Signal Output
	Hardwired	Power Supply	rear cold warm motor 5V Power Supply Output
	Hardwired	Feedback Signal	rear cold warm motor Feedback Signal Input
	Hardwired	Temperature Signal	Ambient Temperature Sensor Temperature Signal Input
	Hardwired	Temperature Signal	rear evaporate send unit temperature sensor Temperature Signal Input
Front Compartment Fuse Box	Hardwired	Power Supply	power A/C compressor power supply Output
	Hardwired	Power Supply	coolant heating unit module power supply Output
	Hardwired	Power Supply	rear heater module power supply Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Power Supply	electronic expansion valve O power supply Output
	Hardwired	Power Supply	electronic expansion valve R power supply Output
	Hardwired	Power Supply	Electric Cooling Fan relay power supply Output
Instrument Panel Fuse Box	Hardwired	Power Supply	front blower relay power supply Output
	Hardwired	Power Supply	rear blower relay power supply Output
power A/C compressor	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Coolant Heater Module	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
rear heat module	LIN1	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic expansion valve O	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
electronic expansion valve R	LIN2	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Electric Cooling Fan relay	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
	Hardwired	Power Supply	Electric Cooling Fan power supply Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Output
Electric Cooling Fan	Hardwired	Power Supply	Electric Cooling Fan relay power supply Input
	Hardwired	Control Signal	Right Front Zone Control Unit duty cycle Control Signal Output
Ambient Temperature Sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit compartment outer Temperature Signal Output
rear evaporate send unit temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit rear evaporate send unit Temperature Signal Output
front blower relay	Hardwired	Power Supply	Instrument Panel Fuse Box Power Input
	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
	Hardwired	Power Supply	front blower power supply Output
front blower	Hardwired	Power Supply	front blower relay power supply Input
	Hardwired	Feedback Signal	Right Front Zone Control Unit Feedback Signal Output
front blower speed control module	Hardwired	Drive Signal	front blower Drive Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit speed control Control Signal Input
rear blower relay	Hardwired	Power Supply	Instrument Panel Fuse Box Power Input
	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
	Hardwired	Power Supply	front blower power supply Output
rear blower	Hardwired	Power Supply	rear blower relay power supply Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Feedback Signal	Right Front Zone Control Unit Feedback Signal Output
rear blower speed control module	Hardwired	Drive Signal	rear blower Drive Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit speed control Control Signal Input
compartment inner temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit compartment inner Temperature Signal Output
evaporate send unit temperature sensor	Hardwired	Temperature Signal	Right Front Zone Control Unit evaporate send unit Temperature Signal Output
driver cold warm motor	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Supply Input
	Hardwired	Feedback Signal	Right Front Zone Control Unit Feedback Signal Output
inner outer cycle motor	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Supply Input
	Hardwired	Feedback Signal	Right Front Zone Control Unit Feedback Signal Output
front mode motor	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Supply Input
	Hardwired	Feedback Signal	Right Front Zone Control Unit Feedback Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
rear mode motor	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Supply Input
	Hardwired	Feedback Signal	Right Front Zone Control Unit Feedback Signal Output
rear cold warm motor	Hardwired	Control Signal	Right Front Zone Control Unit Control Signal Input
	Hardwired	Power Supply	Right Front Zone Control Unit 5 V Power Supply Input
	Hardwired	Feedback Signal	Right Front Zone Control Unit Feedback Signal Output

Component Description

Ambient Temperature Sensor

Ambient Temperature Sensor install in front impact beam upper, main need Function Yes measure vehicle outer part ambient temperature, and Data Transmission to Right Front Zone Control Unit, with convenient adjust air conditioning system work Status, ensure vehicle performance and passenger comfort.

compartment inner temperature sensor

compartment inner temperature sensor install in instrument panel center lower Trim Panel Assembly upper, main need Function Yes detection vehicle inner part temperature, and Data Transmission to Left Front Zone Control Unit, with convenient automatic adjustment air conditioning system, maintain vehicle inner temperature comfort.

servo motor

A/C servo motor Yes vehicle A/C box electromechanical type closed loop perform component, install at Instrument Pack unit inner part A/C housing upper, Output shaft and A/C air door mechanical coupling combined; receive Air Conditioning Control module drive command, drive air door rotate, same when inner set position sensor feedback air door actual angle, enable temperature mix combined, Air Distribution Mode, inner outer cycle air door precisely angle control, Yes automatic A/C enable cockpit temperature area adjustment core actuator part.

Repair Procedure

Refrigerant Recovery and Charging

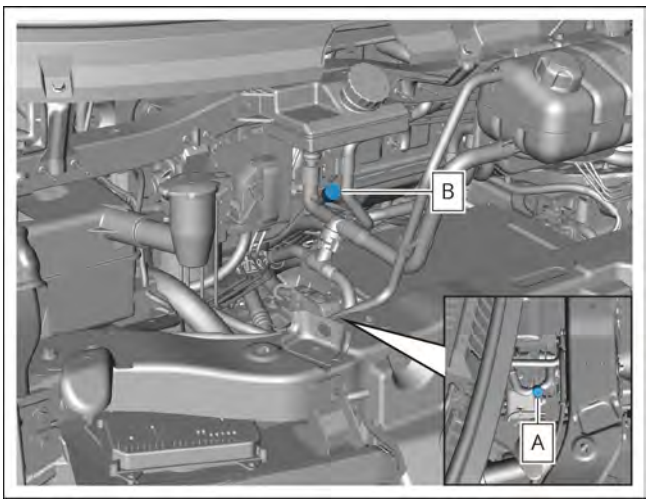
Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

- *please wear safety goggles and seal hand sleeve. prevent operation process center with chemical burn injury and freeze injury air hazard.*
- *if result skin not item connect contact refrigerant, please establish that is use large amount clear water flush. if result refrigerant not item splash into eyes center, please establish that is use clear water rinse eyes, Time not less at 10 min.*
- *do not refrigerant release to large air center, if result not item release, please open door and Windows, wait air self by flow communication rear again continue continue operation.*
- *do not make refrigerant or install with refrigerant capacity unit near fire source.*

refrigerant recover



1 connect refrigerant recover fill unit.
   a. Remove A/C line high-voltage port protection cover A, connect high-voltage fitting.
   b. Remove A/C line low-voltage port protection cover B, connect low-voltage fitting.

2 check refrigerant recover fill unit high-voltage, low-voltage pressure meter whether with pressure indicate mark, if pressure too low, system center no can recover refrigerant.

3 start recover process. with related refrigerant recover fill unit Use detailed information, please refer to refrigerant recover fill unit Instructions for Use manual.

evacuate vacuum

1 check high-voltage side and low-voltage side hose whether connect to air conditioning

system upper, open fill unit high-voltage side and low-voltage side valve.

2 start vacuum pump perform evacuate vacuum, observe pressure meter indicate pin lower lower condition. wait indicate pin stability at vacuum area and no return raise trend rear, disabled fill unit high-voltage side and low-voltage side valve.

3 bumper pressure 10min, observe pressure meter indicate pin. if indicate pin output occur return raise, Instructions system store in leakage, must for air conditioning system perform check leak and service.

fill refrigerant

1 fill front please core for refrigerant and cold freeze oil fill amount and model. refer to:Fluid Capacities and Specifications

2 refer to refrigerant recover fill unit Instructions for Use manual, detailed unlock refrigerant recover fill unit fill cold freeze oil and refrigerant method.

3 Use dedicated moment degree reservoir fill cold freeze oil, direction system add suitable amount cold freeze oil.

Caution

please according to cold freeze oil replace scenario select corresponding fill amount, cold freeze oil fill amount error will cause air conditioning system performance item -based or component fault.

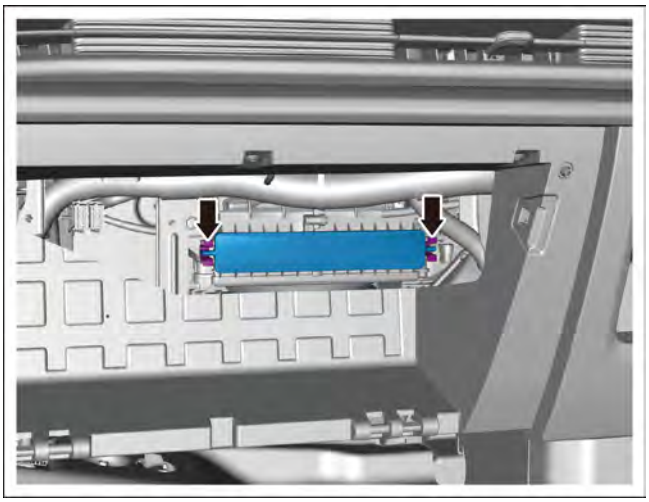
4 direction air conditioning system center fill must need refrigerant amount, ensure unit of measurement correct (that is item item, item item or item).

5 fill complete rear, disabled fill unit high-voltage side and low-voltage side valve, disconnect high, low-voltage fitting and install port protection cover.

Filter Element Cover, Repair Procedure

Removal Steps

1 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure



2 press retaining clip, remove air conditioning filter element cover panel.

Installation Steps

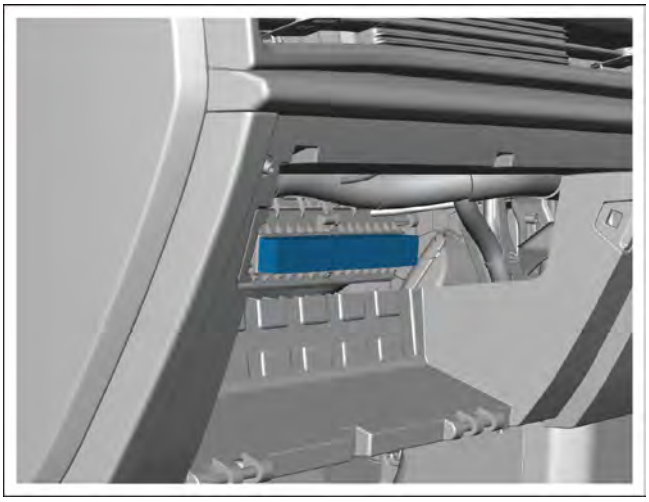
1 Install in the reverse order of removal.

PM2.5 Filter Element, Repair Procedure

Removal Steps

1 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure

2 Remove filter element cover. Refer to:Filter Element Cover, Repair Procedure



3 Remove PM2.5 filter element.

Installation Steps

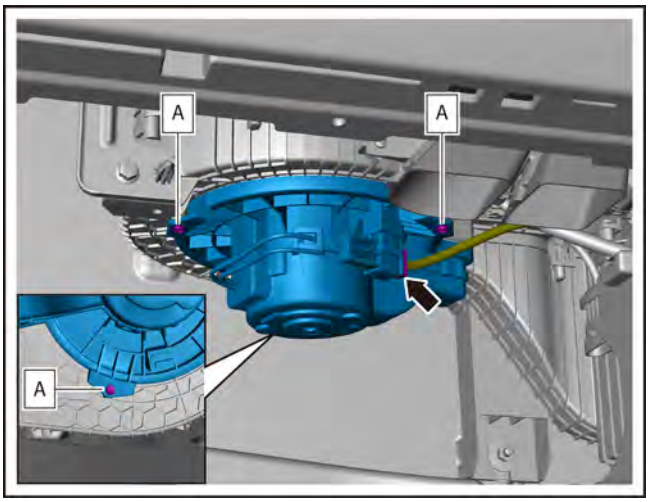
1 Observe the following points, then install in the reverse order of removal.

2 Install when, note filter element upper air flow side direction indication arrow, ensure arrow indicate direction and air flow side direction I cause.

Blower Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 remove blower assembly.

a. Disconnect blower assembly wiring harness connector.

b. Remove 3 retaining screw A, remove blower assembly.
Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

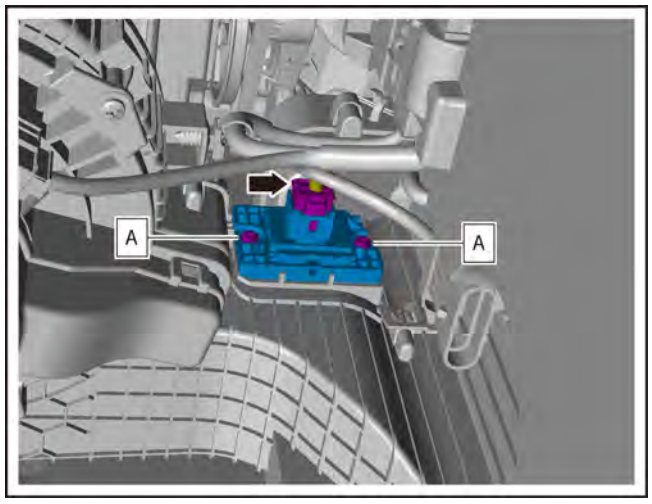
Inspection and Verification:

Install complete rear, for blower assembly perform test, ensure motor operation normal, no abnormal effect.

Speed Control Module, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Remove speed control module.

a. Disconnect speed control module wiring harness connector.

b. Remove 2 retaining screw A, remove speed control module.
Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

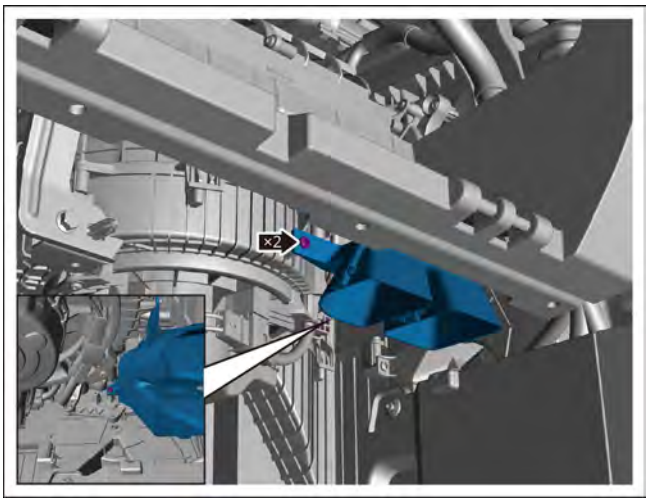
Inspection and Verification:

Install complete rear, operation speed control switch, check speed control module Function whether normal, confirm air unit speed and each gear position phase symbol.

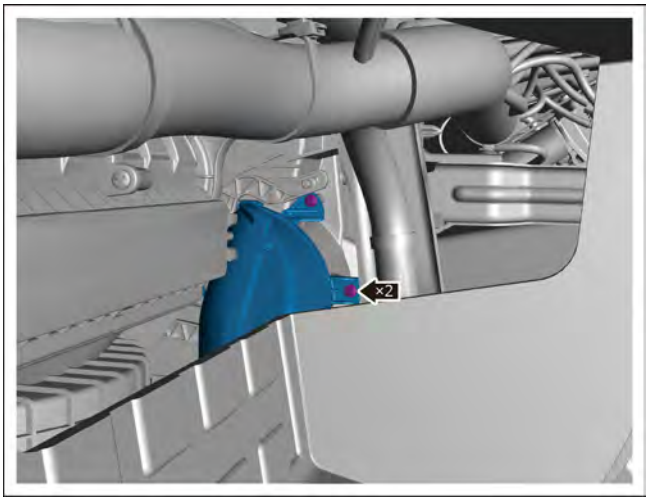
Left Footwell Air Duct, Repair Procedure

Removal Steps

1 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure



2 Remove left footwell air duct 2 retaining screw.



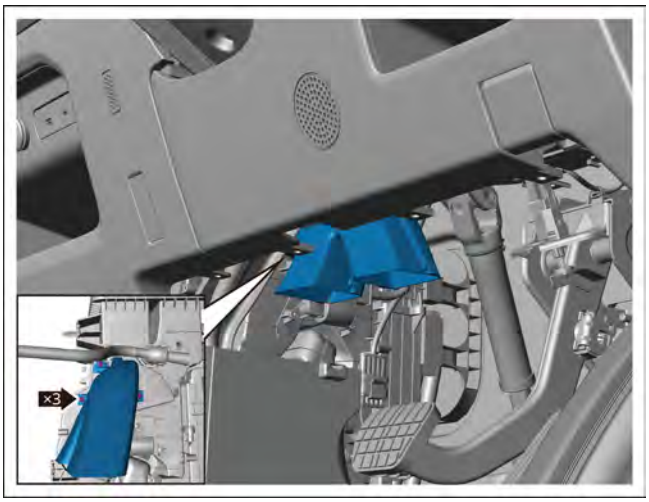
3 Remove 2 retaining screw, remove left footwell air duct.

Installation Steps

1 Install in the reverse order of removal.

Right Footwell Air Duct, Repair Procedure

Removal Steps



1 Remove 3 retaining screw, remove right footwell air duct.

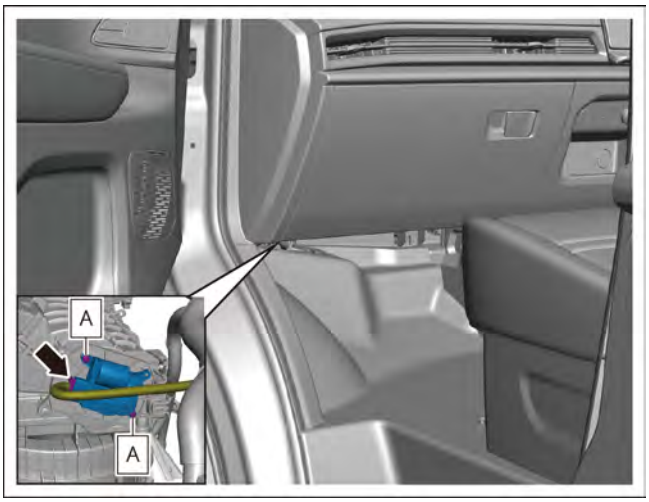
Installation Steps

1 Install in the reverse order of removal.

Servo Motor (Inner Outer Cycle), Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Remove servo motor (inner outer cycle).

a. Remove servo motor (inner outer cycle)2 retaining screw A.

b. disconnect wiring harness connector, remove servo motor (inner outer cycle).

Installation Steps

1 Install in the reverse order of removal.

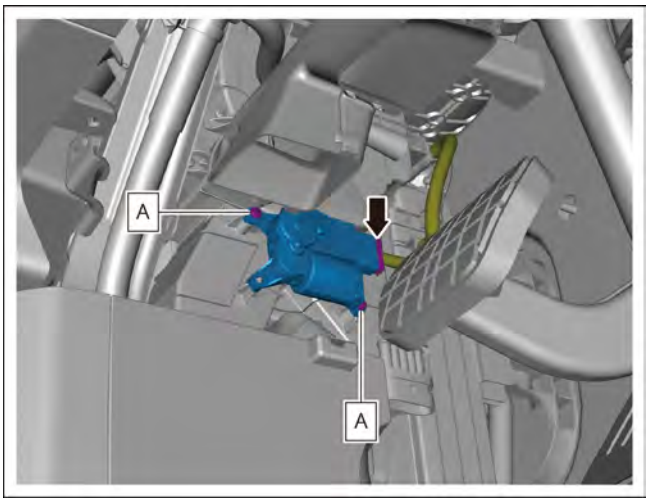
Inspection and Verification:

Install complete rear, test servo motor (inner outer cycle) Function, confirm inner cycle and outer cycle mode lower air door switch replace order smooth, no stuck.

Servo Motor (Temperature), Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Remove servo motor (temperature).

a. Remove servo motor (temperature)2 retaining screw A.

b. disconnect wiring harness connector, remove servo motor (temperature).

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, test servo motor (temperature) Function, temperature from maximum low adjust to maximum high, confirm air door in all travel inner switch replace order smooth, no stuck.

Servo Motor (Mode), Repair Procedure

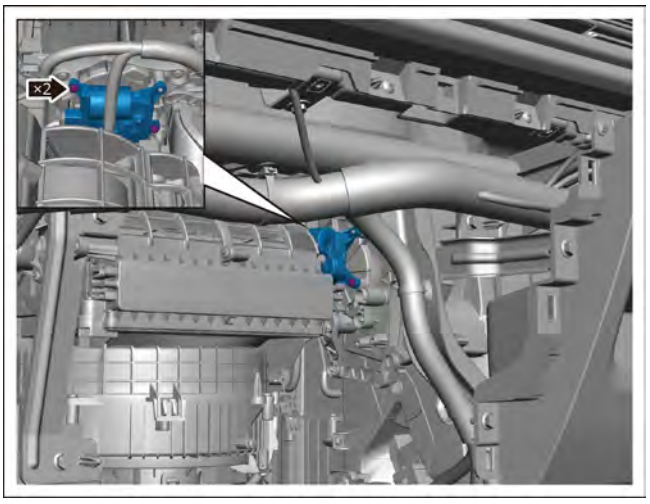
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

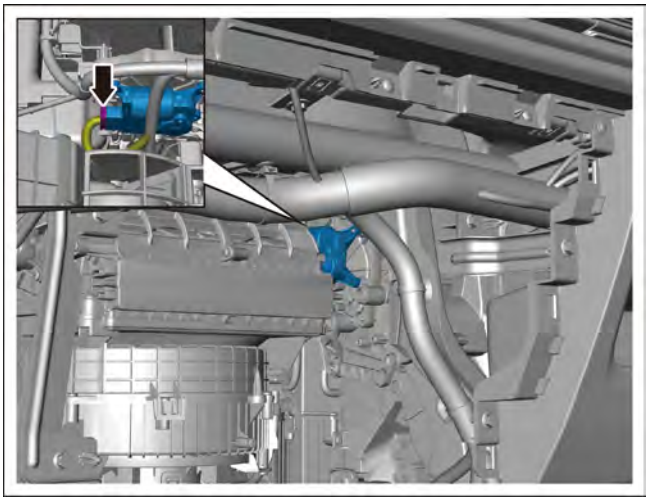
2 Remove side Cover Assembly left. Refer to:Side Cover Assembly Left, Repair Procedure

3 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure

4 Remove glove box housing assembly -RHD. Refer to:Glove Box Housing Assembly -RHD, Repair Procedure



5 Remove servo motor (mode)2 retaining screw A.



6 disconnect wiring harness connector, remove servo motor (mode).

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

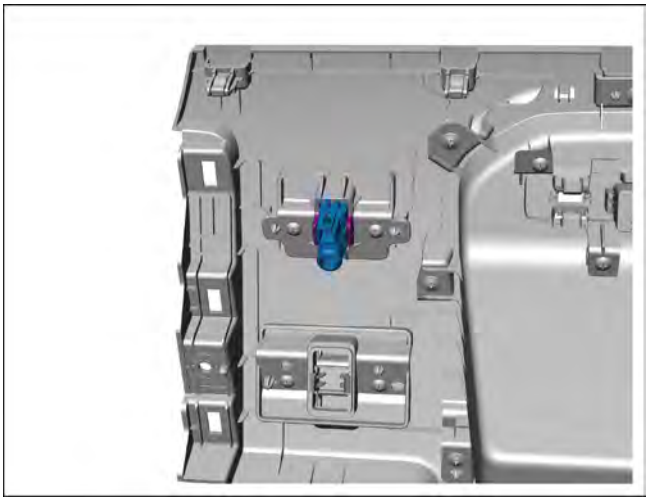
Install complete rear, test servo motor (mode) Function, confirm each output air mode lower air door switch replace order smooth, no stuck.

Compartment Inner Temperature Sensor, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel center lower panel assembly -RHD. Refer to:Instrument Panel Center Lower Panel Assembly -RHD, Removal and Installation



3 release retaining clip, remove compartment inner temperature sensor.

Installation Steps

1 Install in the reverse order of removal.

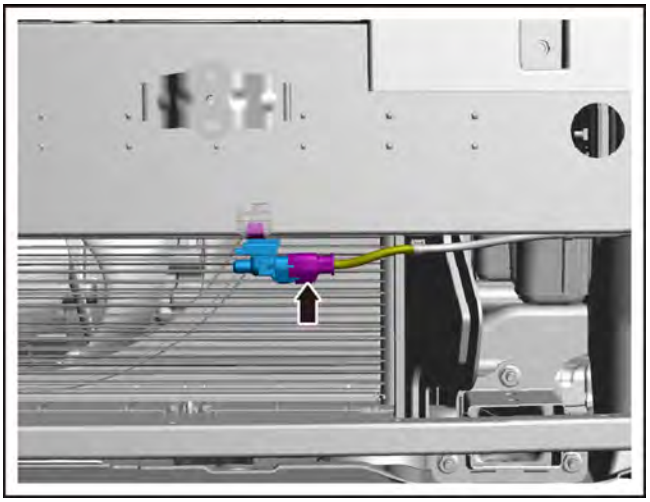
Ambient Temperature Sensor, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 remove Ambient Temperature Sensor.
   a. Disconnect Ambient Temperature Sensor wiring harness connector.
   b. release retaining clip, remove Ambient Temperature Sensor.

Installation Steps

1 Install in the reverse order of removal.

Front HVAC Assembly, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

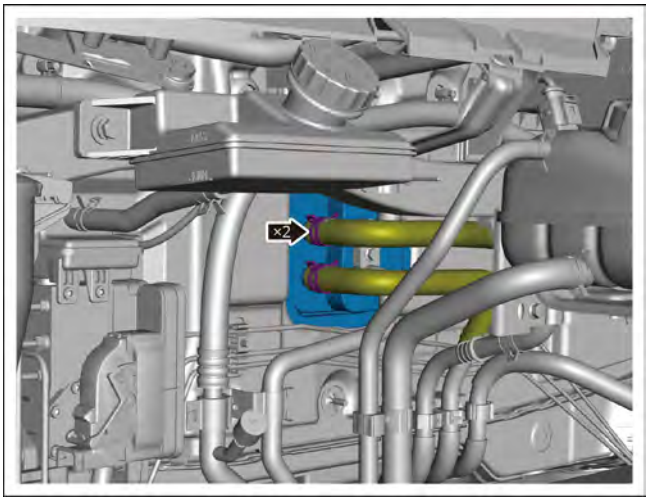
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

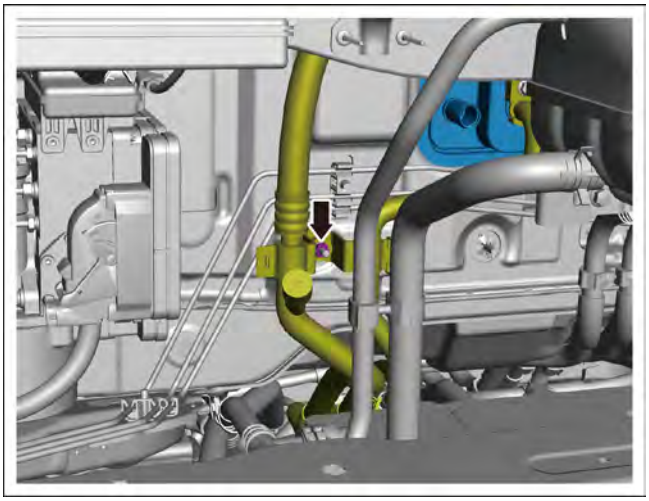
5 Remove instrument panel crossmember assembly -RHD. Refer to:Instrument Panel Crossmember Assembly -RHD, Removal and Installation



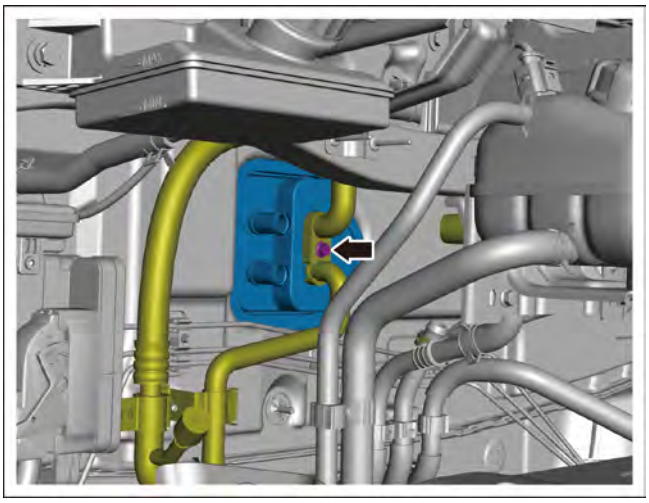
6 Remove 2 retaining clamp, release Front HVAC Assembly connect line.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



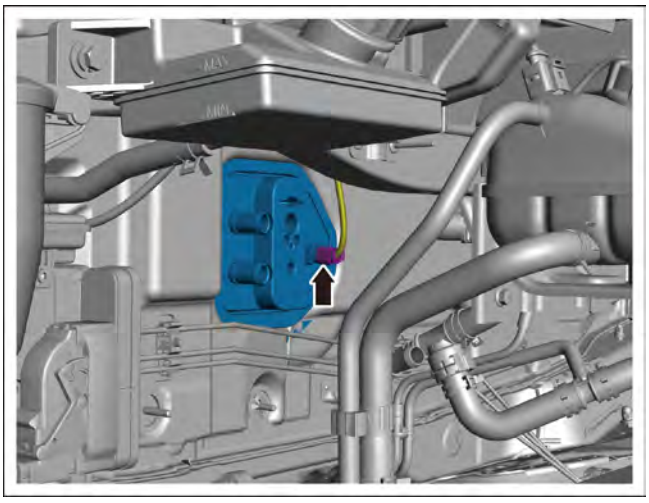
7 Remove Front A/C Inlet/Outlet Pipe Assembly I retaining nut.



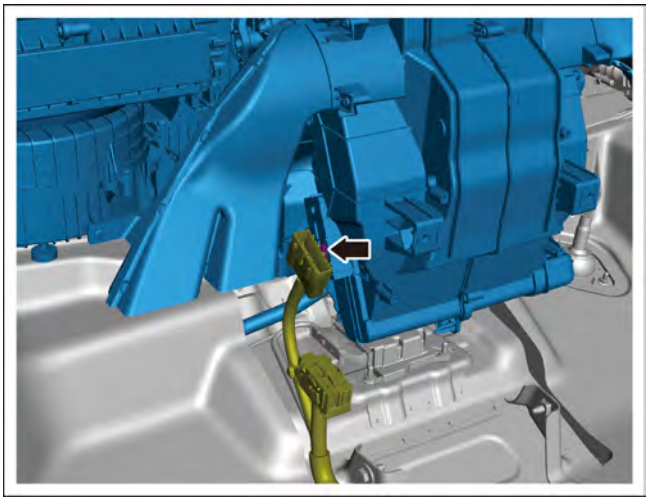
8 Remove retaining bolt, release Front A/C Inlet/Outlet Pipe Assembly I.

Caution

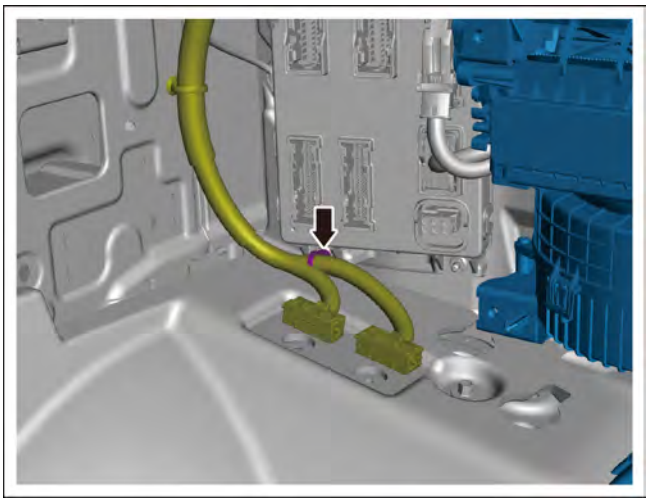
Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



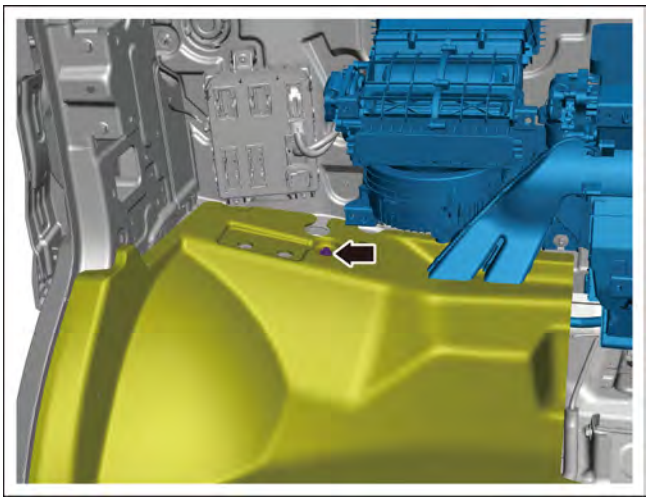
9 disconnect Front HVAC Assembly wiring harness connector (this steps suitable use at Non-heat-pump A/C Vehicle).



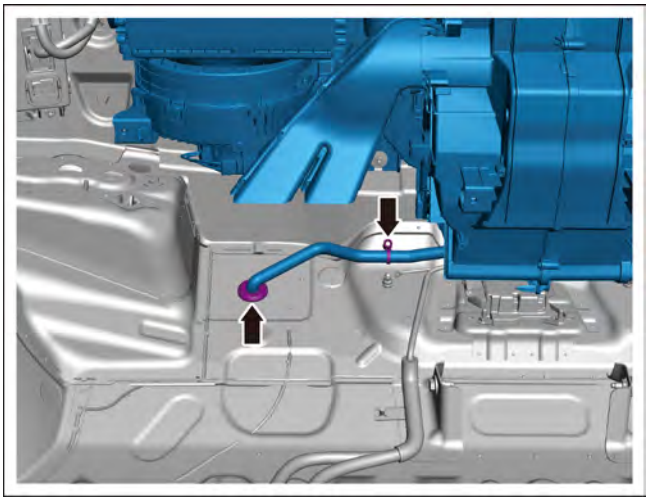
10 Release floor wiring harness retaining clip.



11 Release front compartment wiring harness retaining clip.



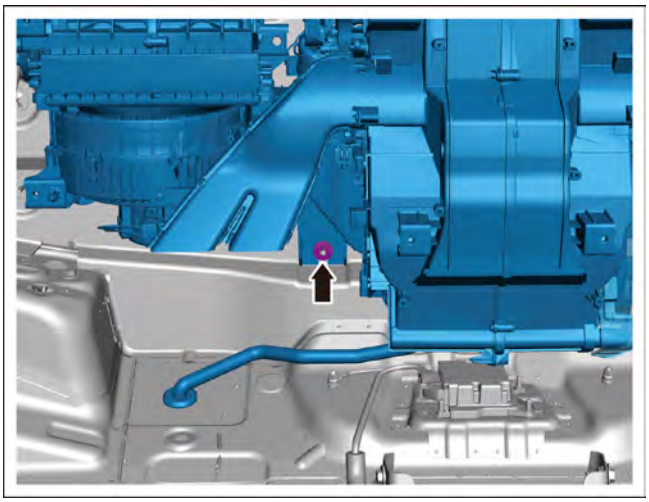
12 Remove plastic nut, lift/open driving compartment carpet.



13 release Front HVAC Assembly retaining clip and rubber sleeve.

a. Release Front HVAC Assembly retaining clip.

b. release Front HVAC Assembly retaining adhesive sleeve.



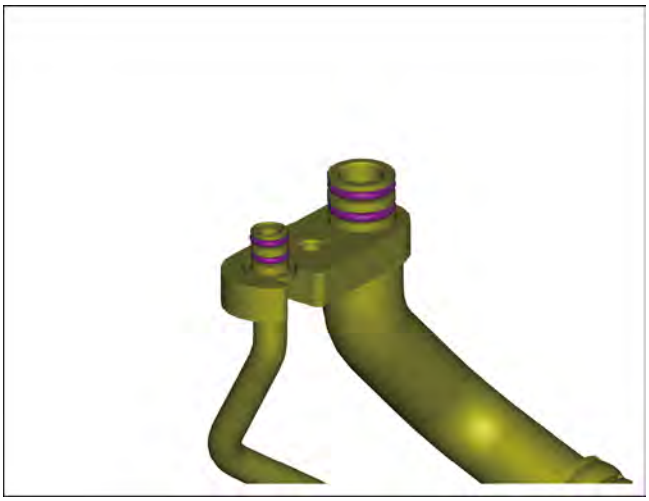
14 Remove Front HVAC Assembly.

a. Remove Front HVAC Assembly retaining nut.

b. in another I technician coordinate assist lower, Remove the front HVAC assembly.

install procedure

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

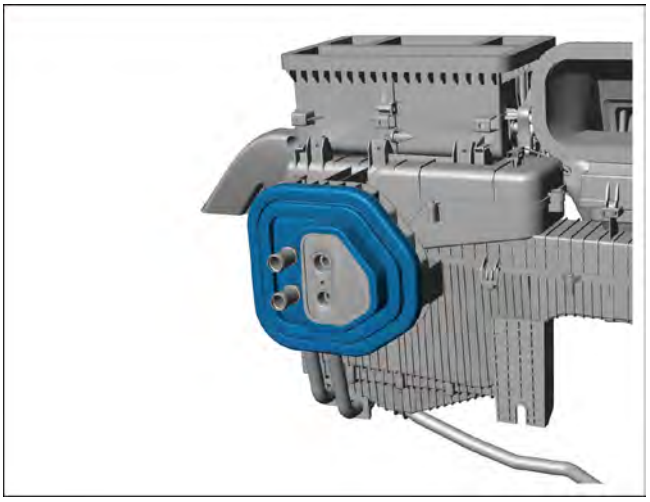
4 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Heater Core Assembly, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps



1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

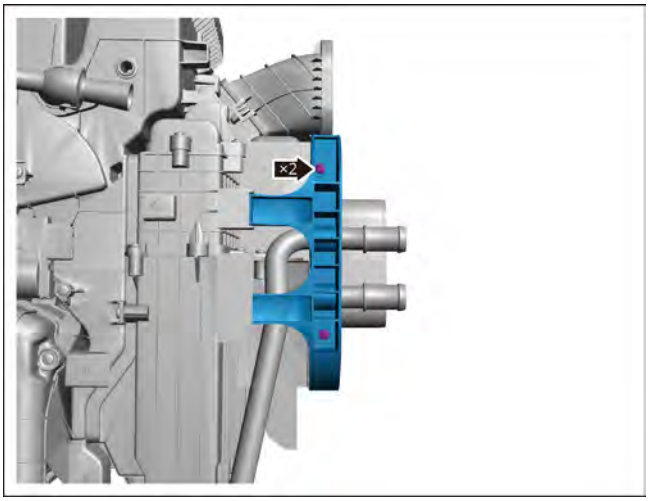
3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Drain the heater circuit coolant. Refer to:Coolant Draining and Filling

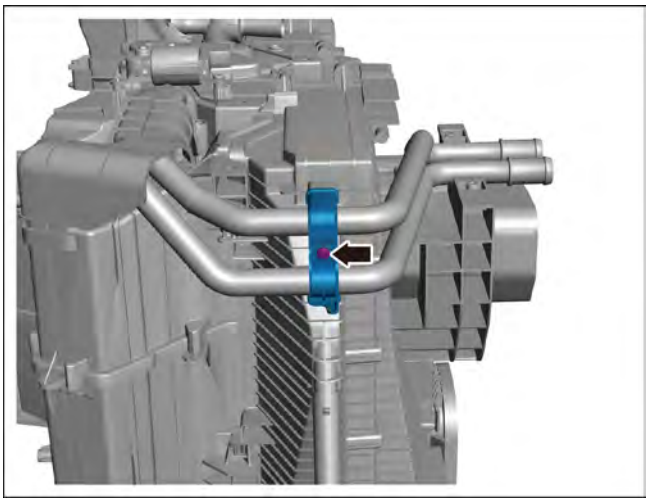
5 Remove instrument panel crossmember assembly -RHD. Refer to:Instrument Panel Crossmember Assembly -RHD, Removal and Installation

6 Remove Front HVAC Assembly. Refer to:Front HVAC Assembly, Repair Procedure

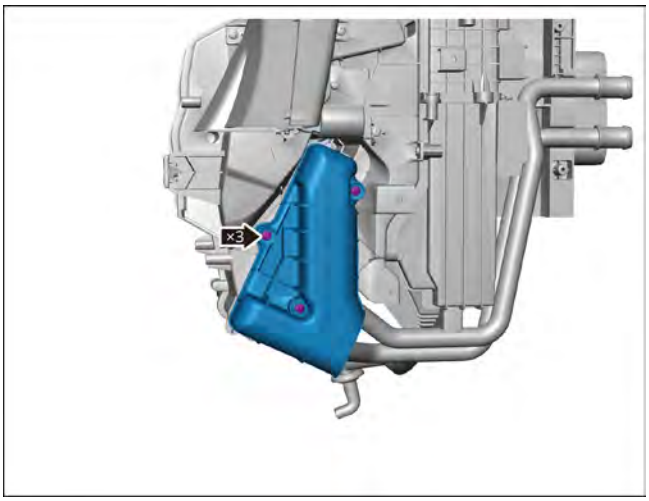
7 Remove item item seal pad.



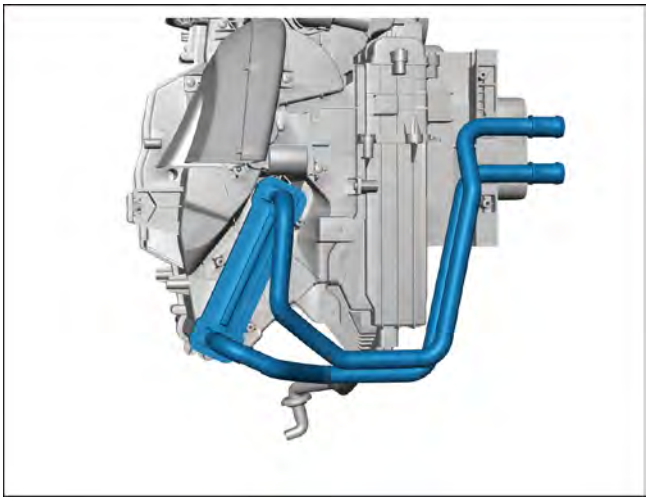
8 Remove 2 retaining screw, remove Heater coolant hose cover panel.



9 Remove retaining screw, remove Heater coolant hose cover panel.



10 Remove 3 retaining screw, remove heater core end cap.



11 Remove heater core assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Evaporator Housing Assembly, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

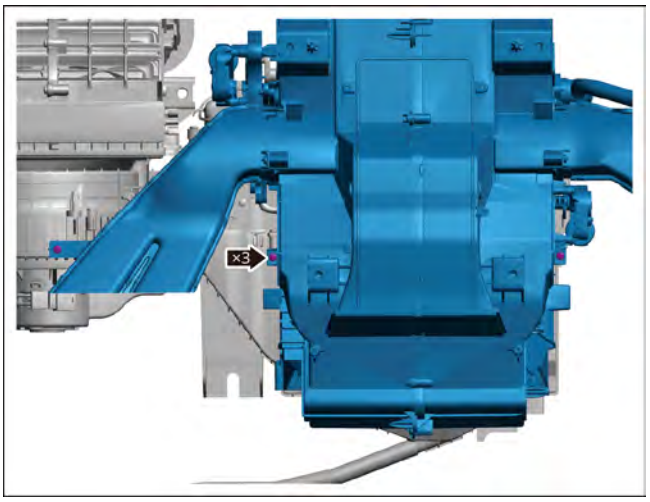
3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

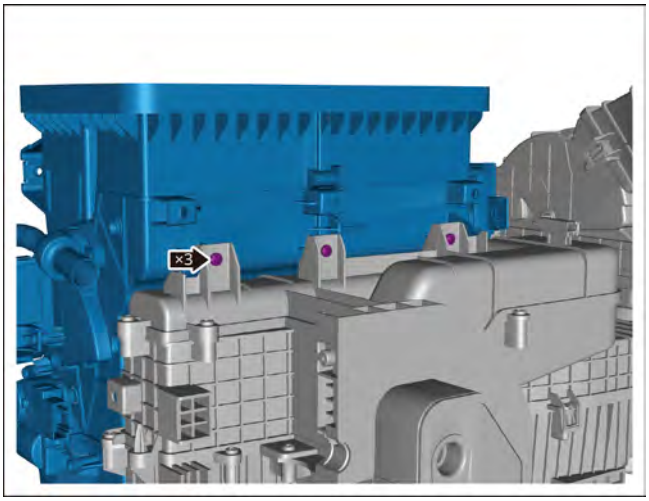
5 Remove instrument panel crossmember assembly -RHD. Refer to:Instrument Panel Crossmember Assembly -RHD, Removal and Installation

6 Remove Front HVAC Assembly. Refer to:Front HVAC Assembly, Repair Procedure

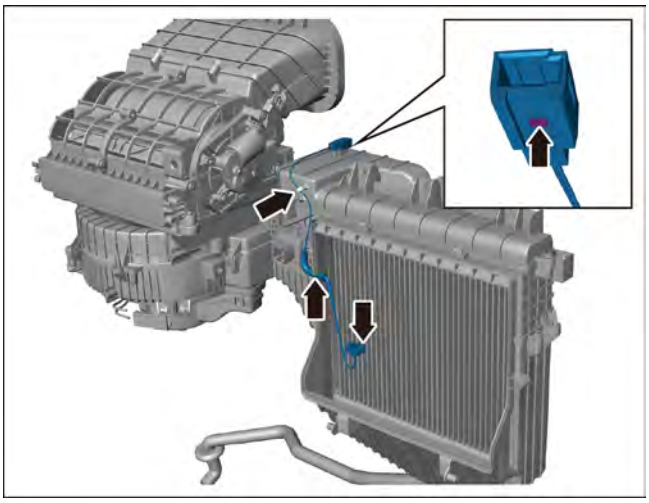
7 Remove heater core assembly. Refer to:Heater Core Assembly, Repair Procedure



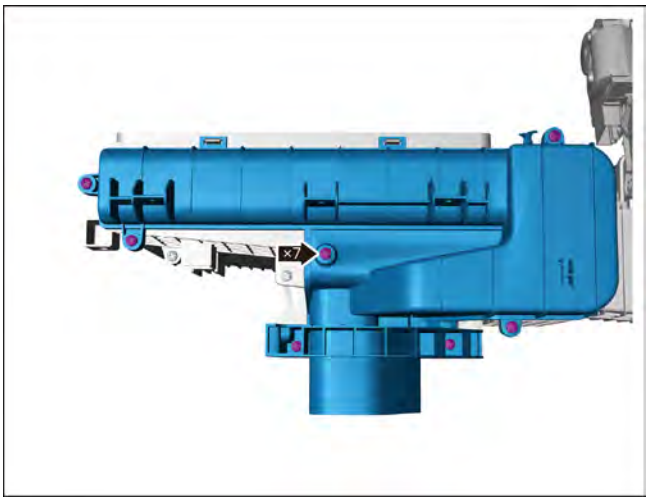
8 Remove evaporate send unit housing 3 retaining screw.



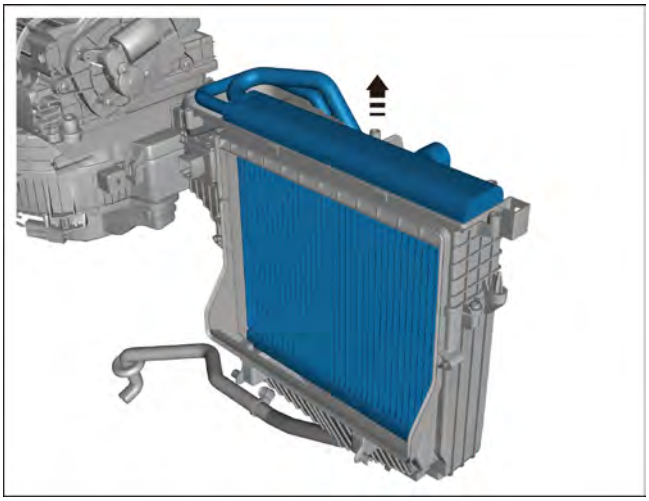
9 Remove 3 retaining screw, remove evaporate send unit housing.



10 Remove evaporate send unit temperature sensor.



11 Remove 7 retaining screw, remove evaporate send unit upper housing.



12 Remove evaporate send unit assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Condenser Assembly, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Drain the coolant. Refer to:Coolant Draining and Filling

5 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

6 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

7 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

8 Remove front anti-collision beam assembly. Refer to:Front Anti-Collision Beam Assembly, Repair Procedure

9 Remove subframe collision avoidance assembly. Refer to:Subframe Collision Avoidance Assembly, Repair Procedure

10 Remove tweeter. Refer to:Tweeter, Repair Procedure

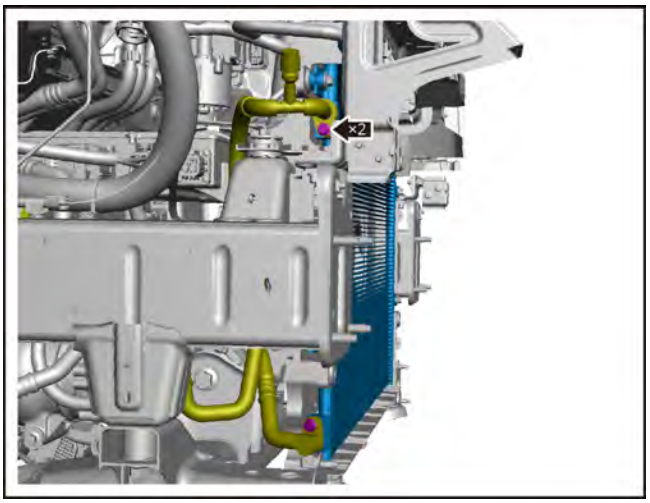
11 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

12 Remove front frame bracket support. Refer to:Front Frame Bracket Support, Repair Procedure

13 Remove air guide cover assembly 1. Refer to:Air Guide Cover Assembly 1, Repair Procedure

14 Remove air guide cover assembly 2. Refer to:Air Guide Cover Assembly 2, Repair Procedure

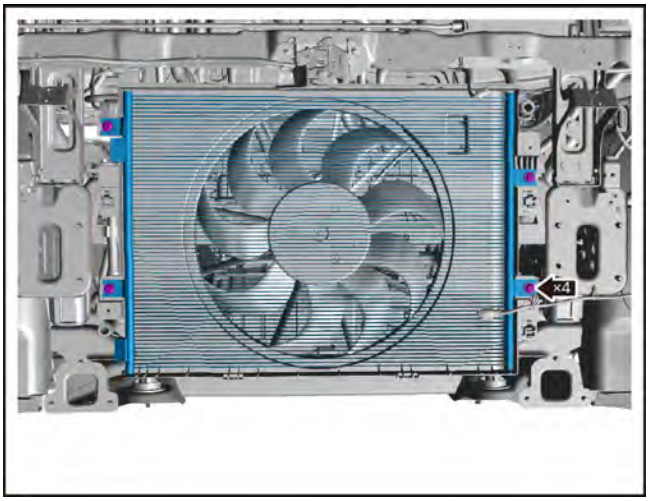
15 Remove radiator assembly. Refer to:Radiator Assembly, Repair Procedure



16 Remove 2 retaining bolt, release condenser connect line.

Caution

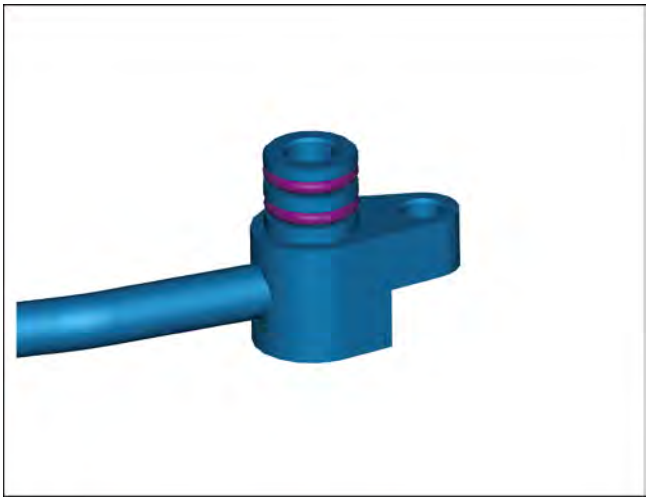
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



17 Remove 4 retaining bolt, remove condenser assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:#unique_746

4 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Power Compressor Assembly, Repair Procedure

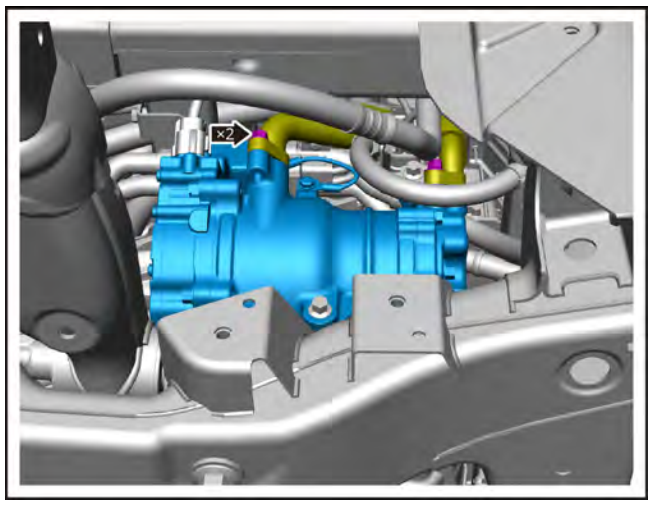
Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps



1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

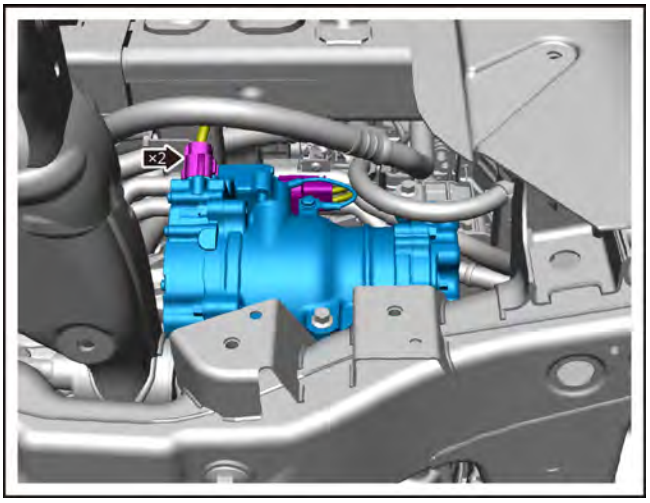
3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

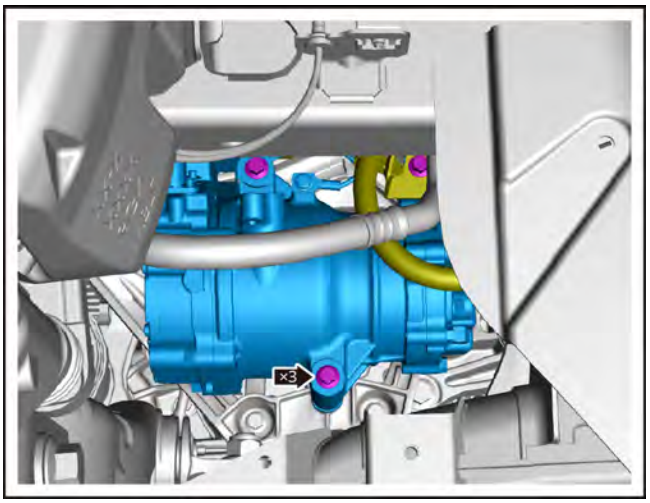
5 Remove 2 retaining bolt, release power Compressor Assembly inlet discharge pipe.

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.



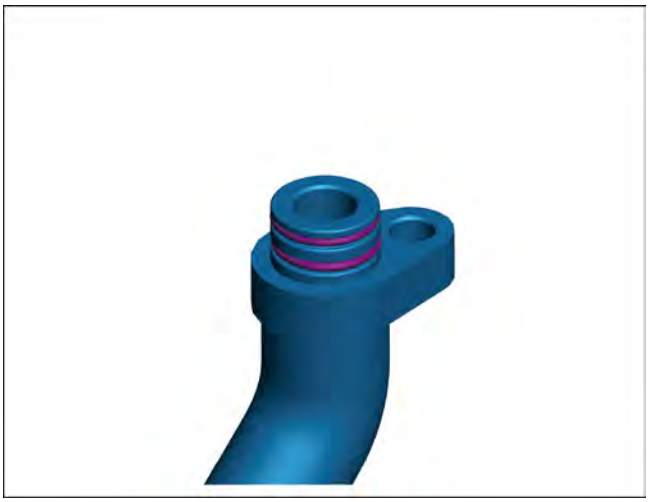
6 Disconnect 2 power Compressor Assembly wiring harness connectors.



7 Remove 3 retaining bolt, remove power Compressor Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Electric Compressor Mounting Bracket, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

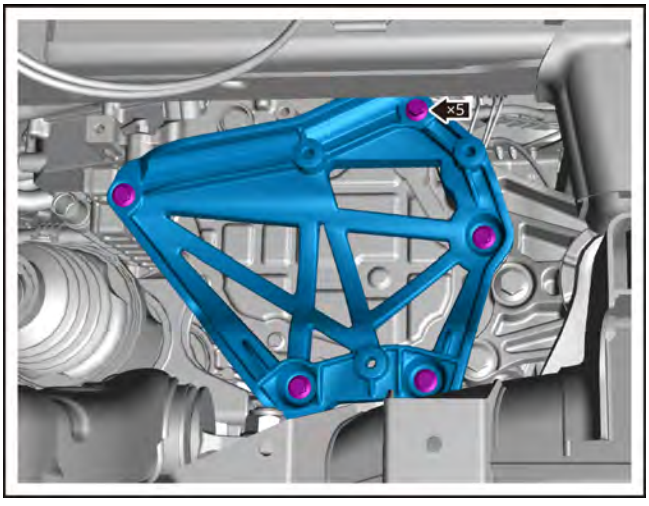
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

5 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure



6 Remove 5 retaining bolt, remove electric compressor mounting bracket.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Front A/C Inlet/Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

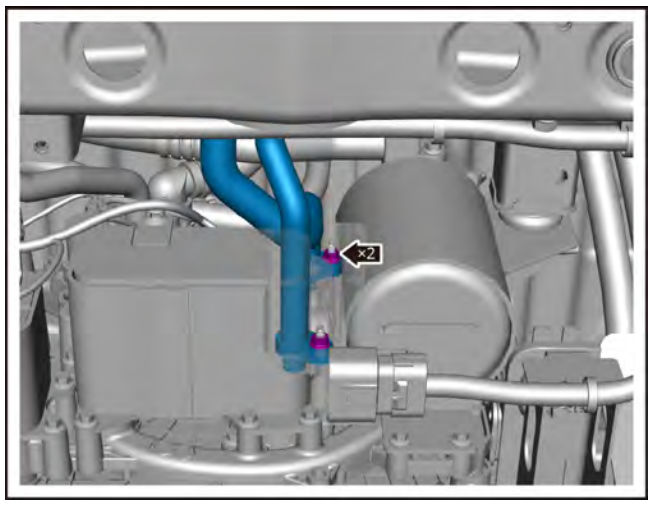
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

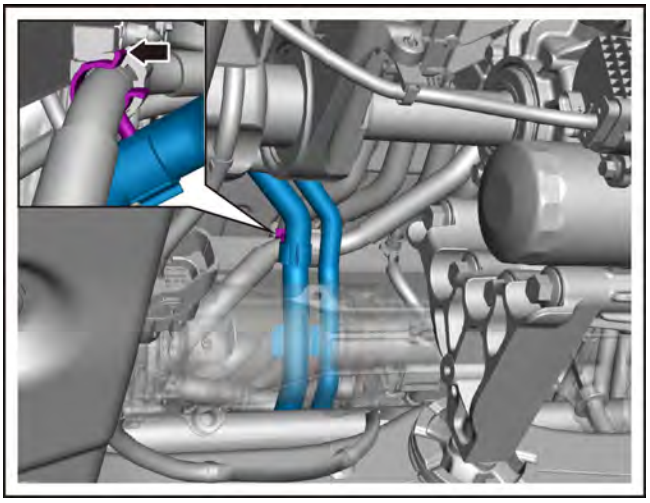
3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

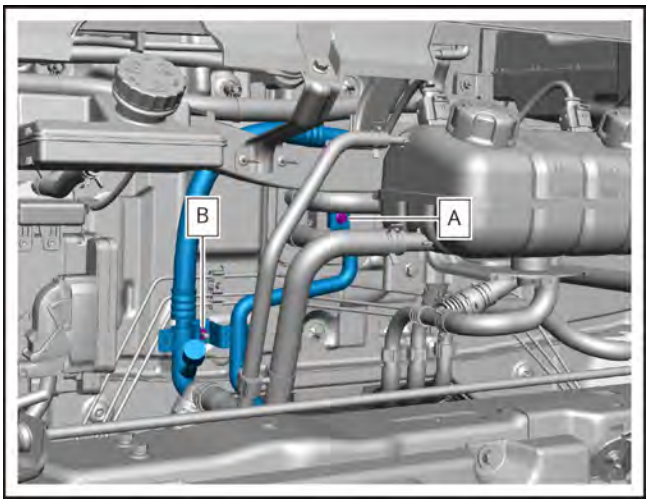
5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure



6 Remove Front A/C Inlet/Outlet Pipe Assembly 2 retaining nut.



7 release Front A/C Inlet/Outlet Pipe Assembly retaining hose clamp.



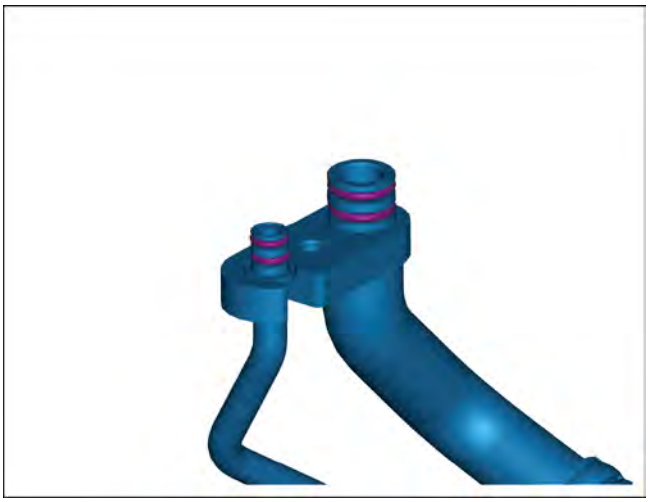
8 remove Front A/C Inlet/Outlet Pipe Assembly.

a. Remove Front A/C Inlet/Outlet Pipe Assembly retaining bolt A.

b. Remove retaining nut B, remove Front A/C Inlet/Outlet Pipe Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

4 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Compressor Suction Pipe Assembly - Heat-Pump A/C, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

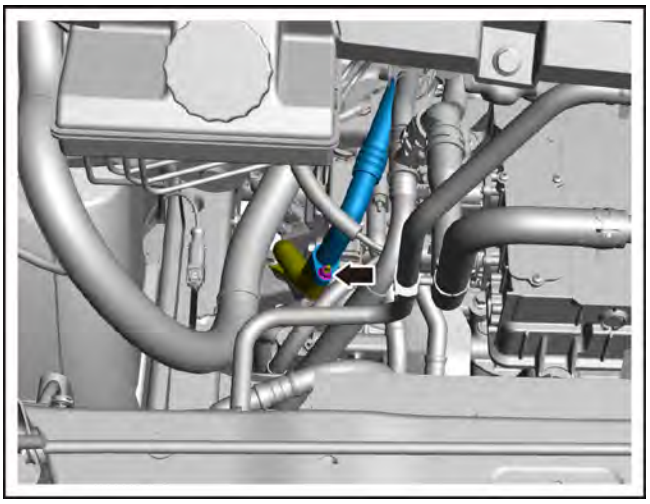
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

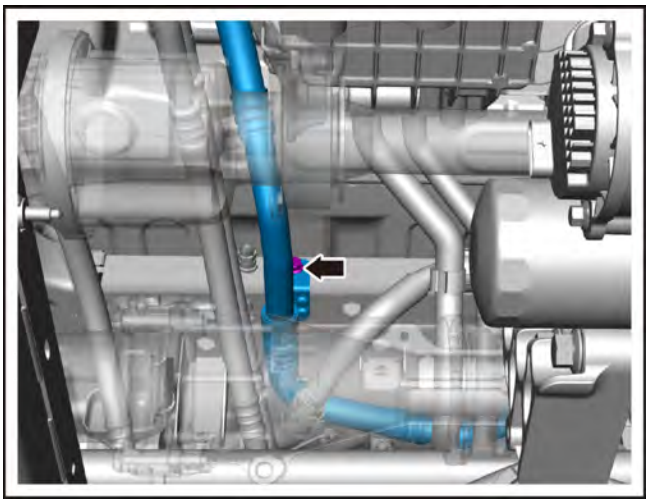
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

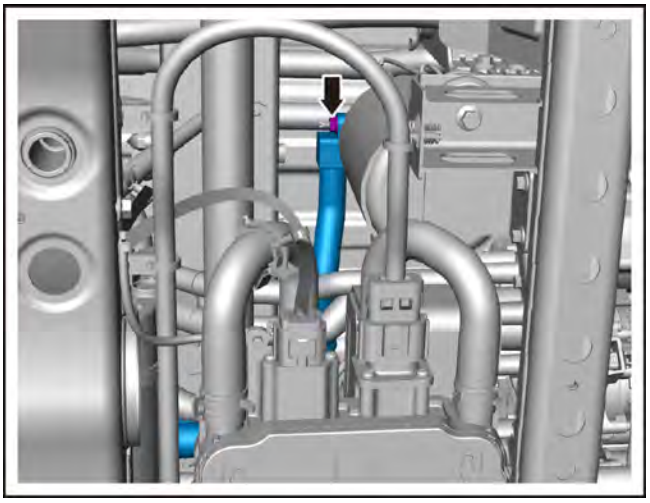
3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure



4 Remove retaining nut, release Compressor Suction Pipe Assembly.



5 Remove Compressor Suction Pipe Assembly retaining bolt.

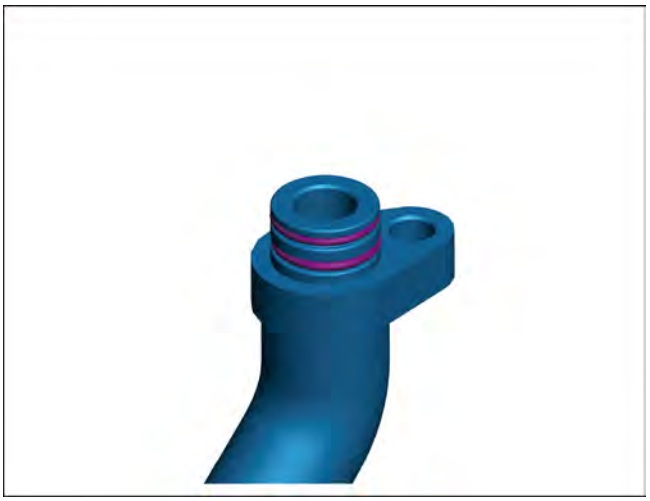


6 Remove retaining nut, remove Compressor Suction Pipe Assembly.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Compressor Suction Pipe Assembly II - Heat-Pump A/C, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

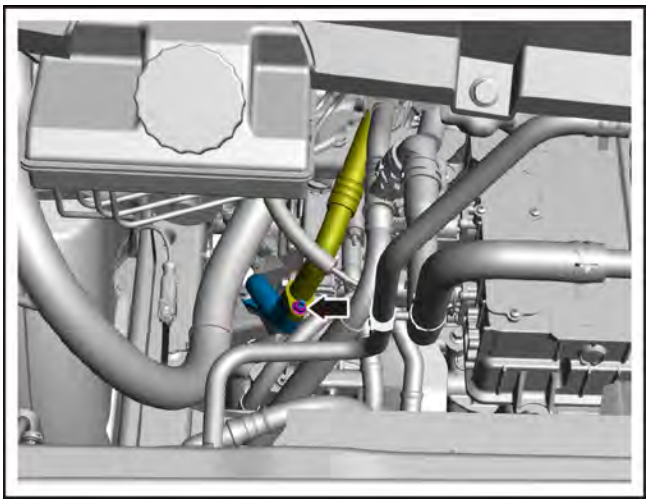
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

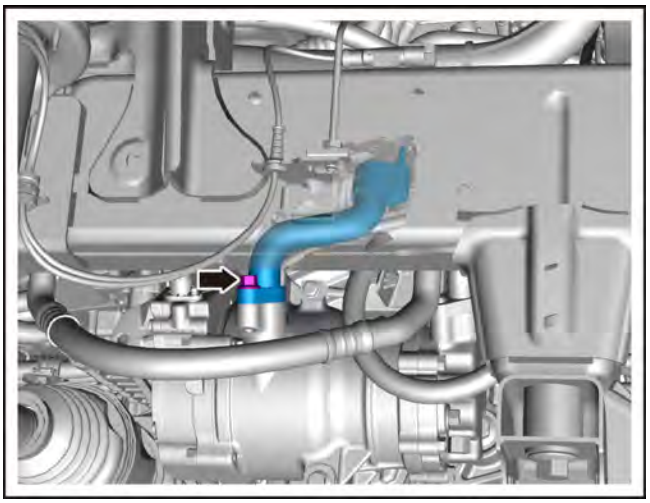
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

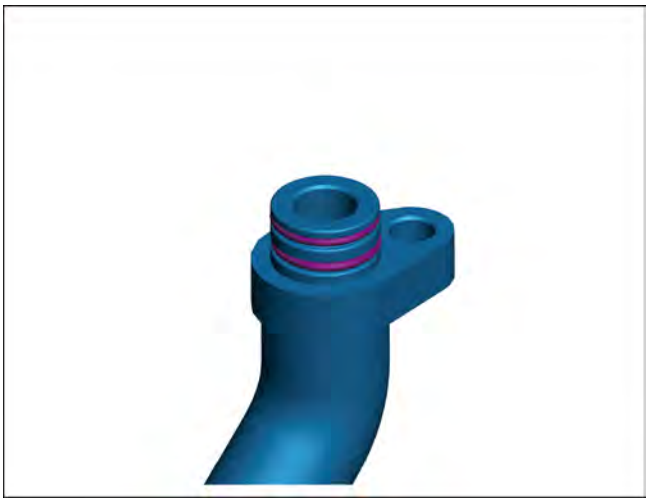


4 Remove retaining nut, release Compressor Suction Pipe Assembly II.



5 Remove retaining bolt, remove Compressor Suction Pipe Assembly II.

Installation Steps



1 Observe the following points, then install in the reverse order of removal.

2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Compressor Discharge Pipe Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

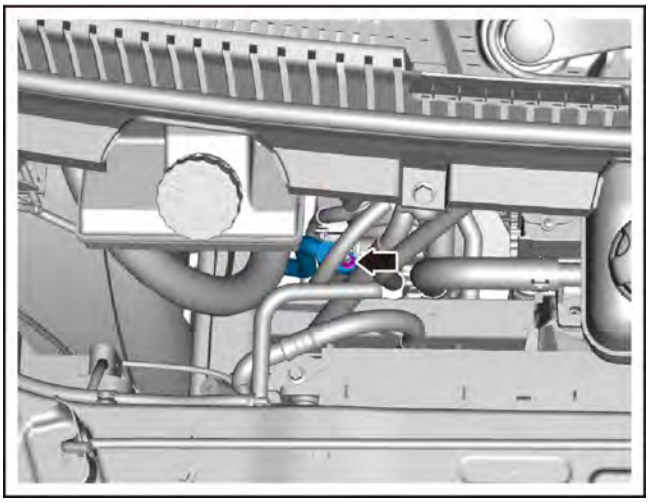
After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

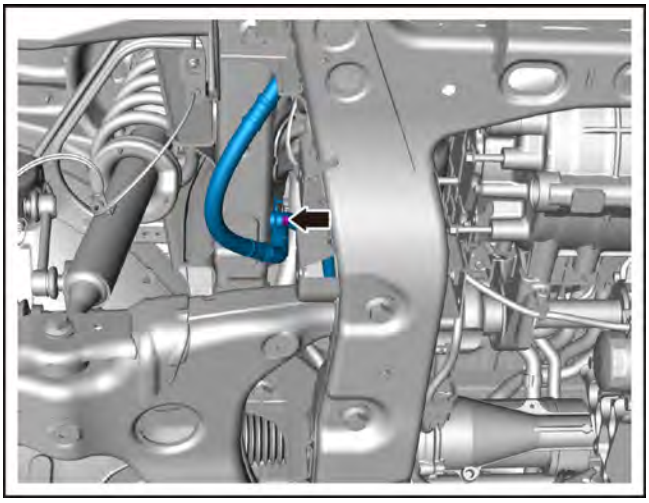
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

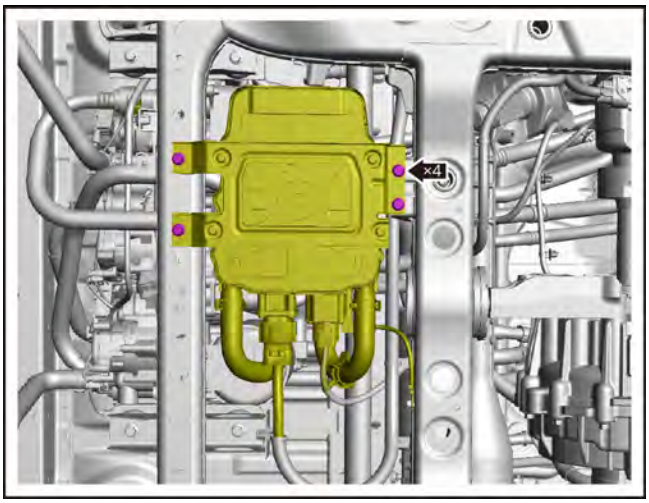
3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure



4 Remove retaining nut, release Compressor Discharge Pipe Assembly.

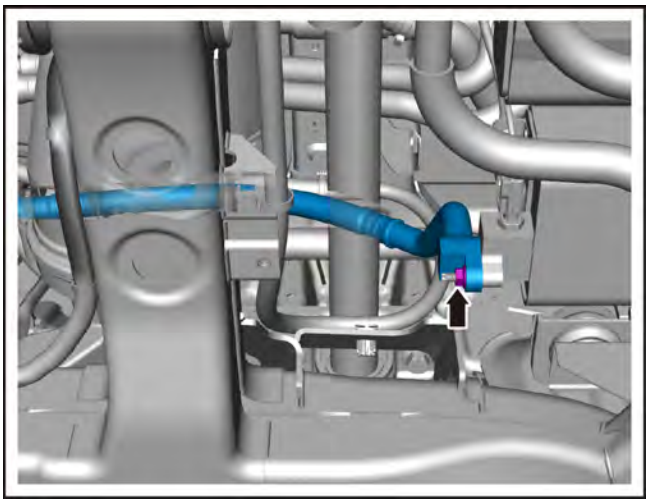


5 Remove Compressor Discharge Pipe Assembly retaining bolt.



6 Remove 4 retaining bolt, offset open water warm power heat assembly.

Torque:xxx±xxN·m

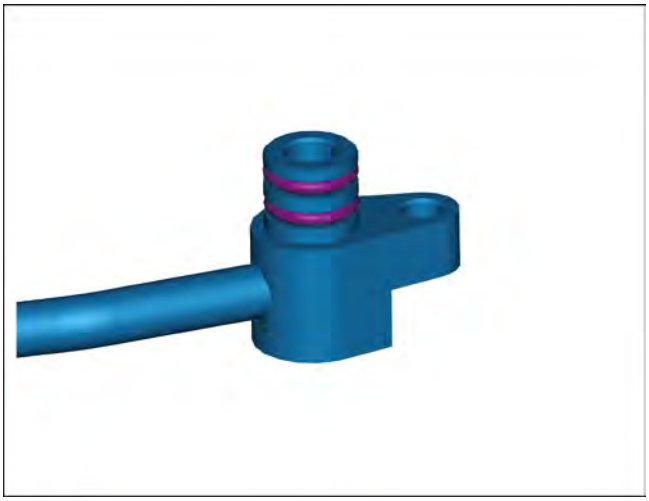


7 Remove retaining bolt, remove Compressor Discharge Pipe Assembly.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Compressor Discharge Pipe Assembly II - Heat-Pump A/C, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

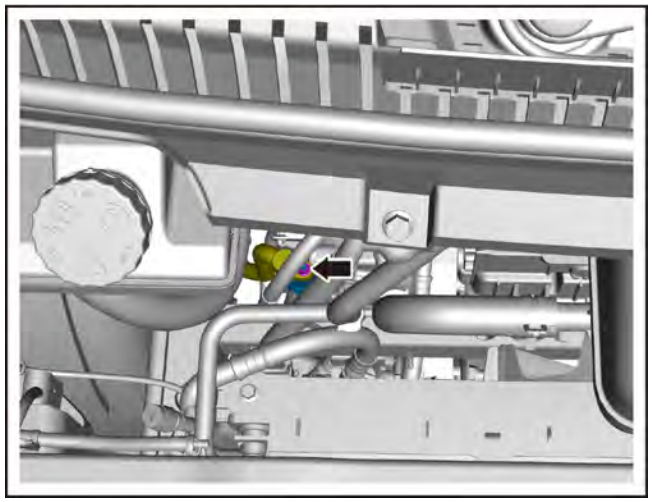
Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

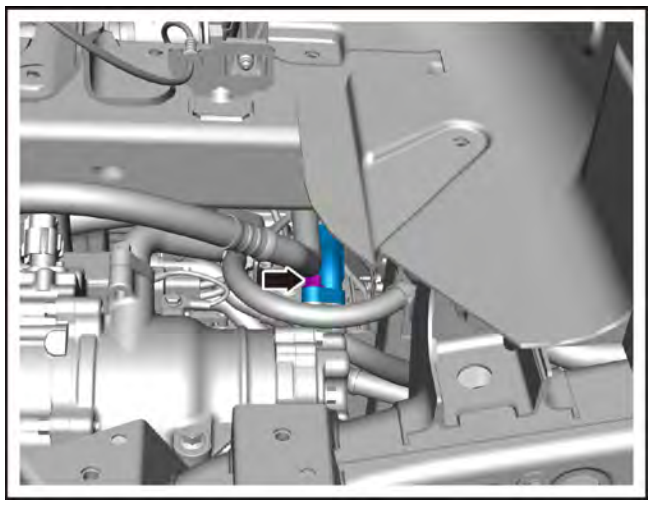
Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support



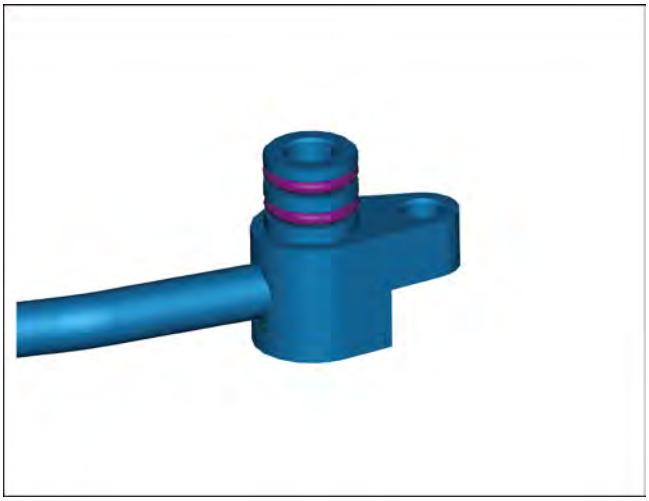
3 Remove retaining nut. release Compressor Discharge Pipe Assembly II.



4 Remove retaining bolt, remove Compressor Discharge Pipe Assembly II.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Condenser Inlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

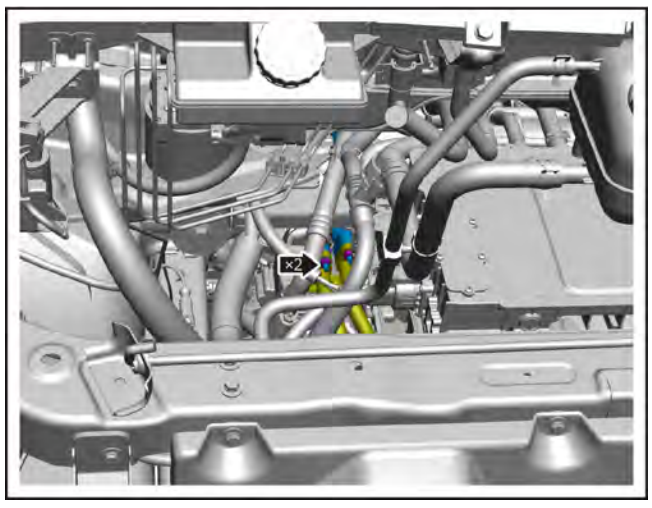
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

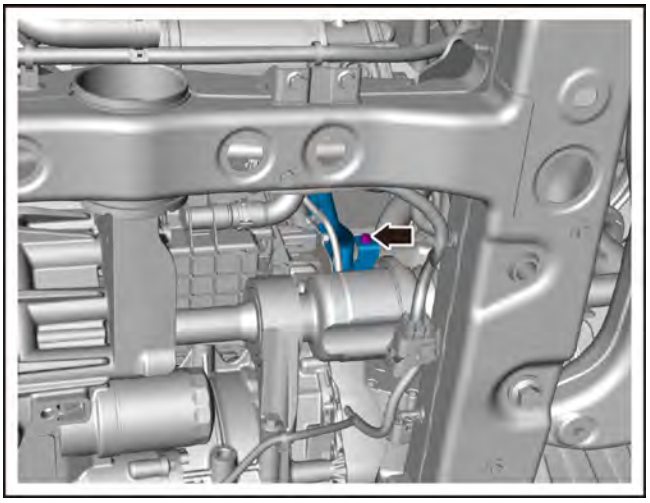
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Remove water warm power heat assembly. Refer to:Water Warm Power Heat Assembly, Repair Procedure

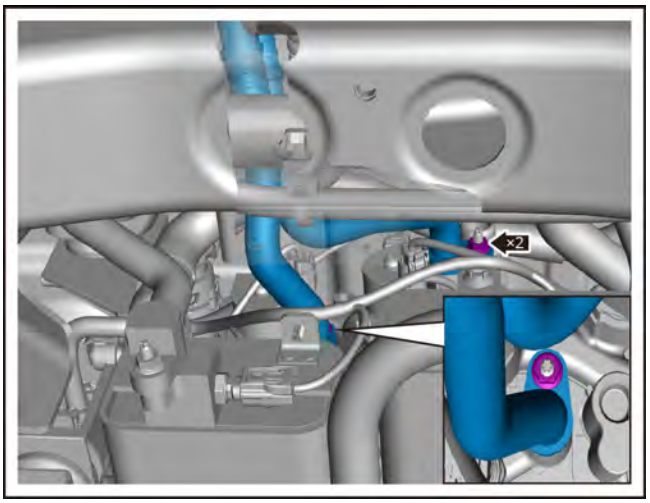


6 Remove 2 retaining nut, release Condenser Outlet Pipe Assembly.

Torque:xxx±xxN·m



7 Remove Condenser Inlet Pipe Assembly retaining bolt.

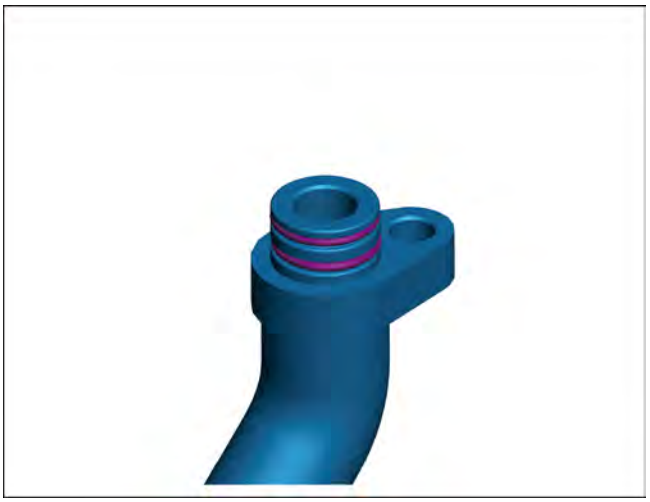


8 Remove 2 retaining nut, remove Condenser Inlet Pipe Assembly.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Condenser Outlet Pipe Assembly - Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

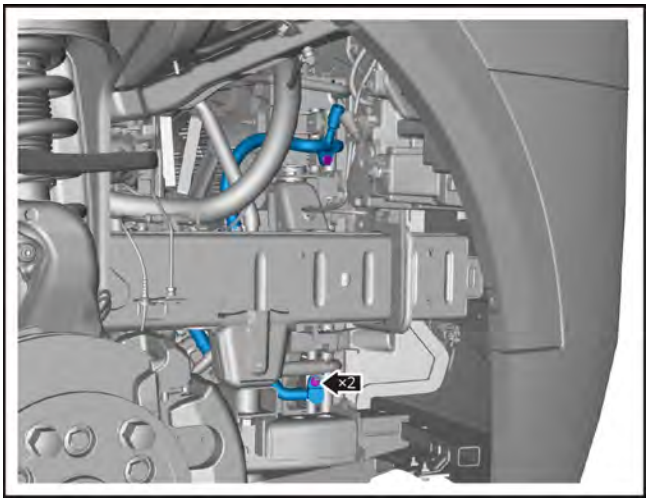
4 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

5 Remove Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

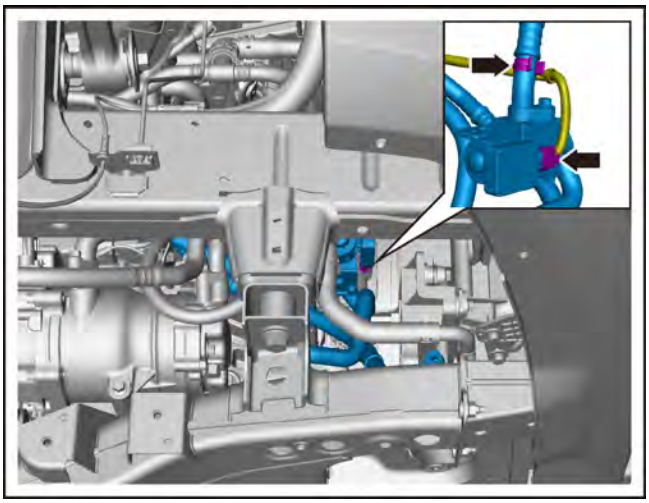
6 Remove right front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

7 Remove right front wheelhouse assembly. Refer to:Left Front Wheel Cover Assembly, Repair Procedure

8 Remove power Compressor Assembly. Refer to:Power Compressor Assembly, Repair Procedure



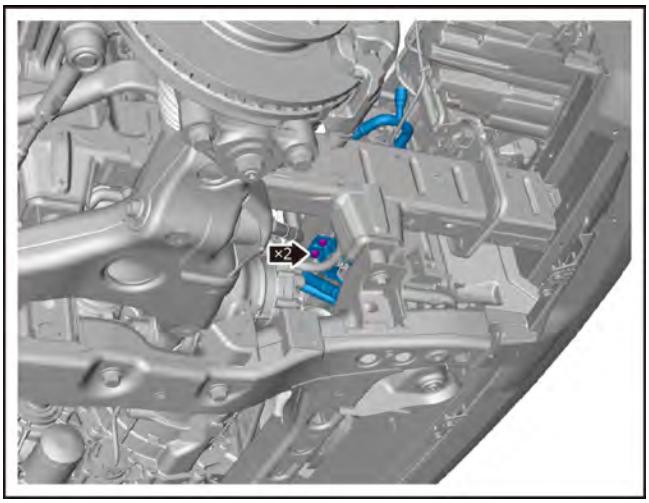
9 Remove Condenser Outlet Pipe Assembly 2 retaining bolt.



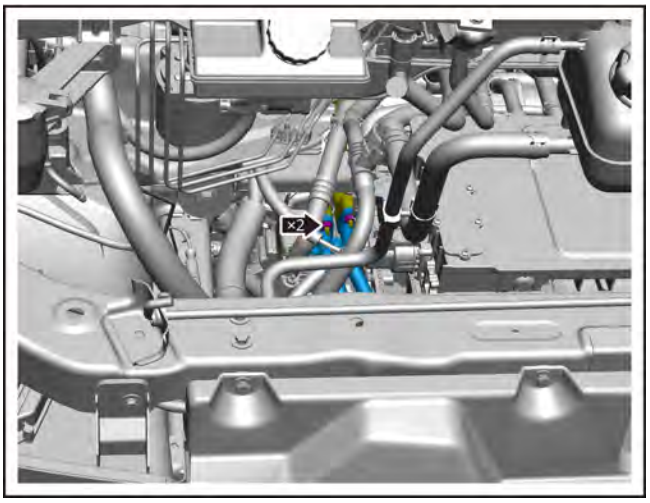
10 Disconnect Condenser Outlet Pipe Assembly wiring harness connector.

a. Disconnect Condenser Outlet Pipe Assembly wiring harness connector.

b. release Condenser Outlet Pipe Assembly retaining hose clamp.



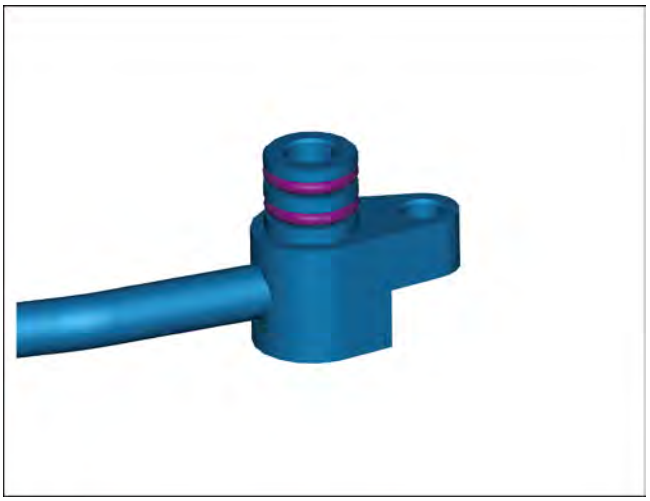
11 Remove Condenser Outlet Pipe Assembly 2 retaining bolt.



12 Remove 2 retaining nut, remove Condenser Outlet Pipe Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Front A/C Inlet/Outlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

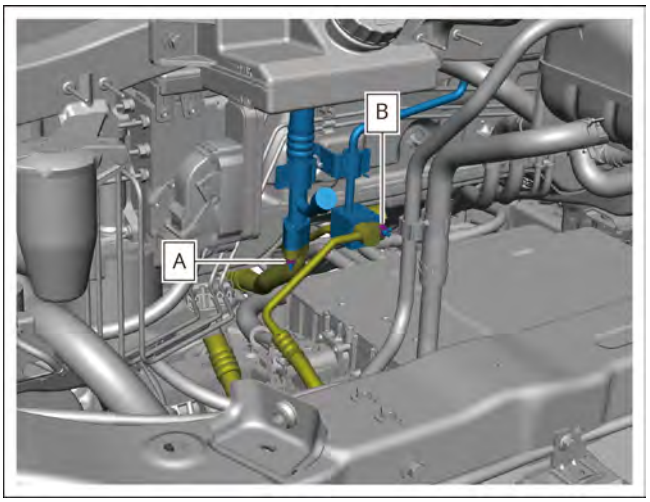
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Removal Steps

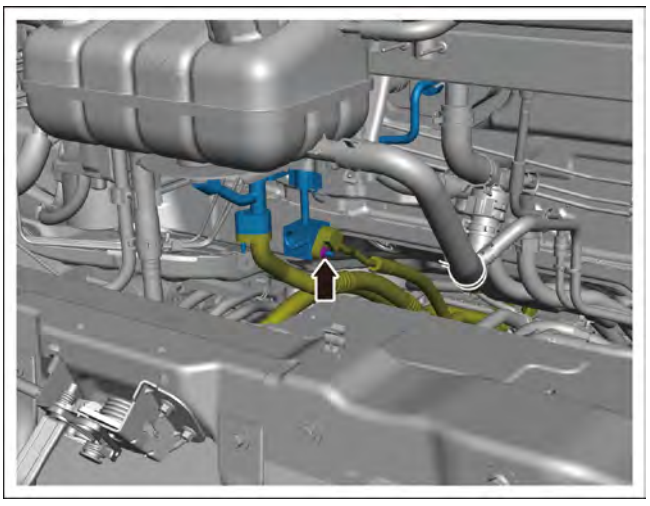
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging



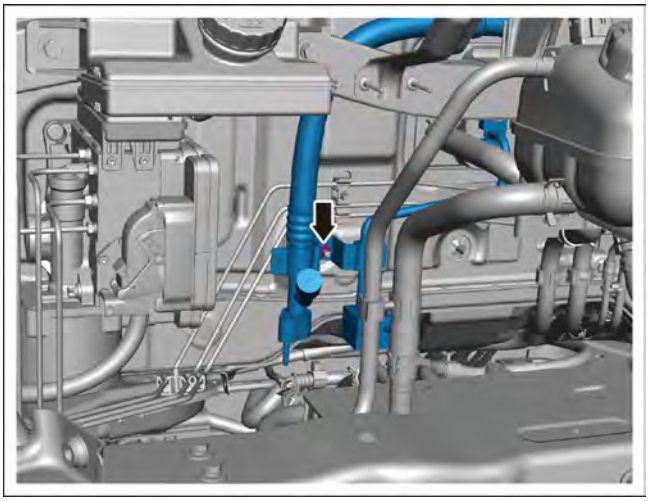
2 release Front A/C Inlet/Outlet Pipe Assembly connect line.

a. Remove retaining nut A, release chiller inlet output pipe assembly.

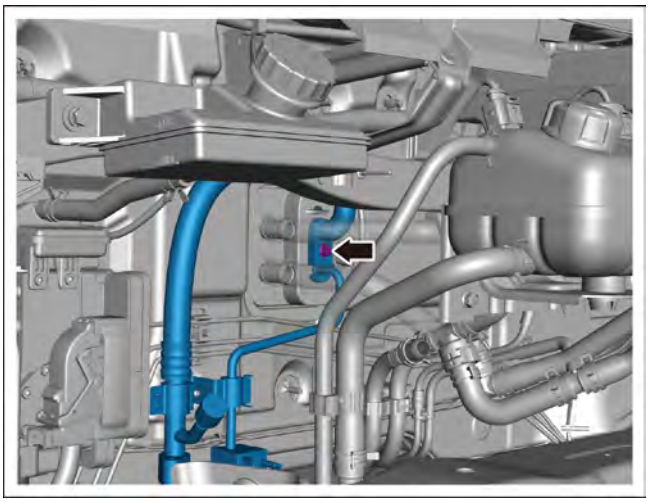
b. Remove retaining nut B, release Condenser Outlet Pipe Assembly.



3 Remove retaining nut, release chiller inlet output pipe assembly.



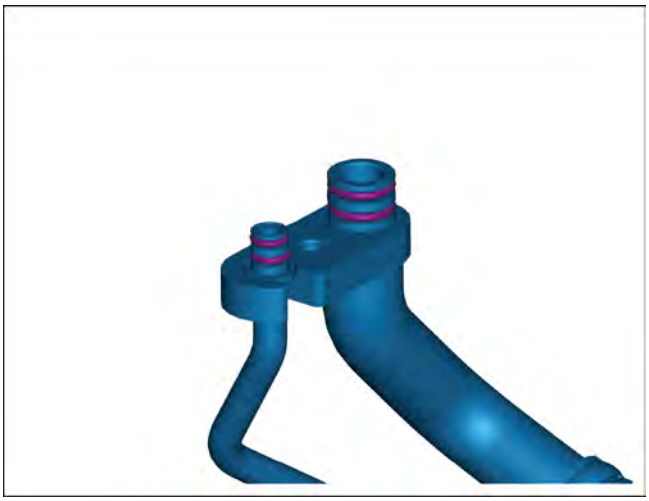
4 Remove Front A/C Inlet/Outlet Pipe Assembly retaining nut.



5 Remove retaining bolt, remove Front A/C Inlet/Outlet Pipe Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

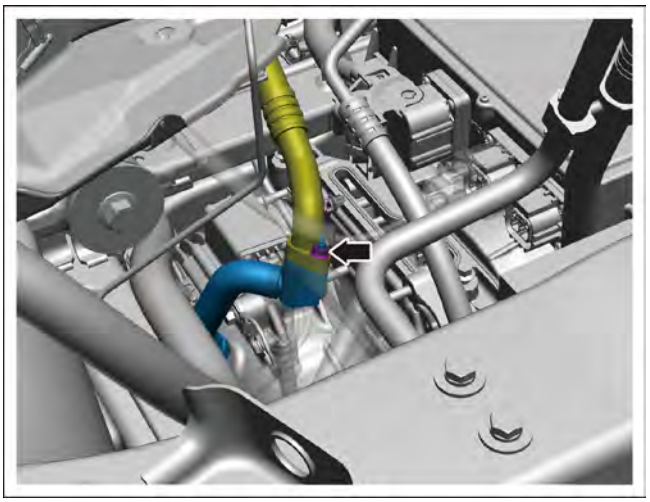
Compressor Suction Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

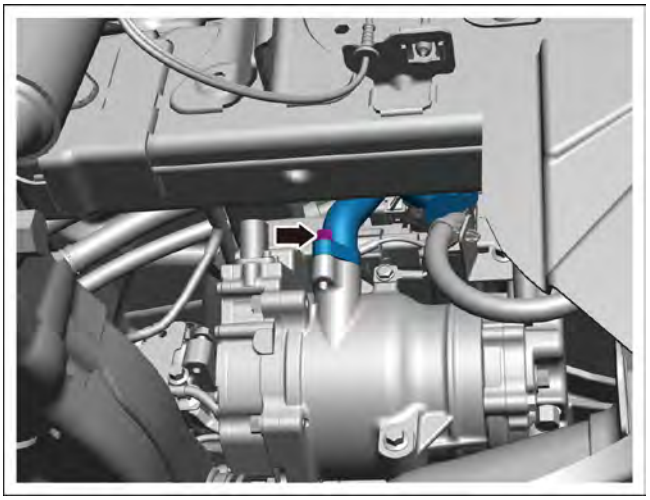
1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging



2 Remove retaining nut, release chiller inlet output pipe assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



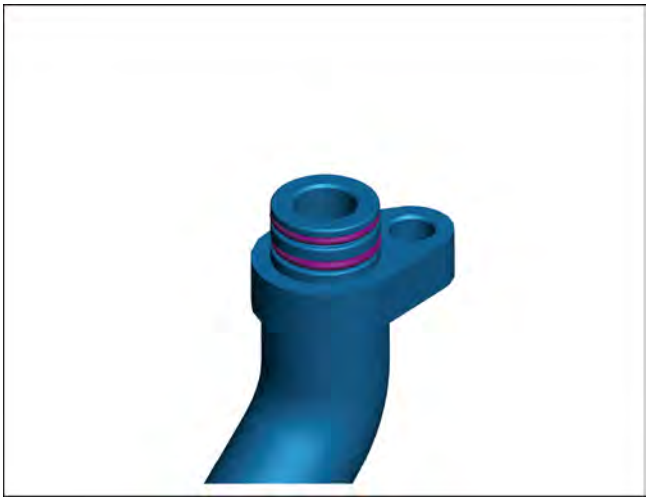
3 Remove retaining bolt, remove Compressor Suction Pipe Assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Compressor Discharge Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

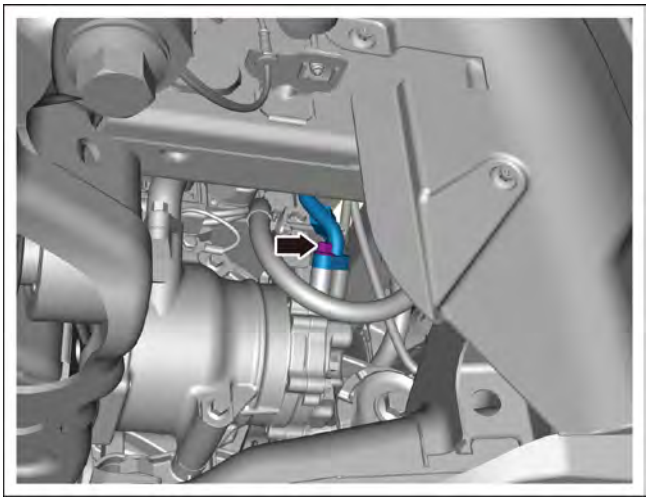
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

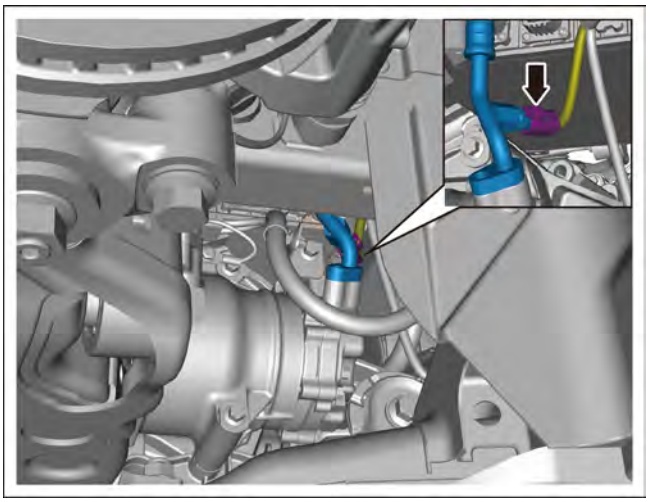


5 Remove retaining bolt, release Compressor Discharge Pipe Assembly.

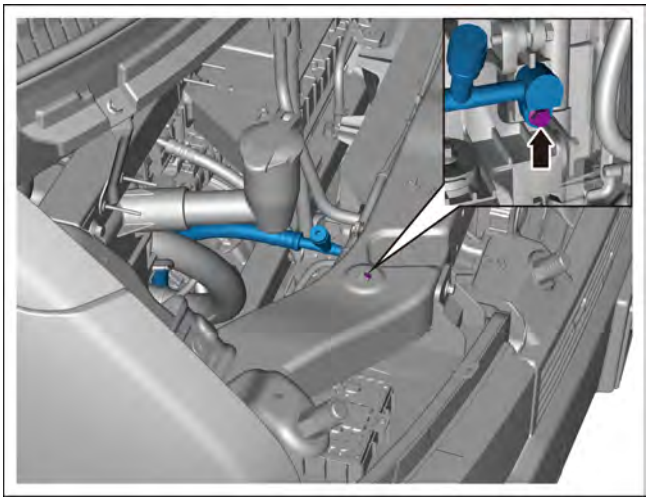
Torque:xxx±xxN·m

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



6 Disconnect Compressor Discharge Pipe Assembly wiring harness connector.

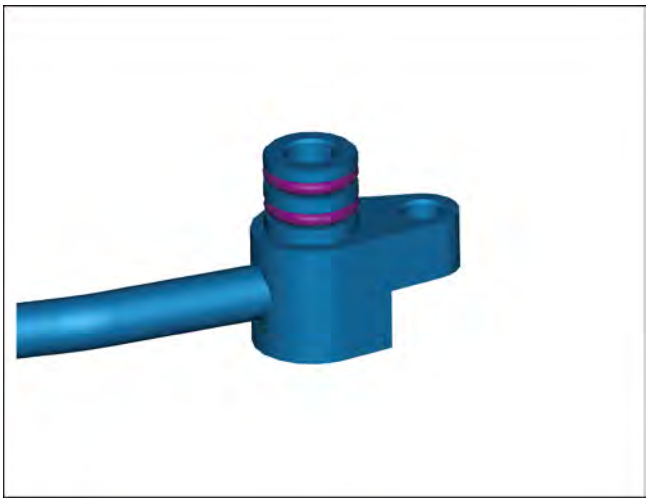


7 Remove retaining bolt, remove Compressor Discharge Pipe Assembly.

> *Caution*
>
> *Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.*

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Condenser Outlet Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

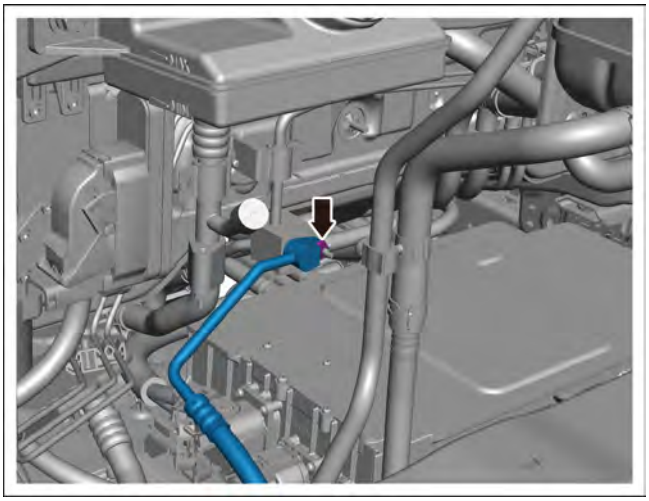
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove Right Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

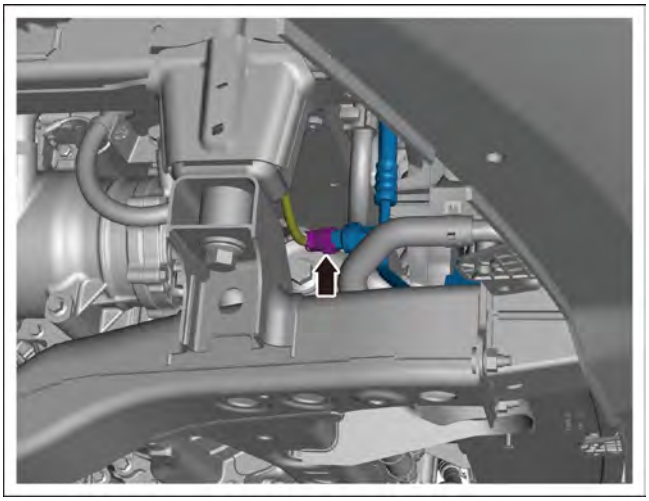
5 Remove right front wheelhouse assembly. Refer to:Left Front Wheel Cover Assembly, Repair Procedure



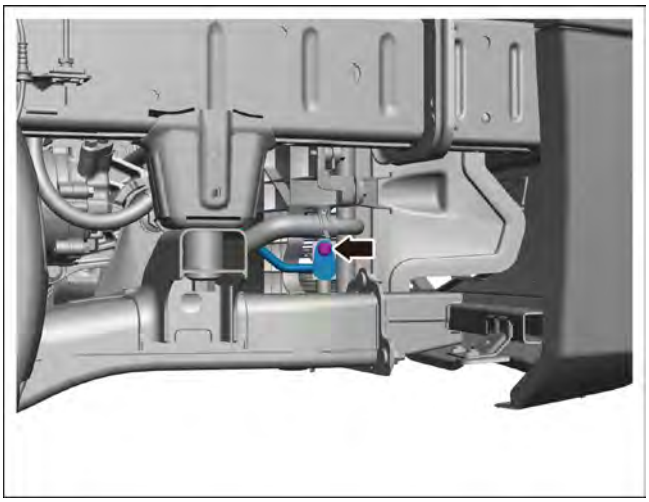
6 Remove retaining nut, release Condenser Outlet Pipe Assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.



7 Disconnect Condenser Outlet Pipe Assembly wiring harness connector.



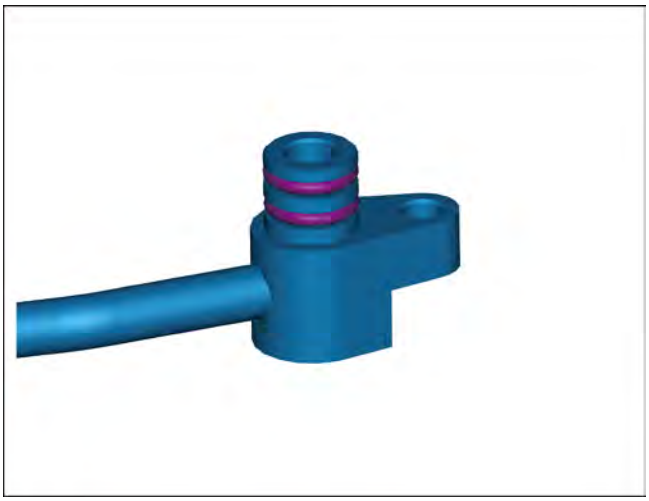
8 Remove retaining nut, remove Condenser Outlet Pipe Assembly.

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Chiller Inlet Output Pipe Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

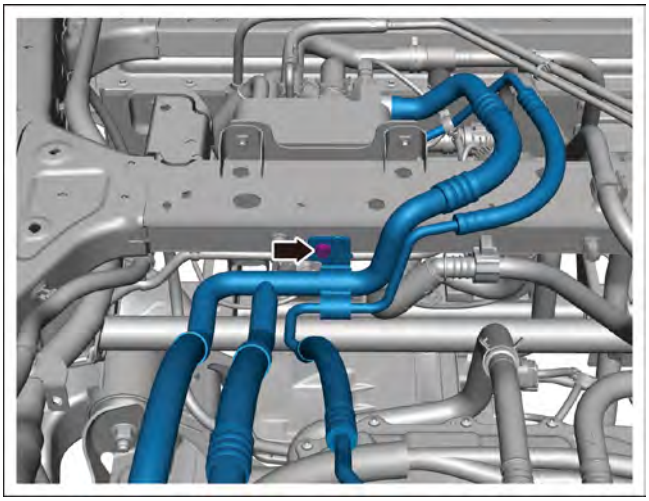
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

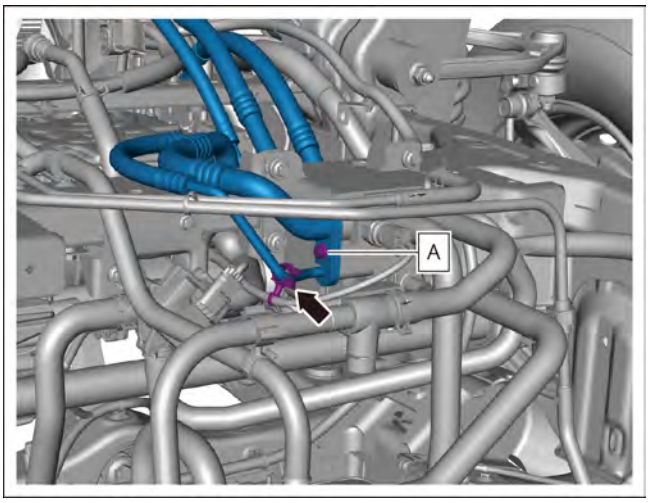
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

6 Remove trapezoidal frame assembly (low cargo deck short shaft). Refer to:Trapezoidal Frame Assembly (Low Cargo Deck Center Shaft), Removal and Installation



7 Remove chiller inlet output pipe assembly retaining bolt.



8 Remove Chiller Inlet/Outlet Pipe Assembly.

Caution

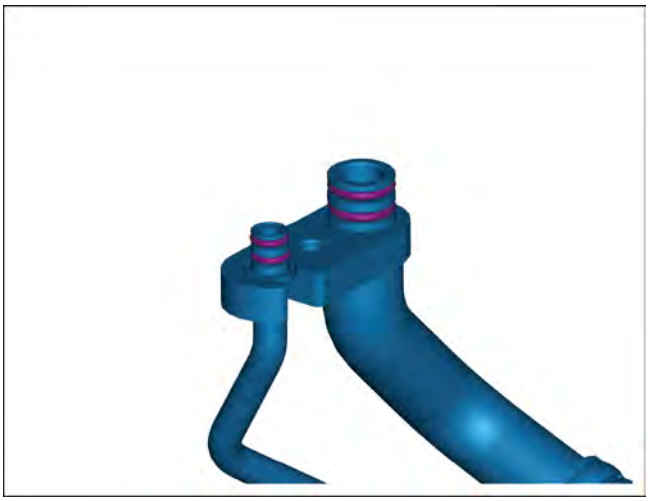
Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

a. Release chassis wiring harness retaining clip.

b. Remove retaining bolt A, remove chiller inlet output pipe assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Fill the brake fluid and bleed the brake system. Refer to:Hydraulic Brake System Bleeding Procedure

4 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

5 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Chiller Assembly - Non-Heat-Pump A/C, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

Remove line rear need for disconnect line and component perform seal, prevent enter dust or foreign matter.

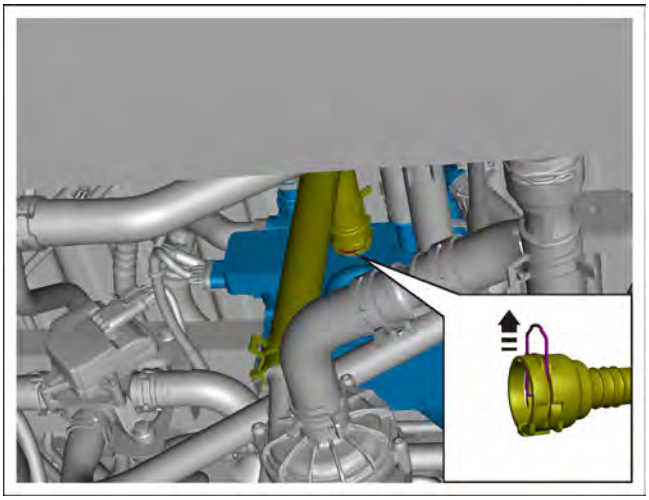
Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

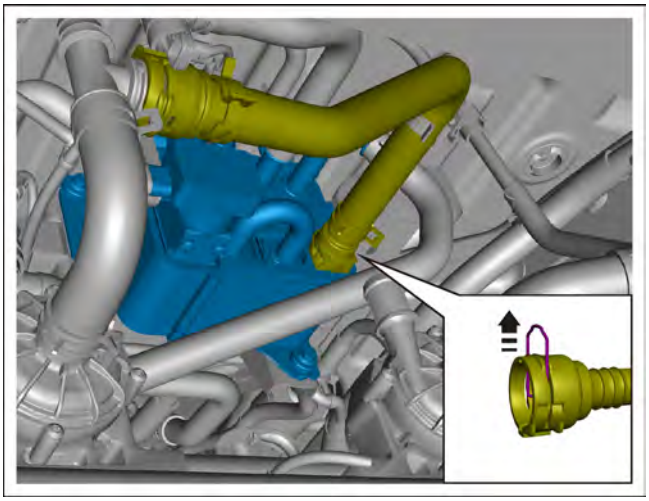
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

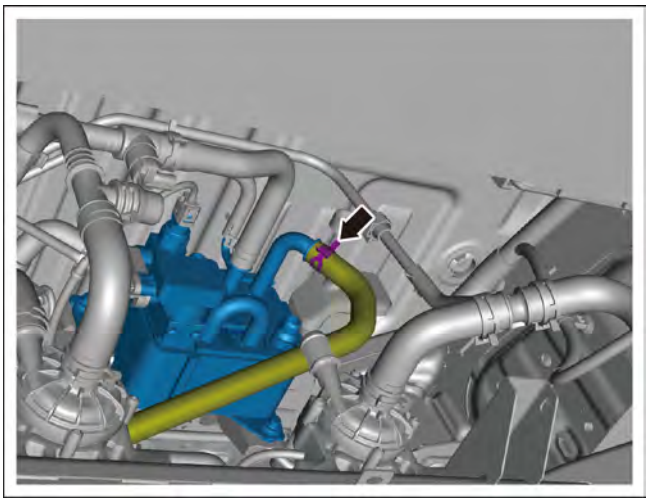
4 Drain the vehicle coolant. Refer to:Coolant Draining and Filling



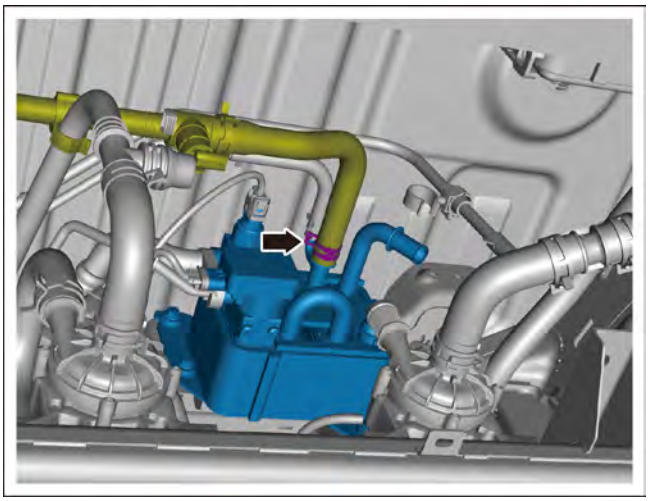
5 release retaining ring, release Water Pump-to-Chiller Hose Assembly.



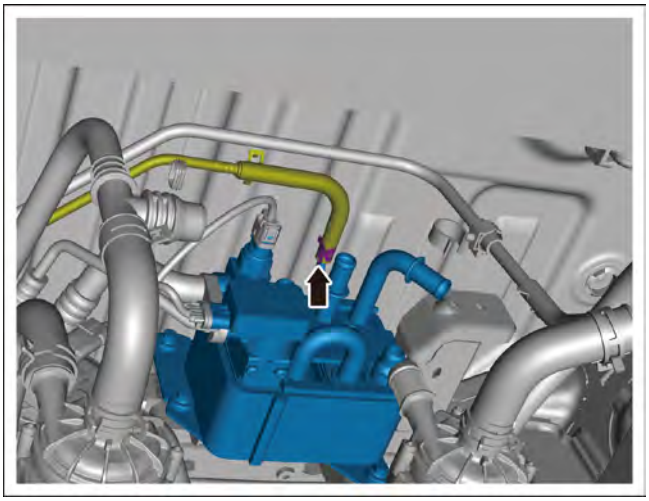
6 release retaining ring, release chiller to water pump inlet pipe assembly.



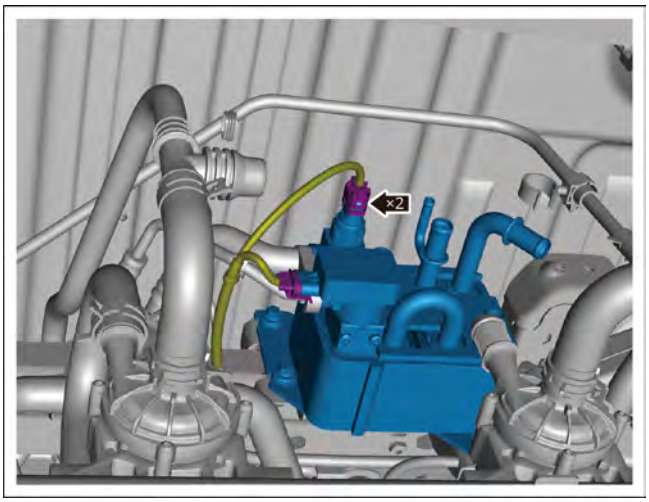
7 Remove retaining clamp, release Three-way Valve-to-Chiller Hose Assembly.



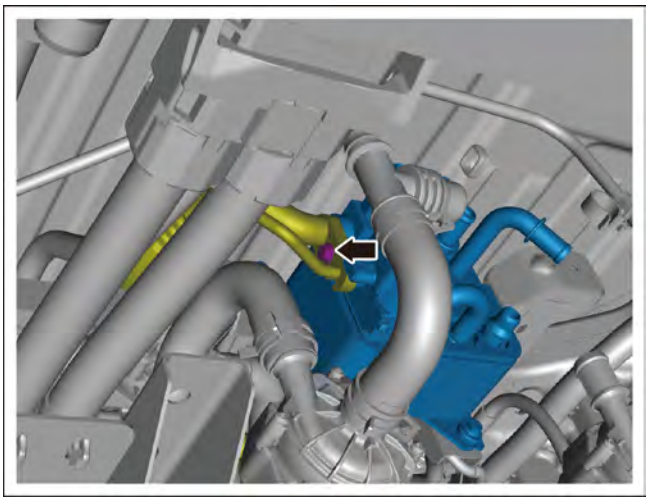
8 Remove retaining clamp, release Battery Inlet Hose Assembly.



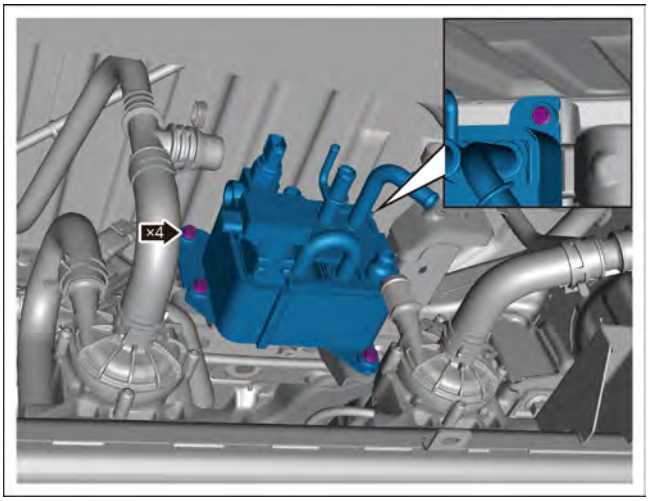
9 Remove retaining clamp, release Battery Circuit Vent Hose Assembly.



10 Disconnect 2 chiller assembly wiring harness connectors.



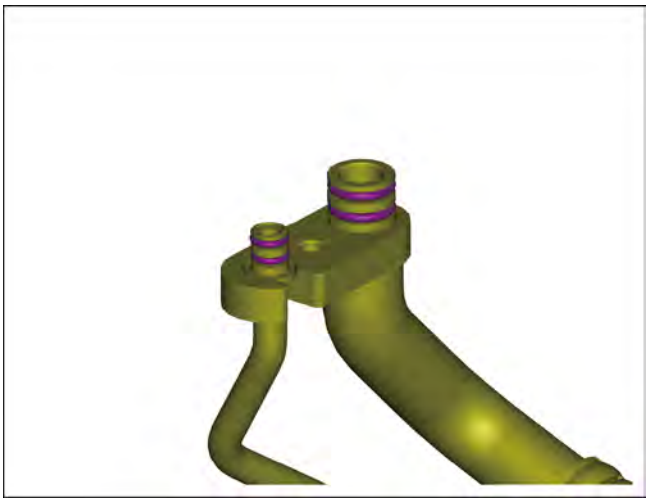
11 Remove retaining bolt, release chiller inlet output pipe assembly.



12 Remove 4 retaining bolt, remove chiller assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Check the seal for damage or deterioration and replace it if necessary. Apply an appropriate amount of lubricant to the seal before installation.

3 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

4 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

PT Sensor - Non-Heat-Pump A/C, Repair Procedure

Warning

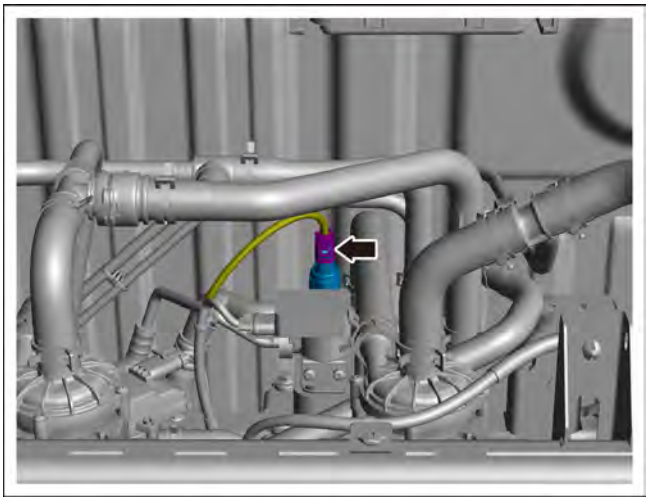
- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

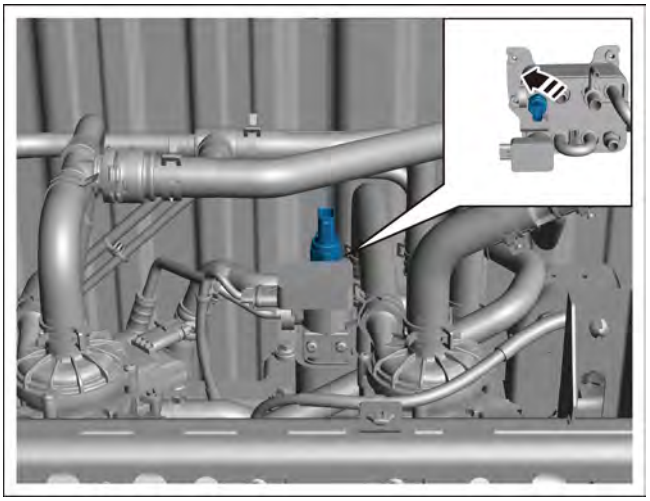
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

3 Raise the vehicle. Refer to:Vehicle Lifting and Support



4 Disconnect PT sensor wiring harness connector.



5 Remove PT sensor.

Torque:xxx±xxN·m

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install front, check seal ring whether damage or deterioration, necessary when replace.

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

right domain controller

Repair Procedure

Right Domain Controller Assembly, Repair Procedure

Warning

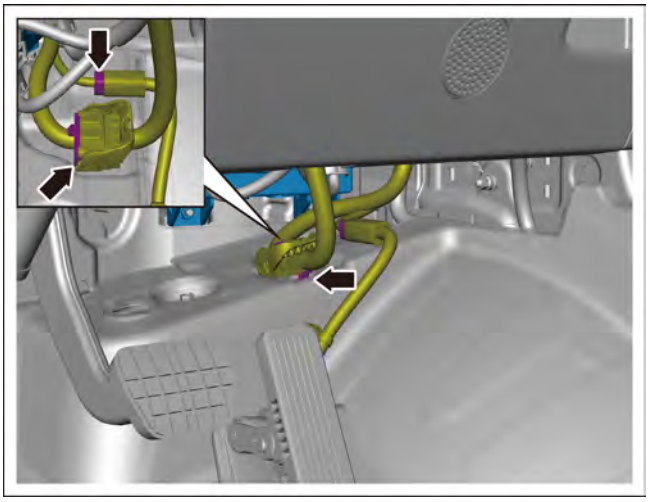
*related at Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions

Caution

Removal and Installation electrical component part when must wear protection electrostatic hand sleeve, electrostatic protection missing may cause components damage.

Removal Steps

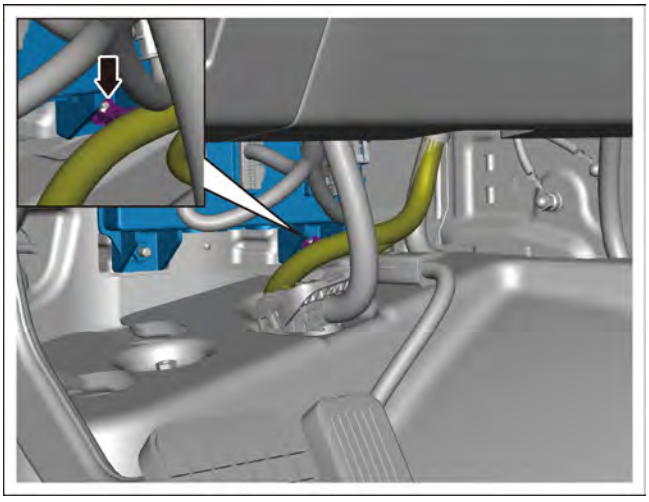
1 Power down the vehicle low-voltage system.Low-voltage Power-up/Power-down Procedure



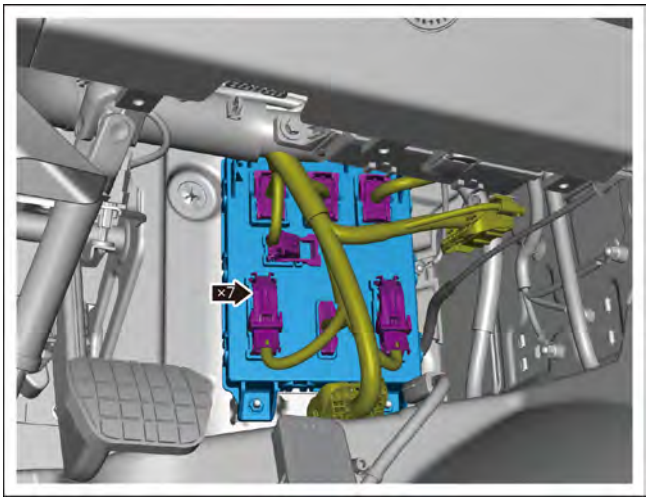
2 Disconnect front compartment wiring harness wiring harness connector.

a. Release instrument panel wiring harness retaining clip.

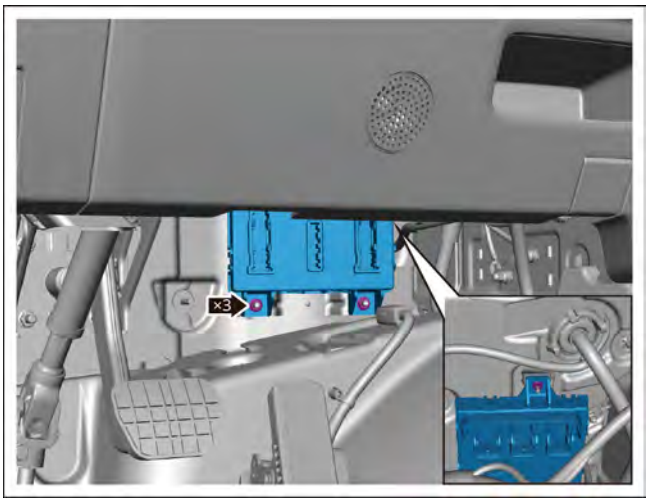
b. Disconnect 2 front compartment wiring harness wiring harness connectors.



3 Release front compartment wiring harness retaining clip.



4 Disconnect 7 right domain Controller Assembly wiring harness connectors.



5 Remove right domain Controller Assembly 3 retaining nut.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 if replace right domain Controller Assembly, then install complete rear, Use diagnostic scan tool perform “RDM” programming and setting. refer to:controller module programming and setting

05 electrical component

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Cockpit Domain Control

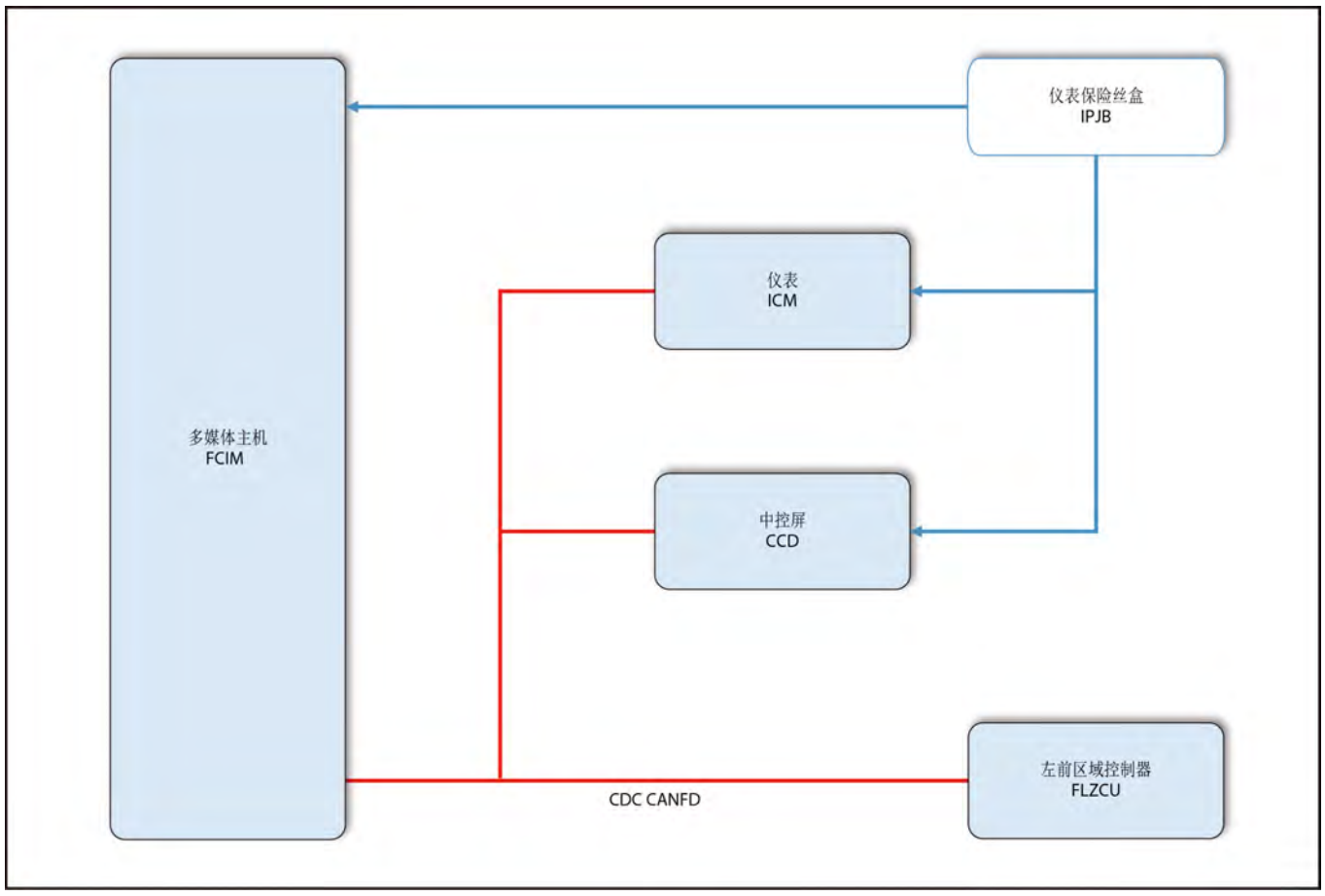
System Overview

Cockpit Domain Control Function Overview

intelligent cockpit control

intelligent cockpit with vehicle load domain controller for core, complete combined Instrument Pack, center control, vehicle unit entertainment, voice interaction, HUD, seat A/C etc. vehicle inner software hardware, through multiple module state person unit interaction enable navigation item audio, vehicle load communication item, vehicle control setting, cockpit environment adjustment, multiple display linked operation, mobile phone mutual link etc. Function, same when for connect vehicle network and outer part item end service, balance driving information deploy indicate, passenger entertainment body verification and Vehicle Status control, item cause aggregate safety Note, person unit interaction, comfort entertainment at I body vehicle inner digital -based item occupant air between.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	CDC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Infotainment Head Unit	CDC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
Instrument Panel Fuse Box	Hardwired	Power Supply	Infotainment Head Unit Power Supply Output
	Hardwired	Power Supply	Instrument Pack Power Supply Output
	Hardwired	Power Supply	Infotainment Display Power Supply Output
Instrument Pack	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
	CDC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Infotainment Display	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
	CDC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Component Description

Infotainment Head Unit

Infotainment Head Unit install at Instrument Pack unit inner part, main need Function Yes enable cockpit Multimedia information treatment, through software hardware unlock analysis and processing audio video, interaction command and various vehicle load signal. Vehicle Domain Controller according to vehicle work Status and use user operation command control Infotainment Head Unit, adjustment audio Output, frame surface display with and interaction logic, enable more advantage cockpit interaction body verification and item consumption management.

Infotainment Display

Infotainment Display install in Instrument Pack unit center part, main need Function Yes person unit interaction display and operation Input, through display deploy indicate cockpit various information and receive use user contact control operation. Infotainment Head Unit according to vehicle work Status and use user operation command control Infotainment Display, adjust frame surface inner capacity, display illuminate degree with and contact control effect should logic, enable more advantage cockpit interaction body verification and item consumption management.

Instrument Pack

Instrument Pack install in Steering Wheel front side Instrument Pack unit inner part, main need Function Yes vehicle driving information deploy indicate, through display present Vehicle Speed, speed, fault Note etc. vehicle Status data. Infotainment Head Unit according to vehicle work Status and vehicle signal control Instrument Pack, adjust frame surface layout local, display illuminate degree with and alarm Note logic, enable more advantage driving information present body verification and item consumption management.

Fault Diagnosis (ICC)

Cockpit Domain Controller (ICC) DTC List

DTC	DTC Meaning	DTC Description
B180017	Battery voltage is too high	voltage too high
B180016	Battery voltage is too low	voltage too low
B188700	DTC_ECU_SW_FAILURE	ECU software fault
B188503	Abnormal radio antenna	receive audio antenna abnormal
B180C11	Left front horn wire circuit short circuit to ground	left front Horn line circuit to ground short circuit
B180C12	Left front horn wire circuit short circuited to power supply	left front Horn line circuit for power supply short circuit
B180C13	Left front horn wire circuit open circuit	left front Horn line circuit open circuit
B180D11	Right front horn wire circuit short circuit to ground	right front Horn line circuit to ground short circuit
B180D12	Right front horn wire circuit short circuited to power supply	right front Horn line circuit for power supply short circuit
B180D13	Open circuit in the right front horn wire circuit	right front Horn line circuit open circuit
B188604	Abnormal communication between SOC and MCU	SOC and MCU communication abnormal
B182A04	Microphone 1 malfunction	microphone 1 fault
B188804	ECU internal high temperature	ECU inner part high temperature
U244787	0x447 Message Timeout(RLCR)	0x447 message timeout (RLCR)
U24F387	0x4F3 Message Timeout(RRCR)	0x4F3 message timeout (RRCR)
U241F87	0x41F Message Timeout(BMS)	0x41F message timeout (BMS)
U235487	0x354 Message Timeout(BNCM)	0x354 message timeout (BNCM)
U247787	0x477 Message Timeout(CDU)	0x477 message timeout (CDU)
U245587	0x455 Message Timeout(CWC)	0x455 message timeout (CWC)
U227787	0x277 Message Timeout(CSA)	0x277 message timeout (CSA)
U226487	0x264 Message Timeout(ONEBOX)	0x264 message timeout (ONEBOX)
U212287	0x122 Message Timeout(EPS)	0x122 message timeout (EPS)
U245987	0x459 Message Timeout(EVCC)	0x459 message timeout (EVCC)
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller
U236087	0x360 Message Timeout(MFS)	0x360 message timeout (MFS)
U224B87	0x24B Message Timeout(ONEBOX)	0x24B message timeout (ONEBOX)
U240187	0x401 Message Timeout(LBMS)	0x401 message timeout (LBMS)

DTC	DTC Meaning	DTC Description
U24CF87	0x4CF Message Timeout(TBOX)	0x4CF message timeout (TBOX)
U22AB87	0x2AB Message Timeout(FRZCU)	0x2AB message timeout (FRZCU)
U253A87	0x53A Message Timeout(FMCU)	0x53A message timeout (FMCU)
U24ECFB	0x4EC message E2E checksum error	0x4EC message E2E validation Error
U007388	Bus Off	bus disabled
U130055	ICC Not Configured	ICC not configuration
U130056	ECU Configuration Is Invalid / Incompatible Configuration	ECU software configuration no valid / not compatible
U300051	ICC Not Programmed	ICC not programming
U2430FB	0x430 message E2E checksum error	0x430 message E2E validation Error
U242FFB	0x42F message E2E checksum error	0x42F message E2E validation Error
U24A9FB	0x4A9 message E2E checksum error	0x4A9 message E2E validation Error
U2264FB	0x264 message E2E checksum error	0x264 message E2E validation Error
U249CFB	0x49C message E2E checksum error	0x49C message E2E validation Error
U252CFB	0x52C message E2E checksum error	0x52C message E2E validation Error
U2524FB	0x524 message E2E checksum error	0x524 message E2E validation Error
U2122FB	0x122 message E2E checksum error	0x122 message E2E validation Error
U2314FB	0x314 message E2E checksum error	0x314 message E2E validation Error
U249EFB	0x49E message E2E checksum error	0x49E message E2E validation Error
U2467FB	0x467 message E2E checksum error	0x467 message E2E validation Error
U250FFB	0x50F message E2E checksum error	0x50F message E2E validation Error
U24B9FB	0x4B9 message E2E checksum error	0x4B9 message E2E validation Error
U253AFB	0x53A message E2E checksum error	0x53A message E2E validation Error
U257BFB	0x57B message E2E checksum error	0x57B message E2E validation Error
U250BFB	0x50B message E2E checksum error	0x50B message E2E validation Error
U2397FB	0x397 message E2E checksum error	0x397 message E2E validation Error
U241FFB	0x41F message E2E checksum error	0x41F message E2E validation Error
U248AFB	0x48A message E2E checksum error	0x48A message E2E validation Error
U24B4FB	0x4B4 message E2E checksum error	0x4B4 message E2E validation Error
U2477FB	0x477 message E2E checksum error	0x477 message E2E validation Error
U2360FB	0x360 message E2E checksum error	0x360 message E2E validation Error
U24AFFB	0x4AF message E2E checksum error	0x4AF message E2E validation Error
U24E0FB	0x4E0 message E2E checksum error	0x4E0 message E2E validation Error

Repair Procedure

Cockpit Domain Controller Main Unit, Repair Procedure

Warning

*related at Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions

Caution

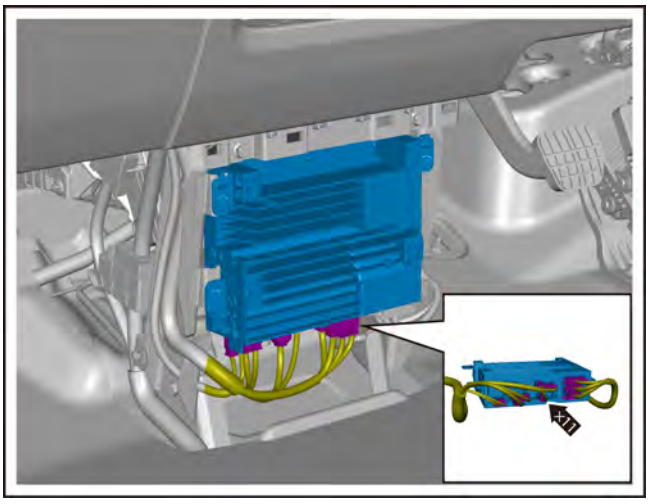
Removal and Installation electrical component part when must wear protection electrostatic hand sleeve, electrostatic protection missing may cause components damage.

Removal Steps

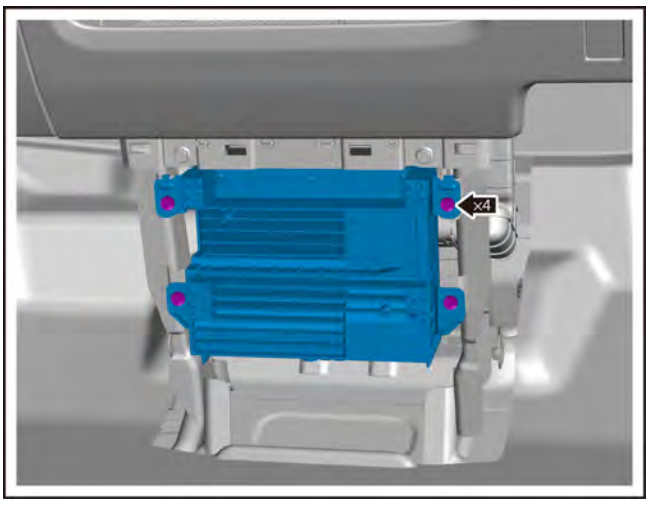
1 Power down the vehicle low-voltage system.Low-voltage Power-up/Power-down Procedure

2 Remove HVAC flap assembly left, right. Refer to:HVAC Flap Assembly Left, Repair Procedure

3 Remove instrument panel lower trim panel assembly. Refer to:Instrument Panel Lower Trim Panel Assembly, Repair Procedure



4 Disconnect 11 Cockpit Domain Controller main unit wiring harness connectors.



5 Remove 4 retaining bolt, remove Cockpit Domain Controller main unit.

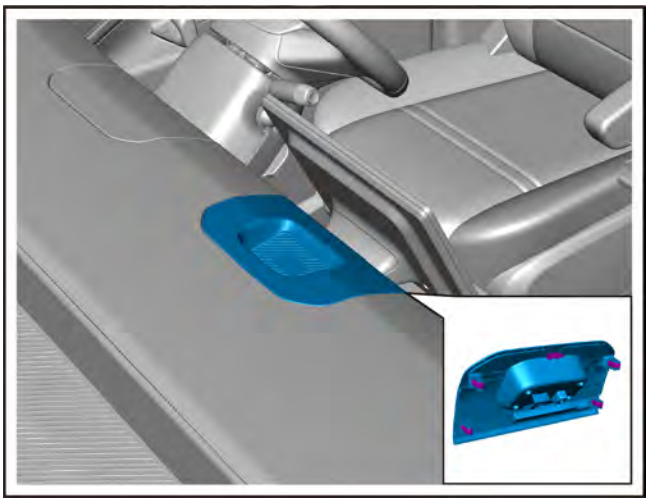
Installation Steps

1 Install in the reverse order of removal.

Center Display, Repair Procedure

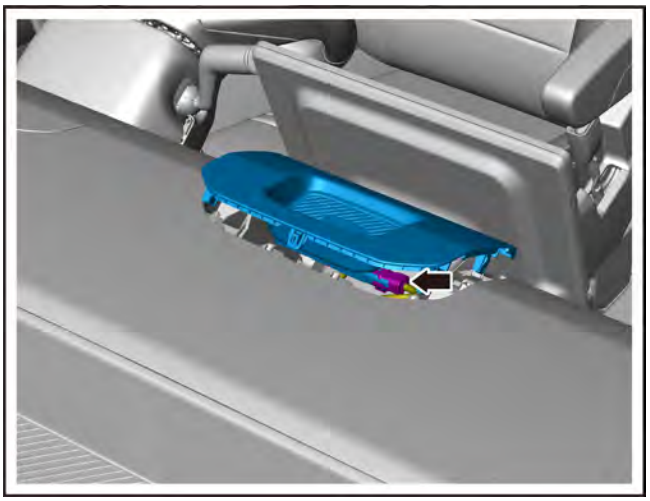
Removal Steps

1 Power down the vehicle low-voltage system.Low-voltage Power-up/Power-down Procedure



2 UsePlastic Pry ToolRelease display mounting cover retaining clip.

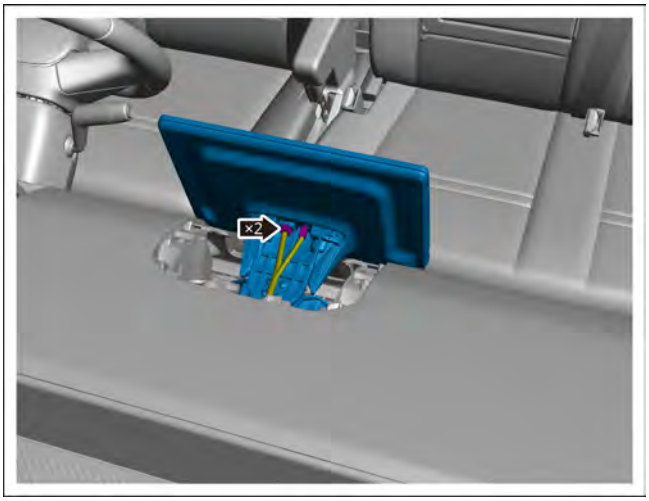
> ⚠ *Caution*
>
> *Remove when note protection around side trim panel, prevent wipe injury.*



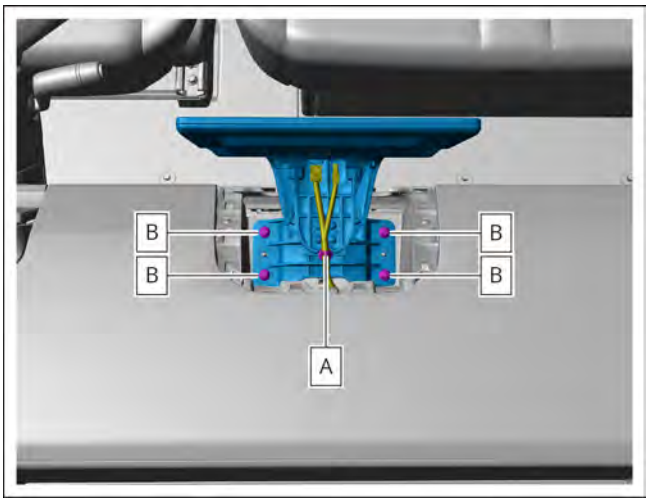
3 disconnect wiring harness connector, remove display mounting cover with RF antenna.



4 UsePlastic Pry ToolRelease center display upper cover panel retaining clip.



5 Disconnect 2 center display wiring harness connectors.



6 UsePlastic Pry ToolRemove center display.

a. release center display wiring harness retaining clip A.

b. Remove 4 retaining bolt B, remove center display.

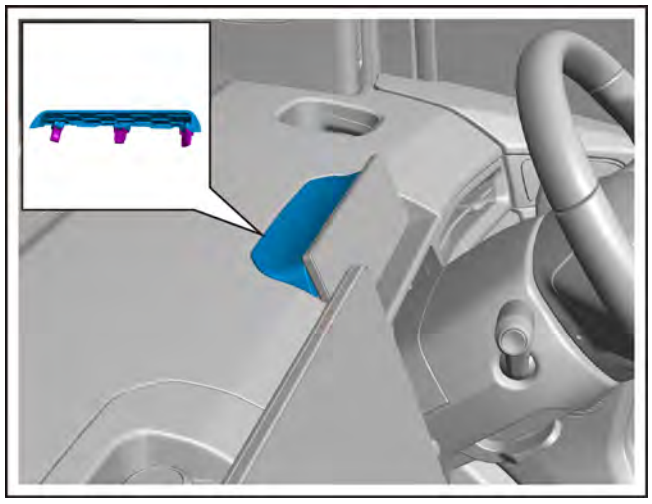
Installation Steps

1 Install in the reverse order of removal.

Instrument Pack Display, Repair Procedure

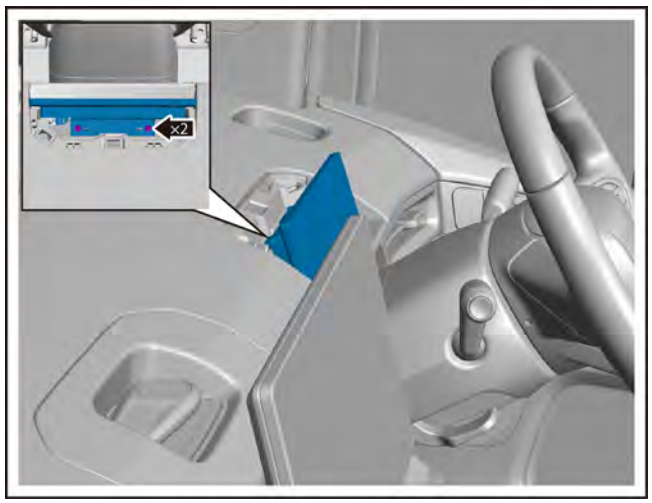
Removal Steps

1 Power down the vehicle low-voltage system.Low-voltage Power-up/Power-down Procedure

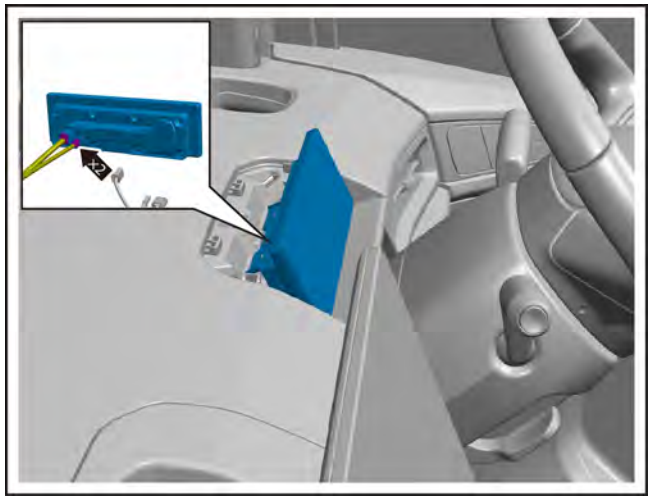


2 UsePlastic Pry ToolRelease combination Instrument Pack cover - High-spec Version -RHD retaining clip.

> ⚠ *Caution*
>
> *Remove when note protection around side trim panel, prevent wipe injury.*



3 Remove Instrument Pack display 2 retaining bolt.



4 disconnect 2 wiring harness connector, remove Instrument Pack display.

Installation Steps

1 Install in the reverse order of removal.

speaker

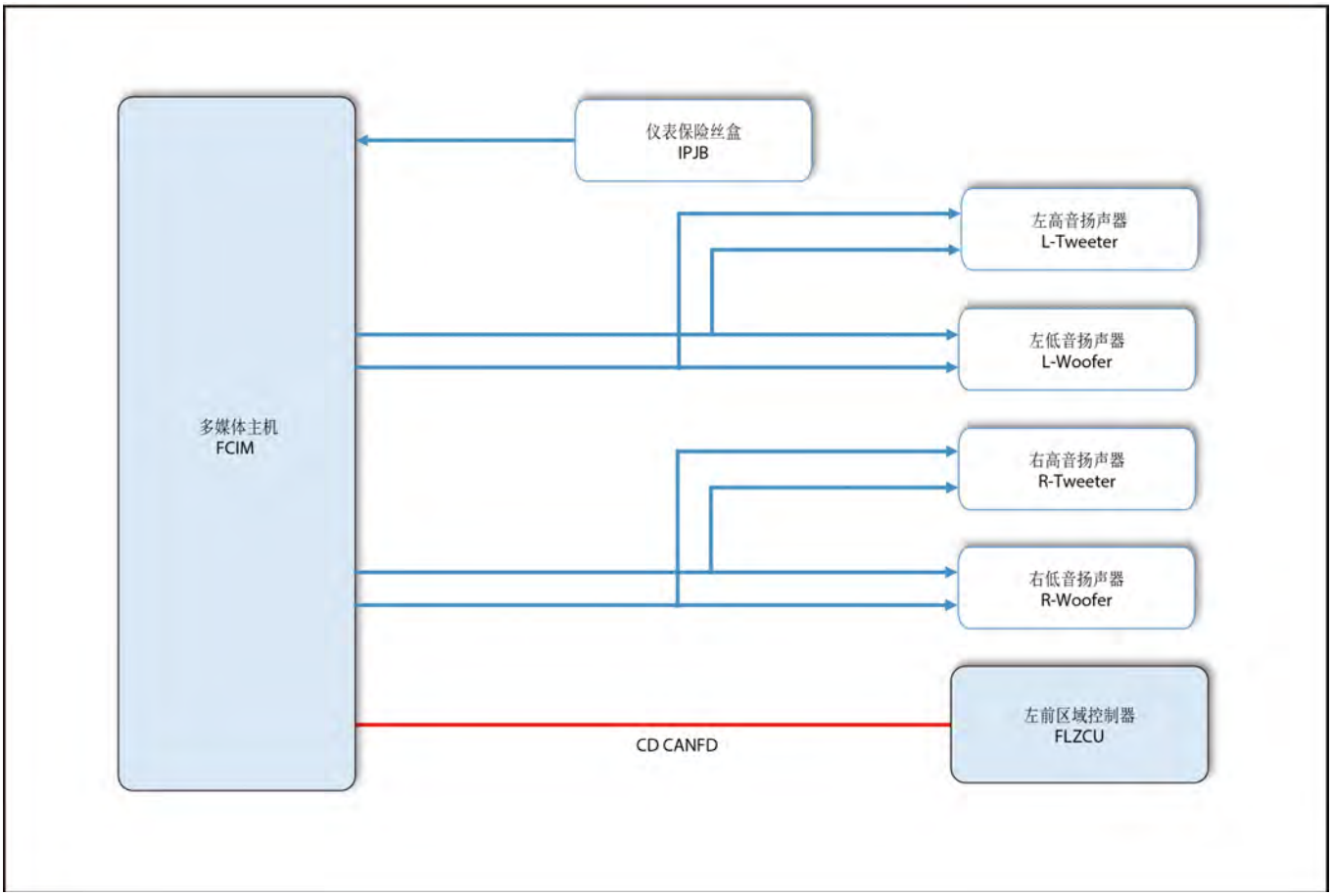
System Overview

Speaker Function Overview

speaker

high, woofer operate for vehicle load audio system send sound perform component, receive audio main unit Output audio power signal and conversion for sound wave; tweeter responsible for also original high frequency Audio Signal, improve sound clear degree and communication item sensing, woofer treatment center low frequency signal, enable turbid item low-tone valid result, II coordination complete all frequency segment audio item place, for vehicle inner provide good good listen detect body verification, same when support electrical fault self-test, can feedback speaker short circuit, open circuit etc. abnormal Status.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	CD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Infotainment Head Unit	CD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Power Supply	Instrument Pack fuse wire Power Supply Input
	Hardwired	Audio Signal	speaker positive terminal signal
	Hardwired	Audio Signal	speaker negative signal
Instrument Panel Fuse Box	Hardwired	Power Supply	Infotainment Head Unit Power Supply Output
speaker	Hardwired	Audio Signal	speaker positive terminal signal
	Hardwired	Audio Signal	speaker negative signal

Component Description

tweeter

tweeter install at vehicle inner door panel inner, main need Function Yes send sound, through power sound conversion also original audio high frequency detailed section, improve vehicle audio communication item degree and layer times sensing. Infotainment Head Unit according to item audio item place Status Output corresponding Audio Signal, drive control tweeter work, also original clear detailed item high frequency audio valid, enable advantage substance sound field matching and listen detect body verification improve.

woofer

woofer install at vehicle inner sound field layout set position, main need Function Yes send sound, through power sound conversion also original audio center low frequency signal, also original turbid item item meet vehicle load audio valid. Infotainment Head Unit according to item audio item place Status control woofer work, adjustment audio Output width value and dynamically valid result, enable more advantage audio substance performance and vehicle sound field valid result.

Infotainment Head Unit

Infotainment Head Unit main need Function for treatment Multimedia information, enable person vehicle interaction and audio video, navigation etc. Function Output. vehicle controller according to vehicle operation Status and Infotainment Head Unit interaction, adjustment work mode and Output Parameters, enable smooth person unit interaction body verification and vehicle load Function coordination management.

Repair Procedure

Tweeter, Repair Procedure

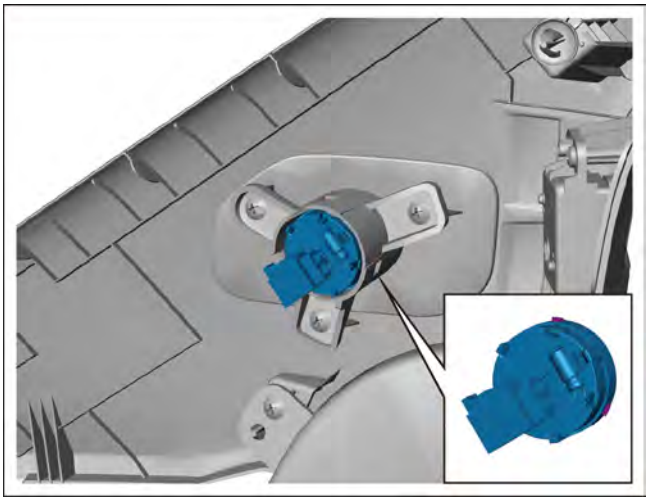
Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation



3 Remove retaining clip, remove tweeter.

Installation Steps

1 Install in the reverse order of removal.

Woofer, Repair Procedure

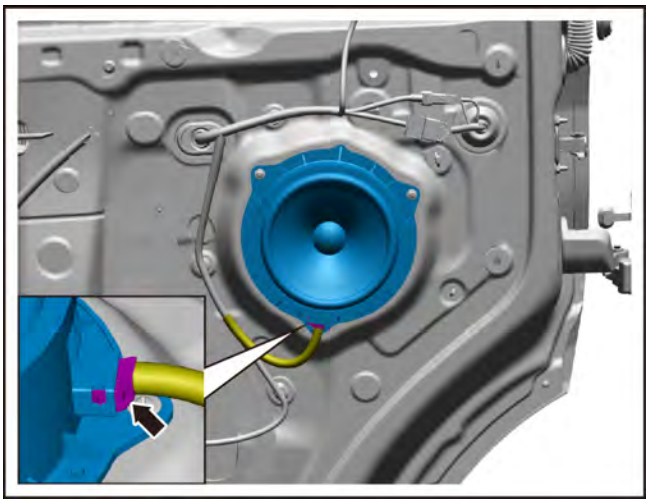
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

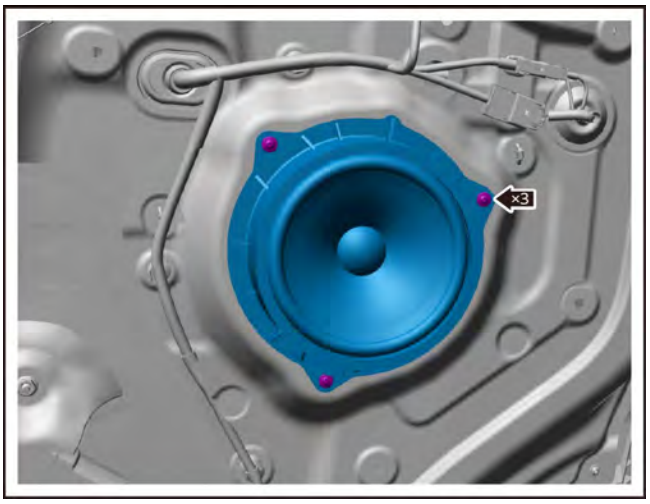
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation



3 Disconnect woofer wiring harness connector.



4 Remove 3 retaining screw, remove woofer.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, for woofer perform check, ensure in Use when no item audio, no static noise, sound clear, no obvious delay.

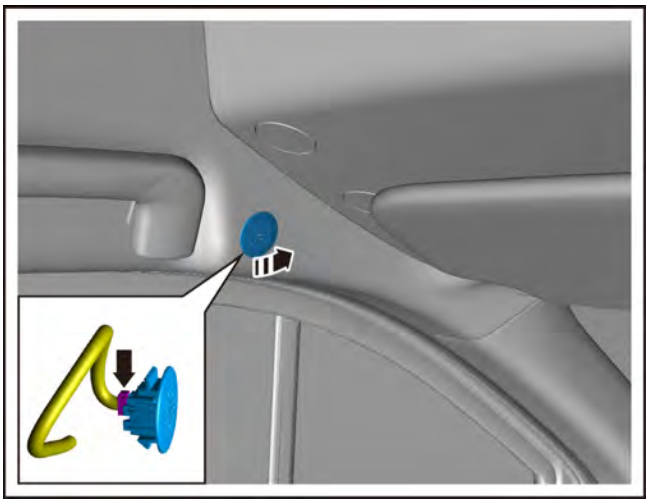
Microphone (Including Surface Cover), Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 remove microphone (including surface cover).

a. UsePlastic Pry ToolRelease microphone (including surface cover) retaining clip.

Caution

Remove when note protection around side trim panel, prevent wipe injury.

b. disconnect wiring harness connector, remove microphone (including surface cover).

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear for microphone (including surface cover) perform check, ensure communication item voice clear item meet, environment noise audio valid suppress control.

parking radar

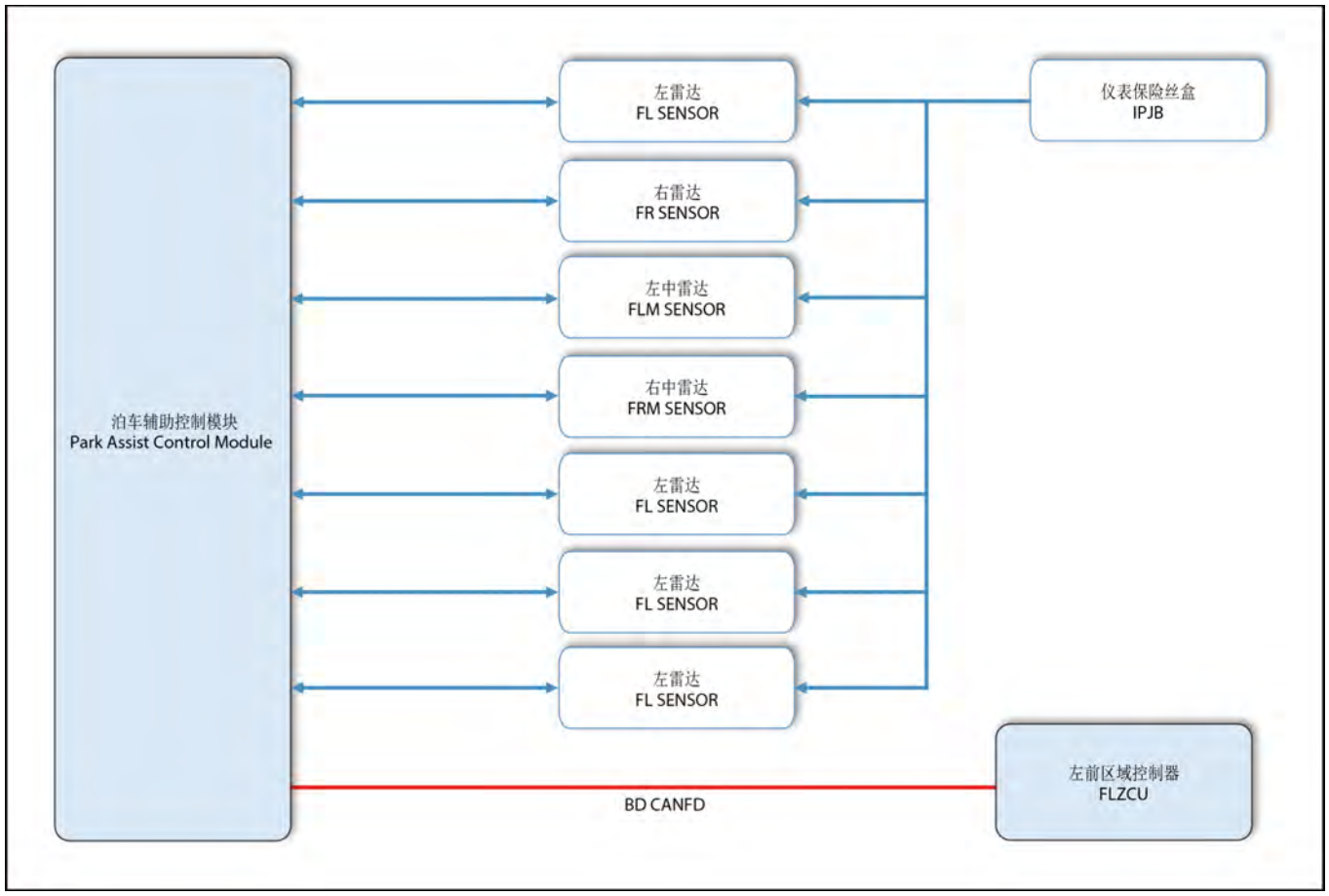
System Overview

Parking Radar Function Overview

parking radar Function

parking radar item assist body layout position ultrasonic sensor detect vehicle around side obstacle object, through calculate ultrasonic send radio and return wave Time difference, obtain remove obstacle object phase for body distance information, and detect Data Transmission to vehicle controller; system according to obstacle object distance remote near Output not same level alarm signal, through Instrument Pack sound light Note warning known driver obstacle object Location and distance, Driver Assistance person complete reverse, low speed parking operation, same when have backup sensor Fault self-test capability, can recognition probe head contamination, signal abnormal etc. fault, valid item compensation vehicle view item blind area, lower low low speed parking when collision air hazard, improve parking process safety characteristic and operation convenience characteristic.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
parking assist control module	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Communication Signal	and ultrasonic sensor Data Transmission
Instrument Panel Fuse Box	Hardwired	Power Supply	ultrasonic sensor Power Supply Output
ultrasonic sensor	Hardwired	Power Supply	ultrasonic sensor Power Supply Input
	Hardwired	Communication Signal	and parking assist control module Data Transmission

Component Description

ultrasonic sensor

ultrasonic sensor install at vehicle front rear bumper inside, main need Function Yes send radio and receive 40kHz ultrasonic signal, detect vehicle around side obstacle object distance information. parking assist control module through SIG signal pin direction ultrasonic sensor transmit trigger command, radar receive command rear send radio ultrasonic, encounter to obstacle object reverse radio rear receive return wave, and distance detect signal return transmit to parking assist control module. controller according to each radar feedback obstacle object distance data, complete obstacle object Location determine, enable parking assist, distance alarm etc. Function.

parking assist control module

parking assist control module main need Function Yes acquire treatment all vehicle ultrasonic sensor detect signal, actual when monitoring vehicle around side obstacle object Status. parking assist control module according to vehicle gear position, Vehicle Speed and radar work Status control each Location ultrasonic sensor, receive and unlock item obstacle object distance signal, enable parking distance alarm and obstacle object monitoring Function, ensure vehicle low speed parking safety characteristic and stability characteristic.

Fault Diagnosis (UltrasonciRadar)

Ultrasonic Sensor (UltrasonciRadar) DTC List

DTC	DTC Meaning	DTC Description
U273487	(0x4B4)Lost Communication With FLZCU	(0x4B4) and left area controller FLZCU lost communication
U24B4FB	0x4B4 message E2E checksum error	0x4B4 message E2E validation Error
U007388	Bus off	bus disabled
U130055	USSC Not Configured	USSC not configuration
B150017	Over voltage fault	overvoltage Fault
B150116	Under-voltage fault	undervoltage Fault
B150225	The right of back ultrasonic sensor Failure	ultrasonic sensor front left sensor Fault
B150325	The right of back ultrasonic sensor Failure	ultrasonic sensor front left center sensor Fault
B150425	The right of back ultrasonic sensor Failure	ultrasonic sensor front right center sensor Fault
B150525	The right of back ultrasonic sensor Failure	ultrasonic sensor front right sensor Fault
B150625	The right of back ultrasonic sensor Failure	ultrasonic sensor rear left sensor Fault
B150725	The right of back ultrasonic sensor Failure	ultrasonic sensor rear left center sensor Fault
B150825	The right of back ultrasonic sensor Failure	ultrasonic sensor rear right center sensor Fault
B150925	The right of back ultrasonic sensor Failure	ultrasonic sensor rear right sensor Fault
U248A87	0x48A(ONEBOX) Message Overtime	0x48A(ONEBOX) message timeout
U272687	Lost Communication With TCM	(0x4AF) and TCM lost communication
U24AFFB	0x4AF message E2E checksum error	0x4AF message E2E validation Error
U231987	0x319(FLZCU) Message Overtime	0x319(FLZCU) message timeout
U249D87	0x49D(FLZCU) Message Overtime	0x49D(FLZCU) message timeout
U248AFB	0x48A message E2E checksum error	0x48A message E2E validation Error
U249DFB	0x49D message E2E checksum error	0x49D message E2E validation Error

Repair Procedure

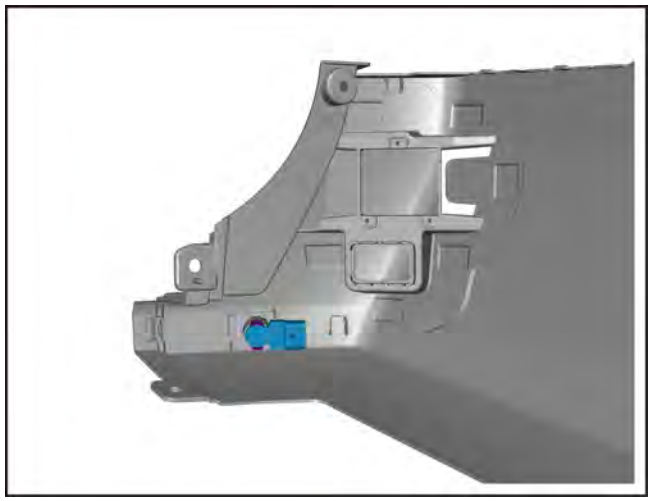
Main Radar Probe Head, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

3 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation



4 release retaining clip, remove main radar probe head.

Installation Steps

1 Install in the reverse order of removal.

Follow-up Work:

Install complete rear, in air item channel circuit upper activation parking assist system, confirm radar no incorrect report, Instrument Pack display distance and actual distance phase same.

From Radar Probe Head - Left Front, Repair Procedure

Tips

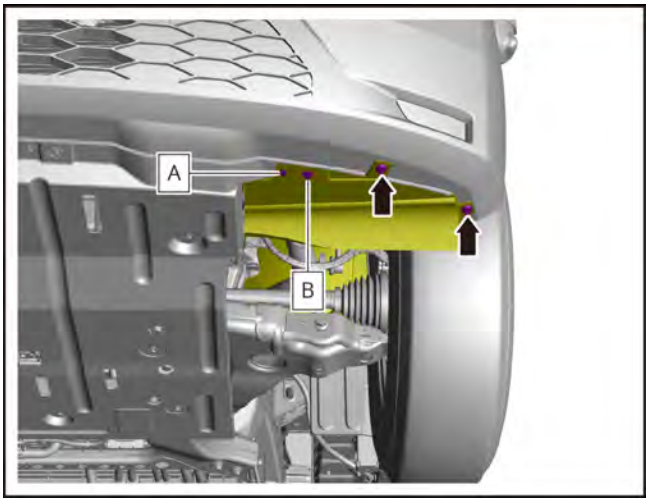
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove left front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

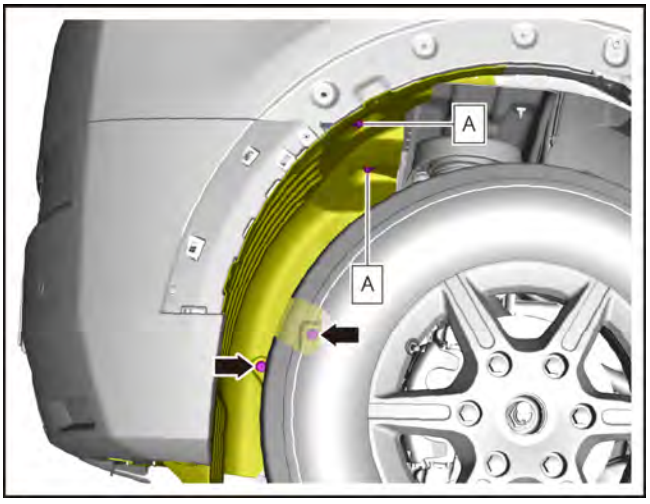


4 Remove left front wheel cover assembly fastener.

a. Remove Front Underbody Shield retaining bolt A.

b. Remove left front wheel cover assembly retaining bolt B.

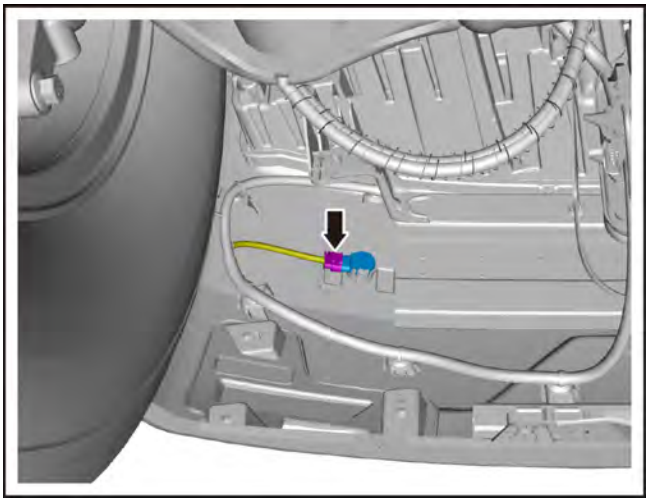
c. Remove left front wheel cover assembly 2 retaining clip.



5 offset open left front wheel cover assembly.

a. Remove left front wheel cover assembly 2 plastic nut A.

b. Remove 2 retaining clip, offset open left front wheel cover assembly.



6 disconnect wiring harness connector, remove from radar probe head - left front.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Follow-up Work:

Install complete rear, in air item channel circuit upper activation parking assist system, confirm radar no incorrect report, Instrument Pack display distance and actual distance phase same.

From Radar Probe Head - Left Front Center, Repair Procedure

Tips

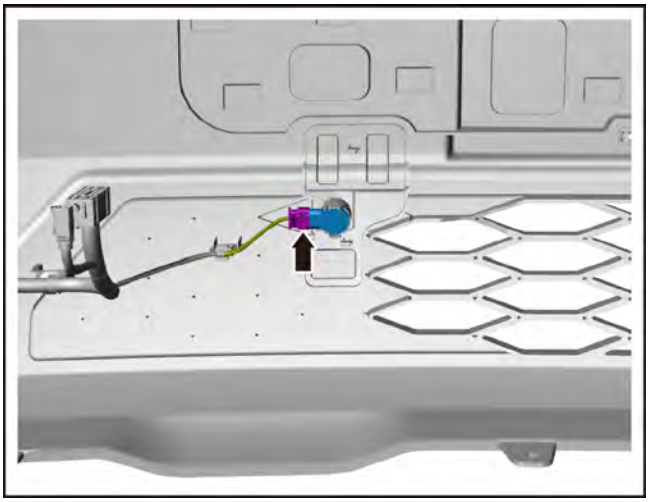
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 disconnect wiring harness connector, remove from radar probe head - left front center.

Installation Steps

1 Install in the reverse order of removal.

Follow-up Work:

Install complete rear, in air item channel circuit upper activation parking assist system, confirm radar no incorrect report, Instrument Pack display distance and actual distance phase same.

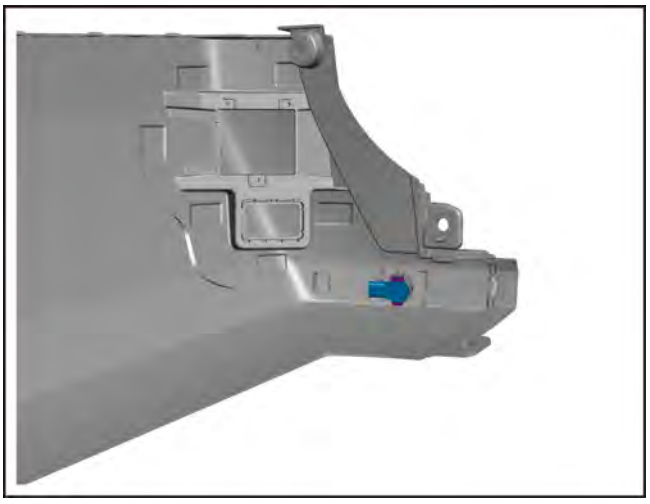
From Radar Probe Head - Right Rear, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

3 Remove rear bumper right lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation



4 release retaining clip, remove from radar probe head - right rear.

Installation Steps

1 Install in the reverse order of removal.

Follow-up Work:

Install complete rear, in air item channel circuit upper activation parking assist system, confirm radar no incorrect report, Instrument Pack display distance and actual distance phase same.

From Radar Probe Head - Left Rear Center, Repair Procedure

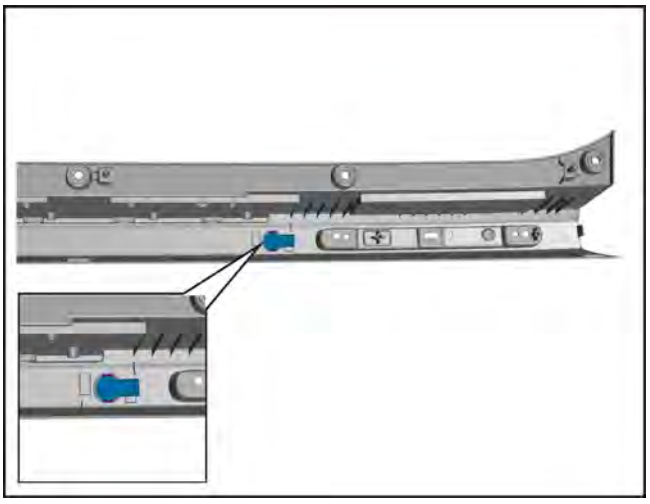
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation



3 release retaining clip, remove from radar probe head - left rear center.

Installation Steps

1 Install in the reverse order of removal.

Follow-up Work:

Install complete rear, in air item channel circuit upper for vehicle perform test, ensure radar no incorrect report, Instrument Pack display distance and actual distance phase same.

camera

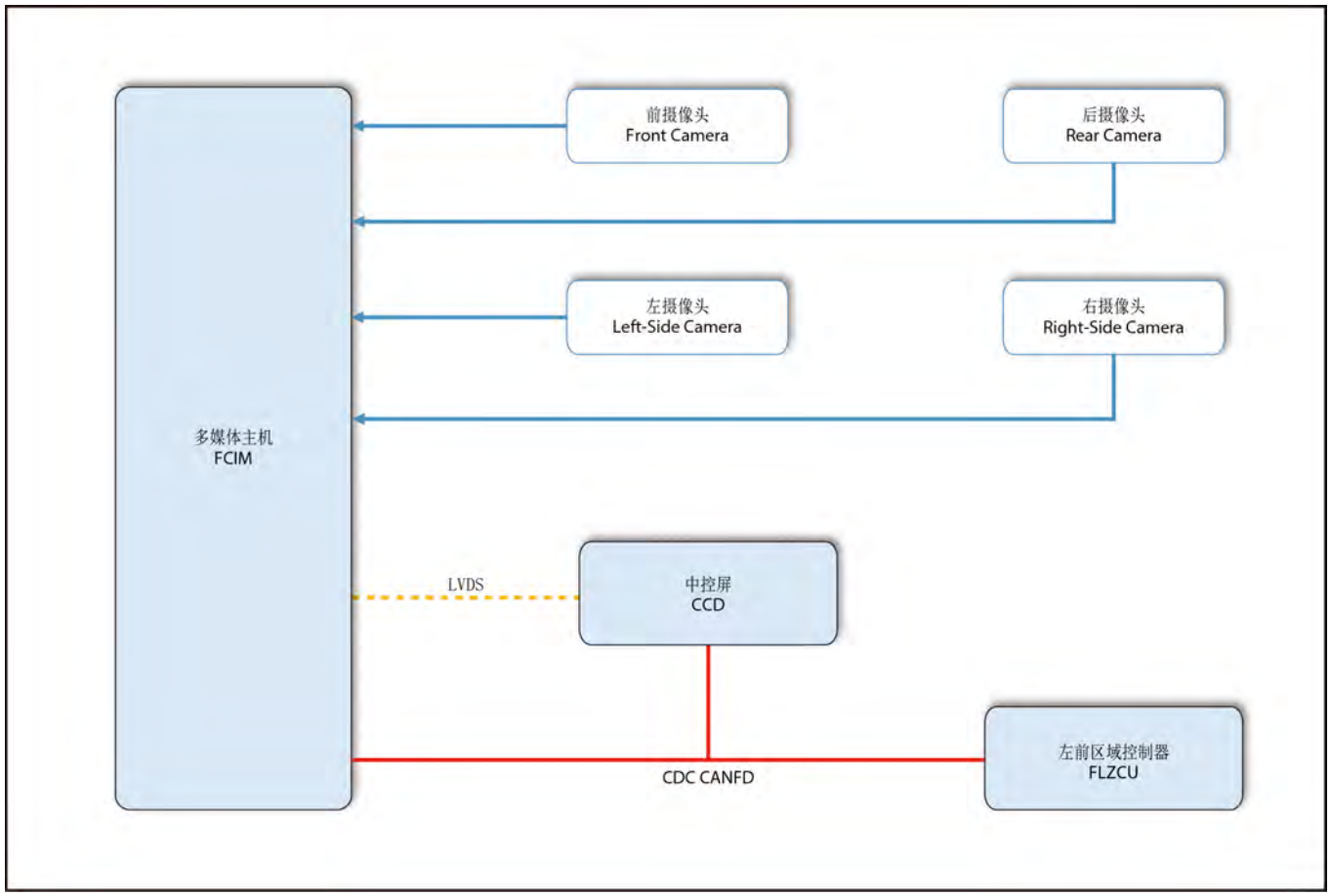
System Overview

Camera Function Overview

panoramic image

360 degree panoramic image by distribution in body front rear left right item angle camera acquire around side frame surface, main need Function Yes obtain remove vehicle IV around environment map like, map like treatment Unit for multiple circuit frame surface perform distortion change Straightening and splice combined form, generate item item panoramic view map Output to Infotainment Display roof. system according to vehicle gear position and Steering Wheel steering angle item add dynamically trajectory trigger guide line, assist driver observe body around side blind area, assist parking and low speed communication operate, enable lower low item item air hazard, improve driving convenience characteristic valid result.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	CDC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Infotainment Display	CDC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	LVDS	Low-voltage Differential Signal	360 image signal Input
Infotainment Head Unit	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	LVDS	Low-voltage Differential Signal	360 image signal Output
	Hardwired	video signal	camera video signal Input
camera	Hardwired	video signal	camera video signal Output

Component Description

360 camera

360 panoramic front, rear, left, right camera section distinguish install in body IV around corresponding Location, main need Function Yes acquire vehicle around side actual when environment frame surface, through GMSL same shaft line cable original map like Data Transmission to Infotainment Head Unit. Infotainment Head Unit according to IV circuit camera acquire frame surface perform distortion change Straightening and panoramic splice, combined form all vehicle item item view map, enable eliminate except body view detect blind area, assist parking and low speed safety communication operate valid result.

Infotainment Head Unit

Infotainment Head Unit install at center control unit inner part, main need Function Yes receive map like treatment module Output panoramic image video signal, same when complete combined item audio item place, navigation, Bluetooth mutual link and body setting etc. various vehicle load Function. Infotainment Head Unit according to button signal and vehicle operation Status unlock item corresponding command, Output frame surface and Audio Signal, enable all vehicle infotainment, panoramic image display and vehicle person unit interaction intelligent control.

Repair Procedure

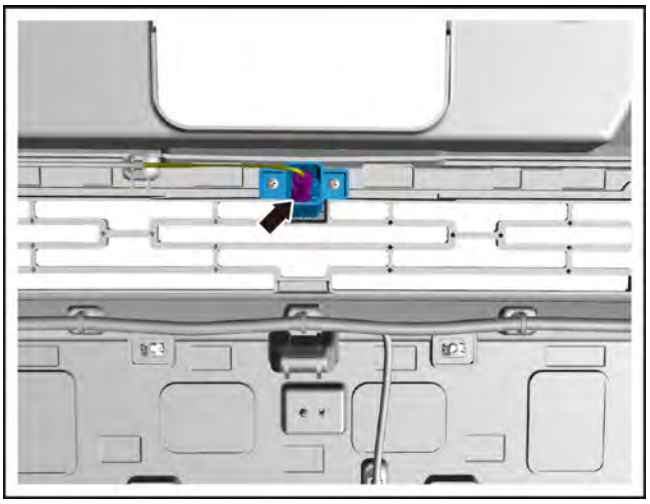
Front-View Camera, Repair Procedure

Removal Steps

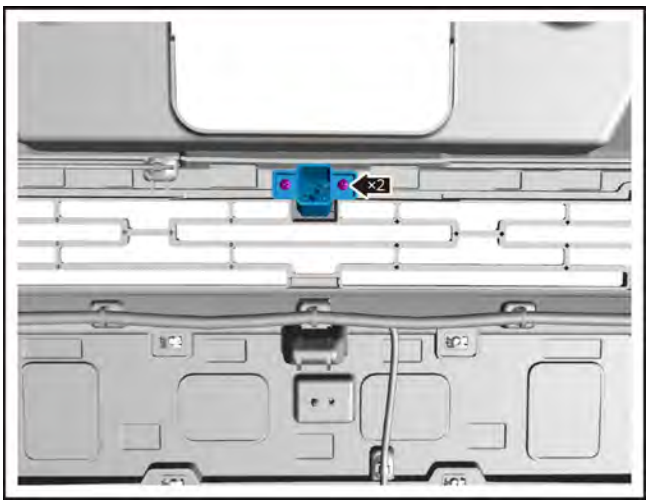
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 disconnect Front-view Camera connector.



5 Remove 2 retaining screw, remove Front-view Camera.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

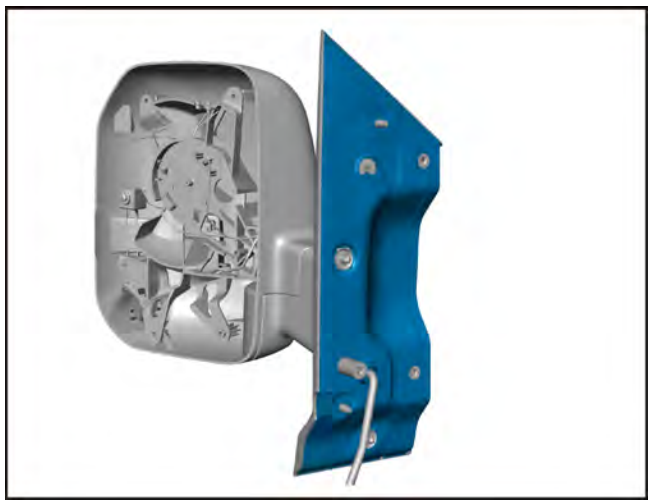
Install complete rear, activation 360 panoramic Camera System, observe Front-view Camera frame surface, confirm map like clear no module item, frame surface smooth no card item or obvious delay.

Left View Camera, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Outside Rearview Mirror assembly. Refer to:Left Outside Rearview Mirror Assembly, Repair Procedure

3 Remove left mirror glass section assembly. Refer to:Left Mirror Glass Section Assembly, Repair Procedure

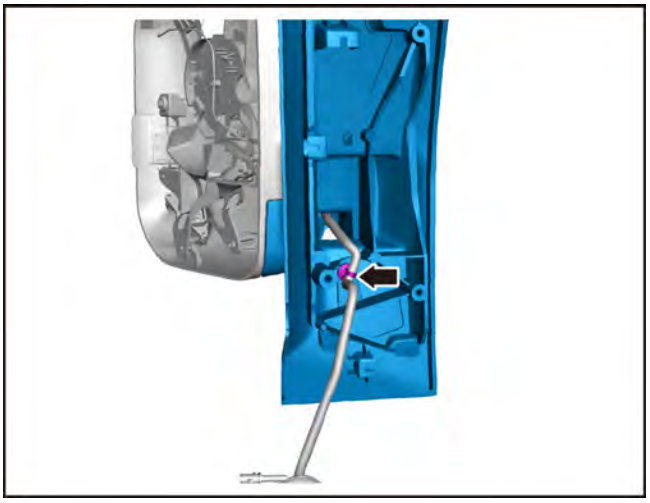
4 Remove left mirror adjuster. Refer to:Left Mirror Adjuster, Repair Procedure

5 Remove service port cover. Refer to:Service Port Cover, Repair Procedure

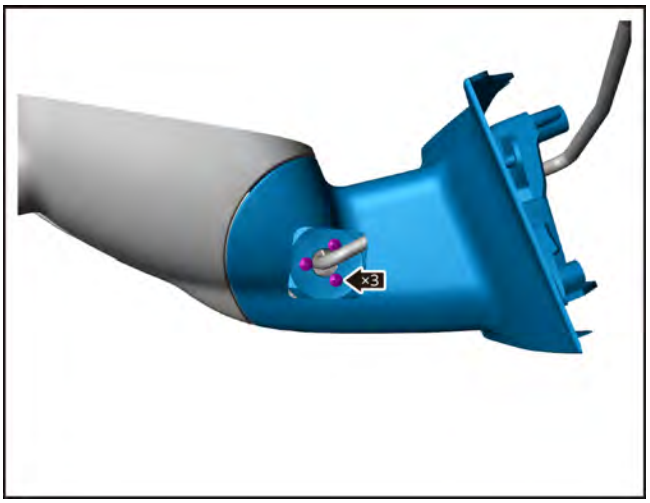
6 Remove left mirror glass small assembly. Refer to:Left Mirror Glass Small Assembly, Repair Procedure

7 Remove Left Outside Rearview Mirror goggles turn. Refer to:Left Outside Rearview Mirror Goggles Turn, Repair Procedure

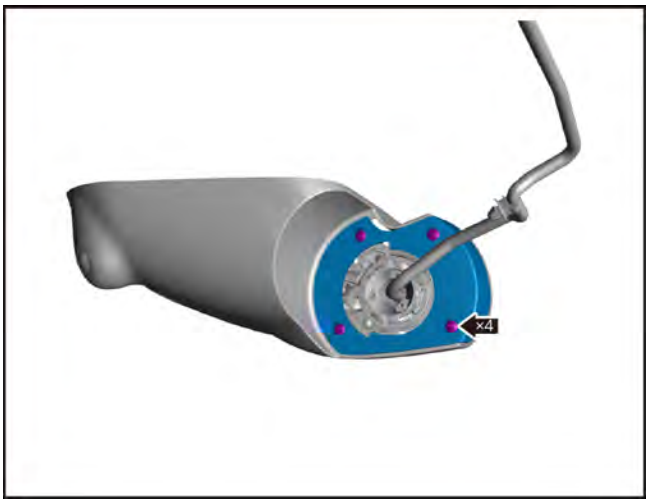
8 Remove Left Outside Rearview Mirror isolate away block.



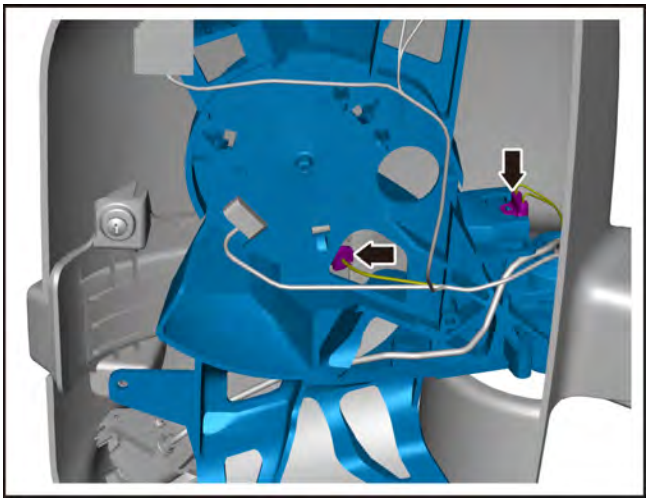
9 Release Left Outside Rearview Mirror assembly wiring harness retaining clip.



10 Remove 3 retaining screw, remove Left Outside Rearview Mirror assembly outer housing.



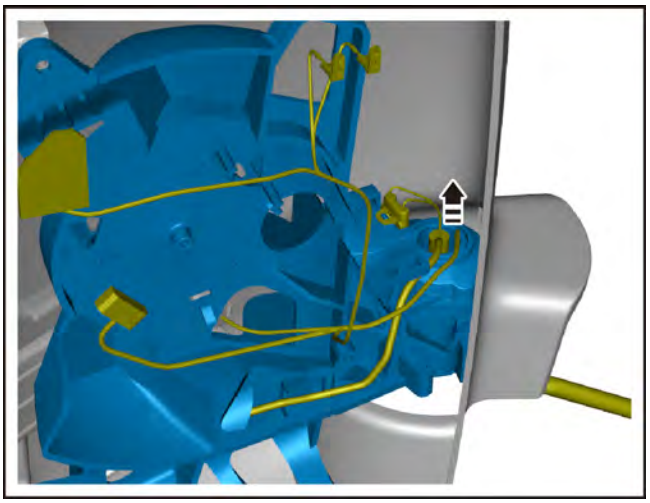
11 Remove 4 retaining screw, remove Left Outside Rearview Mirror connect trim cover.



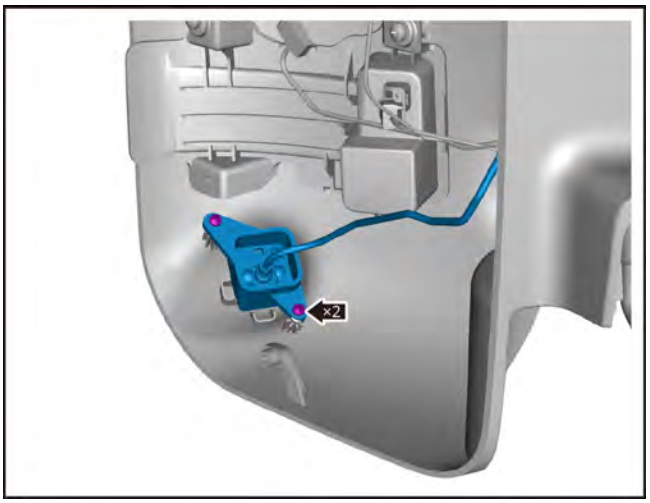
12 release retaining clip, disconnect Left Outside Rearview Mirror motor assembly wiring harness connector.

a. Disconnect Turn Signal Lamp wiring harness connector.

b. release retaining clip, disconnect Left Outside Rearview Mirror motor assembly wiring harness connector.



13 along direction arrow side direction evacuate output Left Outside Rearview Mirror assembly wiring harness, remove Left Outside Rearview Mirror assembly frame energized unit.



14 Remove 2 retaining screw, remove left view camera.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

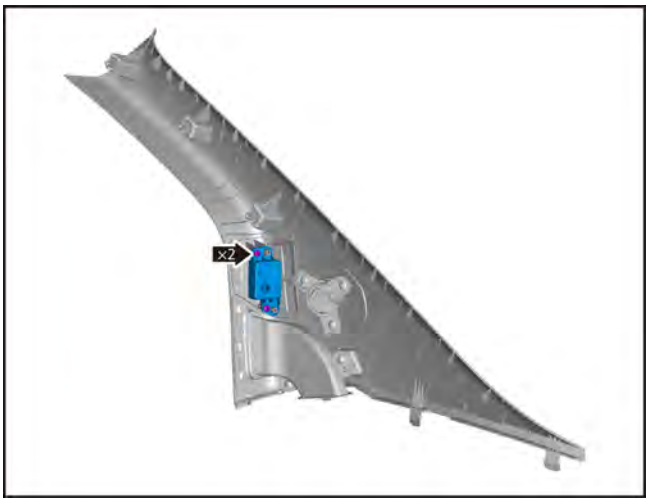
Install complete rear, activation 360 panoramic Camera System, observe left view camera frame surface, confirm map like clear no module item, frame surface smooth no card item or obvious delay.

DMS Camera, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation



3 Remove 2 retaining screw, remove DMS camera.

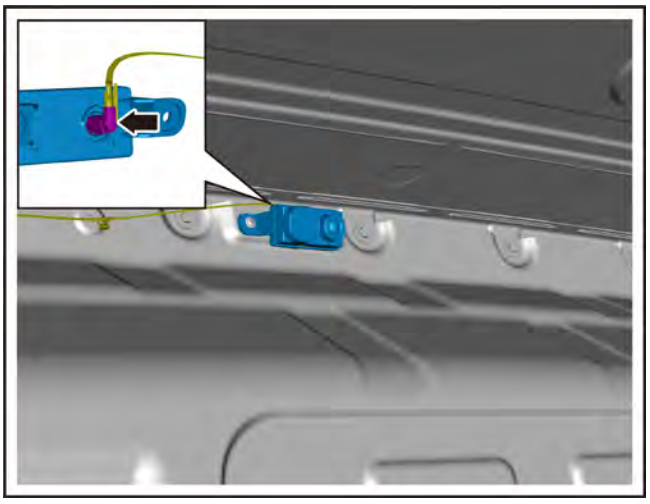
Installation Steps

1 Install in the reverse order of removal.

Monitoring Camera, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Disconnect Monitoring Camera wiring harness connector.



3 Remove 2 retaining screw, remove Monitoring Camera.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

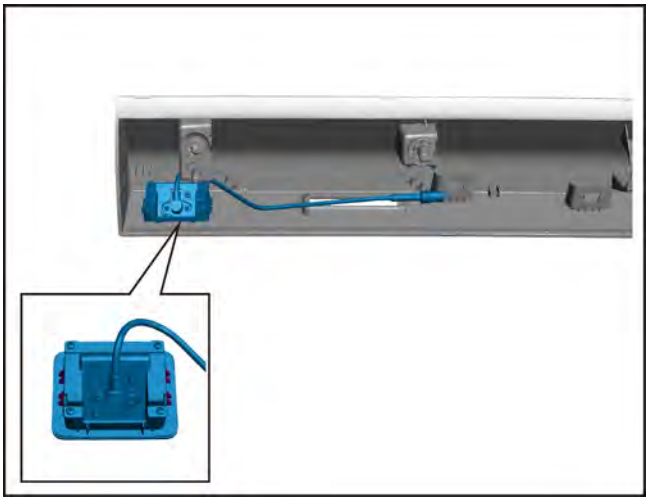
Install complete rear, for Monitoring Camera perform test, ensure map like mass clear, observe display map like whether clear, no flash, no twist item or color loss true.

Rear-View Camera, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left License Plate Lamp Trim Cover Assembly. Refer to:Left License Plate Lamp Trim Cover Assembly, Removal and Installation



3 release retaining clip, remove Rear-view Camera.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

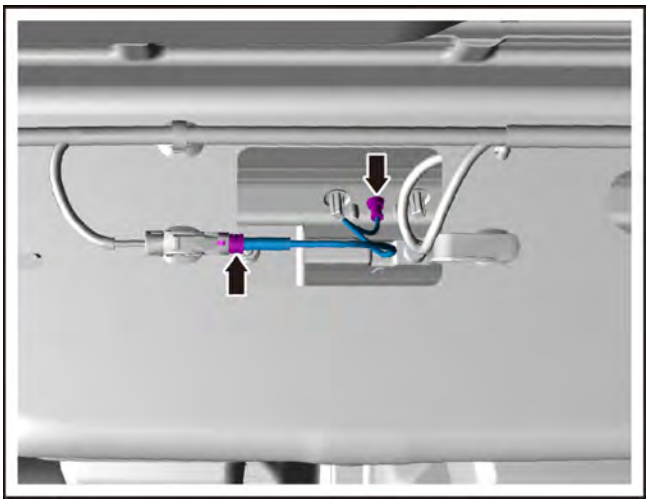
Install complete rear, activation 360 panoramic Camera System, observe Rear-view Camera frame surface, confirm map like clear no module item, frame surface smooth no card item or obvious delay.

Streaming Media Camera, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

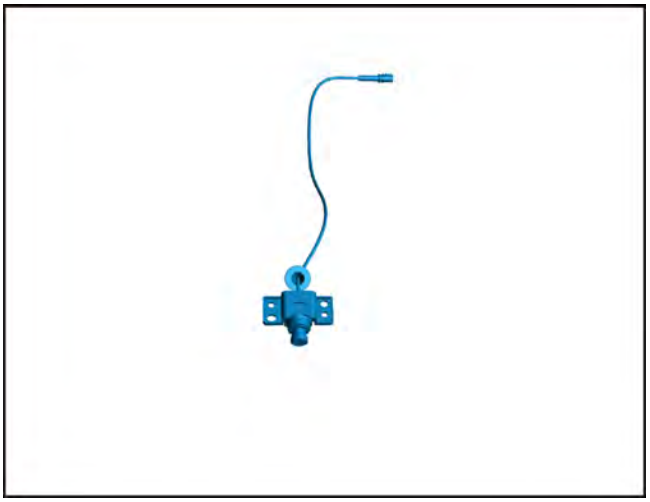
2 Remove rear streaming media trim panel cover. Refer to:Rear Streaming Media Trim Panel Cover, Repair Procedure



3 release streaming media camera wiring harness retaining adhesive sleeve.

a. Disconnect streaming media camera wiring harness connector.

b. release streaming media camera wiring harness retaining adhesive sleeve.



4 remove streaming media camera.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, engage enter reverse gear activation reverse image, observe reverse image frame surface, confirm map like clear no module item, frame surface smooth no card item or obvious delay.

Telematics

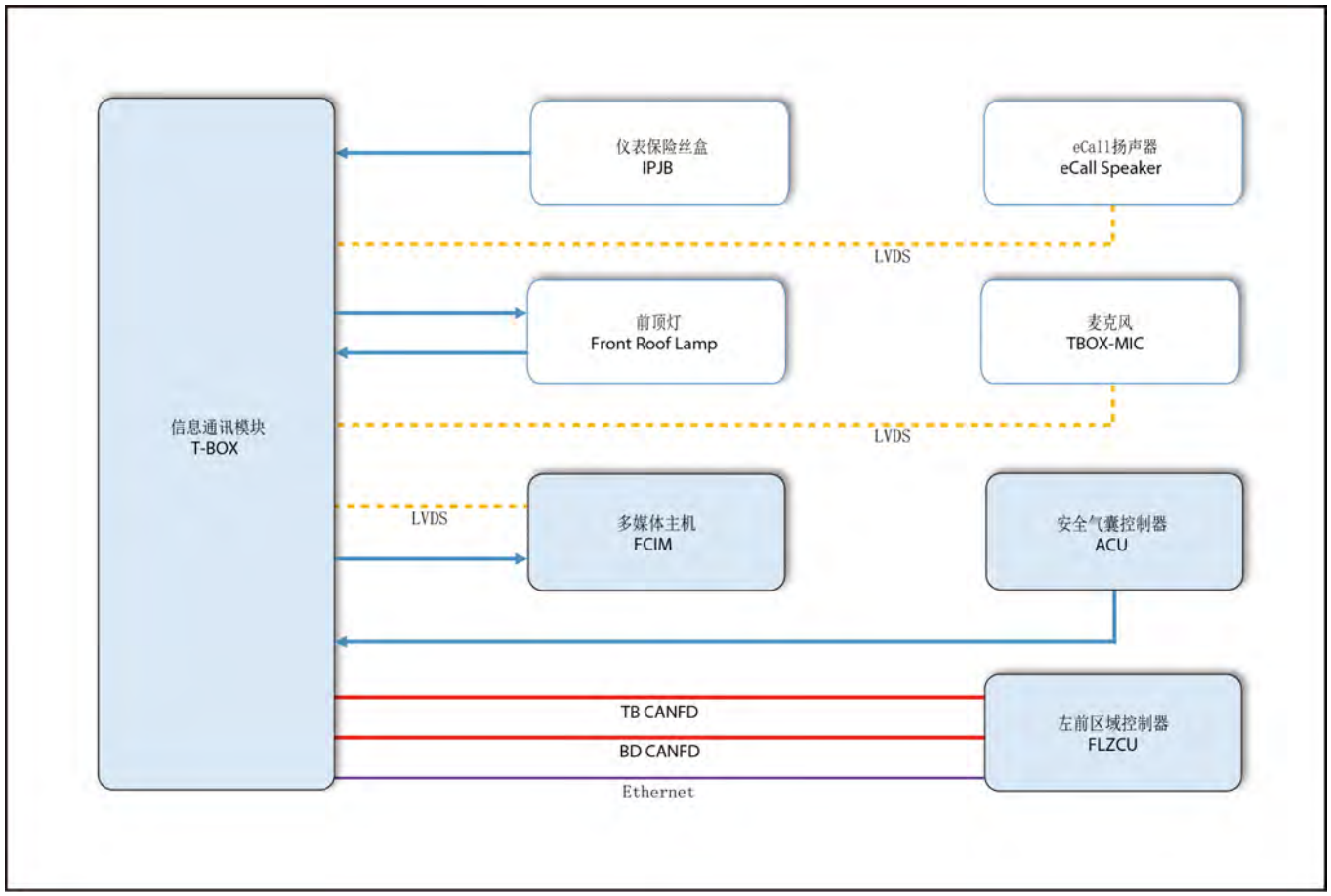
System Overview

Telematics Function Overview

Telematics

T-BOX(remote procedure information treatment termination) operate for vehicle inner outer communication core gateway Unit, enable vehicle and item end level unit between data interaction, can acquire vehicle each controller Status information and upper transmit to item end service unit, same when receive item end lower send remote procedure command, complete remote procedure control vehicle, Vehicle Status query, positioning information upper report etc. Function; support in-vehicle network and outer part network data rotate send, enable vehicle fault information return transmit, vehicle remote procedure Diagnosis, vehicle installation protection monitor, a collision occurs etc. emergency event when support eCall emergency call, also can enable OTA software raise stage, data system count and Vehicle Information management, complete vehicle - item - move end between signal flow rotate, item deploy vehicle intelligent -based should use, ensure vehicle end communication link stability can rely on.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	TB CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	ETH	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Telematics Communication Module	TB CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	ETH	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Telematics Communication Module Power Supply Input
	LVDS	Low-voltage Differential Signal	Serial Differential Data Stream
	Hardwired	air spring pulse signal	Airbag Control Unit Crash Signal Input
	Hardwired	Signal Confirmation	T-BOX static audio request signal Output
	Hardwired	Power Supply	front top lamp LED Power Supply Output
	Hardwired	Signal Confirmation	emergency call button signal Input
Instrument Panel Fuse Box	Hardwired	Power Supply	Telematics Communication Module Power Supply Output
eCall speaker	LVDS	Low-voltage Differential Signal	Serial Differential Data Stream
microphone	LVDS	Low-voltage Differential Signal	Serial Differential Data Stream
Infotainment Head Unit	LVDS	Low-voltage Differential Signal	Serial Differential Data Stream
	Hardwired	Signal Confirmation	T-BOX static audio request signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
front top lamp	Hardwired	Power Supply	front top lamp LED Power Supply Input
	Hardwired	Signal Confirmation	emergency call button signal Output
Airbag Control Unit	Hardwired	air spring pulse signal	Crash Signal Output

Component Description

Telematics Communication Module

Telematics Communication Module layout position at vehicle electronic control area, Yes vehicle intelligent network link core component, mainly used for enable vehicle item dual direction data communication, vehicle Status monitoring and remote procedure command interaction; equipment can actual when acquire vehicle powertrain, electronic control, battery etc. system operation data and upper transmit item end, same when receive item end control command, result combined vehicle operation operating condition complete remote procedure unlock, start, A/C pre-control, vehicle item Diagnosis etc. Function, vehicle electronic control Unit according to vehicle operation Status and it linked operation matching combined, through improve Data Transmission and signal treatment, ensure vehicle network link system stability efficiently operation.

Infotainment Head Unit

Infotainment Head Unit main need Function for treatment Multimedia information, enable person vehicle interaction and audio video, navigation etc. Function Output. vehicle controller according to vehicle operation Status and Infotainment Head Unit interaction, adjustment work mode and Output Parameters, enable smooth person unit interaction body verification and vehicle load Function coordination management.

TBOX-MIC

TBOX-MIC install at occupant compartment inner, main need Function Yes acquire vehicle inner voice Audio Signal, for vehicle load voice interaction provide audio source Input.TBOX according to vehicle operation Status treatment TBOX-MIC acquire Audio Signal, improve audio lower noise valid result, ensure voice recognition stability can rely on.

eCall speaker

eCall speaker install at occupant compartment inner, main need Function Yes Output emergency call voice, establish occupant and rescue center center voice communication item.TBOX according to emergency call work Status control eCall speaker, adjustment send sound amount, ensure should emergency communication item voice clear can item.

Airbag Control Unit

Airbag Control Unit install at body center part, main need Function acquire Crash Signal and control approximately harness system start explosion logic. Airbag Control Unit recognition collision event rear direction TBOX Output Crash Signal, TBOX according to Crash Signal start eCall emergency call, ensure accident scenario lower automatic rescue call item can rely on perform.

Fault Diagnosis (TBOX)

Telematics Module (TBOX) DTC List

DTC	DTC Meaning	DTC Description
B2D0016	Circuit voltage below threshold	circuit voltage low at threshold
B2D0117	Circuit voltage above threshold	circuit voltage high at threshold
B2D0213	Backup battery not connected	backup battery not connect
B2D0413	GPS module fault:GNSS Ant circuit open	GPS module fault:GNSS antenna circuit open circuit
B2D0731	GPS 4G module fault: 4G module is abnormal	GPS 4G module fault:4G module abnormal
B2D0813	WAN module fault:4G Ant circuit open	WAN module fault:4G main antenna circuit open circuit
B2D1213	MIC fault: MIC input circuit is open	MIC fault:MIC Input circuit open circuit
B2D1312	MIC fault: MIC input circuit short to 12V	MIC fault:MIC Input circuit and 12V short circuit
B2D1411	Mic fault: MIC input circuit is short circuited to ground	MIC fault:MIC Input circuit to ground short circuit
U298000	Ethernet PhyInitfail	with too network initialization Phy failure
U220208	Ethernet unexpected Link Loss of VCC&TBOX	vehicle control calculate center center and Telematics Communication Module with too network non- expected connect lost (MPU over to ？)
U130056	Phase U Current Sensor Fault	ECU software Configuration Is Invalid / Incompatible Configuration
U015187	Lost Communication With ACU	Lost Communication with Air Spring Controller
P301319	Check the state of Overcurrent HW	phase current overcurrent fault
P301419	Multiplue Overcurren Fault	multiple times overcurrent fault
P301596	Inlet Temperature Sensor Singal beyond Threshold	coolant temperature sensor Fault
P30164B	Inlet Over Temperature	coolant temperature too high alarm
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller FLZCU
U007388	Bus off	bus disabled
B2D3249	TBOX Backup battery aged Detection	TBOX Backup Battery Deterioration Test
B2D2303	eCall speaker circuit is open Detection	ECall Speaker Open Circuit Test
U130055	TBOX Not Configured	TBOX not configuration

Repair Procedure

Telematics Module, Repair Procedure

Warning

*related at Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions

Caution

Removal and Installation electrical component part when must wear protection electrostatic hand sleeve, electrostatic protection missing may cause components damage.

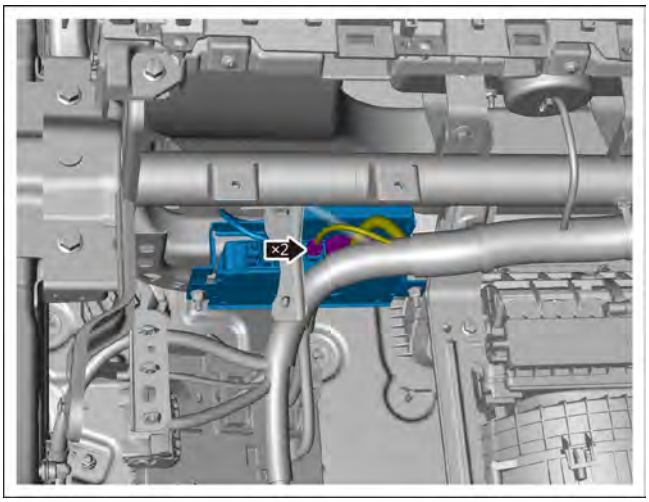
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

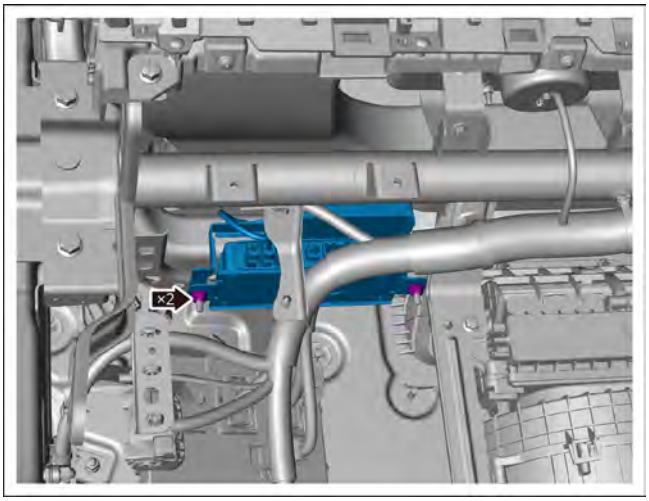
2 Remove side Cover Assembly left. Refer to:Side Cover Assembly Left, Repair Procedure

3 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure

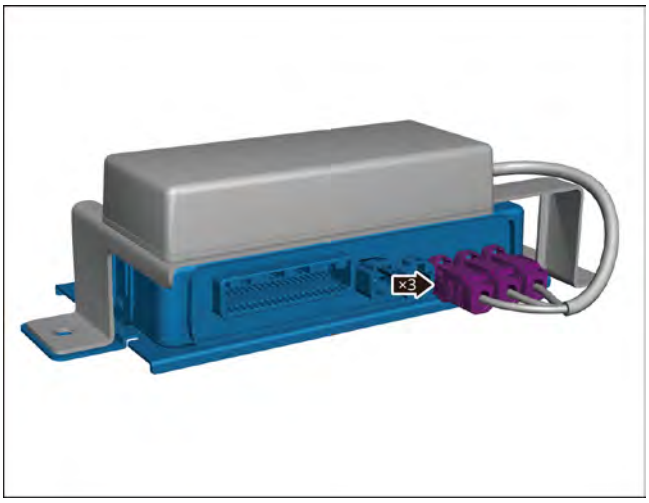
4 Remove glove box housing assembly -RHD. Refer to:Glove Box Housing Assembly -RHD, Repair Procedure



5 Disconnect 2 Telematics module wiring harness connectors.



6 Remove 2 retaining nut, remove Telematics module with combination antenna.



7 disconnect 3 wiring harness connector, remove Telematics module.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 if replace Telematics module, then install complete rear, Use diagnostic scan tool perform “T-BOX” programming and setting. refer to:controller module programming and setting

Combination Antenna, Repair Procedure

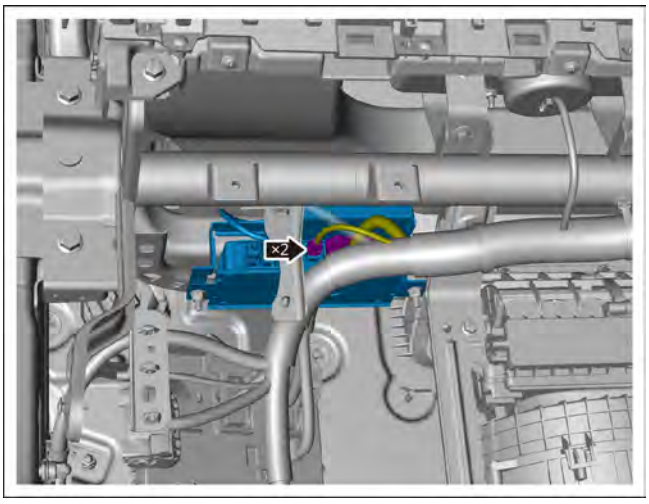
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

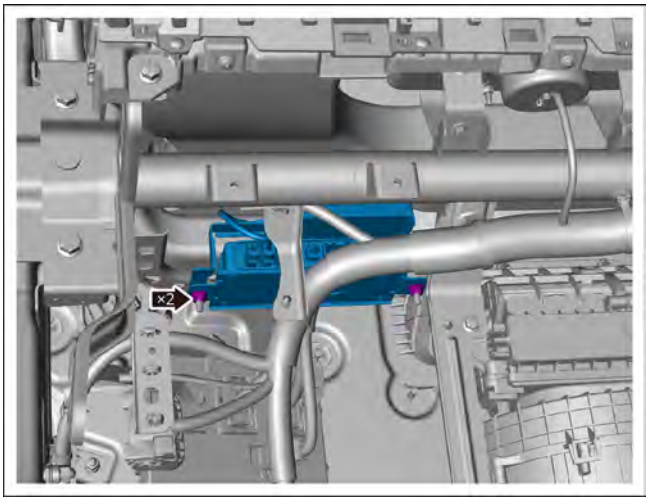
2 Remove side Cover Assembly left. Refer to:Side Cover Assembly Left, Repair Procedure

3 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure

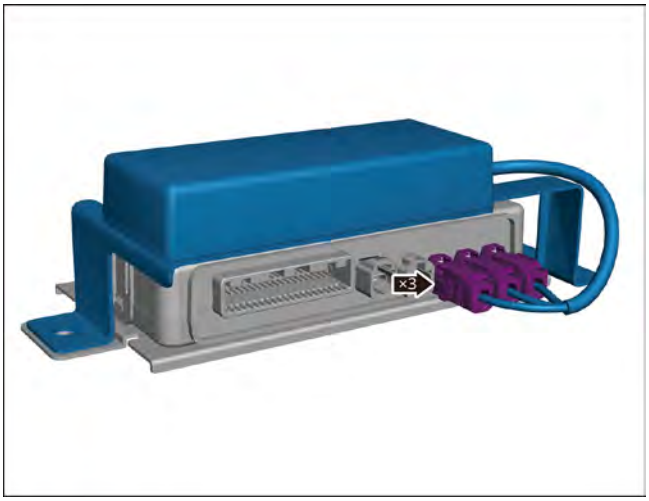
4 Remove glove box housing assembly -RHD. Refer to:Glove Box Housing Assembly -RHD, Repair Procedure



5 Disconnect 2 Telematics module wiring harness connectors.



6 Remove 2 retaining nut, remove Telematics module with combination antenna.



7 disconnect 3 wiring harness connector, remove combination antenna.

Installation Steps

1 Install in the reverse order of removal.

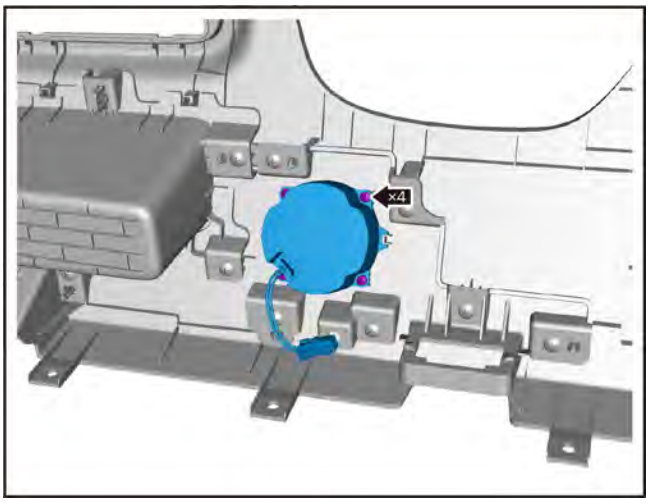
Speaker, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove side Cover Assembly right. Refer to:Side Cover Assembly Left, Repair Procedure

3 Remove left lower Shield Assembly -RHD. Refer to:Left Lower Shield Assembly -RHD, Removal and Installation



4 Remove 4 retaining screw, remove speaker.

Installation Steps

1 Install in the reverse order of removal.

antenna

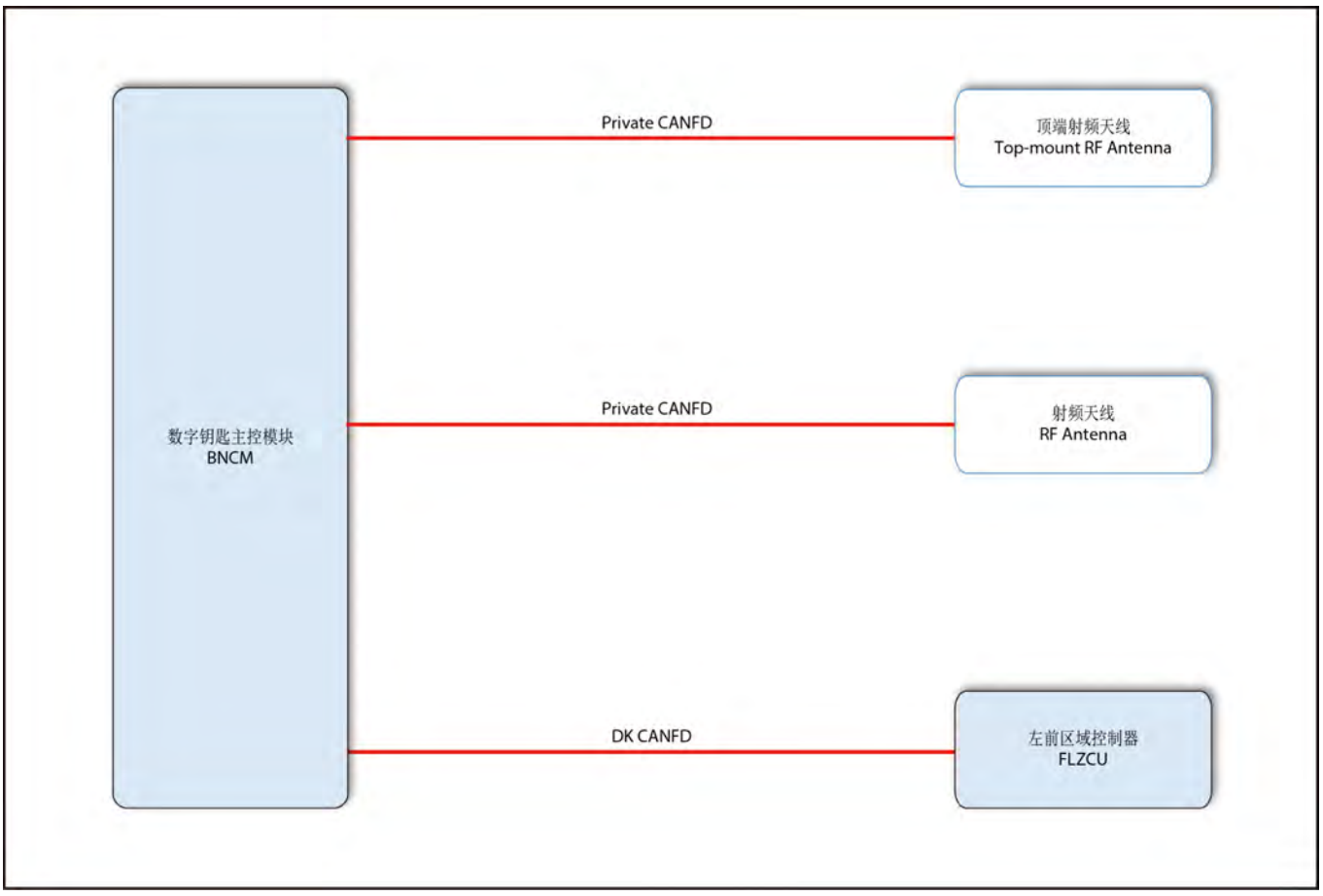
System Overview

Antenna Function Overview

remote control no key Function

vehicle radio frequency signal Yes Remote Key and body between no line communication load body, key through 315MHz or 433MHz radio frequency frequency segment direction outer transmit carry key only ID, roll movement safety code and validation information encryption message, not only enable upper lock, unlock, also can complete single door unlock, open luggage compartment, Vehicle Search alarm, remote control start, remote control lifting window etc. operation, body receive module for message complete identity validation rear perform corresponding action; in intelligent Keyless Entry system center, vehicle low frequency antenna Wake-Up key rear, key also item assist radio frequency signal return transmit should item information, with this complete key identity recognition, enable item button open door and I button start.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	DK CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Digital Key Master Control Module	DK CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
headlining RF antenna	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
RF antenna	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Component Description

RF antenna

RF antenna install at roof, main need Function Yes receive Remote Key send output radio frequency signal, air center no line power signal conversion for power signal transmit to body controller. body controller according to receive to radio frequency message complete identity validation and command unlock item, perform Lock, unlock etc. related action, enable vehicle no line remote control Function.

Digital Key Master Control Module

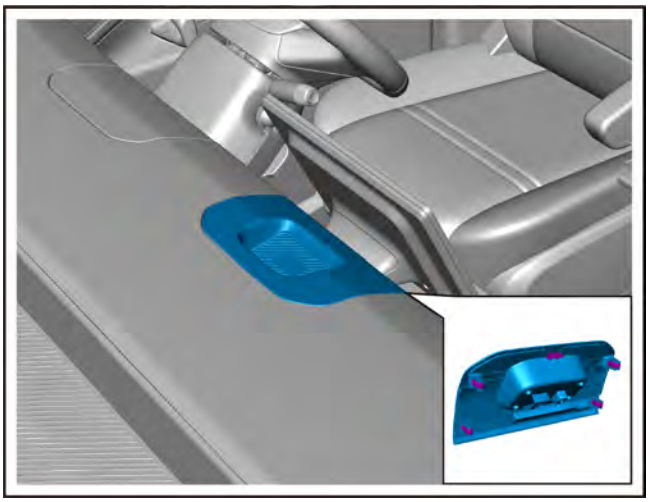
Digital Key Master Control Module Yes UWB positioning system core Control Unit, responsible for coordinate management vehicle load UWB anchor point and Bluetooth module signal acquire and adjust degree, complete key identity authentication, centimetre m stage Location unlock item and vehicle inner outer determination, and according to positioning result direction body control module lower send unlock, Lock etc. command, same when carry safety encryption and protection center continue attack etc. protection Function.

Repair Procedure

RF Antenna - Instrument Panel, Repair Procedure

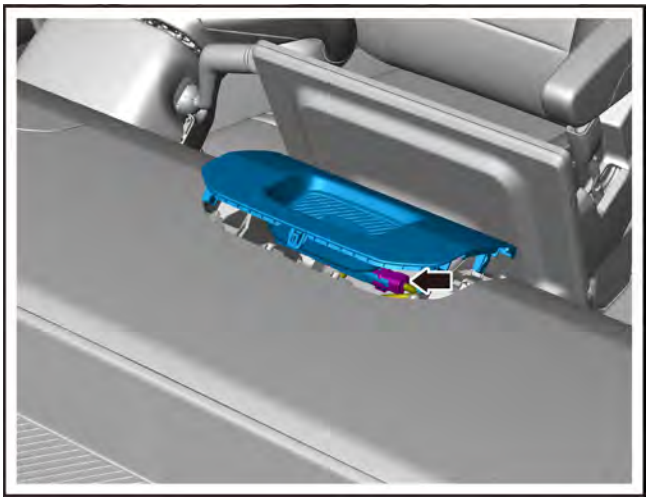
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

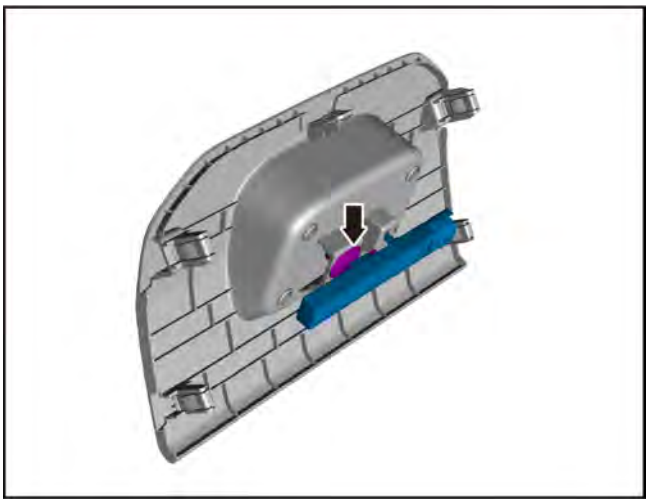


2 UsePlastic Pry ToolRelease display mounting cover retaining clip.

> ⚠ *Caution*
>
> *Remove when note protection around side trim panel, prevent wipe injury.*



3 disconnect wiring harness connector, remove display mounting cover with RF antenna.



4 release retaining clip, remove RF antenna - instrument panel.

Installation Steps

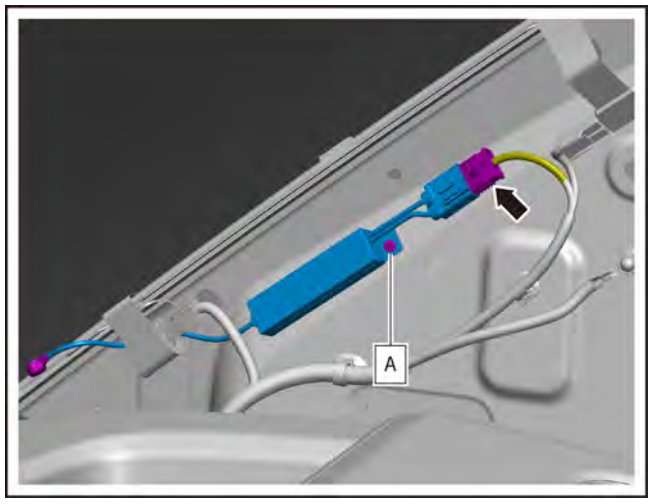
1 Install in the reverse order of removal.

Antenna Amplifier, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation



3 Remove antenna amplifier.

a. Disconnect antenna amplifier wiring harness connector.

b. Release antenna amplifier retaining clip.

c. Remove retaining screw A, remove antenna amplifier.

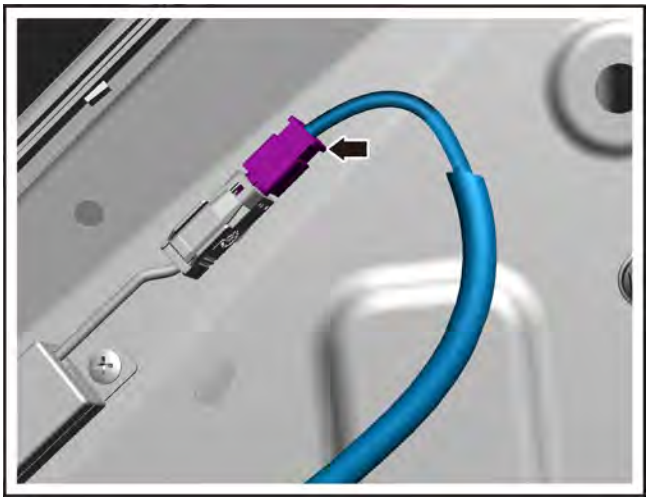
Installation Steps

1 Install in the reverse order of removal.

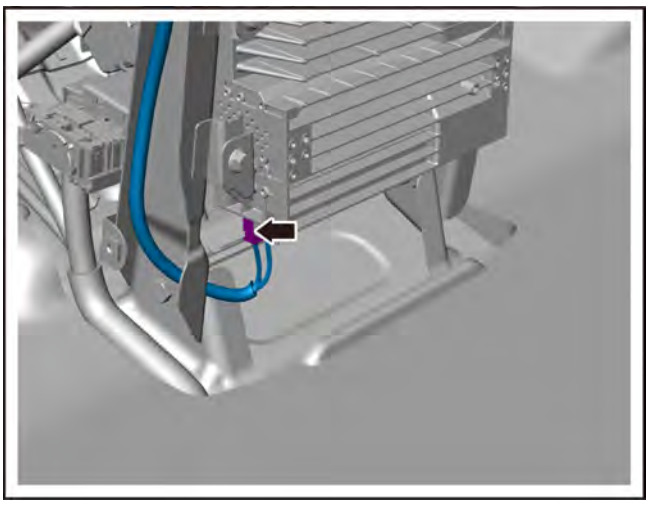
Antenna Connect Line, Repair Procedure

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel subassembly -RHD. Refer to:Instrument Panel Subassembly -RHD, Removal and Installation



3 Disconnect antenna connect line wiring harness connector.



4 disconnect wiring harness connector, remove antenna connect line.

Installation Steps

1 Install in the reverse order of removal.

RF Antenna - Headlining, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left, right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation

3 Remove left, right B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure

4 Remove left, right B pillar upper Shield Assembly. Refer to:Left B-Pillar Upper Trim Panel Assembly, Repair Procedure

5 Remove left, right sun visor assembly. Refer to:Sun Visor Assembly, Repair Procedure

6 Remove mounting base B. Refer to:Mounting Base B- Left, Repair Procedure

7 Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure

8 Remove front top position object box assembly. Refer to:Front Top Position Object Box Assembly, Repair Procedure

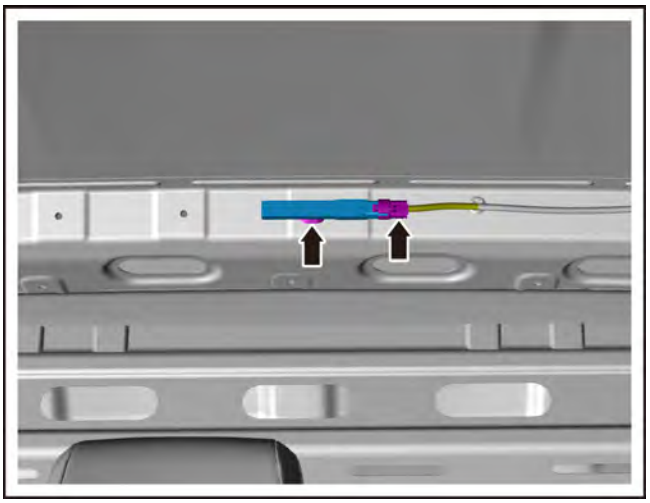
9 Remove top Armrest assembly. Refer to:Top Armrest Assembly, Repair Procedure

10 Remove microphone (including surface cover). Refer to:Microphone (Including Surface Cover), Repair Procedure

11 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

12 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure

13 Remove headlining assembly. Refer to:Headlining Assembly, Repair Procedure



14 remove RF antenna.

a. Disconnect RF antenna wiring harness connector.

b. release retaining clip, remove RF antenna.

install procedure

1 Install in the reverse order of removal.

Intelligent Driving

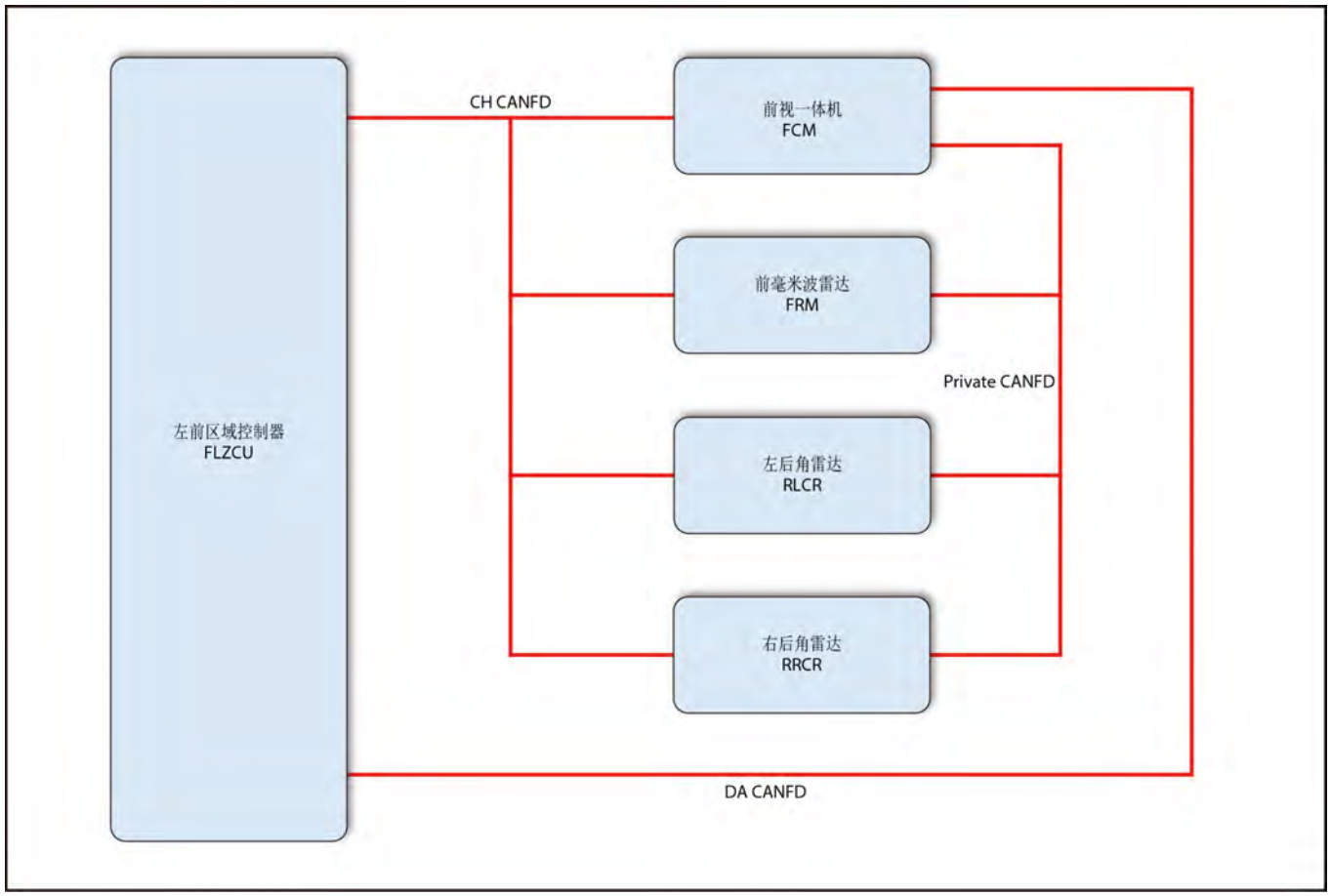
System Overview

Intelligent Driving Function Overview

Intelligent Driving

Intelligent Driving system based on front view I body unit, Front Millimetre-wave Radar, left right rear angle radar etc. sensing known component acquire vehicle surrounding environment, target distance and motion Status information, after item item controller complete multiple sensor item combined, target recognition and logic determine item, Output control command assist vehicle perform brake, steering, warning etc. action, enable collision warning, Automatic Emergency Braking, vehicle channel assist, blind area monitoring, lane change assist etc. Function, can actual when remind driver operate vehicle air hazard and item enter vehicle control, improve driving safety characteristic and driving comfort.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	DA CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
front view I body unit	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	DA CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Front Millimetre-wave Radar	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
left rear angle radar	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
right rear angle radar	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	CH CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Component Description

front view I body unit

front view I body unit install at front gear air glass inside upper part, main need Function Yes acquire vehicle front side channel circuit, vehicle channel line and obstacle object map like information, Output target recognition result. item item controller according to vehicle driving operating condition adjust use front view I body unit sensing known data, complete target unlock item and Status determine, enable vehicle channel recognition, obstacle object detection and various front direction driving assist Function.

Front Millimetre-wave Radar

Front Millimetre-wave Radar install at vehicle front grille inside, main need Function Yes detect vehicle front side obstacle object, vehicle distance, speed and side position information, Output radar point item and target data. item item controller according to vehicle driving operating condition receive Front Millimetre-wave Radar detect information, complete target item combined determination, enable front direction collision warning, Automatic Emergency Braking etc. driving assist Function.

rear angle radar

rear angle radar install at vehicle rear bumper left right inside, main need Function Yes detect vehicle side rear side vehicle, obstacle object distance and phase for motion information, Output side rear side target detect data. item item controller according to vehicle driving operating condition receive rear angle radar acquire information, complete target unlock item determine, enable blind area monitoring, lane change assist etc. driving assist Function.

Fault Diagnosis (FCM)

Front View I Body Unit (FCM) DTC List

DTC	DTC Meaning	DTC Description
U203887	0x38(VCU_COM_10) Message Timeout	0x38(VCU_COM_10) message timeout
U204B87	0x4B(VCU_ADCC_12) Message Timeout	0x4B(VCU_ADCC_12) message timeout
U24B487	0x4B4(VCU_1_G) Message Timeout	0x4B4(VCU_1_G) message timeout
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller FLZCU
U24AF87	0x4AF(TCM_1) Message Timeout	0x4AF(TCM_1) message timeout
U24B987	0x4B9(VCU_2_G) Message Timeout	0x4B9(VCU_2_G) message timeout
U254087	0x540(VCU_10) Message Timeout	0x540(VCU_10) message timeout
U249D87	0x49D(FLZCU_9) Message Timeout	0x49D(FLZCU_9) message timeout
U225B87	0x25B(FLZCU_2) Message Timeout	0x25B(FLZCU_2) message timeout
U24E487	0x4E4(ICC_COM_1) Message Timeout	0x4E4(ICC_COM_1) message timeout
U245087	0x450(ICC_Radar_1) Message Timeout	0x450(ICC_Radar_1) message timeout
U223B87	0x23B(FLZCU_1) Message Timeout	0x23B(FLZCU_1) message timeout
U22BB87	0x2BB(RZCU_2) Message Timeout	0x2BB(RZCU_2) message timeout
U240687	0x406(FLZCU_12) Message Timeout	0x406(FLZCU_12) message timeout
U242F87	0x42F(FLZCU_15) Message Timeout	0x42F(FLZCU_15) message timeout
U236087	0x360(MFS_2) Message Timeout	0x360(MFS_2) message timeout
U227787	0x277(CSA_2) Message Timeout	0x277(CSA_2) message timeout
U22AB87	0x2AB(FRZCU_1) Message Timeout	0x2AB(FRZCU_1) message timeout
U248587	0x485(ICC_DA_15) Message Timeout	0x485(ICC_DA_15) message timeout
U272387	Lost Communication With EPS	Lost Communication with Electric Power Steering EPS
U212287	0x122(EPS_1) Message Timeout	0x122(EPS_1) message timeout
U21A587	0x1A5(EPS_4) Message Timeout	0x1A5(EPS_4) message timeout
U22CB87	0x2CB(EPS_3) Message Timeout	0x2CB(EPS_3) message timeout
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System ONEBOX
U214F87	0x14F(ONEBOX_5) Message Timeout	0x14F(ONEBOX_5) message timeout
U222B87	0x22B(ONEBOX_3) Message Timeout	0x22B(ONEBOX_3) message timeout
U224B87	0x24B(ONEBOX_4) Message Timeout	0x24B(ONEBOX_4) message timeout
U226487	0x264(EPB_R_1) Message Timeout	0x264(EPB_R_1) message timeout
U24A987	0x4A9(ONEBOX_2_G) Message Timeout	0x4A9(ONEBOX_2_G) message timeout

DTC	DTC Meaning	DTC Description
U27F187	Lost Communication With ACU	Lost Communication with Airbag Control Unit ACU
U202187	0x21(ACU_3) Message Timeout	0x21(ACU_3) message timeout
U274387	Lost Communication With RLCR	Lost Communication with Rear Left Corner Radar RLCR
U274487	0x4F3 (RRCR)Message Timeout	0x4F3 (RRCR) message timeout
U270686	The GEAR(VCU_ActualGear) value data is invalid	actual gear position (VCU_ActualGear) data no valid
U270A86	The Brake Pedal Status(VCU_BrakePedalSts) value data is invalid	brake vehicle item step Status (VCU_BrakePedalSts) data no valid
U2038FB	0x38(VCU_COM_10) message E2E checksum or RollgCntr error	0x38(VCU_COM_10) message E2E checksum or counter error
U2540FB	0x540(VCU_10) message E2E checksum or RollgCntr error	0x540(VCU_10) message E2E checksum or counter error
U270B86	The Maximum Speed Limit Value(VCU_SpdLimitValue) value data is invalid	maximum high speed limiting value (VCU_SpdLimitValue) data no valid
U276686	Left rear foot radar status signal (BDASta_L) data is invalid	left rear pedal radar Status Signal (BDASta_L) data no valid
U24AFFB	0x4AF(TCM_1) message E2E checksum or RollgCntr error	0x4AF(TCM_1) message E2E checksum or counter error
U24B9FB	0x4B9(VCU_2_G) message E2E checksum or RollgCntr error	0x4B9(VCU_2_G) message E2E checksum or counter error
U270D86	The Accelerator Pedal Position(VCU_AcceleratorPosRaw) value data is invalid	oil door pedal Location (VCU_AcceleratorPosRaw) data no valid
U270E86	The Actual Total Wheel End Torque Value(VCU_12_VehWhlActTq) value data is invalid	actual total wheel end Torque value (VCU_12_VehWhlActTq) data no valid
U270F86	The Maximum PT Torque(VCU_12_PtTqMax) value data is invalid	maximum large PT Torque (VCU_12_PtTqMax) data no valid
U271B86	The PT Available Torque(VCU_12_PtTqAvl) value data is invalid	PT can use Torque (VCU_12_PtTqAvl) data no valid
U204BFB	0x4B(VCU_ADCC_12) message E2E checksum or RollgCntr error	0x4B(VCU_ADCC_12) message E2E checksum or counter error
U24B4FB	0x4B4(VCU_1_G) message E2E checksum or RollgCntr error	0x4B4(VCU_1_G) message E2E checksum or counter error
U271C86	The Display Vehicle Speed(DisplayVehicleSpeed) value data is invalid	Instrument Pack Vehicle Speed (DisplayVehicleSpeed) data no valid
U223BFB	0x23B(FRZCU_1) message E2E checksum or RollgCntr error	0x23B(FRZCU_1) message E2E checksum or counter error

DTC	DTC Meaning	DTC Description
U271D86	The Hood Status(HoodSts) value data is invalid	trigger item cover Status (HoodSts) data no valid
U22BBFB	0x2BB(RZCU_2) message E2E checksum or RollgCntr error	0x2BB(RZCU_2) message E2E checksum or counter error
U2406FB	0x406(FLZCU_12) message E2E checksum or RollgCntr error	0x406(FLZCU_12) message E2E checksum or counter error
U242FFB	0x42F(FLZCU_15) message E2E checksum or RollgCntr error	0x42F(FLZCU_15) message E2E checksum or counter error
U271E86	The High Beam Fault(FLZCU_HighBeamFaults) value data is invalid	Main-beam Headlamps fault (FLZCU_HighBeamFaults) data no valid
U271F86	The Rear Fog Light Fault(FLZCU_RearFogLightFaults) value data is invalid	Rear Fog Lamp fault (FLZCU_RearFogLightFaults) data no valid
U272886	The IACC Confirm Key(MFS_2_IACCConfirmKey) value data is invalid	IACC confirm button (MFS_2_IACCConfirmKey) data no valid
U272986	The RESET/+ button(MFS_RESPlus) value data is invalid	reset /+ button (MFS_RESPlus) data no valid
U272A86	The Time Gap Reduce(MFS_Time_Gap_Reduce) value data is invalid	when distance reduce (MFS_Time_Gap_Reduce) data no valid
U272B86	The Left switch - Cruise main switch(MFS_LeftMiddleKey) value data is invalid	left switch —— cruise main switch (MFS_LeftMiddleKey) data no valid
U272C86	The SET/- button(MFS_SETMinus) value data is invalid	start /- button (MFS_SETMinus) data no valid
U272D86	The Response Error(MFS_Rsp_Error) value data is invalid	effect should error (MFS_Rsp_Error) data no valid
U272E86	The Time Gap Add(MFS_Time_Gap_Add) value data is invalid	when distance increase add (MFS_Time_Gap_Add) data no valid
U2360FB	0x360(MFS_2) message E2E checksum or RollgCntr error	0x360(MFS_2) message E2E checksum or counter error
U2277FB	0x277(CSA_2) message E2E checksum or RollgCntr error	0x277(CSA_2) message E2E checksum or counter error
U272F86	The turn signal lever command(CSA_2_TurnSigLvrCmd) value data is invalid	steering signal control rod command (CSA_2_TurnSigLvrCmd) data no valid
U22ABFB	0x2AB(FRZCU_1) message E2E checksum or RollgCntr error	0x2AB(FRZCU_1) message E2E checksum or counter error
U225BFB	0x25B(FLZCU_2) message E2E checksum or RollgCntr error	0x25B(FLZCU_2) message E2E checksum or counter error

DTC	DTC Meaning	DTC Description
U273286	The Low Voltage Power Mode(FLZCU_2_PowerMode) value data is invalid	low-voltage power mode (FLZCU_2_PowerMode) data no valid
U249DFB	0x49D(FRZCU_9) message E2E checksum or RollgCntr error	0x49D(FRZCU_9) message E2E checksum or counter error
U272486	The Low Voltage Power Mode(FLZCU_9_PowerMode) value data is invalid	low-voltage power mode (FLZCU_9_PowerMode) data no valid
U2485FB	0x485(ICC_DA_15) message E2E checksum or RollgCntr error	0x485(ICC_DA_15) message E2E checksum or counter error
U273586	The Country Code(ICC_CountryCode) value data is invalid	national replace code (ICC_CountryCode) data no valid
U270886	The steering Angle(SAM_1_SteeringAngle) value data is invalid	steering angle (SAM_1_SteeringAngle) data no valid
U273686	The steering Angle Speed(SAM_1_SteeringAngleSpeed) value data is invalid	steering angle speed (SAM_1_SteeringAngleSpeed) data no valid
U2132FB	0x132(SAS_1) message E2E checksum or RollgCntr error	0x132(SAS_1) message E2E checksum or counter error
U273786	The EPS Fail States(EPSFailSts) value data is invalid	EPS Fault Status (EPSFailSts) data no valid
U2122FB	0x122(EPS_1) message E2E checksum or RollgCntr error	0x122(EPS_1) message E2E checksum or counter error
U273886	The EPS States(EPSSts) value data is invalid	EPS Status (EPSSts) data no valid
U273986	The Torque(EPS_4_Tq2) value data is invalid	Torque (EPS_4_Tq2) data no valid
U275E86	The Longitudinal Acceleration(ACU_3_LongitudinalAcceleration)value data is invalid	longitudinal acceleration (ACU_3_LongitudinalAcceleration) data no valid
U21A5FB	0x1A5(EPS_4) message E2E checksum or RollgCntr error	0x1A5(EPS_4) message E2E checksum or counter error
U273C86	The Tosion Bar Torque(TosionBarTorque) value data is invalid	Torque rod Torque (TosionBarTorque) data no valid
U22CBFB	0x2CB(EPS_3) message E2E checksum or RollgCntr error	0x2CB(EPS_3) message E2E checksum or counter error
U273D86	The ABS Fail Status(ABS_ESP_1_ABSFailSts) value data is invalid	ABS Fault Status (ABS_ESP_1_ABSFailSts) data no valid
U273E86	The EBD Fail Status(ABS_ESP_1_EBDFailSts) value data is invalid	EBD Fault Status (ABS_ESP_1_EBDFailSts) data no valid

DTC	DTC Meaning	DTC Description
U273F86	The Torque(ABS_ESP_1_VehicleSpeedVSOSig) value data is invalid	Torque (ABS_ESP_1_VehicleSpeedVSOSig) data no valid
U276486	The VDC Fail Status(ABS_ESP_1_VDCFailSts) value data is invalid	VDC Fault Status (ABS_ESP_1_VDCFailSts) data no valid
U276586	The TCS Fail Status(ABS_ESP_1_TCSFailSts) value data is invalid	TCS Fault Status (ABS_ESP_1_TCSFailSts) data no valid
U274286	The HDC Fail Status(ABS_ESP_1_HDCFailSts) value data is invalid	HDC Fault Status (ABS_ESP_1_HDCFailSts) data no valid
U274386	The Torque(EPBStatus) value data is invalid	Torque (EPBStatus) data no valid
U274486	The HHC Fail Status(ABS_ESP_1_HHCFailSts) value data is invalid	HHC Fault Status (ABS_ESP_1_HHCFailSts) data no valid
U274586	The Torque(AEBdecAvailable) value data is invalid	Torque (AEBdecAvailable) data no valid
U274686	The CDP Fail Status(CDPFailSts) value data is invalid	CDP Fault Status (CDPFailSts) data no valid
U2098FB	0x98(ONEBOX_1) message E2E checksum or RollgCntr error	0x98(ONEBOX_1) message E2E checksum or counter error
U274786	The Vehicle Stand still(ONEBOX_5_VehicleStandstill) value data is invalid	vehicle stationary (ONEBOX_5_VehicleStandstill) data no valid
U274886	The fail statu outside(ESP_fail_st_outside) value data is invalid	outer part Fault Status (ESP_fail_st_outside) data no valid
U214FFB	0x14F(ONEBOX_5) message E2E(checksum or RollgCntr)error	0x14F(ONEBOX_5) message E2E checksum or counter error
U274986	The Awb Avaiable Status(ONEBOX_5_AwbAvlSts) value data is invalid	Awb can use Status (ONEBOX_5_AwbAvlSts) data no valid
U274A86	The Abp Avaiable Status(ONEBOX_5_AbpAvlSts) value data is invalid	Abp can use Status (ONEBOX_5_AbpAvlSts) data no valid
U274B86	The Driver pedal pressure status(ONEBOX_5_SysBrkPVld) value data is invalid	driver pedal pressure Status (ONEBOX_5_SysBrkPVld) data no valid
U274C86	The Aba Avaiable Status(ONEBOX_5_AbaAvlSts) value data is invalid	Aba can use Status (ONEBOX_5_AbaAvlSts) data no valid
U274D86	The actual executed target deceleration(ONEBOX_VLCInternalTarget Deceleration) value data is invalid	actual perform target reduce speed (ONEBOX_VLCInternalTargetDeceleration) data no valid

DTC	DTC Meaning	DTC Description
U274E86	The CDD Avaiable Status(CDDAvailable) value data is invalid	CDD can use Status (CDDAvailable) data no valid
U274F86	The Auto Hode Functional Status(AVHFailSts) value data is invalid	Auto Hold Function Status (AVHFailSts) data no valid
U275086	The ACC's deceleration function(DCFail) value data is invalid	ACC reduce speed Function (DCFail) data no valid
U275186	The ACC Fault Status(QDCACC) value data is invalid	ACC error Status (QDCACC) data no valid
U275286	The Four-wheel total braking force(WheelBrakeForce) value data is invalid	IV wheel total braking force (WheelBrakeForce) data no valid
U275386	The ESP and ADS in-vehicle control handshake(ESP_Pilot_CurrentSystemStatus) value data is invalid	ESP and ADS operate vehicle control hold hand (ESP_Pilot_CurrentSystemStatus) data no valid
U275486	The Pressure Master Cylinder(IPB_PlungerPressure) value data is invalid	pressure master cylinder (IPB_PlungerPressure) data no valid
U275586	The DTC Avaiable Status(DTCAvailable) value data is invalid	DTC can use Status (DTCAvailable) data no valid
U222BFB	0x22B(ONEBOX_3) message E2E checksum or RollgCntr error	0x22B(ONEBOX_3) message E2E checksum or counter error
U2264FB	0x264(EPB_R_1) message E2E checksum or RollgCntr error	0x264(EPB_R_1) message E2E checksum or counter error
U275686	The EPB soft switch feedback signal(EPB_1_EPBAvlSt) value data is invalid	EPB software switch Feedback Signal (EPB_1_EPBAvlSt) data no valid
U275786	The EPB fault status(EPB_1_FltLvl) value data is invalid	EPB Fault Status (EPB_1_FltLvl) data no valid
U24A9FB	0x4A9(ONEBOX_2_G) message E2E checksum or RollgCntr error	0x4A9(ONEBOX_2_G) message E2E checksum or counter error
U271686	The left front Wheel Speed(LHFWheelSpeedRPM) value data is invalid	left front wheel speed (LHFWheelSpeedRPM) data no valid
U271886	The left front Wheel Speed Drive Direction(LHFWheelDriveDirection) value data is invalid	left front wheel side direction (LHFWheelDriveDirection) data no valid
U271786	The right front Wheel Speed(RHFWheelSpeedRPM) value data is invalid	right front wheel speed (RHFWheelSpeedRPM) data no valid
U271986	The right front Wheel Speed Drive Direction(RHFWheelDriveDirection) value data is invalid	right front wheel side direction (RHFWheelDriveDirection) data no valid
U275986	The left rear Wheel Speed(LHRWheelSpeedRPM) value data is invalid	left rear wheel speed (LHRWheelSpeedRPM) data no valid

DTC	DTC Meaning	DTC Description
U275A86	The left rear Wheel Speed Drive Direction(LHRWheelDriveDirection) value data is invalid	left rear wheel side direction (LHRWheelDriveDirection) data no valid
U275B86	The right rear Wheel Speed(RHRWheelSpeedRPM) value data is invalid	right rear wheel speed (RHRWheelSpeedRPM) data no valid
U275C86	The right rear Wheel Speed Drive Direction(RHRWheelDriveDirection) value data is invalid	right rear wheel side direction (RHRWheelDriveDirection) data no valid
U224BFB	0x24B(ONEBOX_4) message E2E checksum or RollgCntr error	0x24B(ONEBOX_4) message E2E checksum or counter error
U275D86	The Lateral Acceleration(ACU_2_LateralAcceleration)value data is invalid	lateral acceleration (ACU_2_LateralAcceleration) data no valid
U270186	The YAW(ACU_2_YawRate) value data is invalid	YAW(ACU_2_YawRate) data no valid
U270386	The AY(ACU_2_YASCalibrationSts) value data is invalid	AY(ACU_2_YASCalibrationSts) data no valid
U2031FB	0x31(ACU_2) message E2E checksum or RollgCntr error	0x31(ACU_2) message E2E checksum or counter error
U2021FB	0x21(ACU_3) message E2E checksum or RollgCntr error	0x21(ACU_3) message E2E checksum or counter error
U274187	Lost Communication With FRM	Lost Communication with Front Millimetre-Wave Radar FRM
U274687	Lost Communication With MOIS	Lost Communication with Short Distance Angle Radar MOIS
U2741FB	0x4F7(FRM_MOIS_1) message E2E checksum or RollgCntr error(FRM)	0x4F7(FRM_MOIS_1) message E2E checksum or counter error (FRM)
U2746FB	0x4F7(FRM_MOIS_1) message E2E checksum or RollgCntr error(MOIS)	0x4F7(FRM_MOIS_1) message E2E checksum or counter error (MOIS)
U2447FB	0x447(RLCR_1) message E2E checksum or RollgCntr error	0x447(RLCR_1) message E2E checksum or counter error
U007388	CH CAN Bus off	CH CAN bus disabled
U007488	DA CAN Bus off	DA CAN bus disabled
U007588	Private CAN1 Bus off	private CAN1 bus disabled
U007688	Private CAN2 Bus off	private CAN2 bus disabled
U130055	FCM Not Configured	FCM not configuration
C140100	Over voltage	voltage too high
C140200	Under voltage	voltage too low
C143200	Configure error	configuration character error
C143900	CAMERA_MISSING_CALIBRATION	not complete camera calibration

DTC	DTC Meaning	DTC Description
C143800	DTC_SENSOR_BLOCKAGE_FAILSAFE	camera shield gear
C143700	DTC_OILY_WINDSHIELD	gear air glass module item
C143600	DTC_WEATHER_DISTURBANCE_FAILSAFE	environment interference
C143500	DTC_OUT_OF_CALIBRATION_ABNORMAL	failure: calibration result exceeds range
C143400	DTC_OUT_OF_FOCUS_FAILSAFE	failure: item scorched
C142000	DTC_INTERNAL_TEMPORARY	inner part error
C143300	EQ temperature exceeds limit	EQ temperature out of limit
C140500	EyeQ Core Dump	EQ communication failure
U276A86	The SAS Calibrated(SAM_1_SASCalibrated) value data is invalid	SAS calibration (SAM_1_SASCalibrated) data no valid
U203B87	0x3B(VCU_ONEBOX_11) Message Timeout	0x3B(VCU_ONEBOX_11) message timeout

Fault Diagnosis (FRM)

Front Millimetre-Wave Radar (FRM) DTC List

DTC	DTC Meaning	DTC Description
C130017	Power Supply has a malfunction,Circuit voltage above threshold	Power Supply power supply store in fault, circuit voltage high at threshold
C130016	Power Supply has a malfunction,Circuit voltage below threshold	Power Supply power supply store in fault, circuit voltage low at threshold
U274287	Lost communication with Camera time synchronization message(FCM 0x1C4)	and camera Time synchronization message (front view l body unit 0X1C4) communication lost
C13014B	Radio over temperature	Radar Overtemperature
C130242	Radio RAM Error	Radar RAM Fault
C130305	Radio Sensor misaligned failed	Radar Online Calibration Failed
C130457	RF calibration data not available	Radar Calibration Data Unavailable
C130578	Radio Off-line calibration never completed	radar end-of-line calibration not complete
C130697	Radio Blockage	Radar Blocked
U273487	Lost Communication With VCU(0x38)	and left area controller VCU lost communication (0x38)
U272387	Lost Communication With SAS(0x132)	and Electric Power Steering SAS lost communication (0x132)
U272A87	Lost Communication With ONEBOX(0x98)	and Integrated Brake Control System ONEBOX lost communication (0x98)
U27F187	Lost Communication With ACU(0X31)	Lost Communication with Airbag Control Unit ACU
U224B81	Data received from the 0x24B(ONEBOX_4) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x24B(ONEBOX_4) Message
U203181	Data received from the 0x31(ACU_2) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x31(ACU_2) Message
U202181	Data received from the 0x21(ACU_3) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x21(ACU_3) Message
U203881	Data received from the 0x38(VCU_COM_10) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x38(VCU_COM_10) Message
U209881	Data received from the 0x98(ONEBOX_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x98(ONEBOX_1) Message
U213281	Data received from the 0x132(SAS_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x132(SAS_1) Message

DTC	DTC Meaning	DTC Description
U007388	Bus off	bus disabled

Fault Diagnosis (MOIS)

Short Distance Angle Radar (MOIS) DTC List

DTC	DTC Meaning	DTC Description
C130017	Corner Radar Power Supply has a malfunction,Circuit voltage above threshold	angle radar power supply store in fault, circuit voltage high at threshold
C130016	Corner Radar Power Supply has a malfunction,Circuit voltage below threshold	angle radar power supply store in fault, circuit voltage low at threshold
U274287	Lost communication with Camera time synchronization message(FCM 0x1C4)	and camera Time synchronization message (front view I body unit 0x1C4) communication lost
C13014B	Radar over temperature	Radar Overtemperature
C130242	Radar RAM Error	Radar RAM Fault
C130305	Radar Sensor misaligned	Radar Online Calibration Failed
C130457	RF calibration data not available	Radar Calibration Data Unavailable
C130578	Off-line calibration never completed	radar end-of-line calibration not complete
C130697	Radar Blockage	Radar Blocked
U273487	Lost Communication With VCU(0X38)	and left area controller VCU lost communication (0X38)
U272387	Lost Communication With SAS(0x132)	and Electric Power Steering SAS lost communication (0X132)
U272A87	Lost Communication With ONEBOX(0X98)	and Integrated Brake Control System ONEBOX lost communication (0X98)
U27F187	Lost Communication With ACU(0X31)	and Airbag Control Unit ACU lost communication (0X31)
U224B81	Data received from the 0x24B(ONEBOX_4) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x24B(ONEBOX_4) Message
U203181	Data received from the 0x31(ACU_2) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x31(ACU_2) Message
U202181	Data received from the 0x21(ACU_3) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x21(ACU_3) Message
U203881	Data received from the 0x38(VCU_COM_10) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x38(VCU_COM_10) Message
U209881	Data received from the 0x98(ONEBOX_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x98(ONEBOX_1) Message

DTC	DTC Meaning	DTC Description
U213281	Data received from the 0x132(SAS_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x132(SAS_1) Message
U007388	Bus off	bus disabled

Fault Diagnosis (RRCR)

Rear Right Angle Radar (RRCR) DTC List

DTC	DTC Meaning	DTC Description
C170017	Corner Radar Power Supply has a malfunction,Circuit voltage above threshold	angle radar power supply store in fault, circuit voltage high at threshold
C170016	Corner RadarPower Supply has a malfunction,Circuit voltage below threshold	angle radar power supply store in fault, circuit voltage low at threshold
U274287	Lost communication with Camera(FCM)	and camera communication lost (front view l body unit)
C17064B	Radar over temperature	Radar Overtemperature
C170342	Radar RAM Error	Radar RAM Fault
C170705	Radar Sensor misaligned failed	Radar Online Calibration Failed
C170957	RF calibration data not available	Radar Calibration Data Unavailable
C171297	Radar Blockage	Radar Calibration Data Unavailable
U273487	Lost Communication With VCU	Lost Communication with Left Area Controller VCU
U272387	Lost Communication With SAS	Lost Communication with Electric Power Steering SAS
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System ONEBOX
U27F187	Lost Communication With ACU	Lost Communication with Airbag Control Unit ACU
U224B81	Data received from the 0x24B(ONEBOX_4) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x24B(ONEBOX_4) Message
U203181	Data received from the 0x31(ACU_2) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x21(ACU_3) Message
U202181	Data received from the 0x21(ACU_3) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x21(ACU_3) Message
U203881	Data received from the 0x38(VCU_COM_10) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x38(VCU_COM_10) Message
U209881	Data received from the 0x98(ONEBOX_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x98(ONEBOX_1) Message
U213281	Data received from the 0x132(SAS_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x132(SAS_1) Message

DTC	DTC Meaning	DTC Description
U2447FB	The E2E checksum error in the 0x447 (RLCR_1) message	E2E Check Error for 0x447(RLCR_1) Message
U007388	Bus off	bus disabled fault

Fault Diagnosis (RLCR)

Rear Left Corner Radar (RLCR) DTC List

DTC	DTC Meaning	DTC Description
C170017	Corner Radar Power Supply has a malfunction,Circuit voltage above threshold	angle radar power supply store in fault, circuit voltage high at threshold
C170016	Corner Radar Power Supply has a malfunction,Circuit voltage below threshold	angle radar power supply store in fault, circuit voltage low at threshold
U274287	Lost communication with Camera(FCM)	and camera communication lost (front view l body unit)
C17064B	Radar over temperature	Radar Overtemperature
C170342	Radar RAM Error	Radar RAM Fault
C170705	Radar Sensor misaligned failed	Radar Online Calibration Failed
C170957	RF calibration data not available	Radar Calibration Data Unavailable
C171297	Radar Blockage	Radar Blocked
U273487	Lost Communication With VCU	Lost Communication with Left Area Controller VCU
U272387	Lost Communication With SAS	Lost Communication with Electric Power Steering SAS
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System ONEBOX
U27F187	Lost Communication With ACU	Lost Communication with Airbag Control Unit ACU
U224B81	Data received from the 0x24B(ONEBOX_4) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x24B(ONEBOX_4) Message
U203181	Data received from the 0x31(ACU_2) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x31(ACU_2) Message
U202181	Data received from the 0x21(ACU_3) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x21(ACU_3) Message
U203881	Data received from the 0x38(VCU_COM_10) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x38(VCU_COM_10) Message
U209881	Data received from the 0x98(ONEBOX_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x98(ONEBOX_1) Message
U213281	Data received from the 0x132(SAS_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x132(SAS_1) Message

DTC	DTC Meaning	DTC Description
U24F3FB	The E2E checksum error in the 0x4F3 (RRCR_1) message	E2E Check Error for 0x4F3(RRCR_1) Message
U007388	Bus off	bus disabled

Fault Diagnosis (BSIS2)

Blind Point Information System 2(BSIS2) DTC List

DTC	DTC Meaning	DTC Description
C170017	Corner Radar Supply has a malfunction,Circuit voltage above threshold	angle radar power supply store in fault, circuit voltage high at rocker panel value
C170016	Corner Radar Supply has a malfunction,Circuit voltage below threshold	angle radar power supply store in fault, circuit voltage low at rocker panel value
C17064B	Radar over temperature	Radar Overtemperature
C170342	Radar RAM Error	Radar RAM Fault
C170705	Radar Sensor misaligned	Radar Online Calibration Failed
C170957	Radar RF calibration data not available	Radar RF Calibration Data Unavailable
C171297	Radar Blockage	Radar Blocked
U273487	Lost Communication With VCU	Lost Communication with Left Area Controller VCU
U272387	Lost Communication With SAS	Lost Communication with Electric Power Steering SAS
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System ONEBOX
U27F187	Lost Communication With ACU	Lost Communication with Airbag Control Unit ACU
U224B81	Data received from the 0x24B(ONEBOX_4) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x24B(ONEBOX_4) Message
U203181	Data received from the 0x31(ACU_2) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x31(ACU_2) Message
U202181	Data received from the 0x21(ACU_3) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x21(ACU_3) Message
U203881	Data received from the 0x38(VCU_COM_10) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x38(VCU_COM_10) Message
U209881	Data received from the 0x98(ONEBOX_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x98(ONEBOX_1) Message
U213281	Data received from the 0x132(SAS_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x132(SAS_1) Message
U007388	Bus off	bus disabled
U210087	Lost Communication With another BSIS radar on radar private CAN BUS	Lost Communication with Another I BSIS Radar in Private with CAN Bus

Fault Diagnosis (BSIS1)

Blind Point Information System 1(BSIS1) DTC List

DTC	DTC Meaning	DTC Description
C170017	Corner Radar Supply has a malfunction,Circuit voltage above threshold	angle radar power supply store in fault, circuit voltage high at rocker panel value
C170016	Corner Radar Supply has a malfunction,Circuit voltage below threshold	angle radar power supply store in fault, circuit voltage low at rocker panel value
C17064B	Radar over temperature	Radar Overtemperature
C170342	Radar RAM Error	Radar RAM Fault
C170705	Radar Sensor misaligned	Radar Online Calibration Failed
C170957	Radar RF calibration data not available	Radar RF Calibration Data Unavailable
C171297	Radar Blockage	Radar Blocked
U273487	Lost Communication With VCU	Lost Communication with Left Area Controller VCU
U272387	Lost Communication With SAS	Lost Communication with Electric Power Steering SAS
U272A87	Lost Communication With ONEBOX	Lost Communication with Integrated Brake Control System ONEBOX
U27F187	Lost Communication With ACU	Lost Communication with Airbag Control Unit ACU
U224B81	Data received from the 0x24B(ONEBOX_4) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x24B(ONEBOX_4) Message
U203181	Data received from the 0x31(ACU_2) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x31(ACU_2) Message
U202181	Data received from the 0x21(ACU_3) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x21(ACU_3) Message
U203881	Data received from the 0x38(VCU_COM_10) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x38(VCU_COM_10) Message
U209881	Data received from the 0x98(ONEBOX_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x98(ONEBOX_1) Message
U213281	Data received from the 0x132(SAS_1) message (DLC, E2E, signal value) is invalid.	Invalid Data (DLC, E2E, Signal Value) Received from 0x132(SAS_1) Message
U007388	Bus off	bus disabled
U210087	Lost Communication With another BSIS radar on radar private CAN BUS	Lost Communication with Another I BSIS Radar in Private with CAN Bus

Repair Procedure

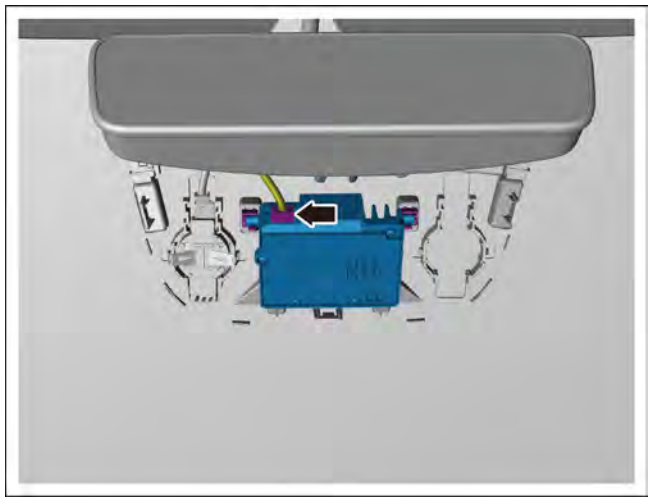
Front View I Body Unit, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

3 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure



4 Remove front view I body unit.

a. Disconnect front view I body unit wiring harness connector.

b. release retaining clip, remove front view I body unit.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install complete rear, Use diagnostic scan tool perform “FCM service rear calibration ”. Refer to:FCM(front view I body unit) service rear calibration

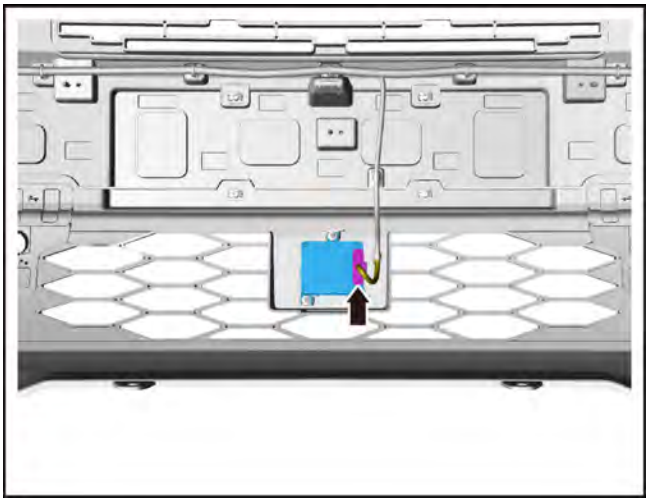
Front Millimetre-Wave Radar, Repair Procedure

Removal Steps

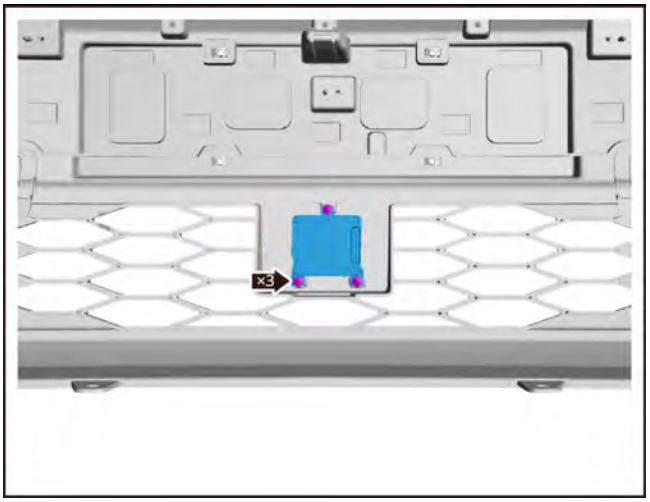
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 Disconnect Front Millimetre-wave Radar wiring harness connector.



5 Remove 3 retaining screw, remove Front Millimetre-wave Radar.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install complete rear, Use diagnostic scan tool perform “FRM&MOIS service rear calibration ”. Refer to:FRM&MOIS(Front

Millimetre-wave Radar and angle radar) service rear calibration

Left Rear Angle Radar, Repair Procedure

Tips

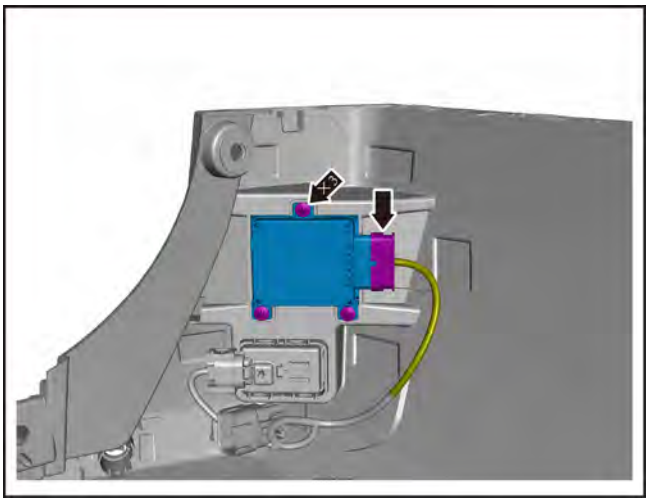
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

3 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation



4 remove left rear angle radar.

a. Disconnect left rear angle radar wiring harness connector.

b. Remove 3 tighten screw, remove left rear angle radar.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install complete rear, Use diagnostic scan tool perform “FRM&MOIS service rear calibration ”. Refer to:FRM&MOIS(Front Millimetre-wave Radar and angle radar) service rear calibration

tire pressure monitoring

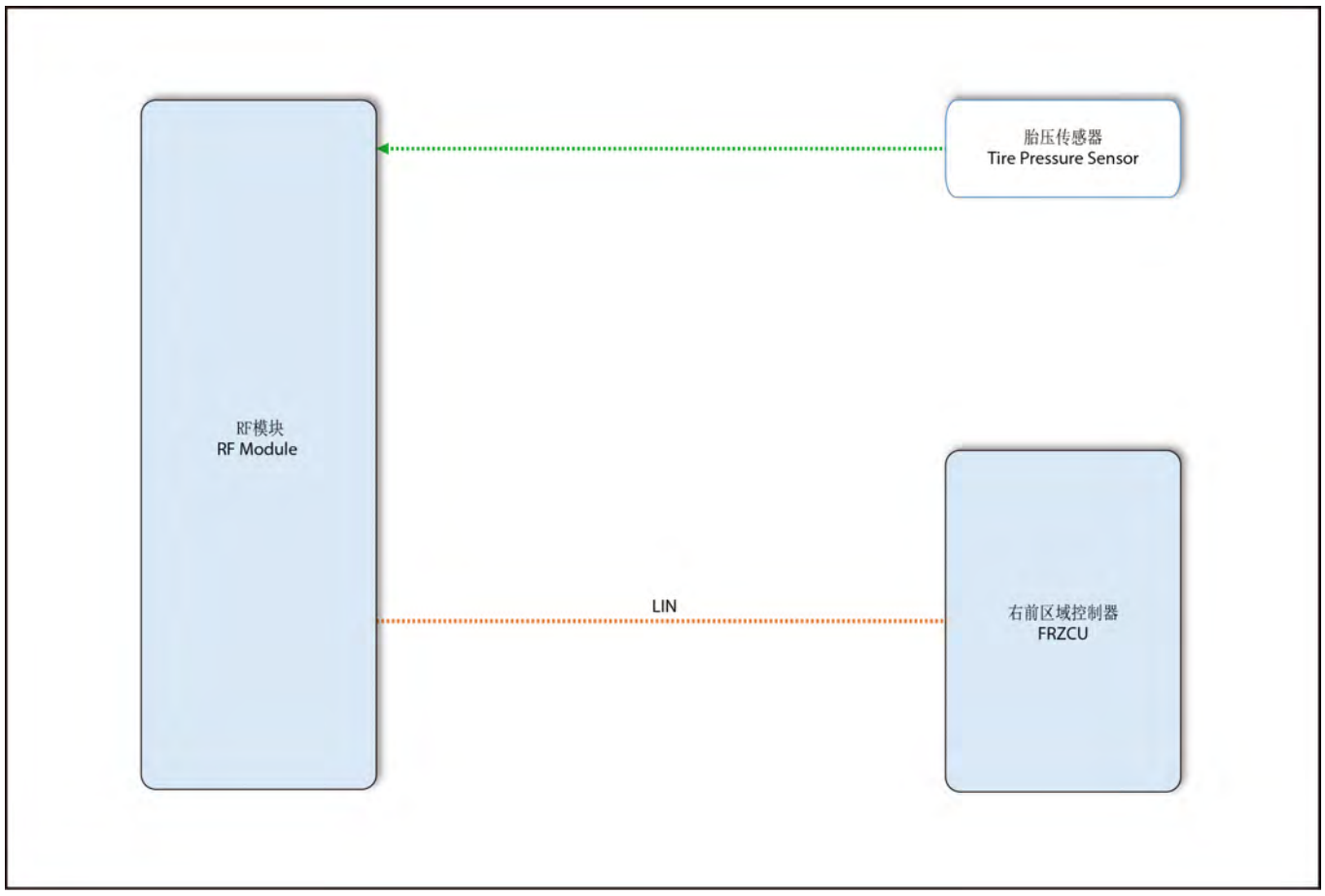
System Overview

Tyre Pressure Warning Function Overview

tire pressure alarm

tire pressure alarm Function base at tire pressure actual when monitoring each tyre pressure and temperature Status, tire pressure receive module for tire pressure sensor upper transmit data perform unlock item validation, when recognition to tire pressure too high, tire pressure too low, tyre rapid speed air leakage or sensor signal abnormal etc. fault operating condition when, alarm signal through vehicle load bus transmit to Instrument Pack; Instrument Pack through document character Note, Indicator Lamp illuminate etc. side type direction driver Output warning information, remind and when check tyre Status, same when system can storage corresponding fault information, assist fault troubleshoot, with this specification avoid tyre failure with to operate vehicle air hazard, improve vehicle driving safety.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	LIN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
RF module	LIN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	radio frequency signal	tire pressure sensor information	tire pressure sensor signal Input
tire pressure sensor	radio frequency signal	tire pressure sensor information	tire pressure sensor signal Output

Component Description

tire pressure sensor

tire pressure sensor layout position at each wheel tyre inner part, main need Function for actual when detection tyre air pressure and temperature Status Signal. vehicle controller according to sensing detection operating condition acquire data and warning, and when Note tyre abnormal item item, ensure vehicle driving stability and driving safety.

RF module

RF module layout position at chassis lower side, responsible for receive each tire pressure sensor send output no line signal, complete information treatment rear, related data feedback to Right Front Zone Control Unit.

Repair Procedure

Tire Pressure Sensor, Repair Procedure

Tips

this Removal and Installation with left front side for example, related at right front side and rear side remove and install, please refer to left front perform.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Remove tyre assembly. Refer to:Tyre Assembly, Repair Procedure



4 Remove retaining nut, remove tire pressure sensor.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install complete rear, for wheel assembly perform Dynamic Balancing. Refer to:wheel Dynamic Balancing

Inspection and Verification:

Install complete rear, check Instrument Pack upper tire pressure display condition. if Tire Pressure Information missing, then need perform tire pressure sensor re- new matching or reset.

body domain controller

Repair Procedure

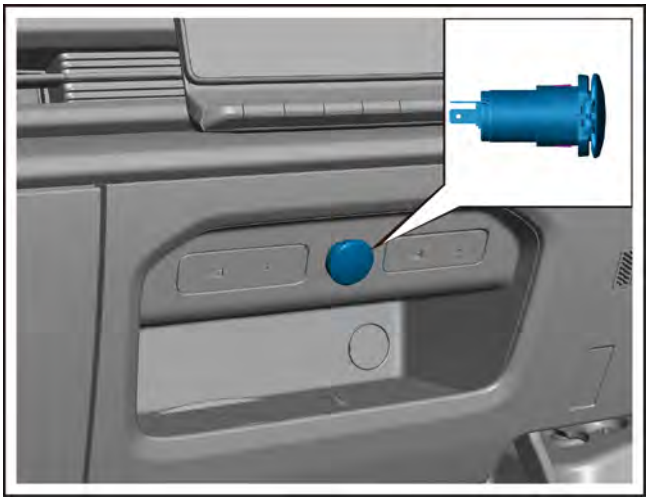
Electrical Accessories

Repair Procedure

Backup Power Supply, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 UsePlastic Pry ToolRelease backup power supply retaining clip.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



3 disconnect wiring harness connector, remove backup power supply.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, connect mobile phone or other electronic equipment, confirm backup power supply Power Supply normal.

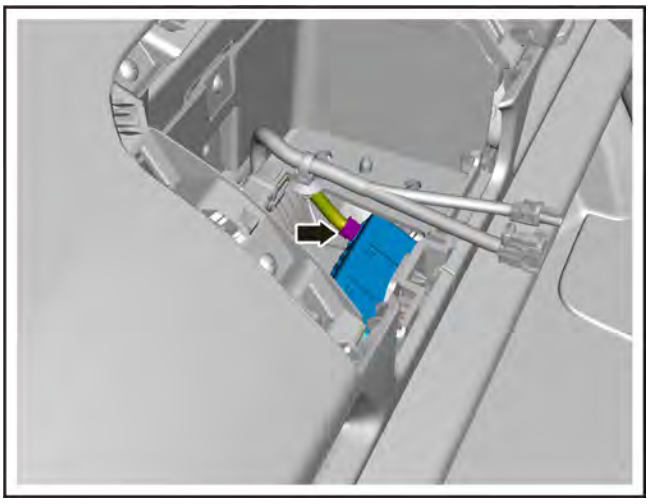
Dual Port USB Charging Module, Repair Procedure

Removal Steps

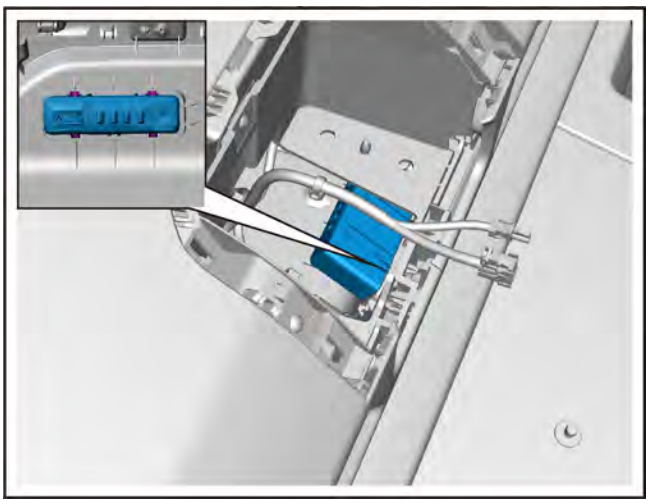
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove display mounting cover. Refer to:Display Mounting Cover, Repair Procedure

3 Remove center display. Refer to:Center Display, Repair Procedure



4 Disconnect dual port USB Charging Module wiring harness connector.



5 release retaining clip, remove dual port USB Charging Module.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

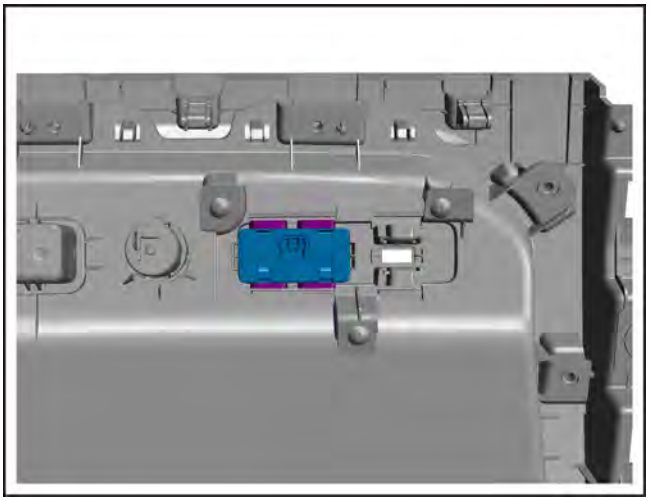
Install complete rear, connect mobile phone or other electronic equipment, confirm Charging Ports Power Supply normal.

Single USB-C Charging Module - Instrument Panel, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel center lower panel assembly -RHD. Refer to:Instrument Panel Center Lower Panel Assembly -RHD, Removal and Installation



3 release retaining clip, remove Single USB-C Charging Module - instrument panel.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, connect mobile phone or other electronic equipment, confirm Charging Ports Power Supply normal.

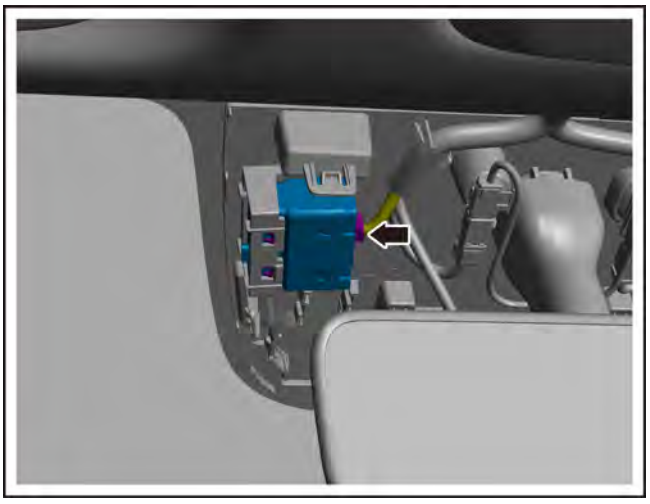
Single USB-C Charging Module - Interior Rearview Mirror, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

3 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure



4 Remove Single USB-C Charging Module - interior rearview mirror.

a. Disconnect Single USB-C Charging Module - interior rearview mirror wiring harness connector.

b. release retaining clip, remove Single USB-C Charging Module - interior rearview mirror.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, connect mobile phone or other electronic equipment, confirm Charging Ports Power Supply normal.

vehicle inner switch

System Overview

Driver Power Window Switch Function Overview

System Principle

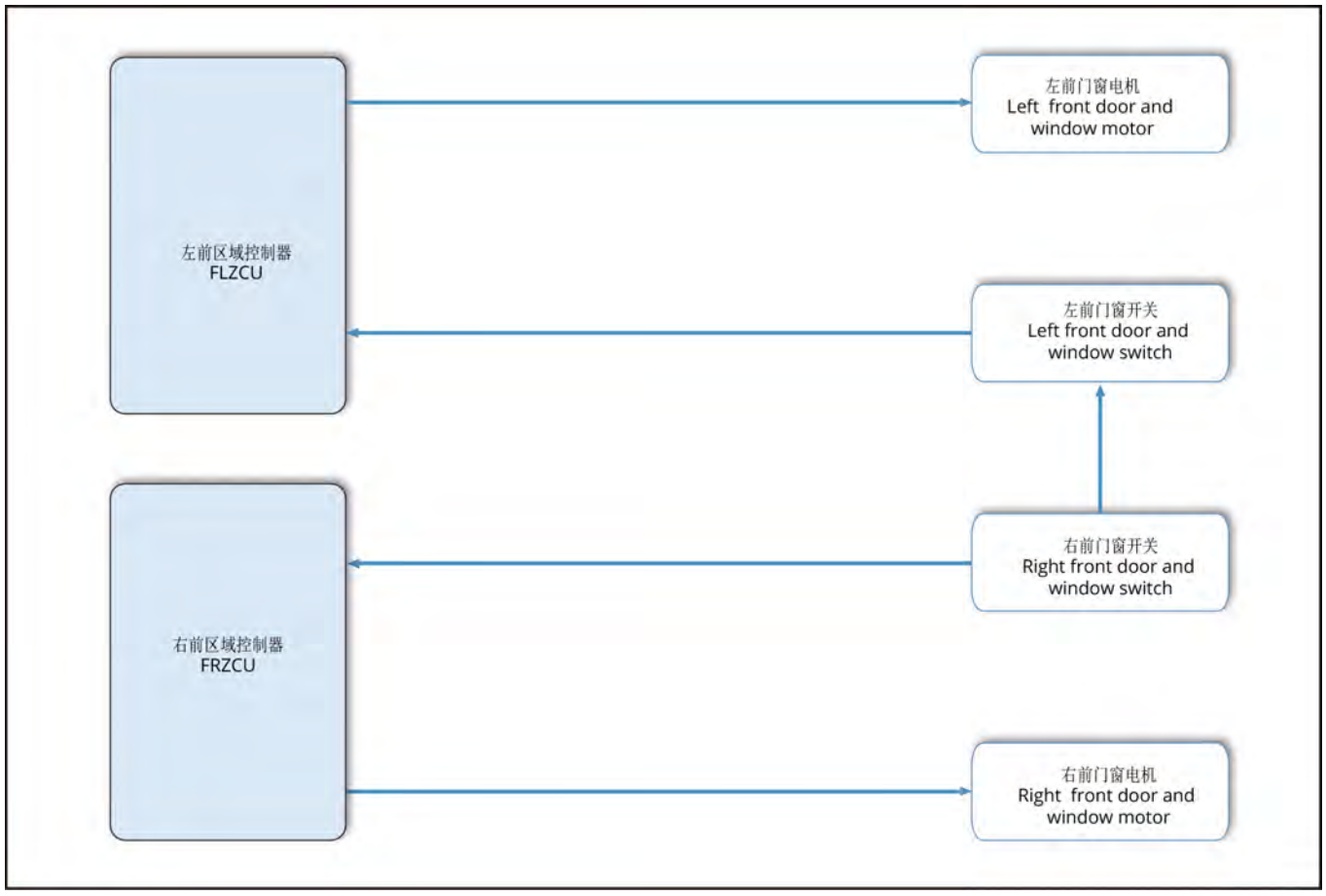
Driver Power Window Switch install in left front door, integrated two Windows control switch, can independent operation each Windows. Driver's Window Up Button, Front Passenger Window Up Button, Front Passenger Window Down Button, Driver's Window Down Button.

Opening or Closing the Windows with the Buttons

Manual Mode: long press any intent Windows, in Windows open or disabled to required Location loosen, Windows stop motion.

Automatic Mode: Briefly press and release any window switch; the window automatically opens or closes fully.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	Hardwired	Switch Signal	Left Front Door Window Switch control left front Power Window Motor signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Switch Signal	right front door window switch control left front Power Window Motor signal Input
	Hardwired	Drive Signal	left front Power Window Motor lower window drive PWM signal Output
Left Front Door Window Switch	Hardwired	Switch Signal	Left Front Zone Control Unit switch control left front Power Window Motor signal Output
	Hardwired	Switch Signal	right front door window switch control left front Power Window Motor signal transfer person
right front door window switch	Hardwired	Switch Signal	Left Front Door Window Switch control left front Power Window Motor signal Output
	Hardwired	Switch Signal	Right Front Zone Control Unit switch control right front Power Window Motor signal Output
left front Power Window Motor	Hardwired	Drive Signal	Left Front Zone Control Unit raise window drive PWM signal Input
Right Front Zone Control Unit	Hardwired	Switch Signal	right front door window switch control right front Power Window Motor signal Input
	Hardwired	Drive Signal	right front Power Window Motor lower window drive PWM signal Output
right front Power Window Motor	Hardwired	Drive Signal	Right Front Zone Control Unit raise window drive PWM signal Input

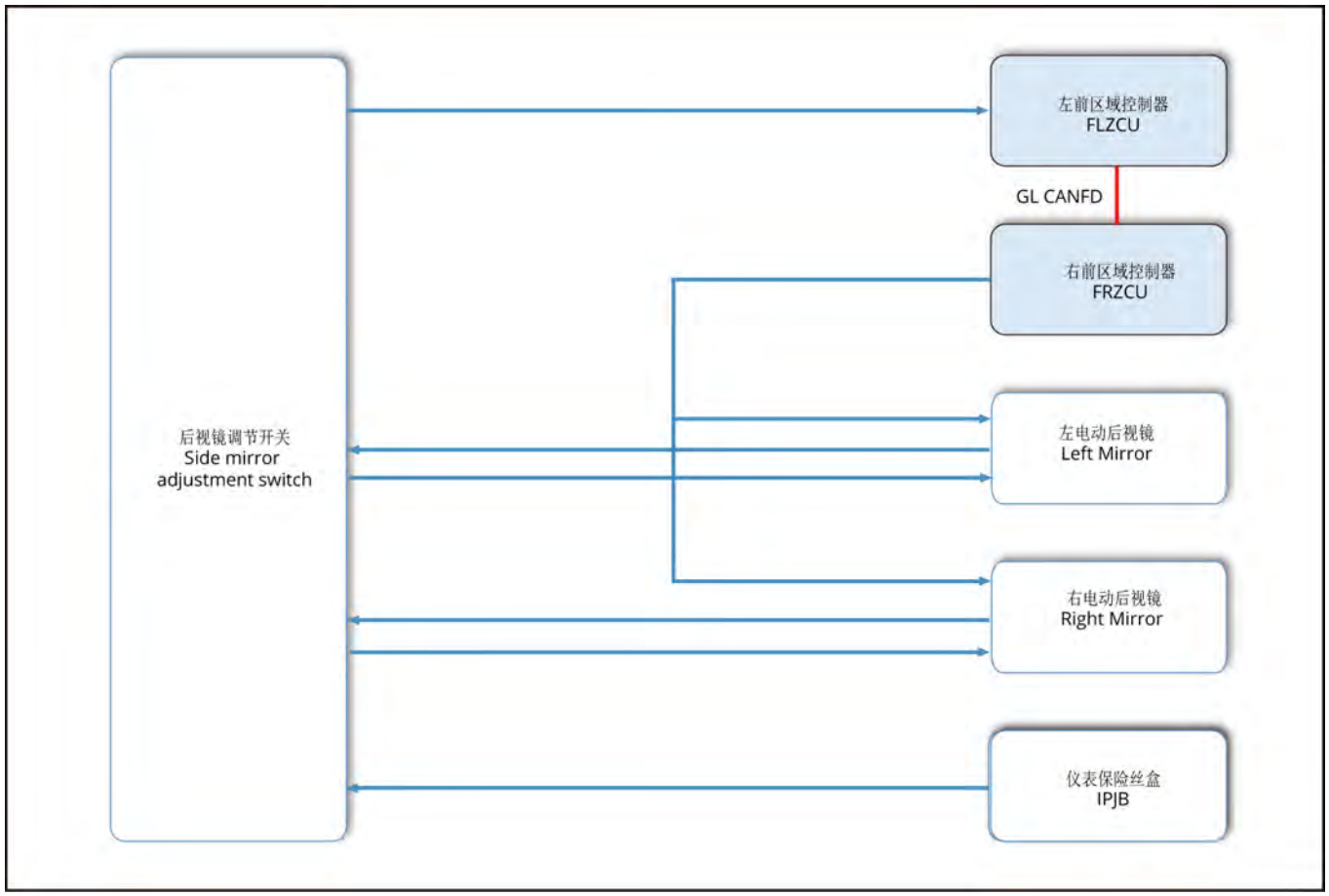
Power Exterior Mirror Switch Function Overview

System Principle

Power Exterior Mirror Switch install in Instrument Pack unit upper, through switch adjustment exterior rearview mirror angle to obtain remove vehicle side rear side interaction communication condition, from and better ground item hold vehicle around condition.

Adjustment: left right turn movement rearview mirror power adjustment button with select need adjustment rearview mirror horizontal Location, upper lower button adjust rearview mirror to upper lower vertical Location, Press the power-folding mirror button to fold or unfold both exterior rearview mirrors.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
rearview mirror adjustment switch	Hardwired	Control Signal	Left Front Zone Control Unit rearview mirror folding switch Control Signal Output
	Hardwired	Control Signal	left power rearview mirror vertical adjustment Control Signal Output
	Hardwired	Control Signal	left power rearview mirror horizontal adjustment Control Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	right power rearview mirror vertical adjustment Control Signal Output
	Hardwired	Control Signal	right power rearview mirror horizontal adjustment Control Signal Output
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
Left Front Zone Control Unit	Hardwired	Control Signal	rearview mirror adjustment switch folding switch Control Signal Input
	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Right Front Zone Control Unit	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
left power rearview mirror	Hardwired	Control Signal	rearview mirror adjustment switch vertical adjustment Control Signal Input
	Hardwired	Control Signal	rearview mirror adjustment switch horizontal adjustment Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit outside mirror heating Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror folding Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror deploy open Control Signal Input
right power rearview mirror	Hardwired	Control Signal	rearview mirror adjustment switch vertical adjustment Control Signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	rearview mirror adjustment switch horizontal adjustment Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit outside mirror heating Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror folding Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror deploy open Control Signal Input
Instrument Panel Fuse Box	Hardwired	Power Supply	rearview mirror adjustment switch Power Supply Output

Multifunction Steering Wheel Switch Function Overview

System Principle

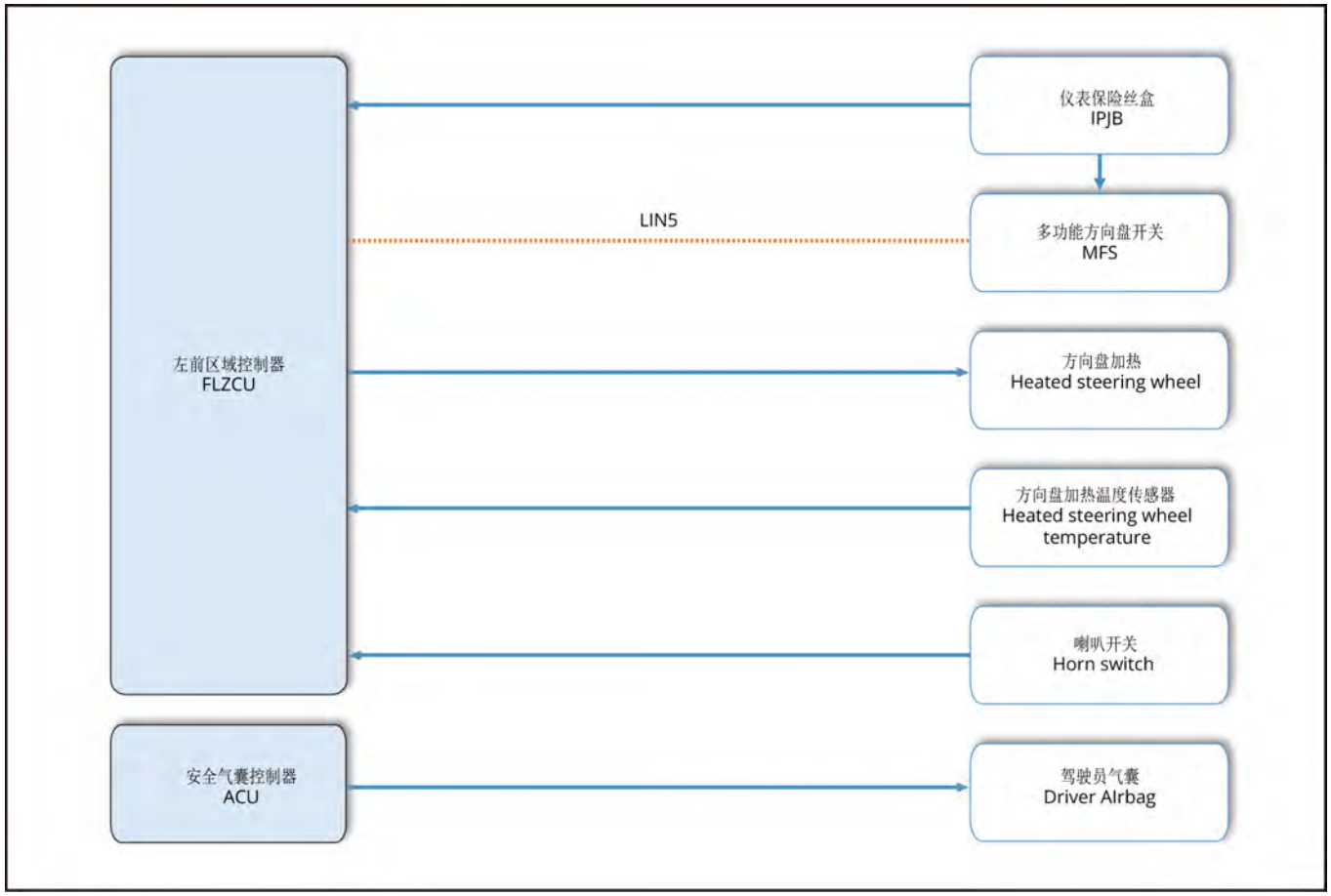
Multifunction Steering Wheel Switch by position at Steering Wheel upper multiple Function switch and position at Steering Wheel lower combination switch consists of. this type setting count ensure driver can sufficient in maintain dual hand not away Steering Wheel condition lower safety, convenience ground operation this some Function.

Multifunction Steering Wheel Switch integrated Driver Airbag, Horn switch and multiple Function control button, support audio, power item, cruise etc. Function operation. for driver provide safety, comfort and convenience driving body verification.

Steering Wheel heat

Steering Wheel inner part integrated temperature sensor actual when feedback when front temperature, support temperature heat. driver can through heat switch control Steering Wheel heat Function disabled and start.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	LIN5	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Steering Wheel heat Control Signal Output
	Hardwired	Temperature Signal	Steering Wheel heat Temperature Signal Input
	Hardwired	Switch Signal	Horn Switch Signal Input
Instrument Panel Fuse Box	Hardwired	Power Supply	Left Front Zone Control Unit Power Supply Output
	Hardwired	Power Supply	Multifunction Steering Wheel Switch Power Supply Output
Multifunction Steering Wheel Switch	LIN5	Communication Signal	Data Transmission and Status Monitoring, Control Request
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
Steering Wheel heat	Hardwired	Control Signal	Left Front Zone Control Unit heat Control Signal Input
Steering Wheel heat temperature sensor	Hardwired	Temperature Signal	Left Front Zone Control Unit Steering Wheel heat Temperature Signal Output
Horn switch	Hardwired	Control Signal	Left Front Zone Control Unit Control Signal Output
Airbag Control Unit	Hardwired	Drive Signal	Driver Airbag Drive Signal Output
Driver Airbag	Hardwired	Drive Signal	Airbag Control Unit Drive Signal Input

Component Description

Driver Power Window Switch

Driver Power Window Switch position at Driver Side Instrument Pack unit upper, can through button operation, power control all Windows lifting, same when switch surface panel upper integrated unlock Lock Button, can through Button Control door unlock and locked.

Power Window Switch

Power Window Switch position at phase corresponding door upper, can through button operation, power control corresponding Windows lifting.

Power Exterior Mirror Switch

Power Exterior Mirror Switch install in Instrument Pack unit upper, through switch enable exterior rearview mirror vertical, horizontal, folding, deploy open, heat Function.

Multifunction Steering Wheel Switch

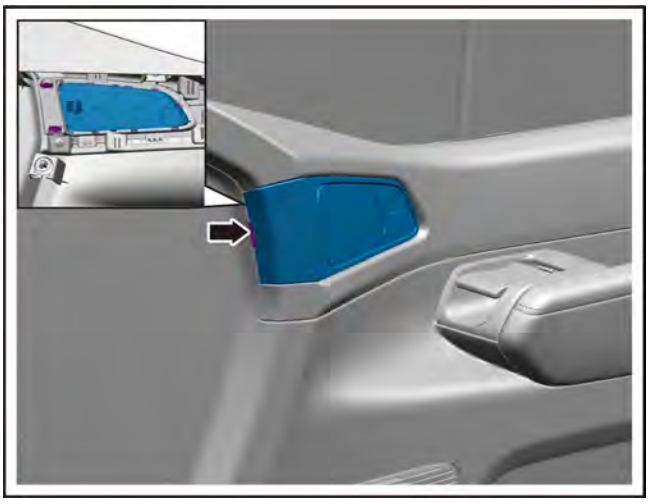
Steering Wheel multiple Function switch install in steering disc upper, Yes integrated in Steering Wheel upper control unit. Steering Wheel multiple Function switch allow driver in not away open Steering Wheel condition lower, direct connect operation audio control, Bluetooth Answer Call, operate vehicle power item adjustment, Cruise Control setting and Voice Control etc. multiple type Function.

Repair Procedure

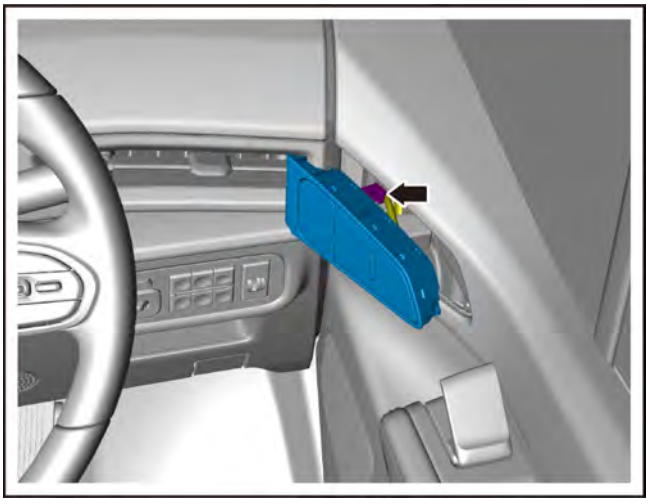
Driver Power Window Switch, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Release driver drive Power Window Switch assembly retaining clip.



3 disconnect wiring harness connector, remove driver drive Power Window Switch switch assembly.

Installation Steps

1 Install in the reverse order of removal.

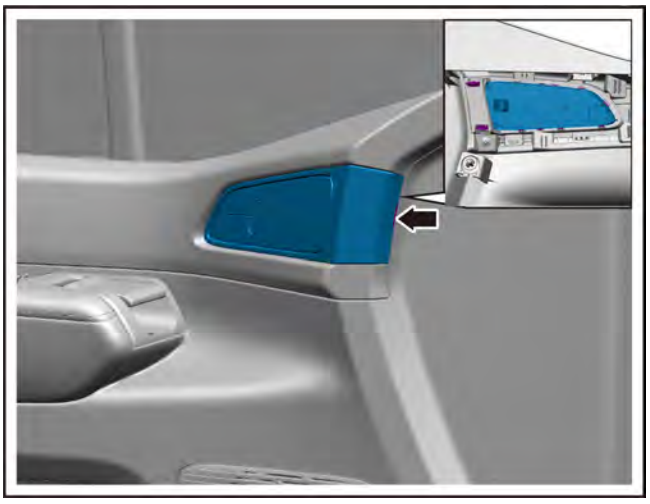
Inspection and Verification:

Install complete rear, operation Driver Power Window Switch, observe Windows glass, confirm Windows glass lifting Function normal no card item.

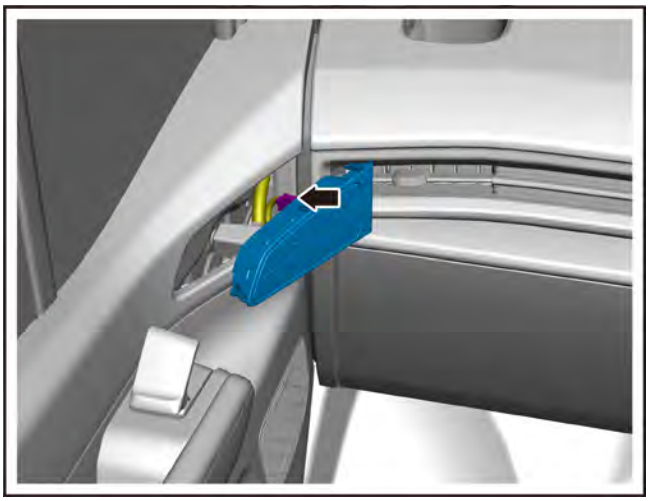
Single-Door Power Window Switch, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Release Single-door Power Window Switch assembly retaining clip.



3 disconnect wiring harness connector, remove Single-door Power Window Switch assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, operation Power Window Switch, observe Windows glass, confirm Windows glass lifting Function normal no card item.

Power Exterior Mirror Switch, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Disconnect 3 Power Exterior Mirror Switch wiring harness connectors.



3 release retaining clip, remove Power Exterior Mirror Switch.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

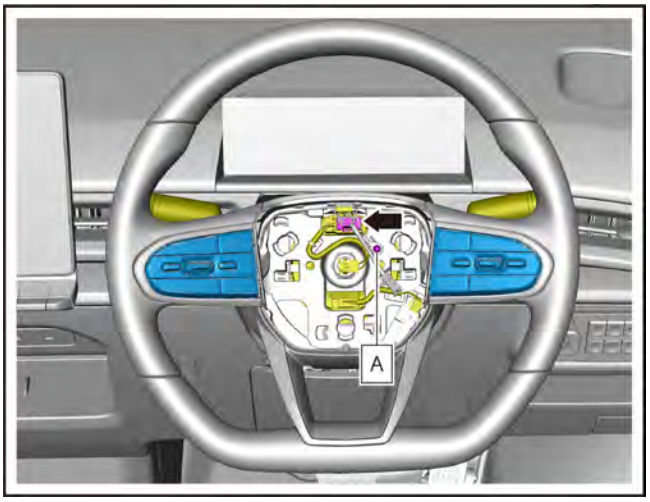
operation Power Exterior Mirror Switch, ensure mirror glass upper lower / left right adjustment Function all normal.

Multifunction Steering Wheel Switch, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

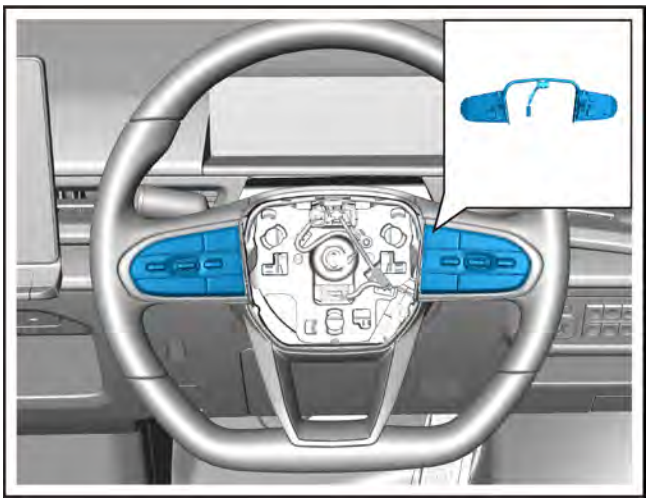
2 Remove driver airbag. Refer to:Driver Airbag, Repair Procedure



3 Remove Multifunction Steering Wheel Switch assembly.

a. Remove Multifunction Steering Wheel Switch assembly retaining screw A.

b. Disconnect Function Steering Wheel switch assembly wiring harness connector.



4 release retaining clip, remove Multifunction Steering Wheel Switch.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:
for Multifunction Steering Wheel Switch perform test, ensure Function no abnormal.

vehicle wiring harness

Repair Procedure

Front Compartment Wiring Harness Assembly, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

disconnect high-voltage connector rear, must establish that is for exposed high-voltage plug head and socket perform seal protection.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove left, right marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation

4 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

5 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

6 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

7 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure

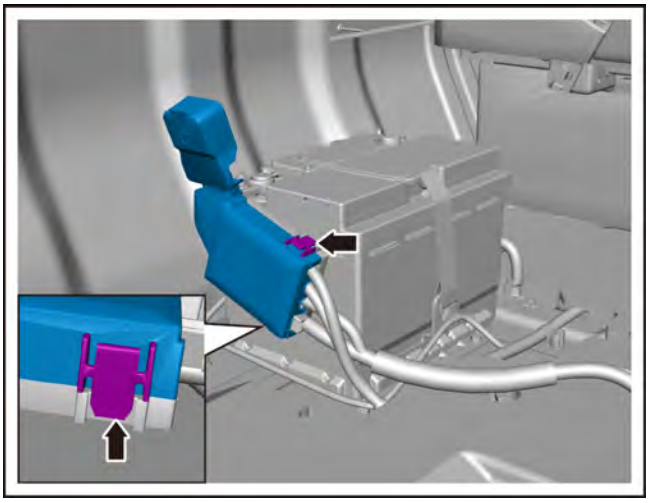
8 Remove front washer line assembly. Refer to:Front Washer Line Assembly, Repair Procedure

9 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure

10 Remove right front seat bracket assembly. Refer to:Right Front Seat Bracket Assembly, Repair Procedure

11 Remove luggage compartment lamp. Refer to:Luggage Compartment Lamp, Repair Procedure

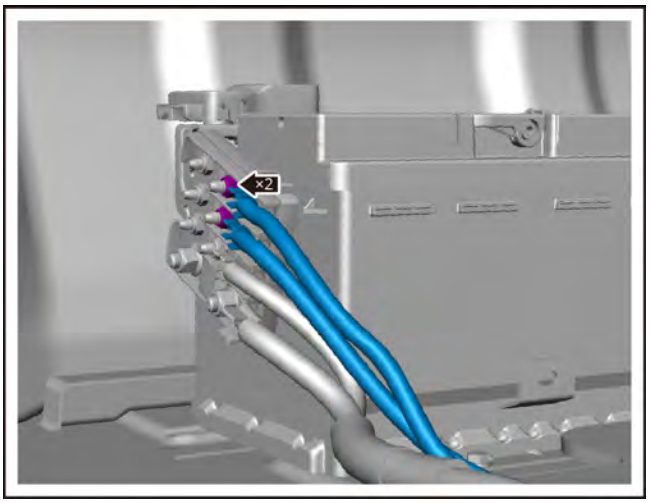
12 Remove right front scuff plate assembly. Refer to:Left Front Scuff Plate Assembly, Repair Procedure



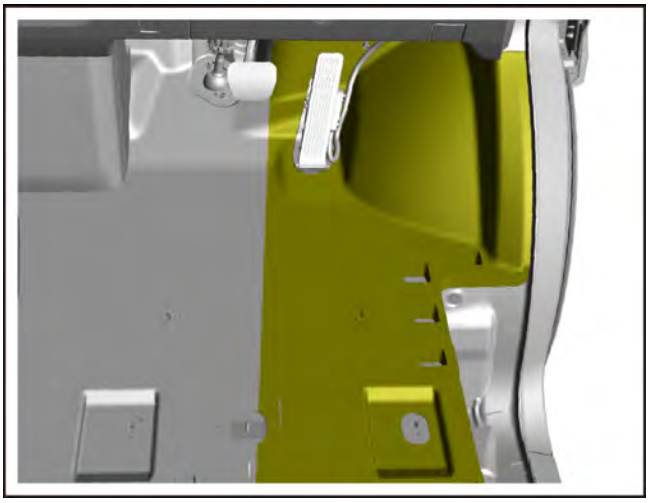
13 remove positive terminal power distribution box upper cover.

a. open battery positive terminal protection cover.

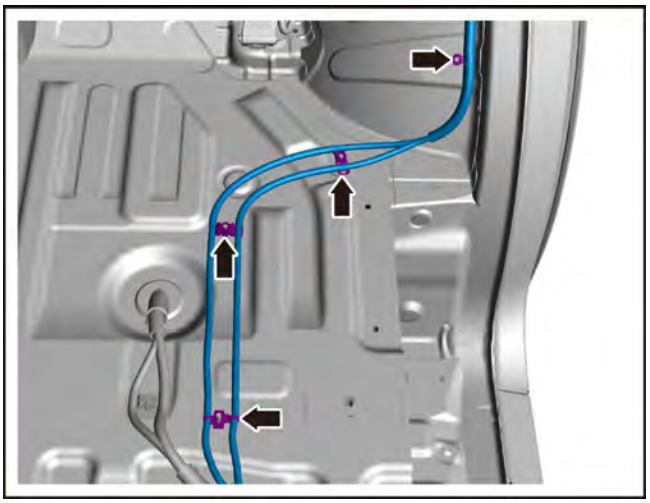
b. press 2 retaining clip, remove positive terminal power distribution box upper cover.



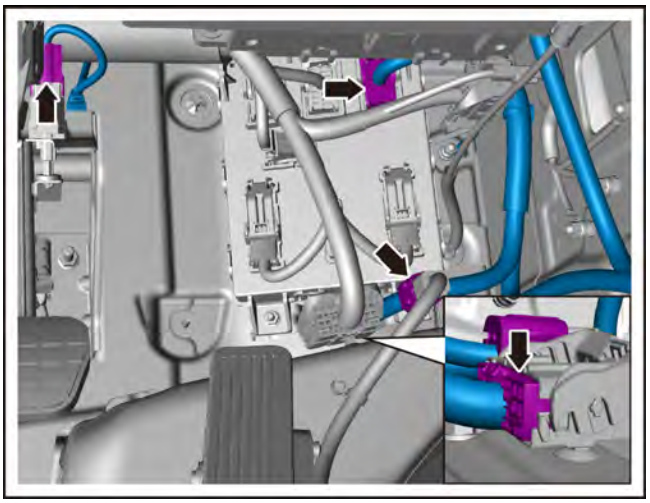
14 Remove 2 retaining nut, release front compartment wiring harness assembly.



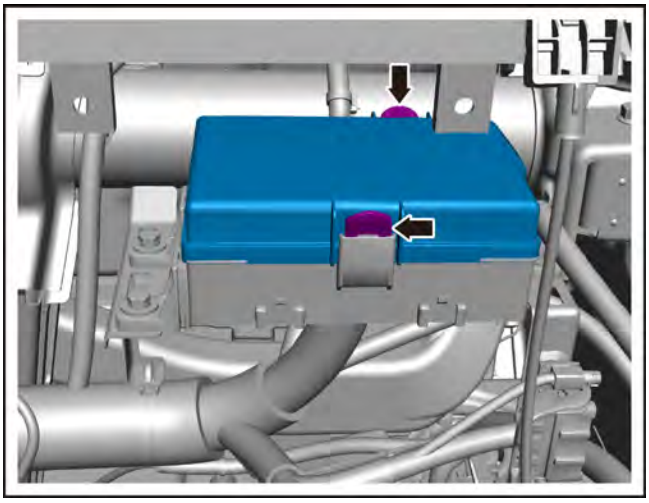
15 release driving compartment carpet.



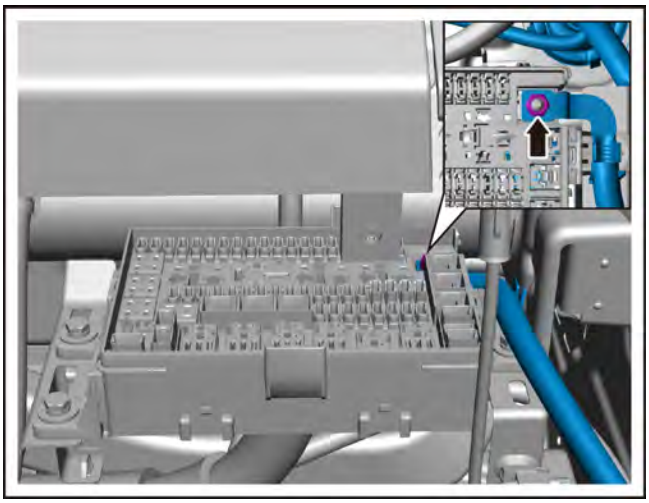
16 Release 4 front compartment wiring harness assembly retaining clips.



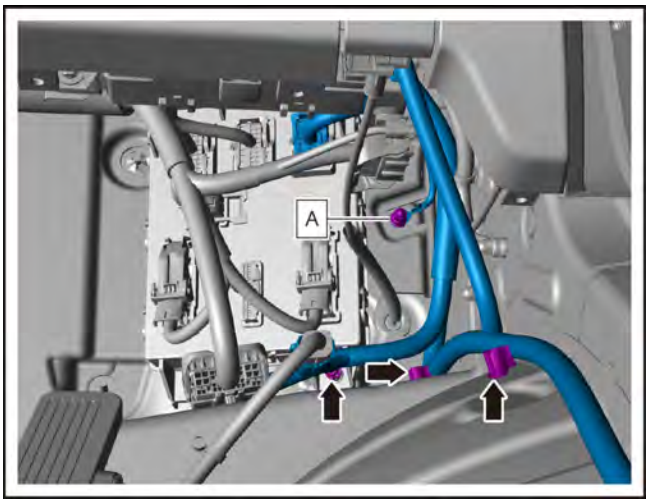
17 Disconnect 5 front compartment wiring harness assembly wiring harness connectors.



18 press retaining clip, remove instrument panel Wiring Harness Assembly fuse box upper cover.



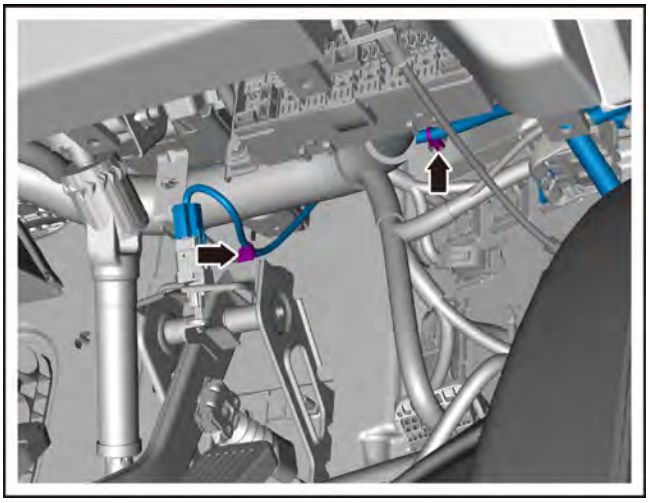
19 Remove front compartment wiring harness fuse box positive terminal retaining bolt.



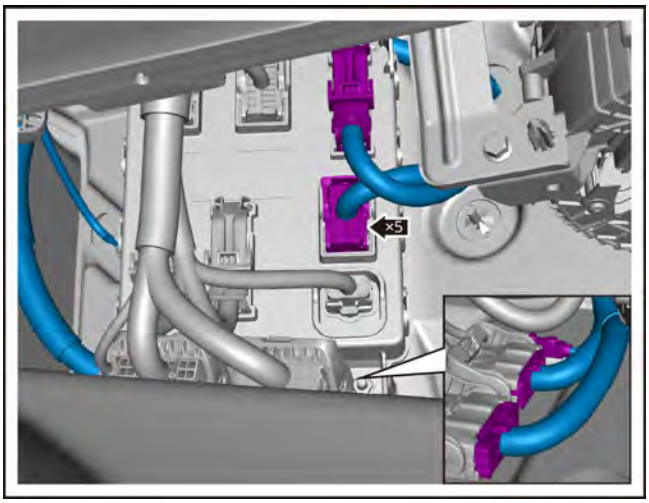
20 Remove front compartment wiring harness assembly fastener.

a. Release 3 front compartment wiring harness assembly retaining clips.

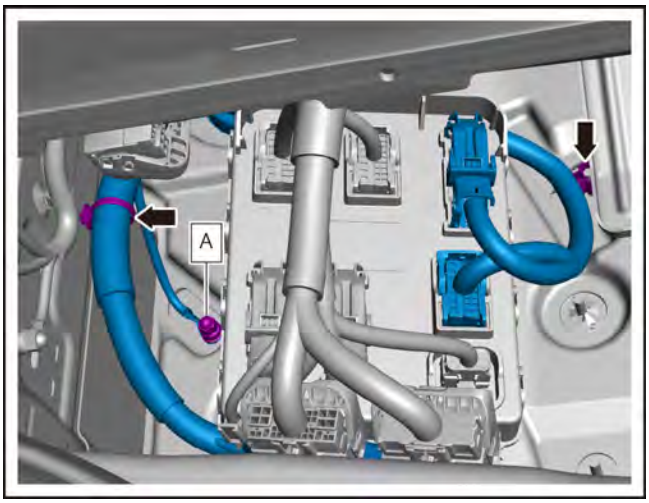
b. Remove front compartment wiring harness assembly ground cable retaining nut A.



21 Release 2 front compartment wiring harness assembly retaining clips.



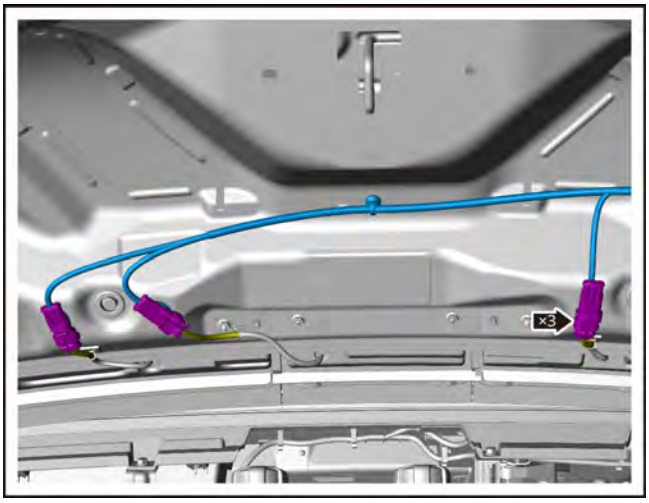
22 Disconnect 5 front compartment wiring harness assembly wiring harness connectors.



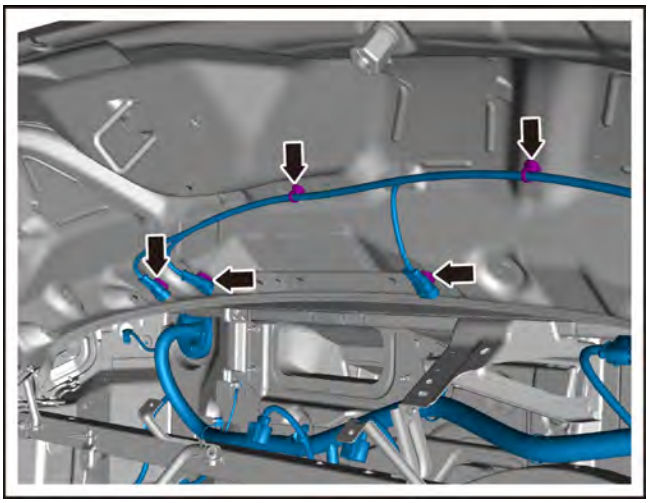
23 Remove front compartment wiring harness assembly fastener.

a. Remove front compartment wiring harness assembly ground cable retaining nut A.

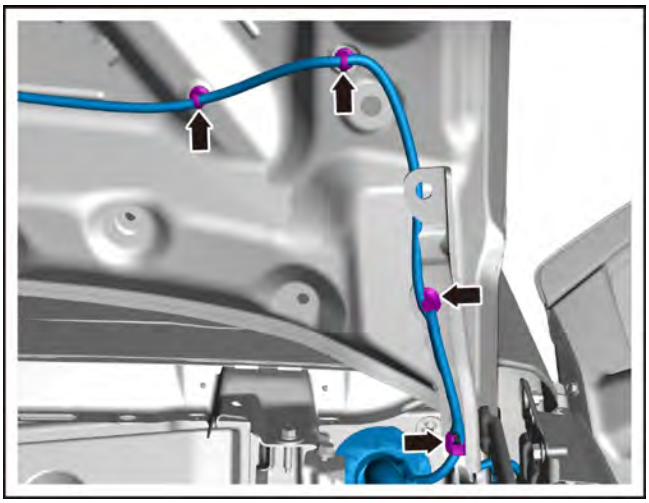
b. Release 2 front compartment wiring harness assembly retaining clips.



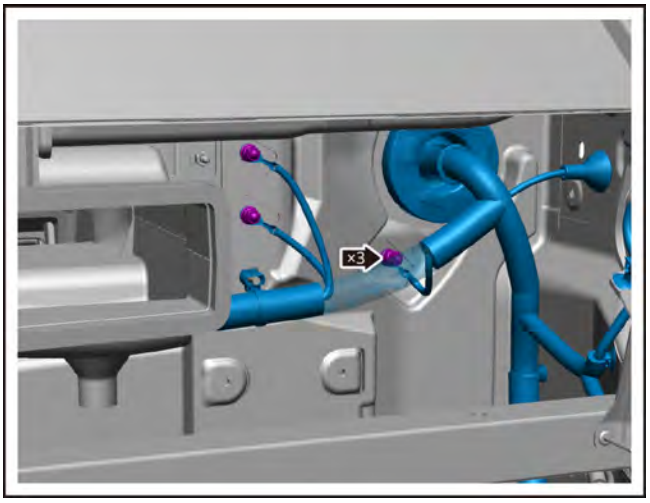
24 Disconnect 3 front compartment wiring harness assembly wiring harness connectors.



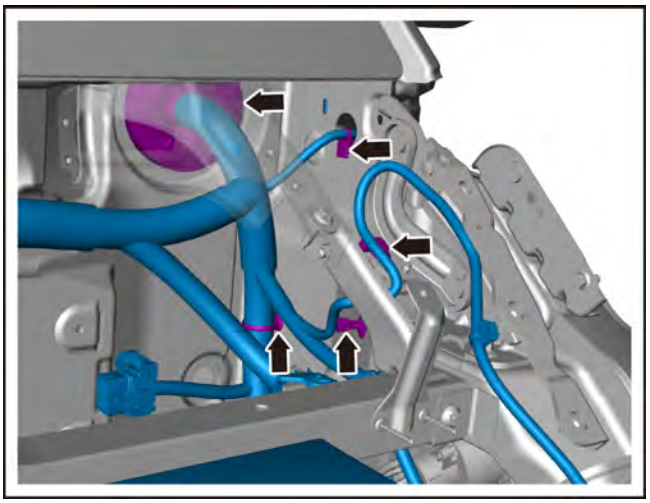
25 Release 5 front compartment wiring harness assembly retaining clips.



26 Release 4 front compartment wiring harness assembly retaining clips.



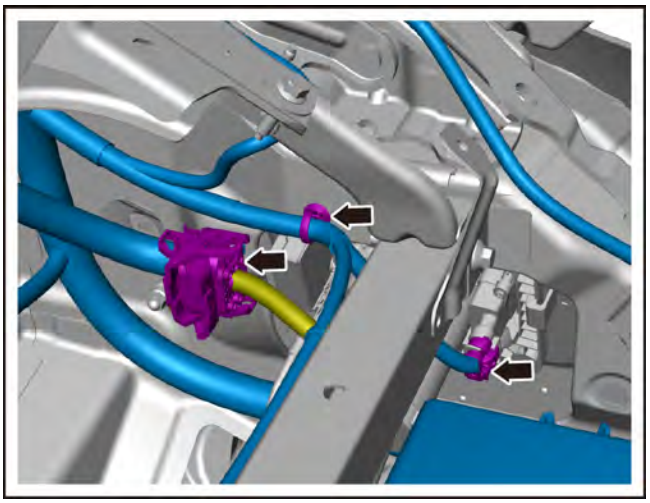
27 Remove front compartment wiring harness assembly ground cable 3 retaining nut.



28 release front compartment wiring harness assembly retaining adhesive sleeve.

a. Release 4 front compartment wiring harness assembly retaining clips.

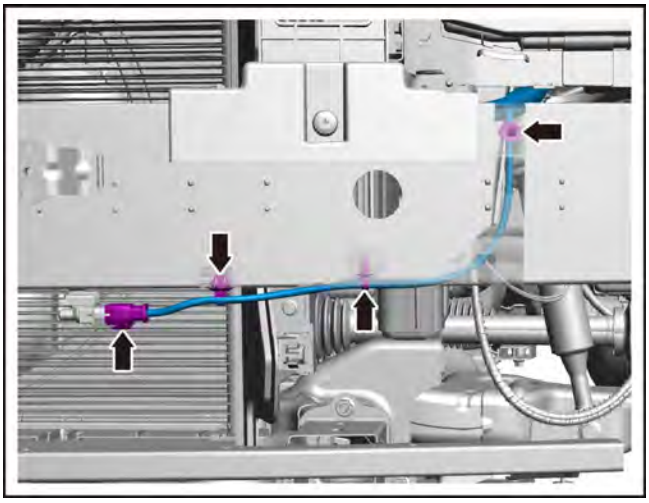
b. release front compartment wiring harness assembly retaining adhesive sleeve.



29 Release front compartment wiring harness assembly retaining clip.

a. Disconnect 2 front compartment wiring harness assembly wiring harness connectors.

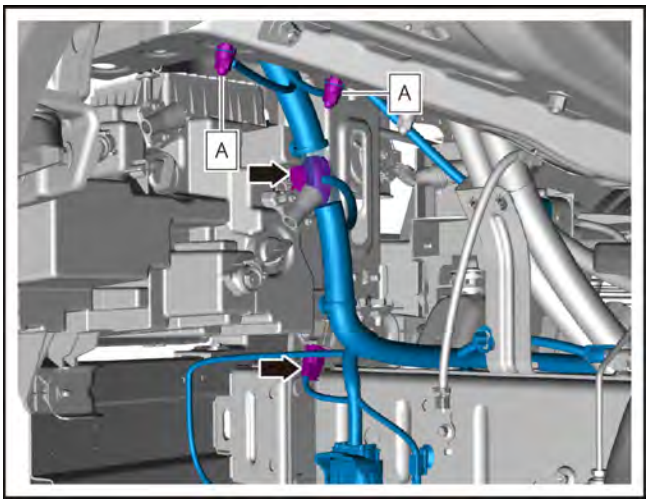
b. Release front compartment wiring harness assembly retaining clip.



30 Release front compartment wiring harness assembly retaining clip.

a. Disconnect front compartment wiring harness assembly wiring harness connector.

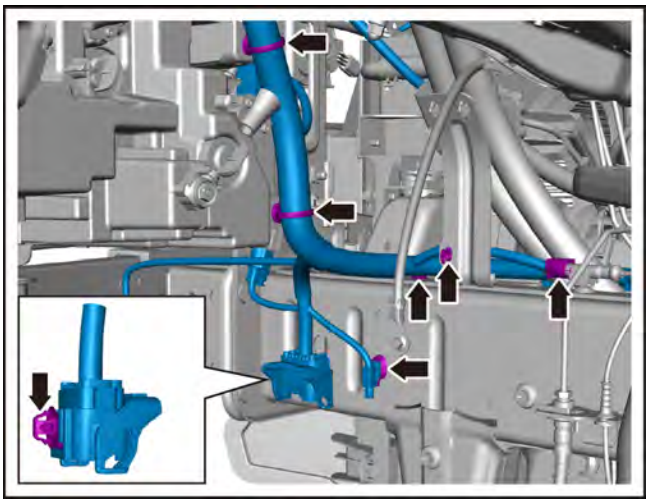
b. Release 3 front compartment wiring harness assembly retaining clips.



31 Disconnect front compartment wiring harness assembly wiring harness connector.

a. Remove front compartment wiring harness assembly 2 retaining nut A.

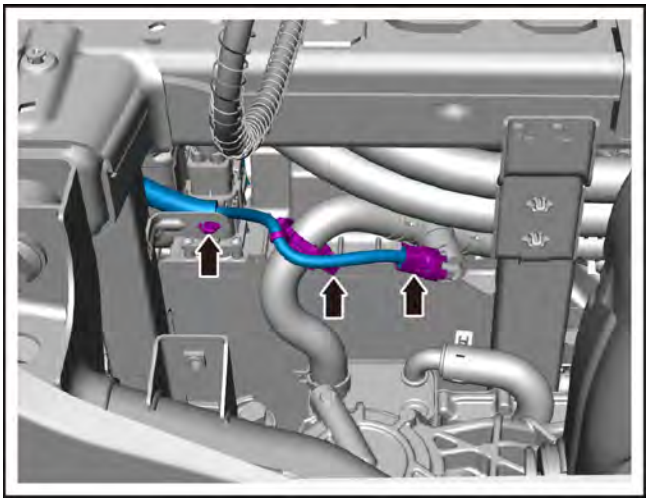
b. Disconnect 2 front compartment wiring harness assembly wiring harness connectors.



32 Disconnect front compartment wiring harness assembly wiring harness connector.

a. Disconnect front compartment wiring harness assembly wiring harness connector.

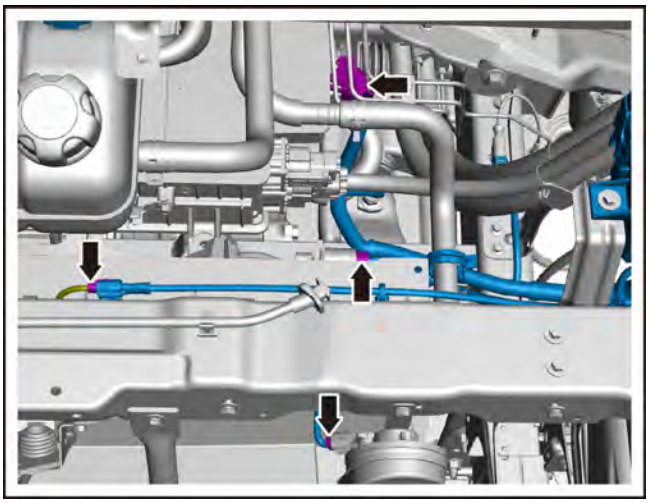
b. Release 6 front compartment wiring harness assembly retaining clips.



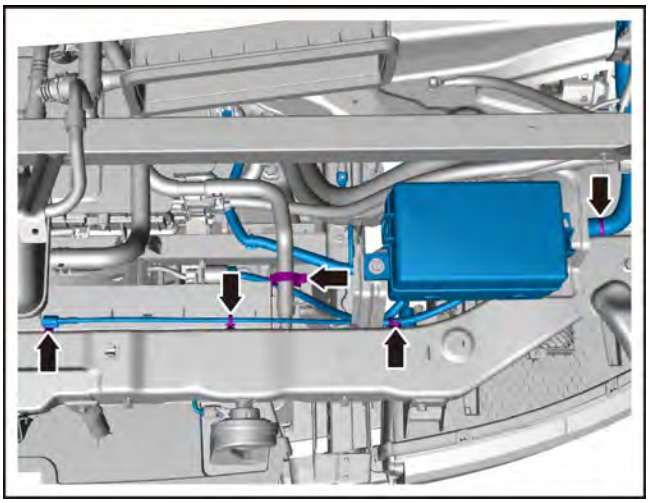
33 Release front compartment wiring harness assembly retaining clip.

a. Disconnect front compartment wiring harness assembly wiring harness connector.

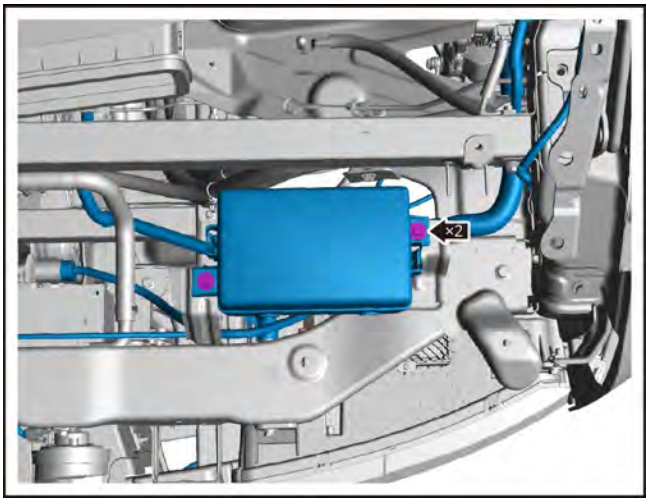
b. Release 2 front compartment wiring harness assembly retaining clips.



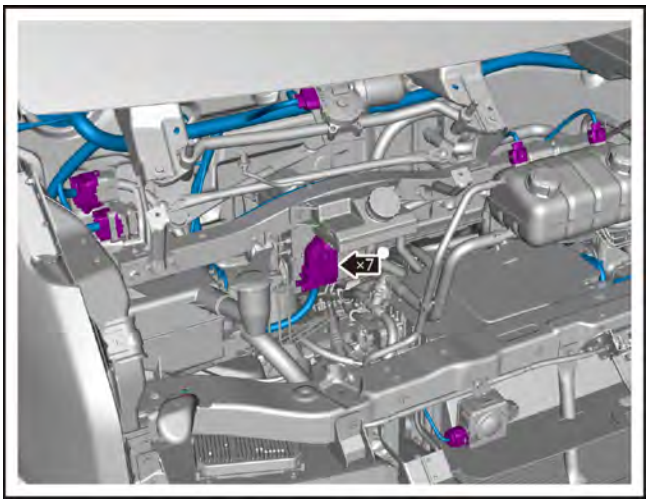
34 Disconnect 3 front compartment wiring harness assembly wiring harness connectors.



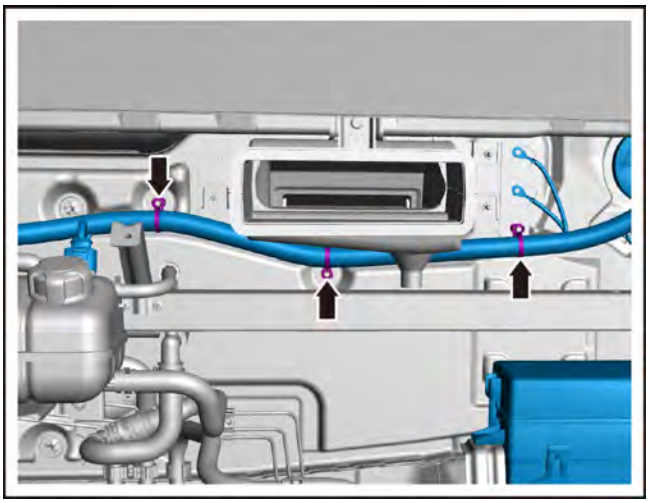
35 Release 5 front compartment wiring harness assembly retaining clips.



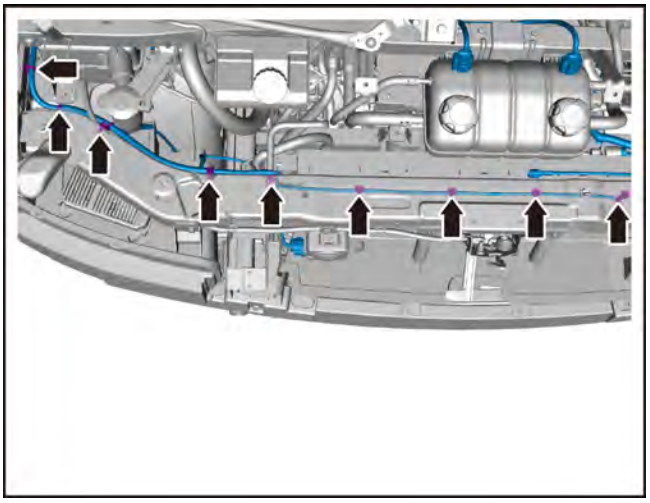
36 Remove front compartment wiring harness assembly fuse box 2 retaining bolt.



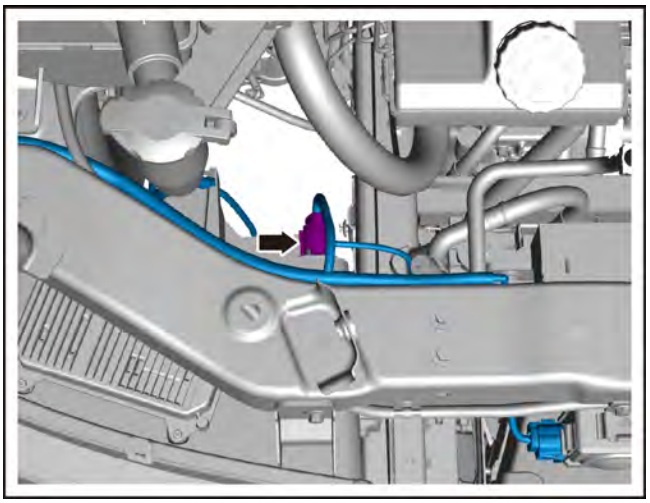
37 Disconnect 7 front compartment wiring harness assembly wiring harness connectors.



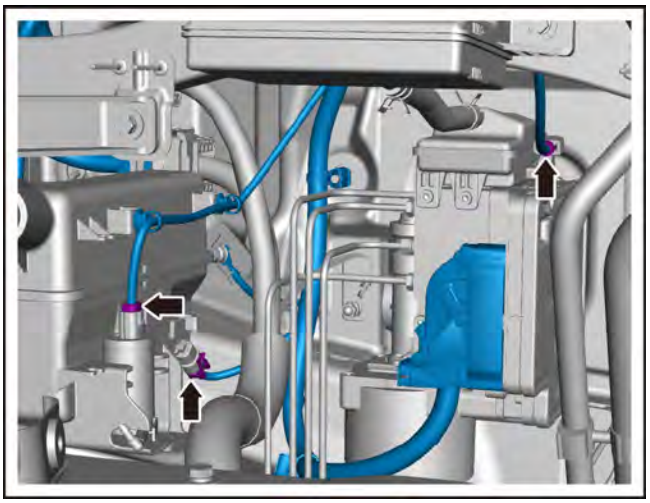
38 Release 3 front compartment wiring harness assembly retaining clips.



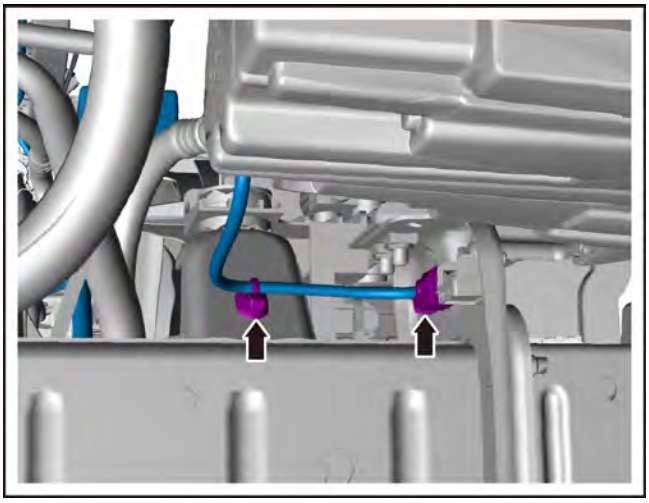
39 Release 9 front compartment wiring harness assembly retaining clips.



40 Disconnect front compartment wiring harness assembly wiring harness connector.



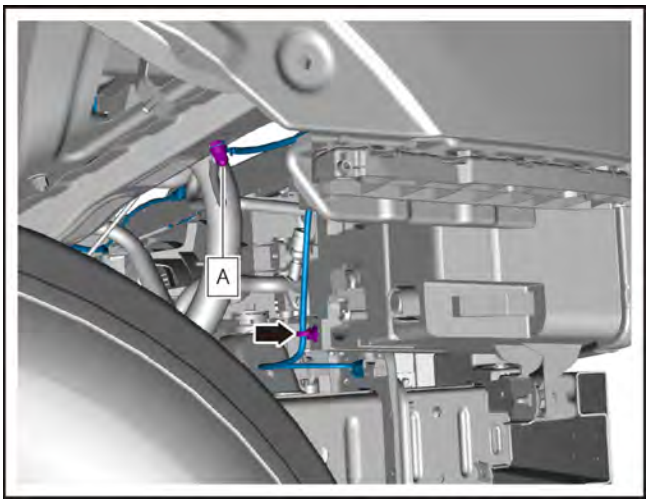
41 Disconnect 3 front compartment wiring harness assembly wiring harness connectors.



42 Release front compartment wiring harness assembly retaining clip.

a. Disconnect front compartment wiring harness assembly wiring harness connector.

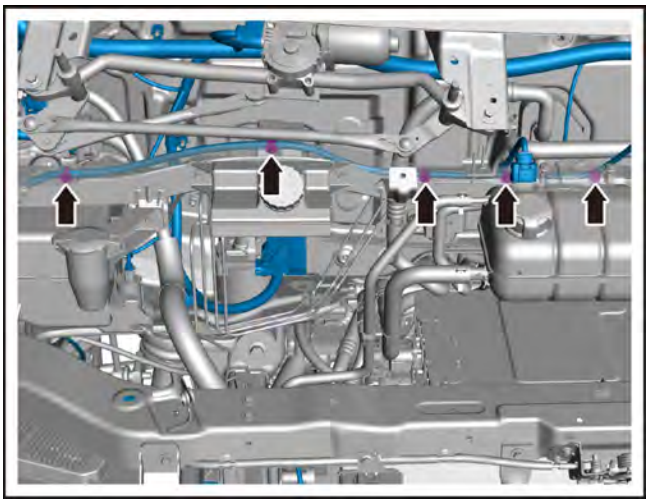
b. Release front compartment wiring harness assembly retaining clip.



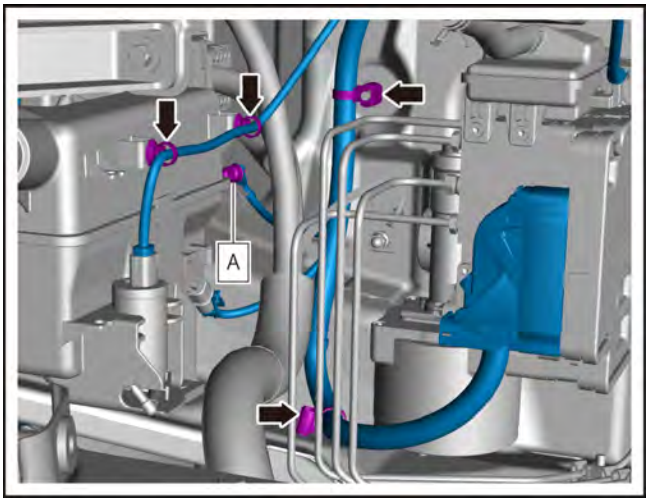
43 Remove front compartment wiring harness assembly fastener.

a. Remove front compartment wiring harness assembly ground cable retaining nut A.

b. Release front compartment wiring harness assembly retaining clip.



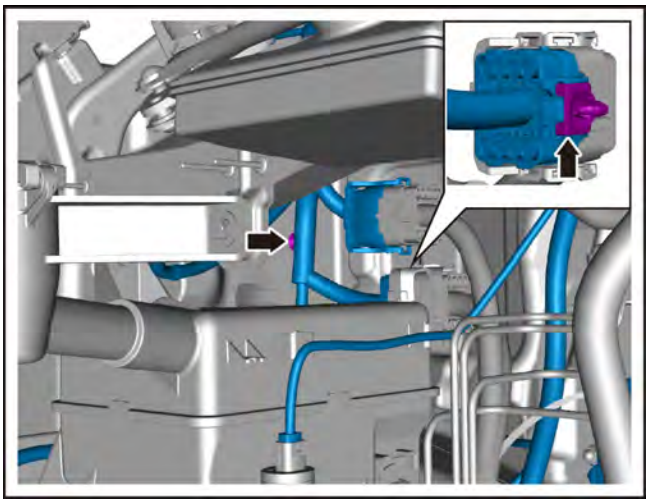
44 Release 5 front compartment wiring harness assembly retaining clips.



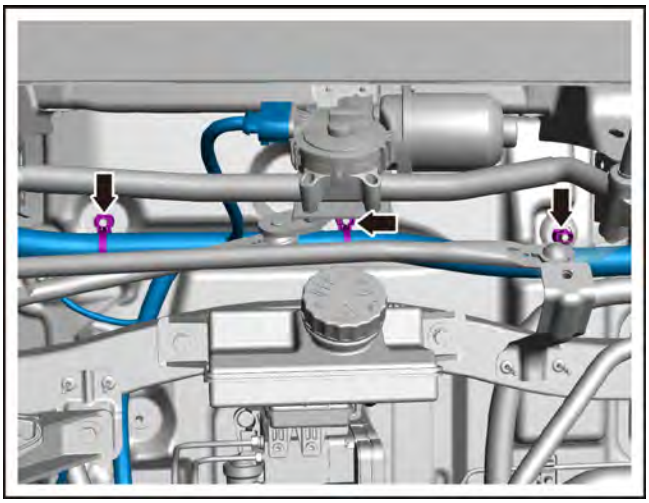
45 Remove front compartment wiring harness assembly fastener.

a. Remove front compartment wiring harness assembly ground cable retaining nut A.

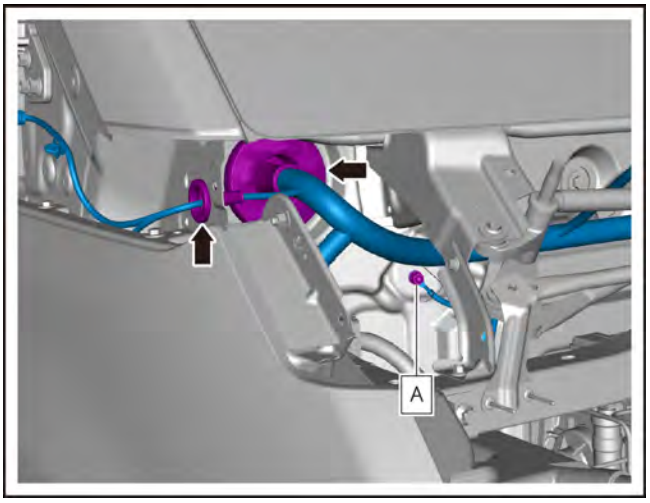
b. Release 4 front compartment wiring harness assembly retaining clips.



46 Release 2 front compartment wiring harness assembly retaining clips.



47 Release 3 front compartment wiring harness assembly retaining clips.



48 remove front compartment wiring harness assembly.

a. Remove front compartment wiring harness assembly ground cable retaining nut A.

b. release 2 retaining adhesive sleeve, remove front compartment wiring harness assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Headlining Wiring Harness, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

3 Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure

4 Remove left, right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation

5 Remove left, right B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure

6 Remove left, right B pillar upper Shield Assembly. Refer to:Left B-Pillar Upper Trim Panel Assembly, Repair Procedure

7 Remove left, right sun visor assembly. Refer to:Sun Visor Assembly, Repair Procedure

8 Remove mounting base B- left, right. Refer to:Mounting Base B- Left, Repair Procedure

9 Remove top Armrest assembly. Refer to:Top Armrest Assembly, Repair Procedure

10 Remove left, right microphone (including surface cover). Refer to:Microphone (Including Surface Cover), Repair Procedure

11 Remove UWB main controller. Refer to:UWB Main Controller, Repair Procedure

12 Remove headlining assembly. Refer to:Headlining Assembly, Repair Procedure

13 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

14 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure

15 Remove clothing cap hook assembly. Refer to:Clothing Cap Hook Assembly, Repair Procedure

16 Remove Monitoring Camera. Refer to:Monitoring Camera, Repair Procedure

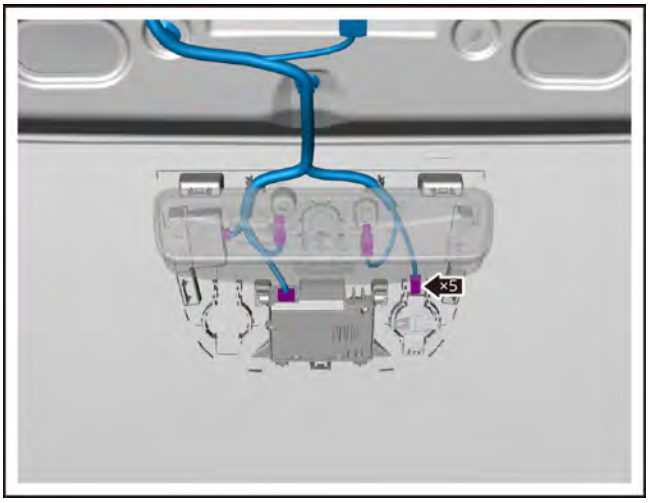
17 Remove isolate panel cover assembly. Refer to:Isolate Panel Cover Assembly, Repair Procedure

18 Remove isolate panel section assembly. Refer to:Isolate Panel Section Assembly, Repair Procedure

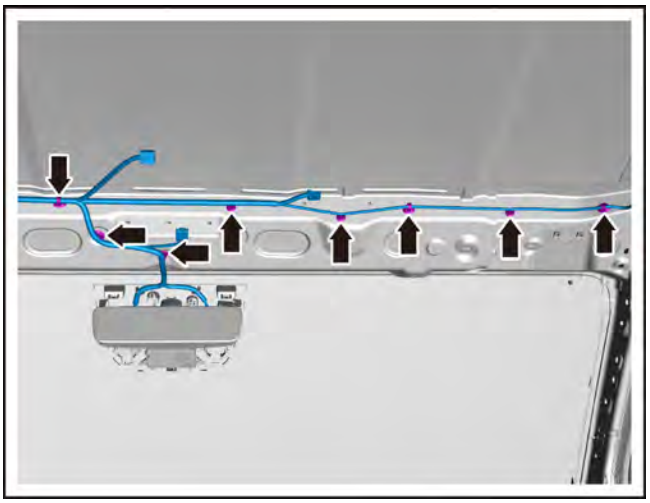
19 Remove compartment inner Rear Dome Lamp assembly - left front, right front. Refer to:Compartment Inner Rear Dome Lamp Assembly - Front, Repair Procedure

20 Remove In-vehicle AC Power Outlet. Refer to:In-Vehicle AC Power Outlet, Repair Procedure

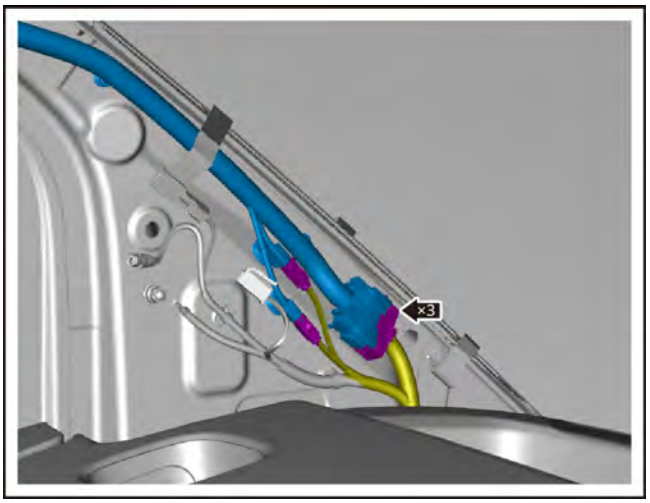
21 Remove compartment inner Rear Dome Lamp assembly - left rear, right rear. Refer to:Compartment Inner Rear Dome Lamp Assembly - Rear, Repair Procedure



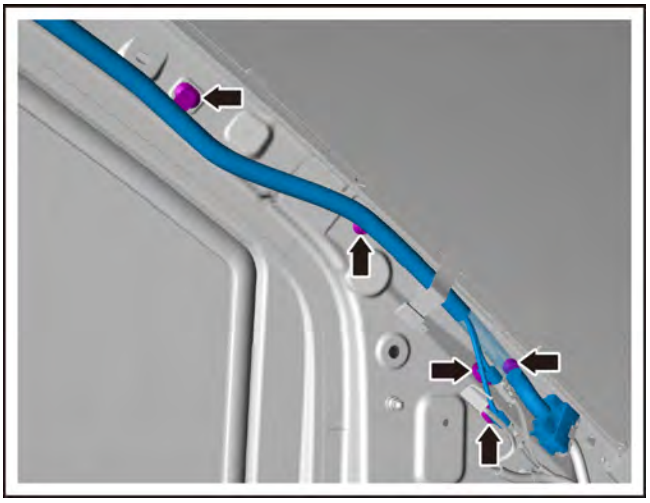
22 Disconnect 5 headlining wiring harness wiring harness connectors.



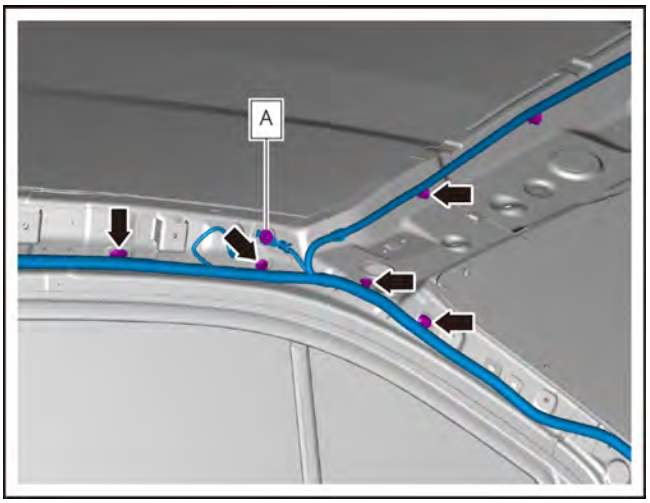
23 Release 8 headlining wiring harness retaining clips.



24 Disconnect 3 headlining wiring harness wiring harness connectors.



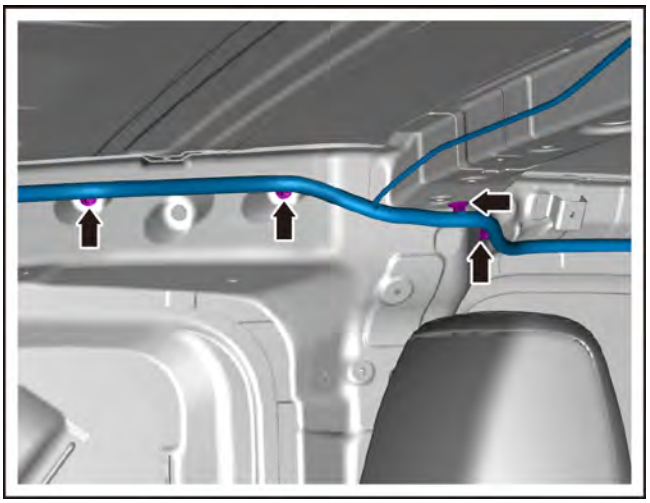
25 Release 5 headlining wiring harness retaining clips.



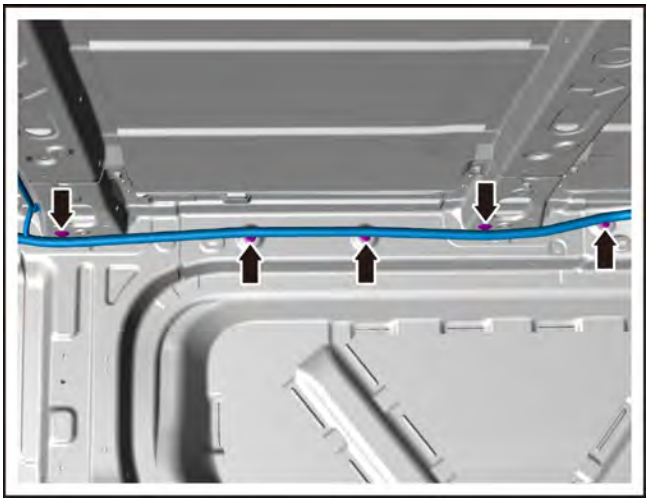
26 Remove headlining wiring harness fastener.

a. Remove headlining wiring harness ground cable retaining bolt A.
Torque:xxx±xxN·m

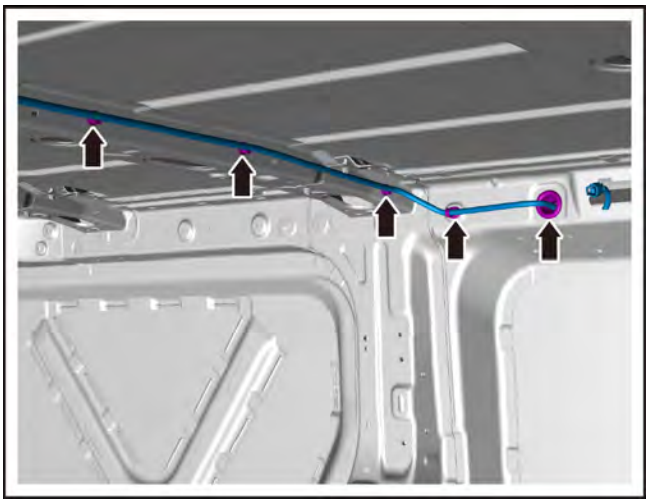
b. Release 5 headlining wiring harness retaining clips.



27 Release 4 headlining wiring harness retaining clips.



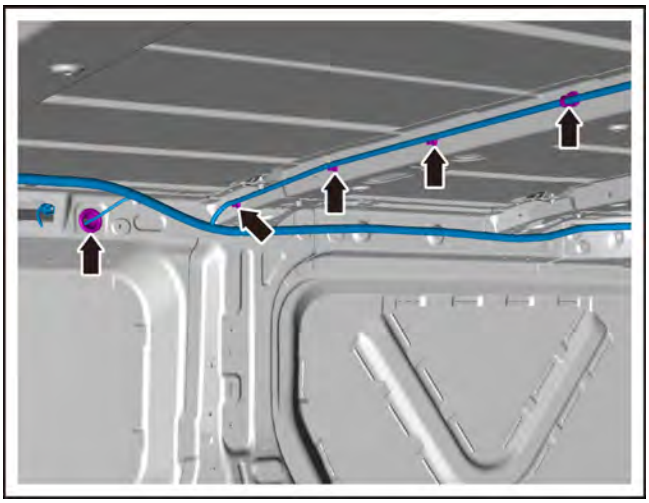
28 Release 5 headlining wiring harness retaining clips.



29 release headlining wiring harness right retaining part.

a. release headlining wiring harness right retaining adhesive sleeve.

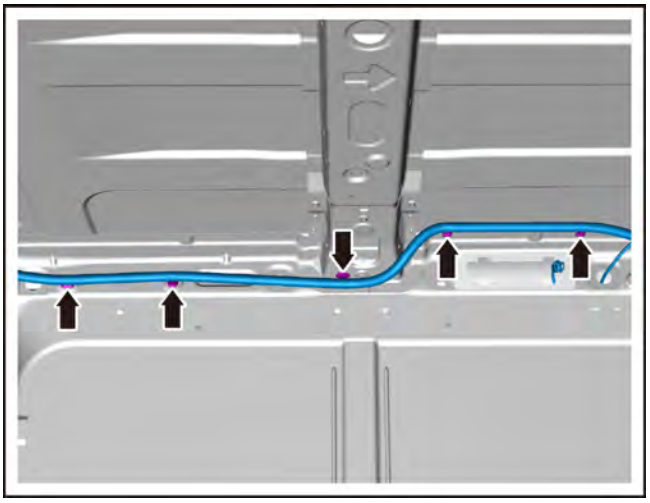
b. Release 4 headlining wiring harness right retaining clips.



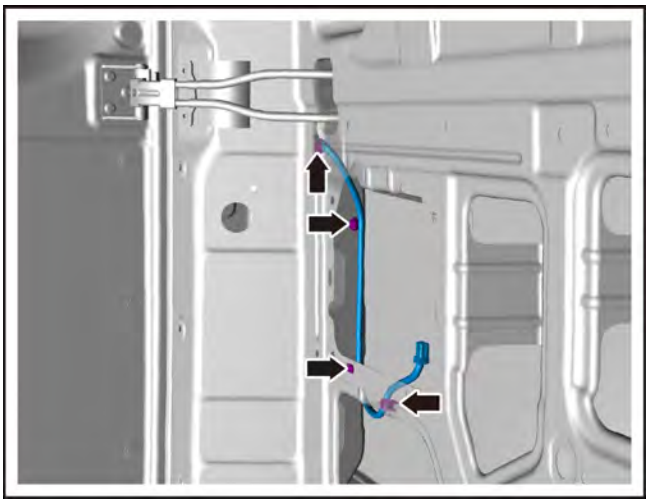
30 release headlining wiring harness left retaining part.

a. release headlining wiring harness left retaining adhesive sleeve.

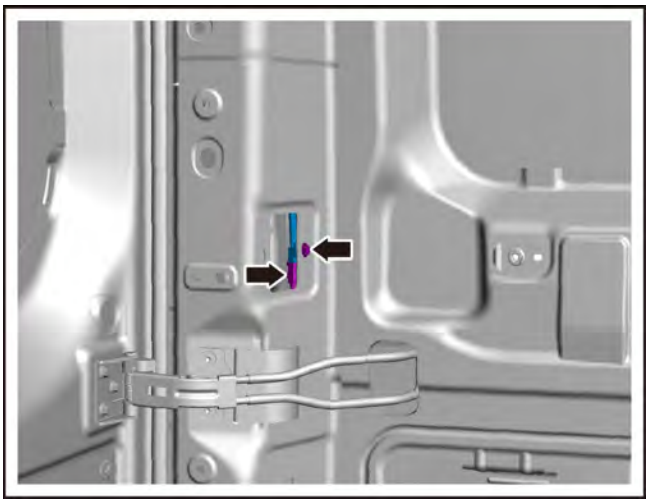
b. Release 4 headlining wiring harness left retaining clips.



31 Release 5 headlining wiring harness retaining clips.



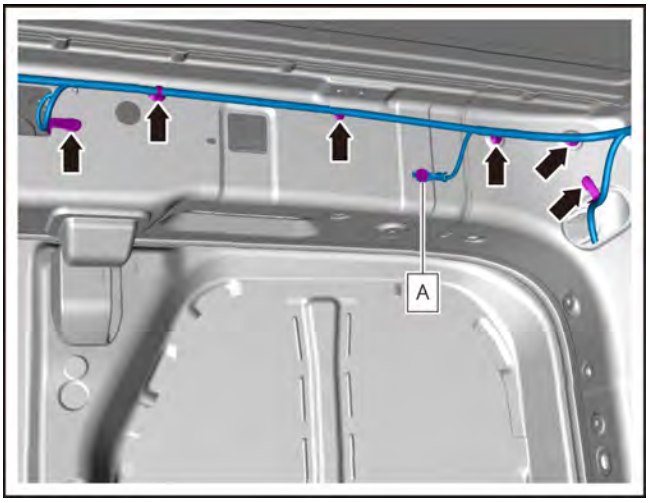
32 Release 4 headlining wiring harness retaining clips.



33 Disconnect headlining wiring harness left wiring harness connector.

a. Disconnect headlining wiring harness left wiring harness connector.

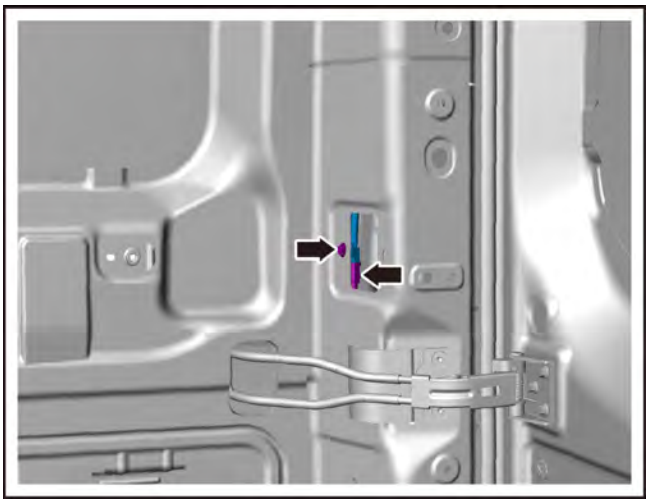
b. Release headlining wiring harness left retaining clip.



34 Remove headlining wiring harness fastener.

a. Remove headlining wiring harness ground cable retaining bolt A.
Torque:xxx±xxN·m

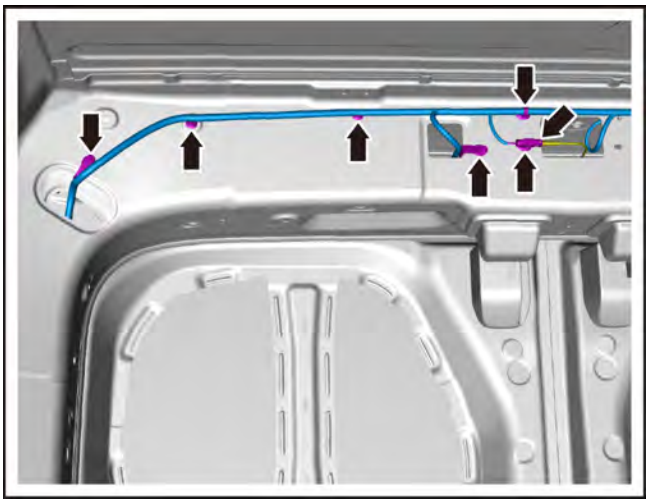
b. Release 6 headlining wiring harness retaining clips.



35 Disconnect headlining wiring harness right wiring harness connector.

a. Disconnect headlining wiring harness right wiring harness connector.

b. Release headlining wiring harness right retaining clip.



36 remove headlining wiring harness.

a. Disconnect headlining wiring harness wiring harness connector.

b. release 6 retaining clip, remove headlining wiring harness.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Floor Wiring Harness, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left, right front door door opening weatherstrip. Refer to:Left Front Door Door Opening Weatherstrip, Repair Procedure

3 Remove left, right B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure

4 Remove luggage compartment lamp. Refer to:Luggage Compartment Lamp, Repair Procedure

5 Remove left, right front scuff plate assembly. Refer to:Left Front Scuff Plate Assembly, Repair Procedure

6 Remove HVAC flap assembly left, right. Refer to:HVAC Flap Assembly Left, Repair Procedure

7 Remove instrument panel lower trim panel assembly. Refer to:Instrument Panel Lower Trim Panel Assembly, Repair Procedure

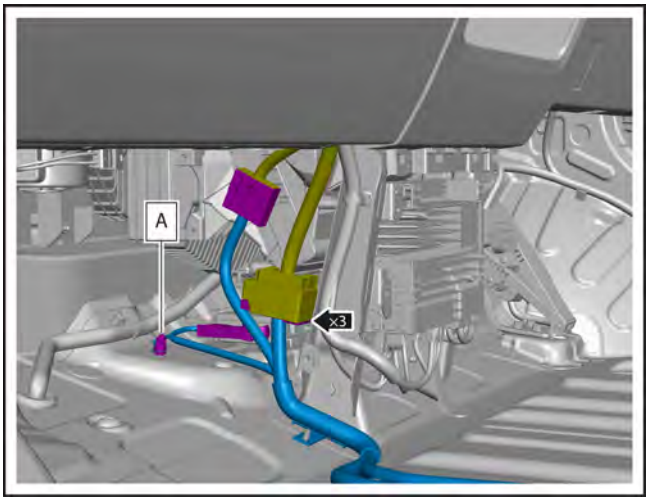
8 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure

9 Remove right front seat bracket assembly. Refer to:Right Front Seat Bracket Assembly, Repair Procedure

10 Remove left front Two-person Seat assembly. Refer to:Left Front Two-Person Seat Assembly, Repair Procedure

11 Remove driving compartment carpet. Refer to:Driving Compartment Carpet, Repair Procedure

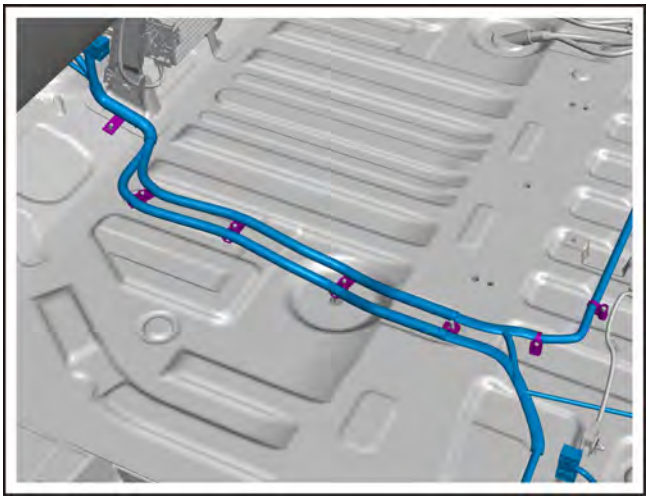
12 Remove air spring controller cover. Refer to:Air Spring Controller Cover, Repair Procedure



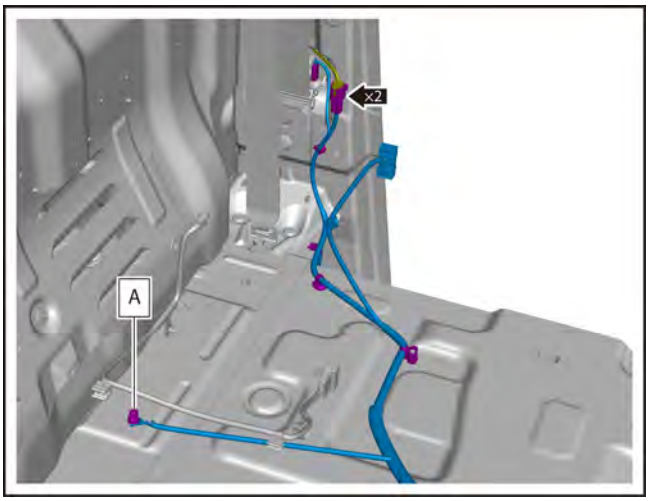
13 Remove floor wiring harness fastener.

a. Disconnect 3 floor wiring harness wiring harness connectors.

b. Remove floor wiring harness ground cable retaining nut A.



14 Release floor wiring harness retaining clip.

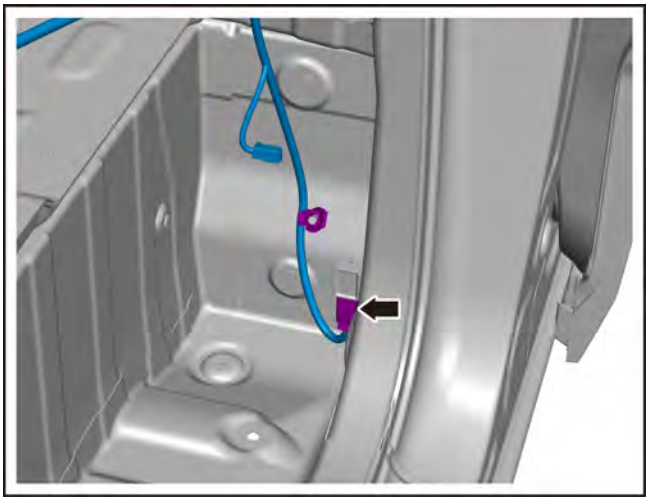


15 Remove floor wiring harness fastener.

a. Disconnect 2 floor wiring harness wiring harness connectors.

b. Release floor wiring harness retaining clip.

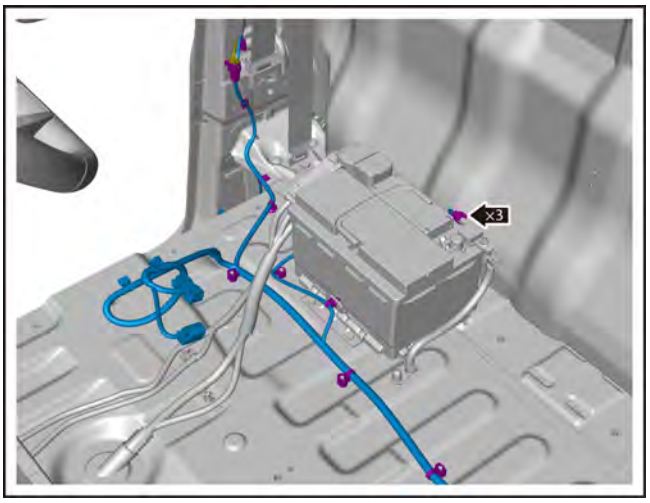
c. Remove floor wiring harness ground cable retaining nut A.



16 Remove floor wiring harness fastener.

a. Disconnect floor wiring harness wiring harness connector.

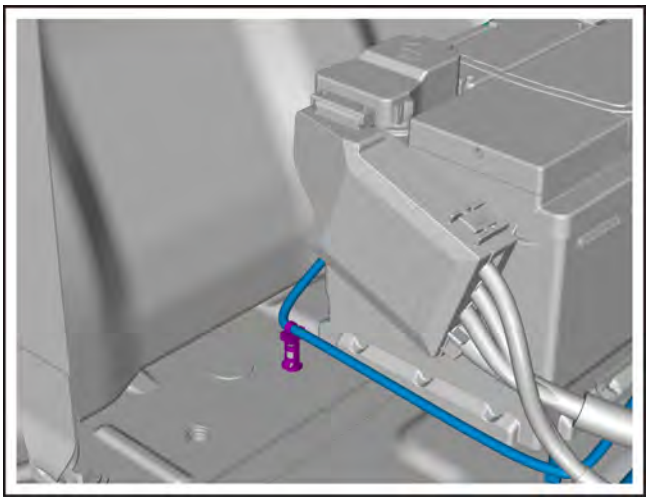
b. Release floor wiring harness retaining clip.



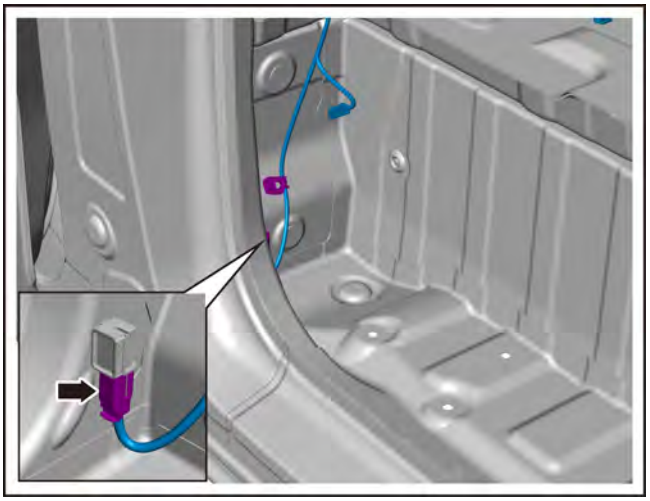
17 Remove floor wiring harness fastener.

a. Disconnect 3 floor wiring harness wiring harness connectors.

b. Release floor wiring harness retaining clip.



18 Release floor wiring harness retaining clip.



19 Remove floor wiring harness fastener.

a. Disconnect floor wiring harness wiring harness connector.

b. release retaining clip, remove floor wiring harness.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Chassis Wiring Harness, Repair Procedure

Warning

*with related High-voltage System Safety Precautions. refer to:*High-voltage System Safety Precautions

Warning

- *For risk-of-death precautions, refer to:*Risk of Death Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *with related Battery and Battery Charging Precautions. refer to:*Battery and Battery Charging Precautions
- *with related Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Power down the vehicle high-voltage system. Refer to:High-voltage Power-up/Power-down Procedure

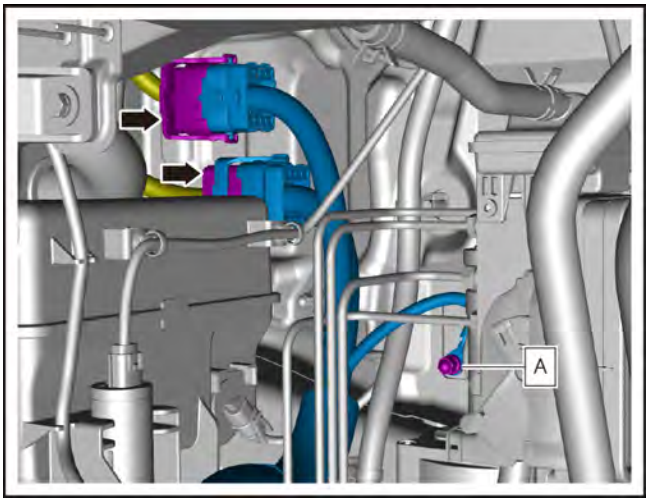
3 Drain the thermal management system coolant. Refer to:Coolant Draining and Filling

4 Remove traction battery pack assembly. Refer to:Traction Battery Pack Assembly, Repair Procedure

5 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

6 Remove rear bumper left, right lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

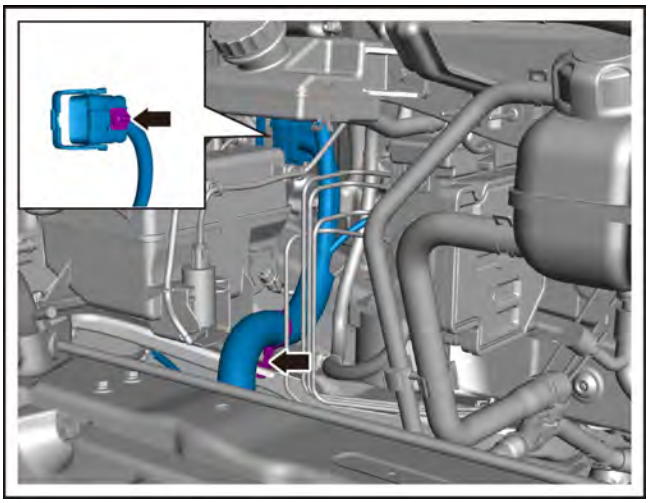
7 Remove left, Right Rear Combination Lamp assembly. Refer to:Left Rear Combination Lamp Assembly, Repair Procedure



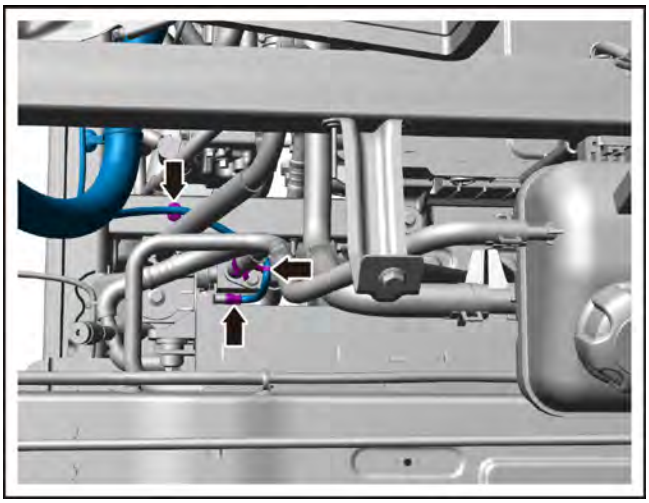
8 Disconnect chassis wiring harness wiring harness connector.

a. Remove chassis wiring harness ground cable retaining nut A.
Torque:xxx±xxN·m

b. Disconnect 2 chassis wiring harness wiring harness connectors.



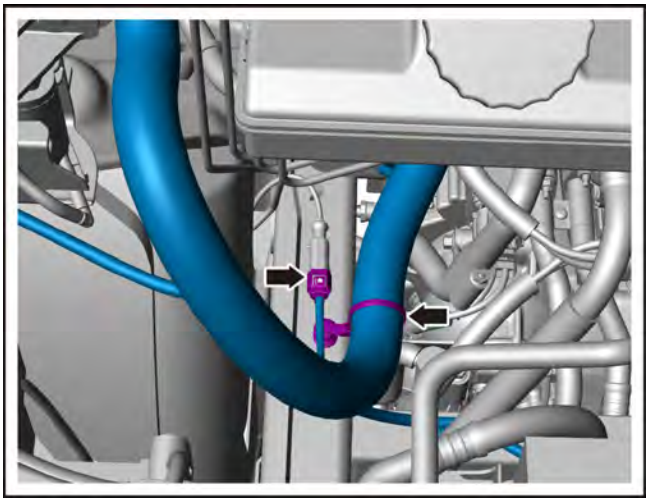
9 Release 2 chassis wiring harness retaining clips.



10 Release chassis wiring harness retaining clip.

a. Disconnect chassis wiring harness wiring harness connector.

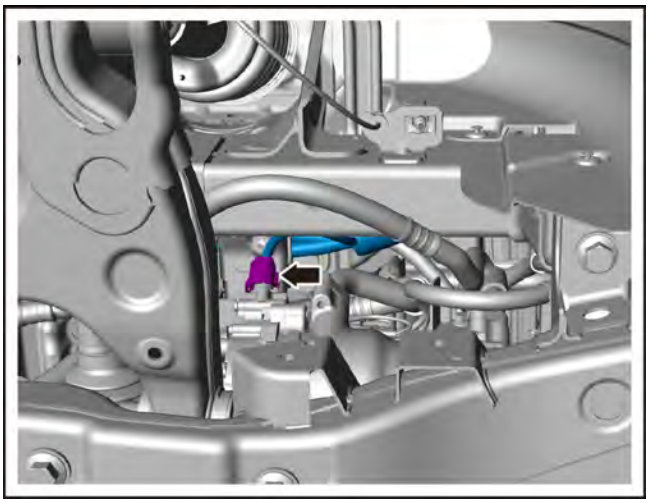
b. Release 2 chassis wiring harness retaining clips.



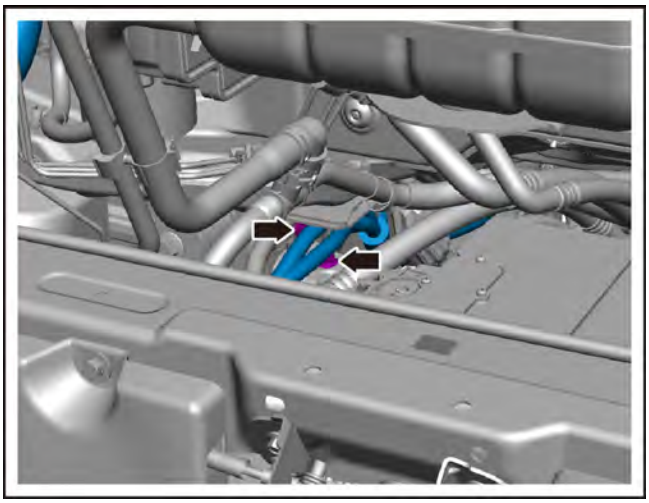
11 Release chassis wiring harness retaining clip.

a. Disconnect chassis wiring harness wiring harness connector.

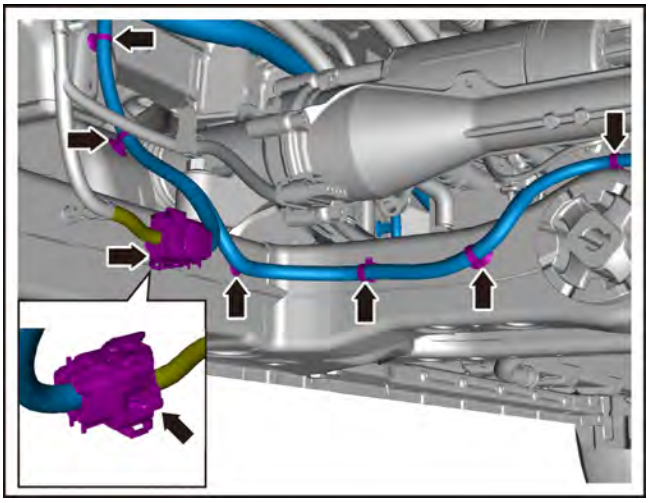
b. Release chassis wiring harness retaining clip.



12 Disconnect chassis wiring harness wiring harness connector.



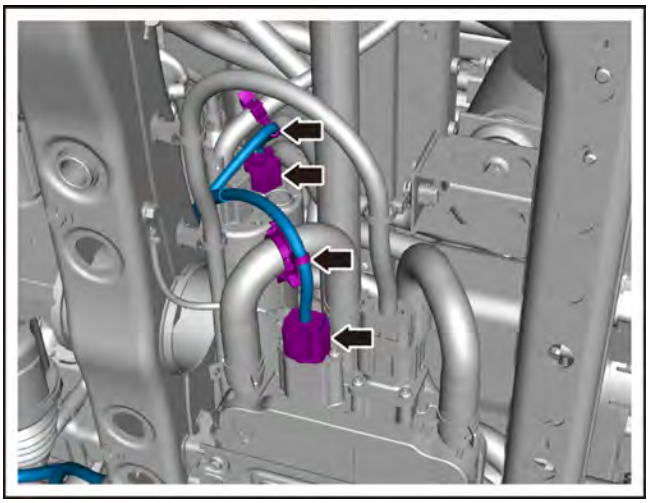
13 Release 2 chassis wiring harness retaining clips.



14 Release chassis wiring harness retaining clip.

a. Disconnect chassis wiring harness wiring harness connector.

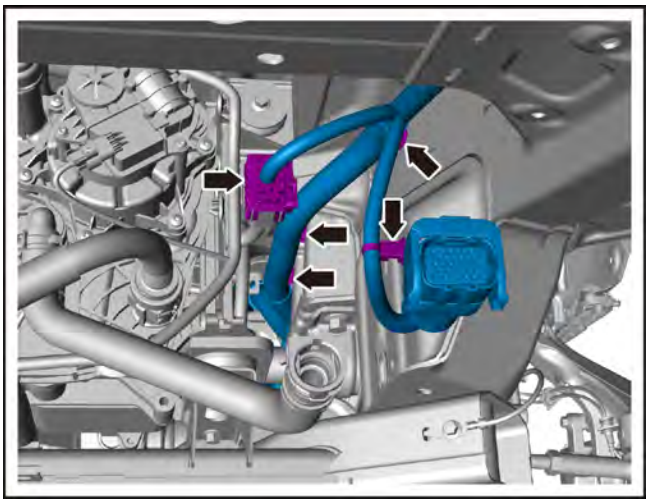
b. Release 7 chassis wiring harness retaining clips.



15 Release chassis wiring harness retaining clip.

a. disconnect chassis wiring harness 2 wiring harness connector

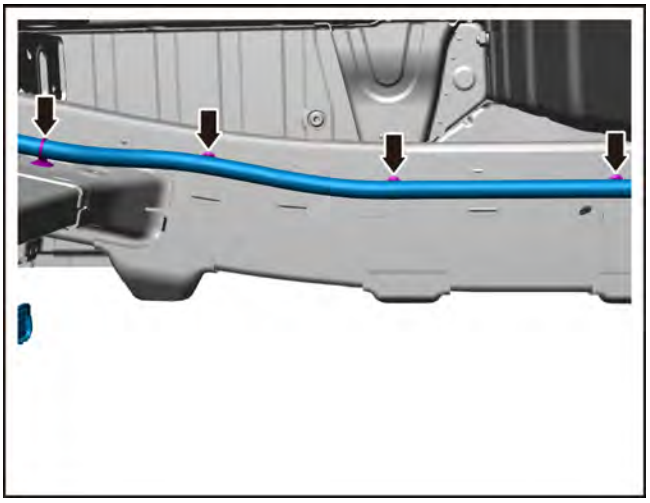
b. Release 2 chassis wiring harness retaining clips.



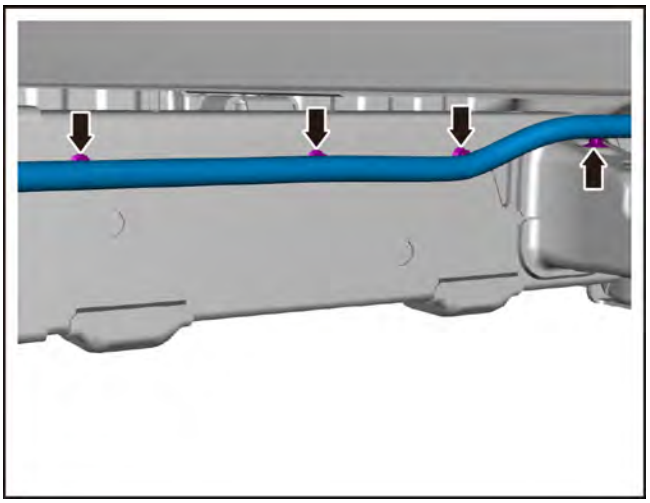
16 Release chassis wiring harness retaining clip.

a. Disconnect chassis wiring harness wiring harness connector.

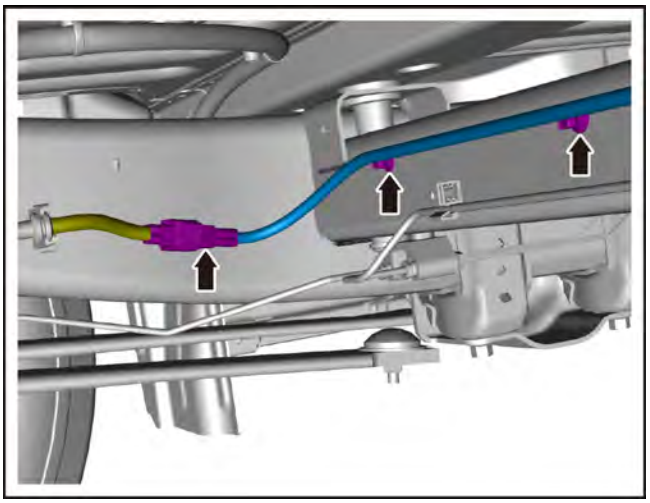
b. Release 4 chassis wiring harness retaining clips.



17 Release 4 chassis wiring harness retaining clips.



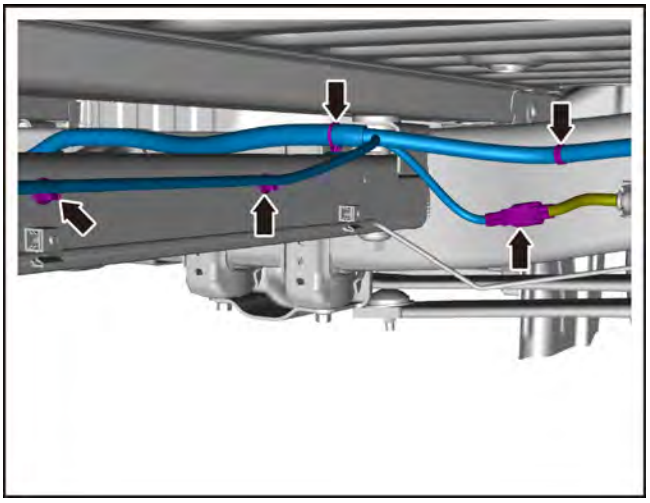
18 Release 4 chassis wiring harness retaining clips.



19 Release chassis wiring harness retaining clip.

a. Disconnect chassis wiring harness wiring harness connector.

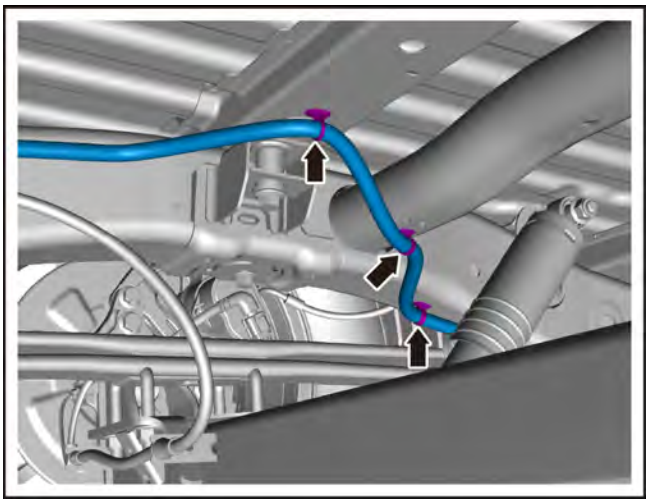
b. Release 2 chassis wiring harness retaining clips.



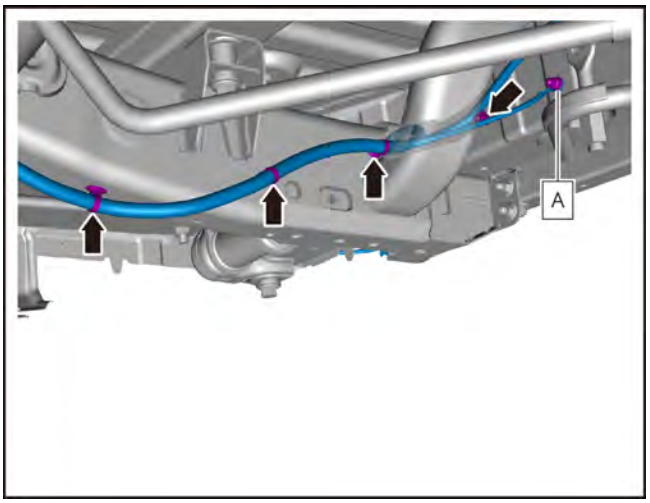
20 Release chassis wiring harness retaining clip.

a. Disconnect chassis wiring harness wiring harness connector.

b. Release 4 chassis wiring harness retaining clips.



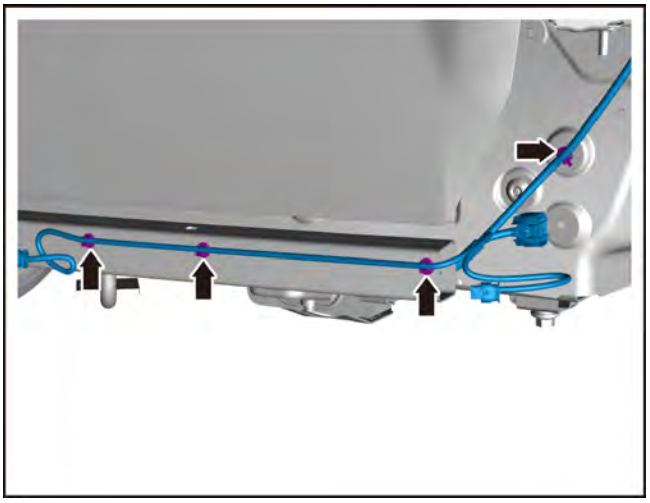
21 Release 3 chassis wiring harness retaining clips.



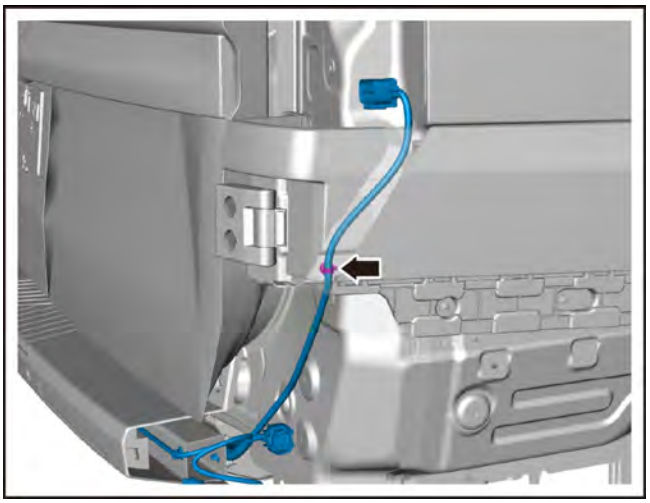
22 Remove chassis wiring harness fastener.

a. Remove chassis wiring harness ground cable retaining nut A.
Torque:xxx±xxN·m

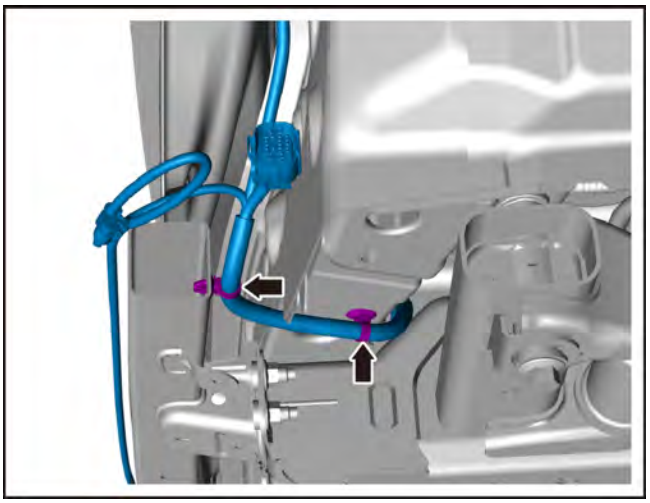
b. Release 4 chassis wiring harness retaining clips.



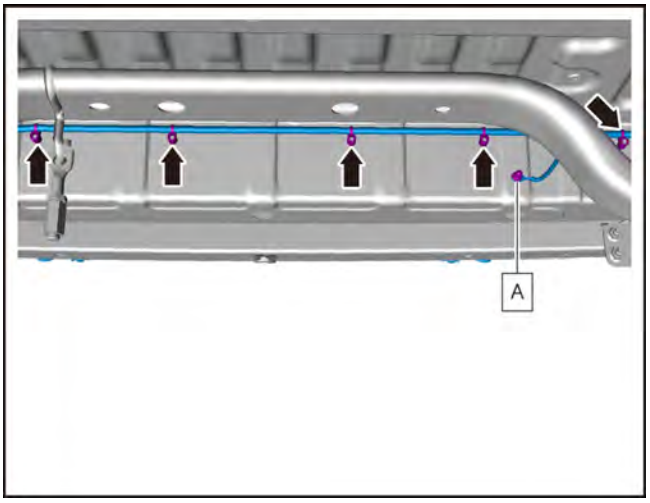
23 Release 4 chassis wiring harness retaining clips.



24 Release chassis wiring harness retaining clip.



25 Release 2 chassis wiring harness retaining clips.



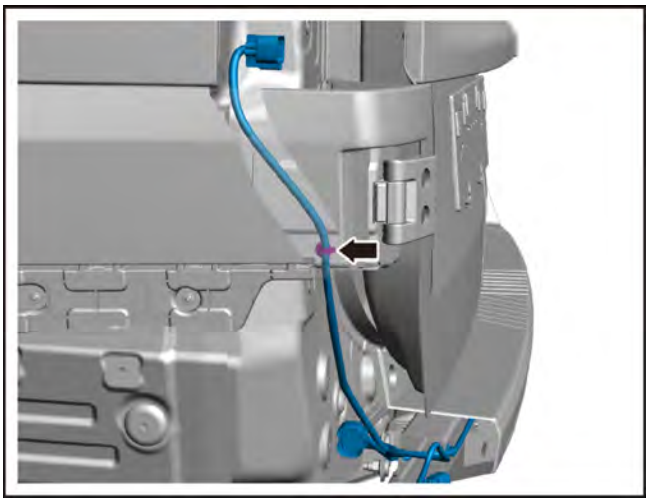
26 Release chassis wiring harness retaining clip.

a. Remove chassis wiring harness ground cable retaining nut A.
Torque:xxx±xxN·m

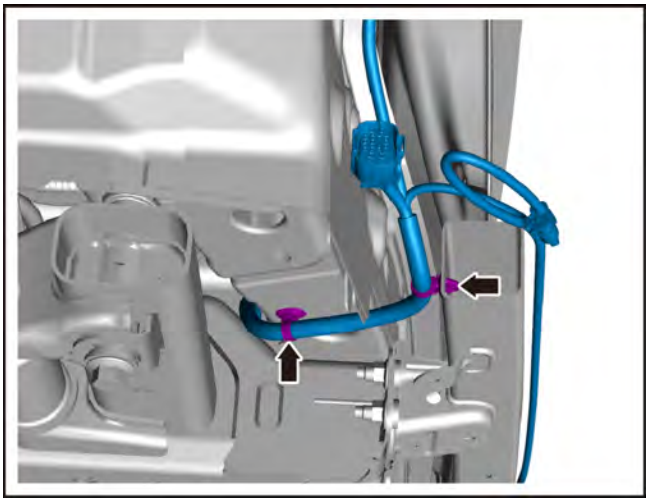
b. Release 5 chassis wiring harness retaining clips.



27 Release 4 chassis wiring harness retaining clips.



28 Release chassis wiring harness retaining clip.



29 release 2 retaining clip, remove chassis wiring harness.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

5 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

Left Front Door Wiring Harness Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

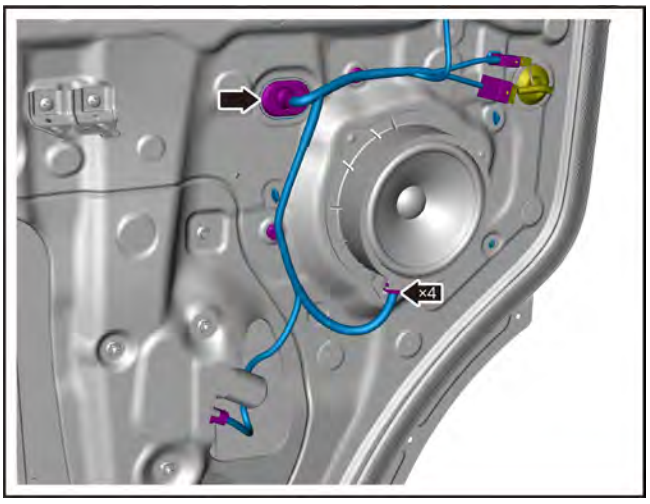
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

4 Remove left front door glass assembly. Refer to:Left Front Door Glass Assembly, Repair Procedure

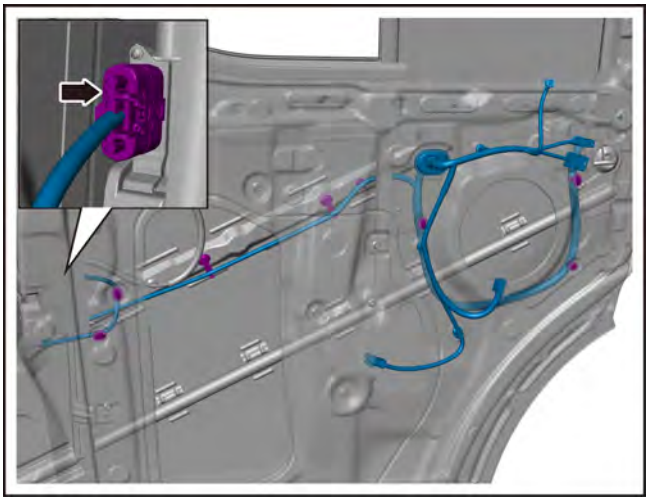


5 Remove left front door Wiring Harness Assembly.

a. Disconnect 4 left front door Wiring Harness Assembly wiring harness connectors.

b. Release left front door Wiring Harness Assembly wiring harness retaining clip.

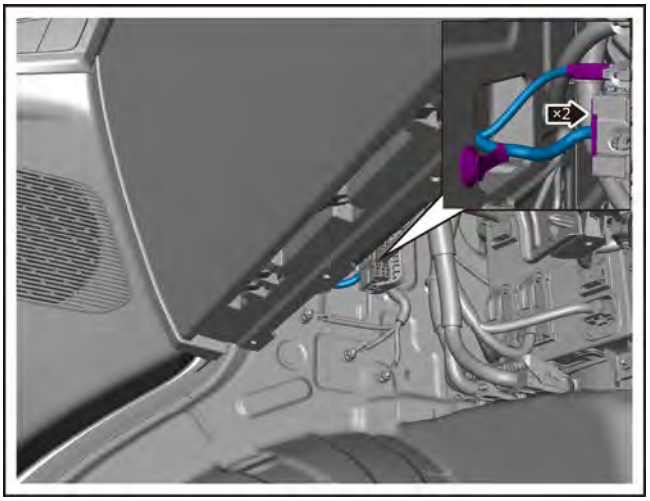
c. pressure output left front door Wiring Harness Assembly wiring harness retaining adhesive sleeve.



6 Remove left front door Wiring Harness Assembly.

a. Disconnect left front door Wiring Harness Assembly wiring harness connector.

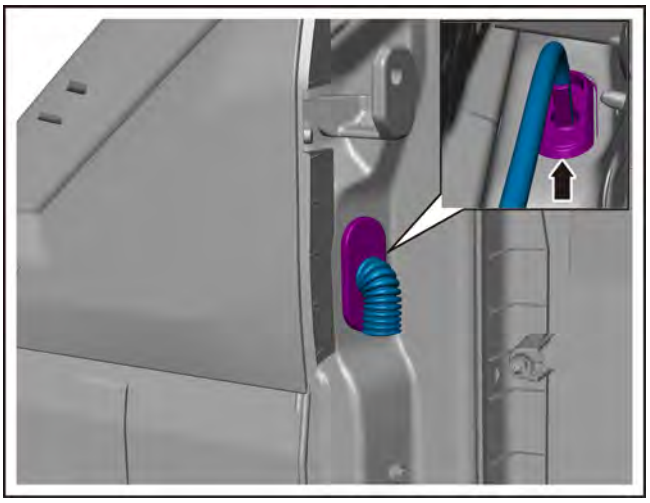
b. Release left front door Wiring Harness Assembly wiring harness retaining clip.



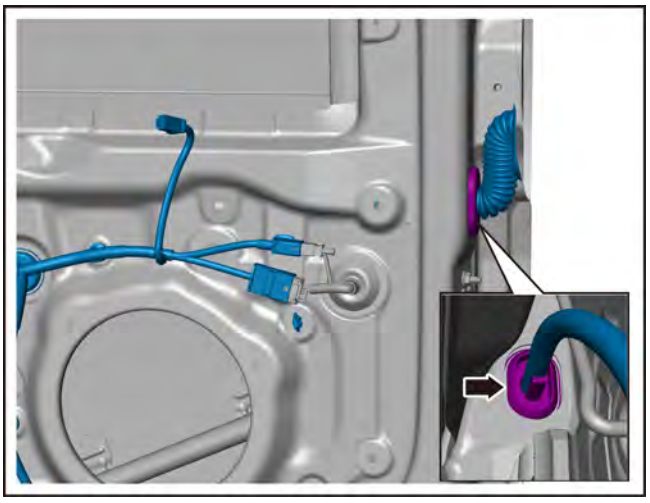
7 Remove left front door Wiring Harness Assembly.

a. Disconnect 2 left front door Wiring Harness Assembly wiring harness connectors.

b. Release left front door Wiring Harness Assembly wiring harness retaining clip.



8 release left front door Wiring Harness Assembly wiring harness retaining adhesive sleeve.



9 release wiring harness retaining adhesive sleeve, remove left front door Wiring Harness Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Left Sliding Door Wiring Harness Assembly, Repair Procedure

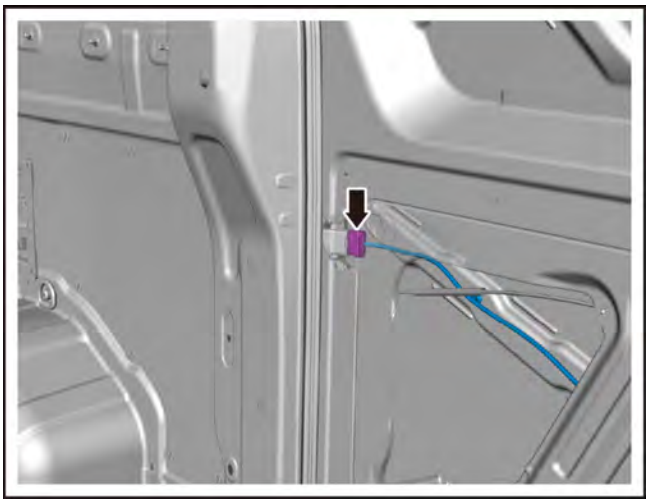
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

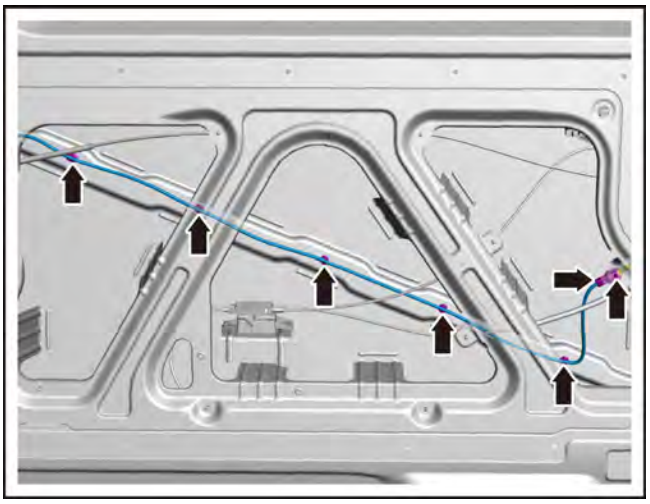
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure



3 Disconnect left Sliding Door wiring harness assembly wiring harness connector.



4 remove left Sliding Door wiring harness assembly.

a. Disconnect left Sliding Door wiring harness assembly wiring harness connector.

b. release 6 retaining clip, remove left Sliding Door wiring harness assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage.

Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

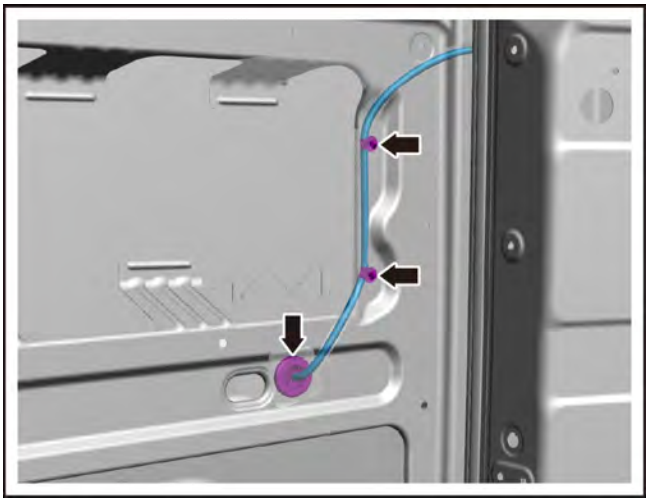
Left Rear Tailgate Wiring Harness Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove tailgate Shield Assembly left. Refer to:Tailgate Shield Assembly Left, Repair Procedure

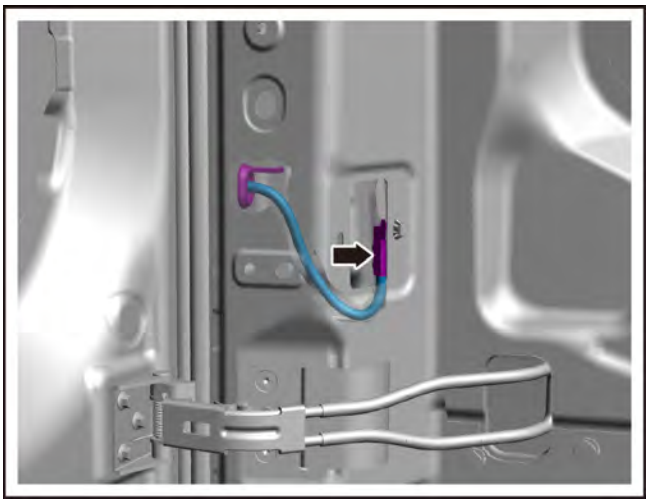
3 Remove Left License Plate Lamp Trim Cover Assembly. Refer to:Left License Plate Lamp Trim Cover Assembly, Removal and Installation



4 release left rear tailgate wiring harness assembly retaining part.

a. Release 2 left rear tailgate wiring harness assembly retaining clips.

b. release left rear tailgate wiring harness assembly retaining adhesive sleeve.



5 Disconnect left rear tailgate wiring harness assembly wiring harness connector.

a. Disconnect left rear tailgate wiring harness assembly wiring harness connector.

b. release left rear tailgate wiring harness assembly retaining adhesive sleeve.



6 release retaining adhesive sleeve, remove left rear tailgate wiring harness assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

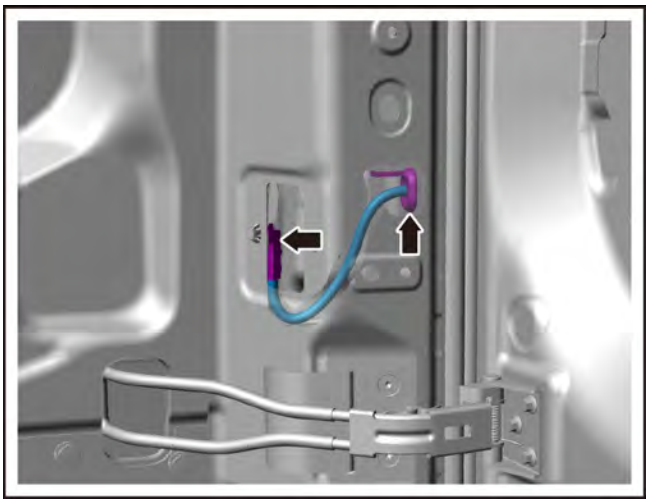
4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Right Rear Tailgate Wiring Harness Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

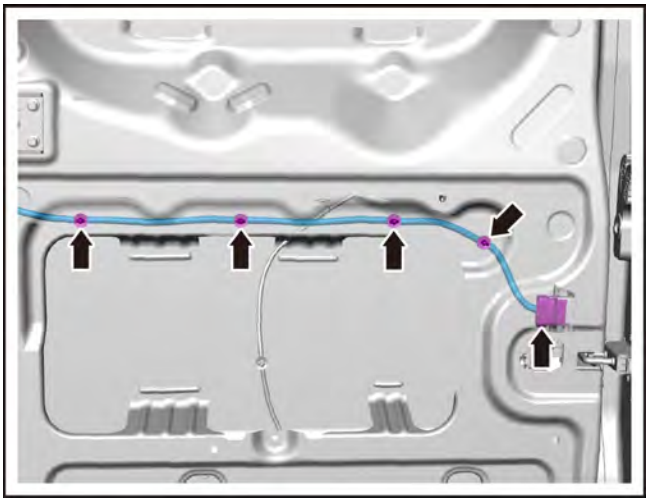
2 Remove tailgate protection assembly right. Refer to:Tailgate Shield Assembly Left, Repair Procedure



3 release right rear tailgate wiring harness assembly retaining adhesive sleeve.

a. Disconnect right rear tailgate wiring harness assembly wiring harness connector.

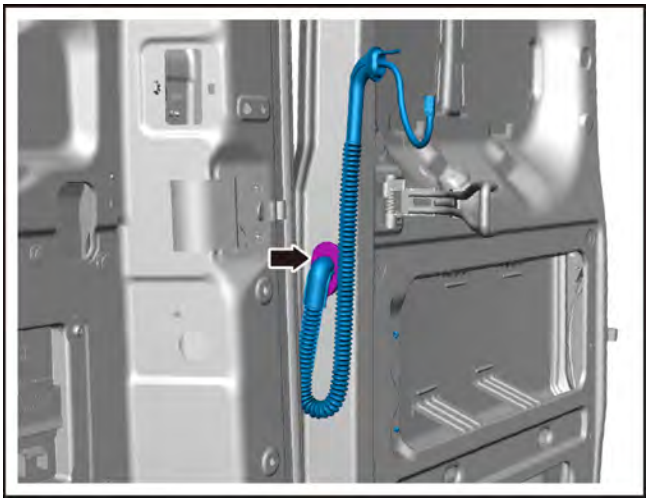
b. release right rear tailgate wiring harness assembly retaining adhesive sleeve.



4 Release right rear tailgate wiring harness assembly retaining clip.

a. Disconnect right rear tailgate wiring harness assembly wiring harness connector.

b. Release 4 right rear tailgate wiring harness assembly retaining clips.



5 release retaining adhesive sleeve, remove right rear tailgate wiring harness assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

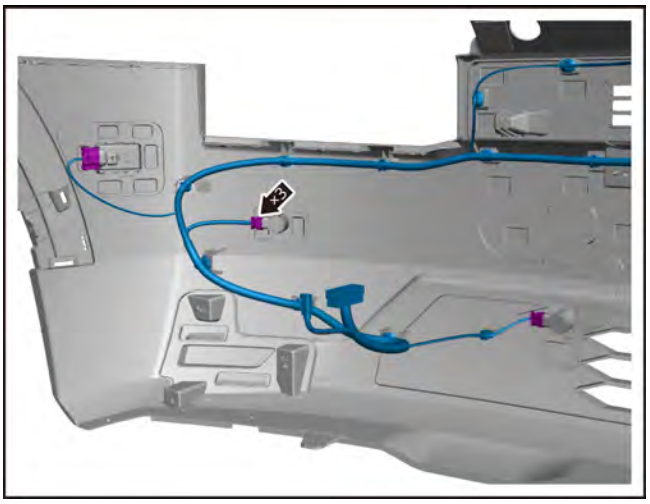
4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Front Bumper Wiring Harness, Repair Procedure

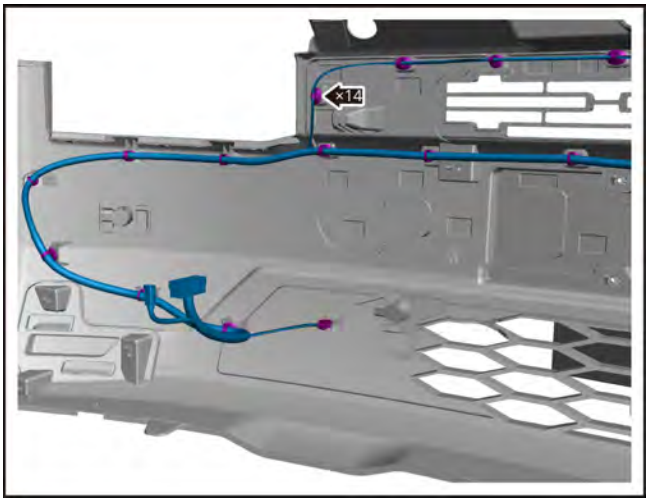
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

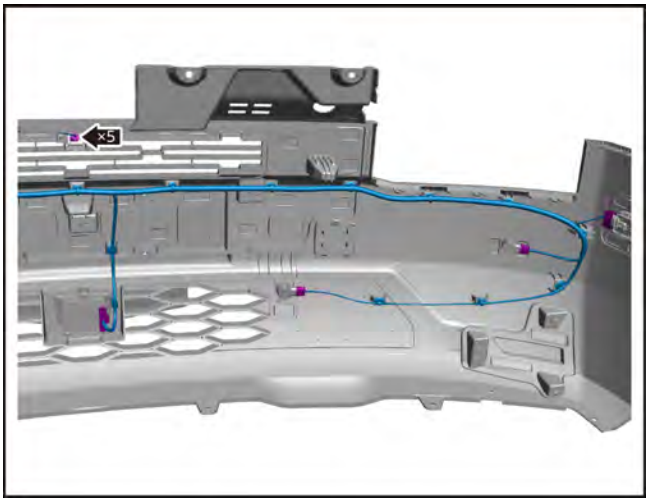
2 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



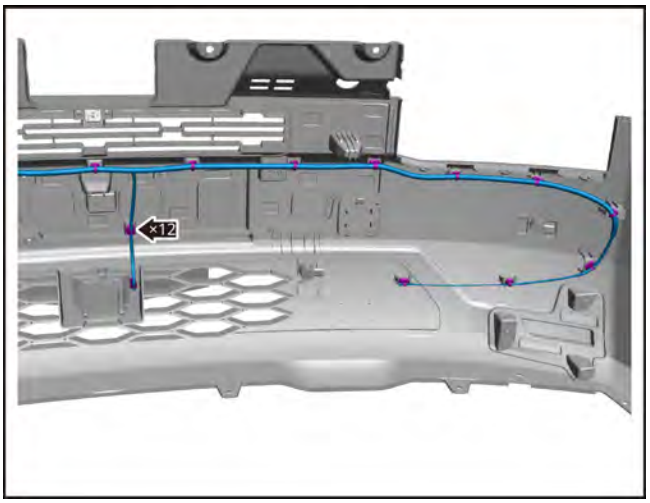
3 Disconnect 3 front bumper wiring harness wiring harness connectors.



4 Release 14 front bumper retaining clips.



5 disconnect front bumper wiring harness 5 wiring harness connector



6 release 12 retaining clip, remove front bumper wiring harness.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Rear Bumper Wiring Harness, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

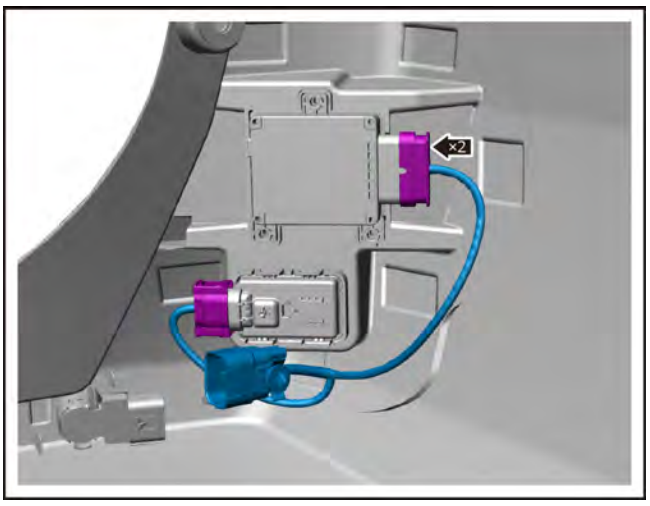
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

4 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation



5 disconnect 2 wiring harness connector, remove Rear Bumper Wiring Harness.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 When connecting the connector, make sure it is clean, dry and free of foreign matter.

3 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

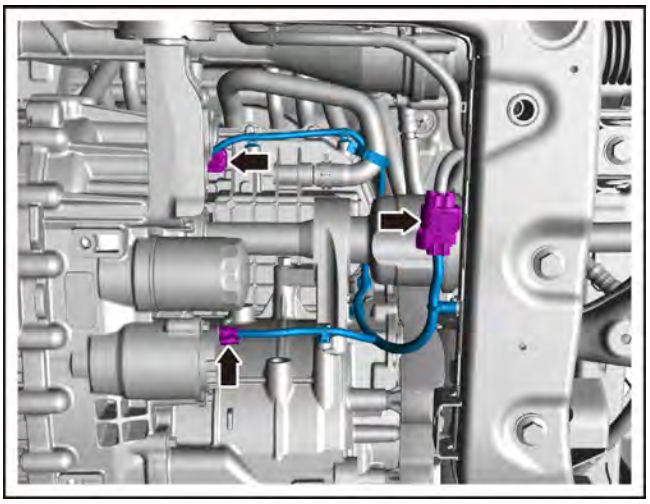
Subframe Jumper Harness, Repair Procedure

Removal Steps

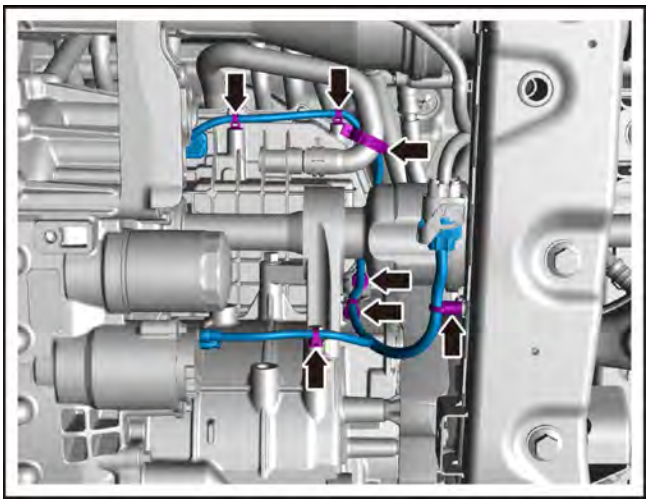
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure



4 Disconnect 3 subframe jumper harness wiring harness connectors.



5 release 7 retaining clip, remove subframe jumper harness.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

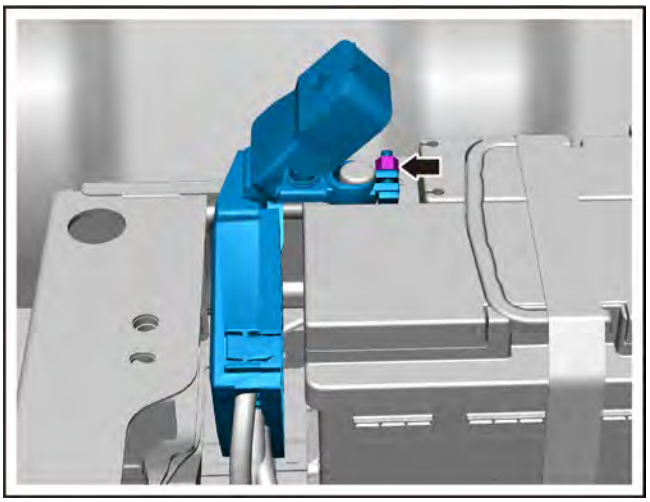
4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Positive Terminal Power Distribution Box, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

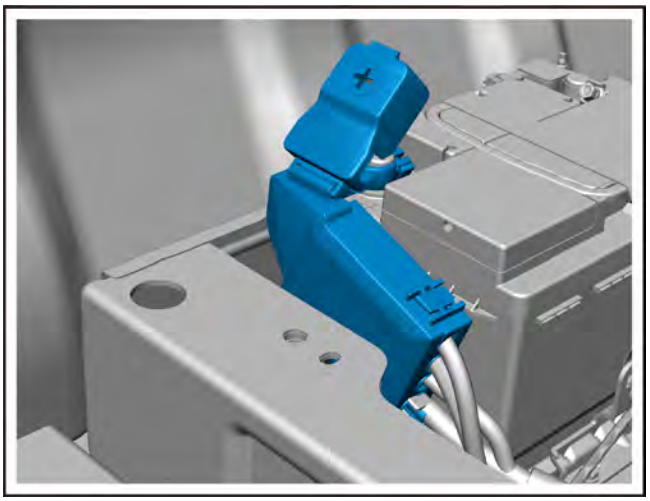
2 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure



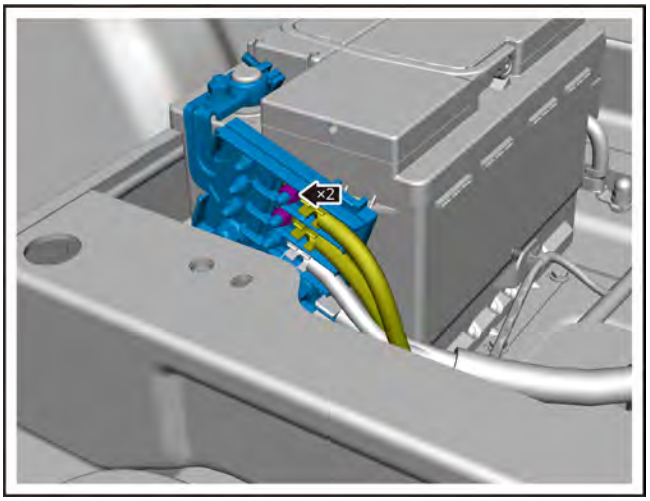
3 Remove positive terminal power distribution box assembly.

a. open positive terminal power distribution box cover cover.

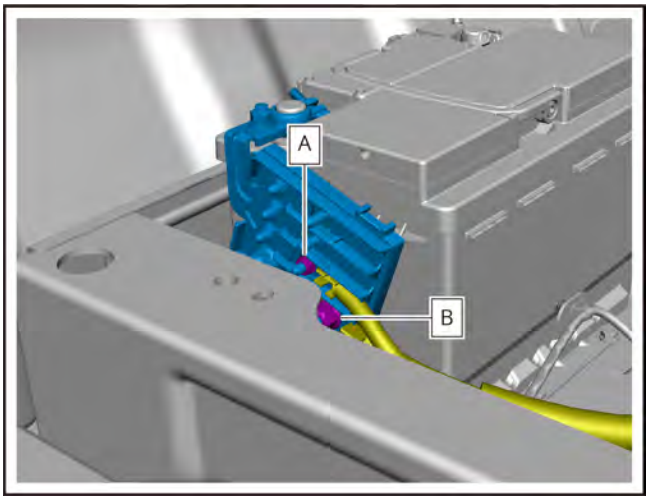
b. Remove positive terminal power distribution box assembly retaining nut.



4 release positive terminal power distribution box upper Cover Assembly.



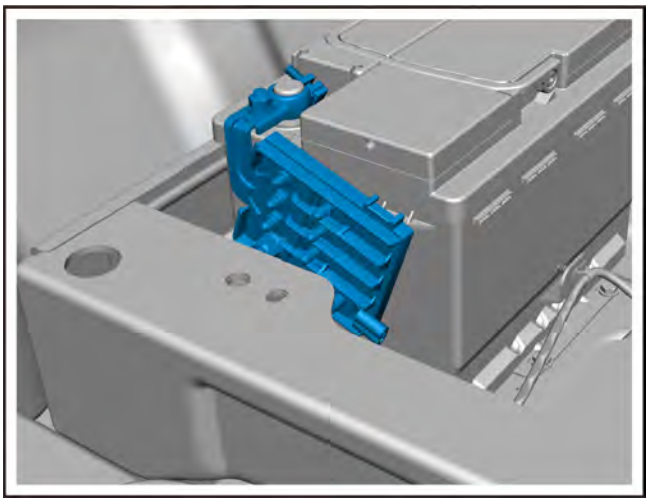
5 Remove 2 retaining nut, release front compartment wiring harness.



6 Remove positive terminal power distribution box assembly fastener.

a. Remove retaining nut A, release battery positive cable.

b. Remove retaining nut B, release battery positive cable.



7 remove positive terminal power distribution box assembly.

Installation Steps

1 Install in the reverse order of removal.

Battery Positive Cable, Repair Procedure

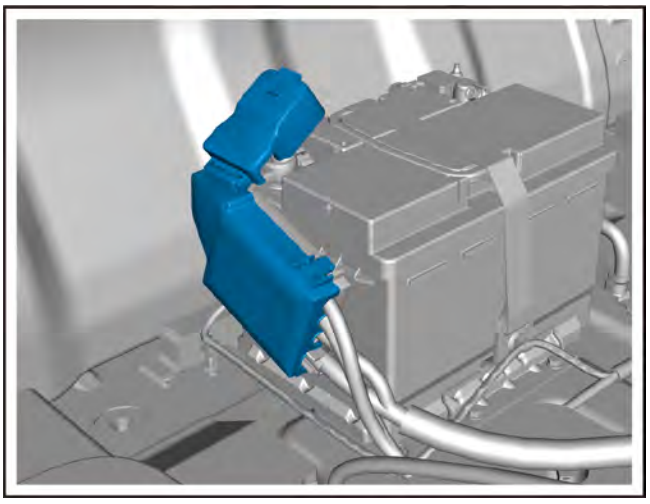
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

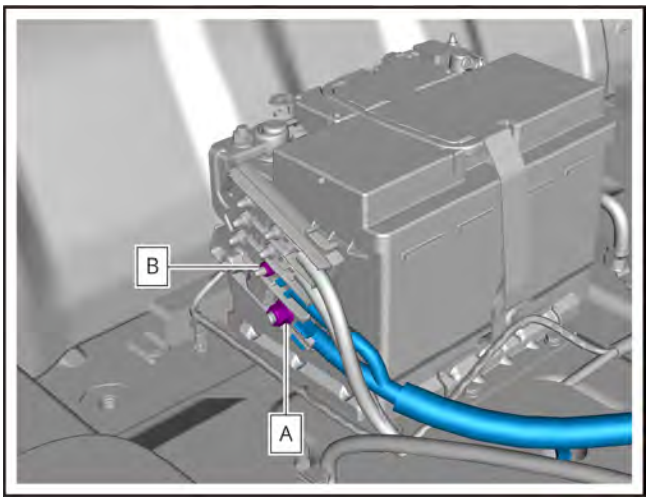
2 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure

3 Remove right front seat bracket assembly. Refer to:Right Front Seat Bracket Assembly, Repair Procedure

4 Remove Front Underbody Shield assembly. Refer to:Front Underbody Shield, Repair Procedure



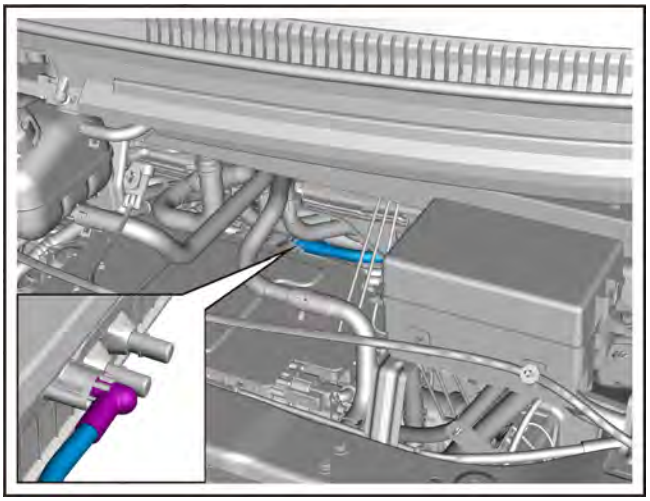
5 release positive terminal power distribution box cover cover.



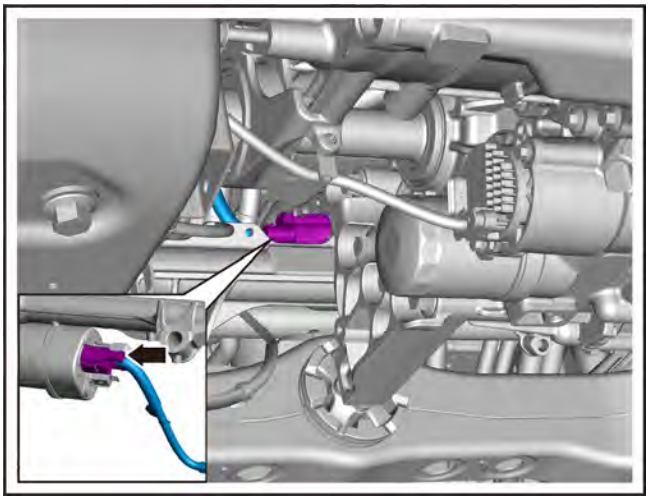
6 Remove battery positive cable.

a. Remove battery positive cable retaining nut A.

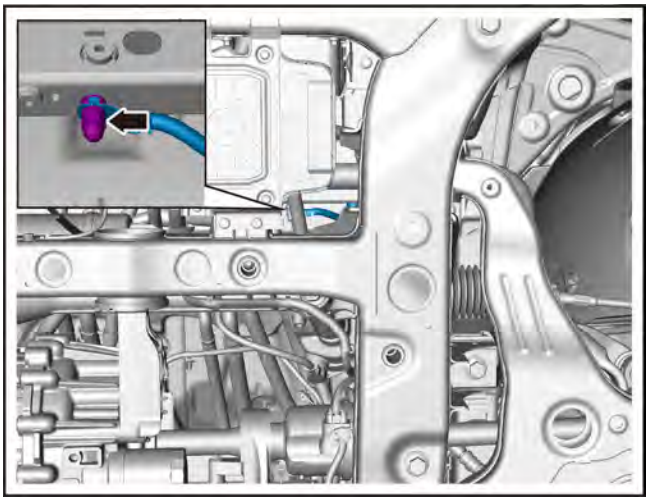
b. Remove battery positive cable retaining nut B.



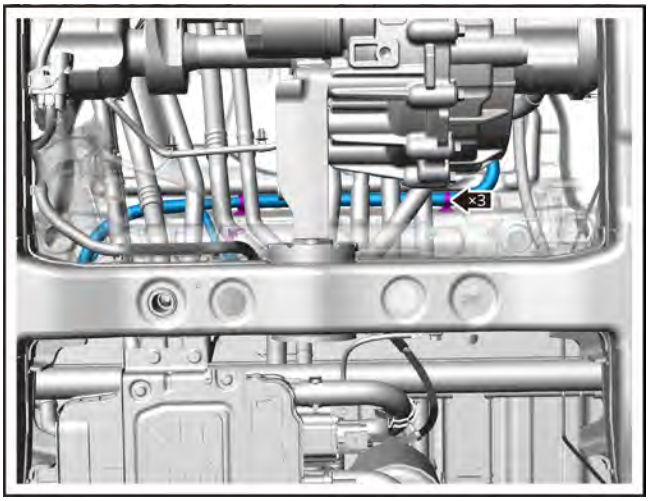
7 release battery positive cable connect wiring harness.



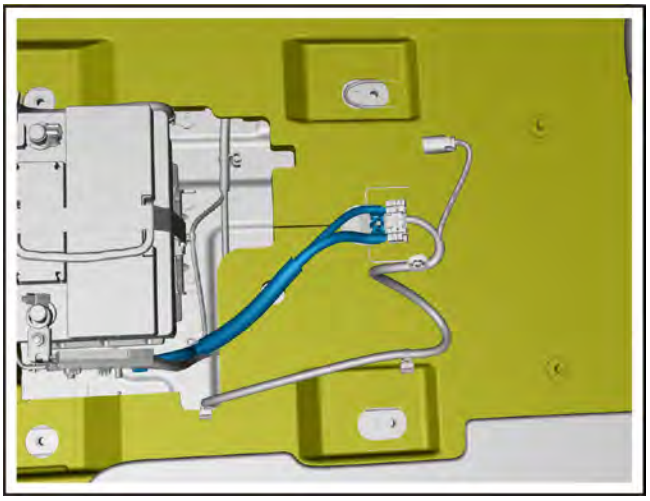
8 Disconnect battery positive terminal wiring harness connector.



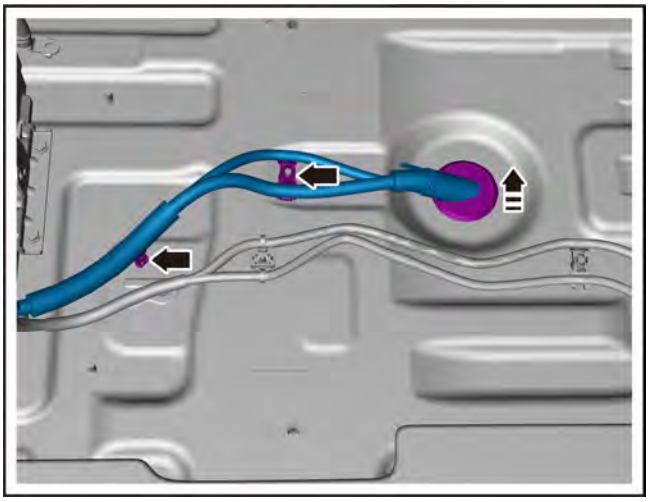
9 Remove battery positive cable ground cable retaining nut.



10 Release 3 battery positive cable assembly retaining clips.



11 Lift the relevant portion of the carpet.



12 release battery positive cable assembly fastener.

a. Release 2 battery positive cable retaining clips.

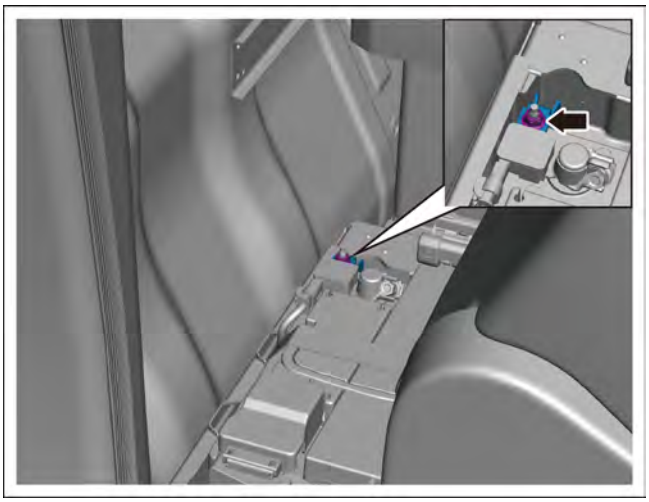
b. release retaining adhesive sleeve, remove battery positive cable assembly.

Installation Steps

1 Install in the reverse order of removal.

Battery Negative Wiring Harness, Repair Procedure

Removal Steps



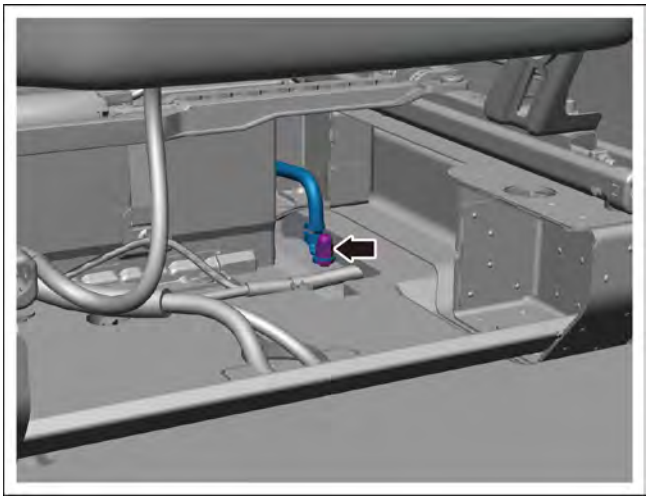
1 disconnect battery negative wiring harness and battery sensor connect.

a. right front Seat Assembly adjust to maximum front end Location.

b. Remove retaining nut, disconnect battery negative wiring harness and battery sensor connect.

Caution

must must in vehicle power supply completely disabled rear, side can Disconnect the negative battery cable. prohibit stop energized operation, No then may will cause system fault.



2 Remove retaining nut, remove battery negative wiring harness.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Frame Ground Wiring Harness, Repair Procedure

Removal Steps

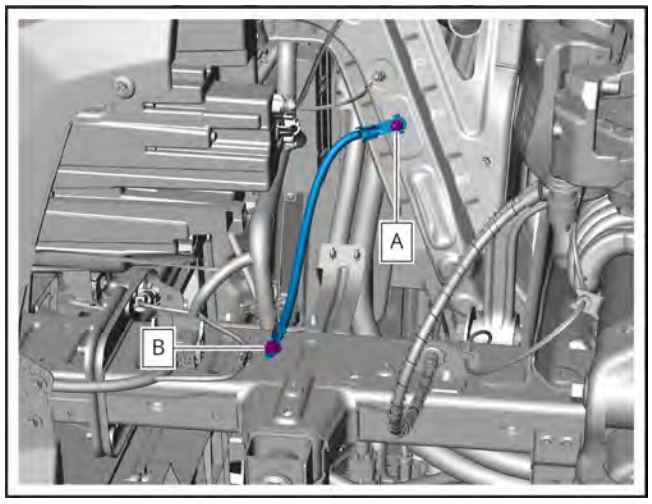
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Remove left front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

5 Remove left front wheel cover assembly. Refer to:Left Front Wheel Cover Assembly, Repair Procedure



6 Remove frame ground wiring harness.

a. Remove frame ground wiring harness retaining nut A.
Torque:xxx±xxN·m

b. Remove retaining bolt B, remove frame ground wiring harness.

Installation Steps

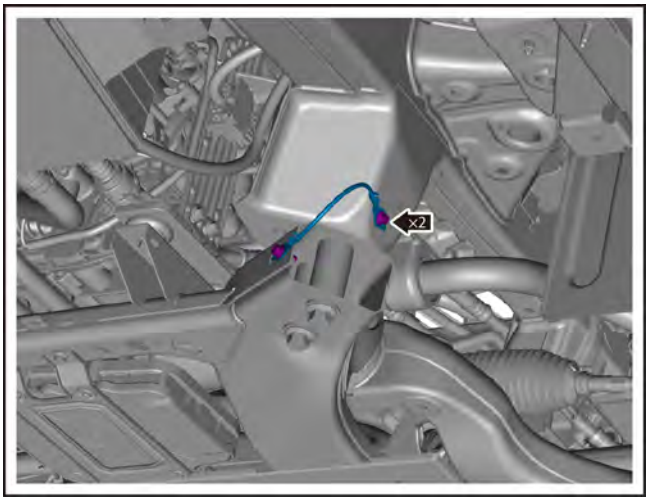
1 Install in the reverse order of removal.

Subframe Ground Wiring Harness, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support



3 Remove 2 retaining bolt, remove subframe ground wiring harness.

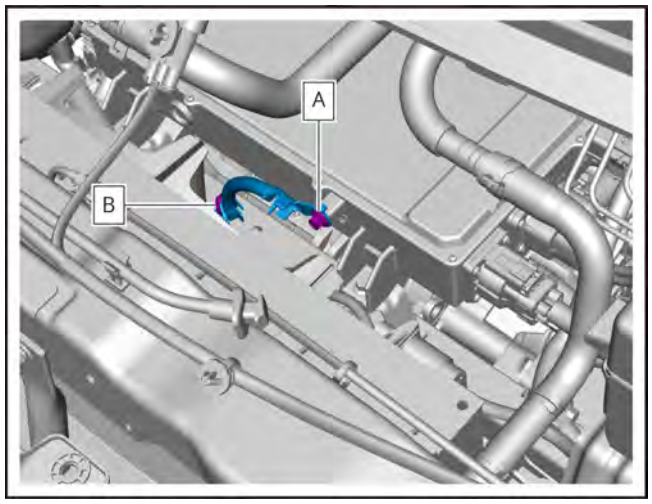
Installation Steps

1 Install in the reverse order of removal.

3-in-1 Negative Ground Harness 1, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 remove 3-in-1 Negative Ground Harness 1.

a. Remove 3-in-1 Negative Ground Harness 1 retaining nut A.

b. Remove retaining nut B, remove 3-in-1 Negative Ground Harness 1.

Installation Steps

1 Install in the reverse order of removal.

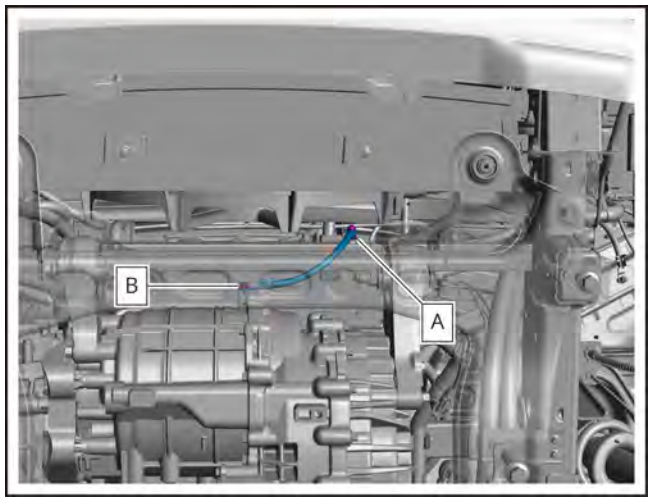
Motor Negative Ground Harness, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure



4 remove motor negative ground harness.

a. Remove motor negative ground harness retaining nut A.

b. Remove retaining bolt B, remove motor negative ground harness.

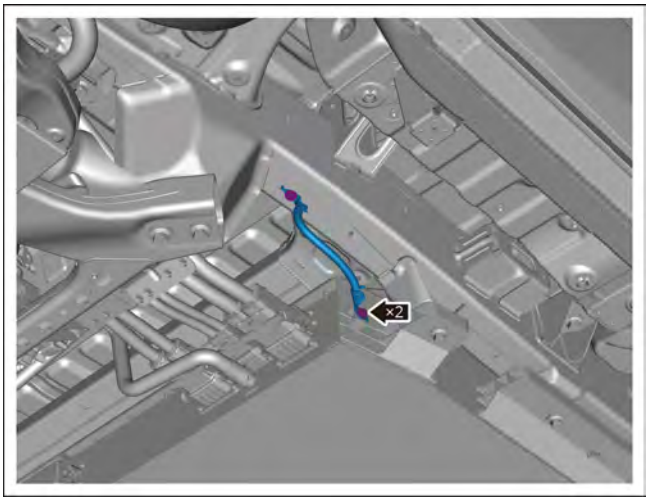
Installation Steps

1 Install in the reverse order of removal.

Battery Pack Negative Ground Wiring Harness, Repair Procedure

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 Remove 2 retaining bolt, remove battery pack negative ground wiring harness.

Installation Steps

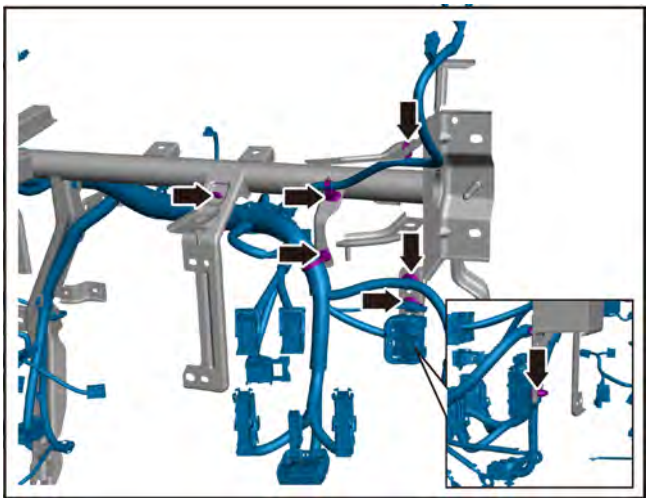
1 Install in the reverse order of removal.

Instrument Panel Wiring Harness Assembly, Repair Procedure

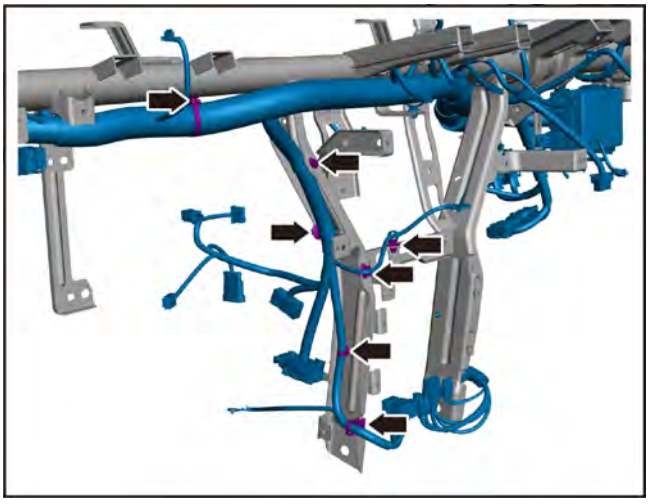
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

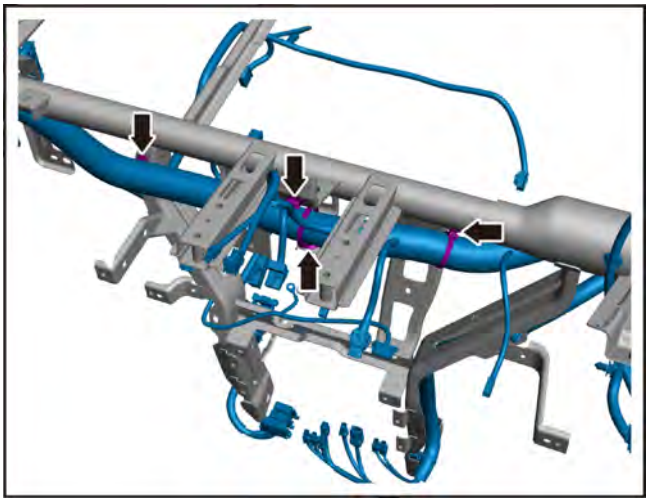
2 Remove instrument panel crossmember assembly -RHD. Refer to:Instrument Panel Crossmember Assembly -RHD, Removal and Installation



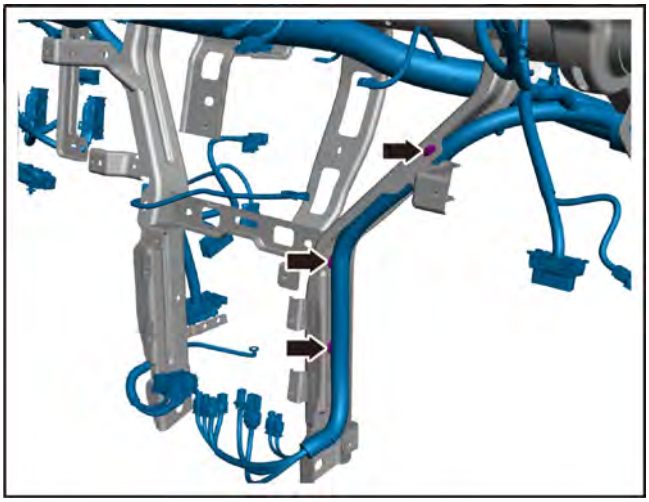
3 Remove instrument panel wiring harness connector retaining clip.



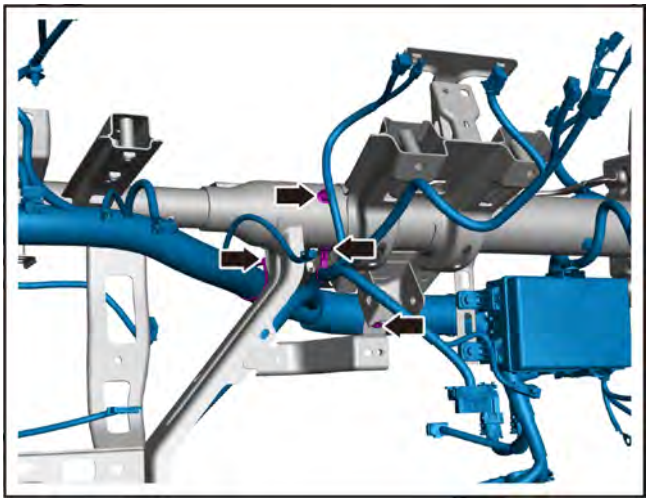
4 Remove instrument panel wiring harness connector retaining clip.



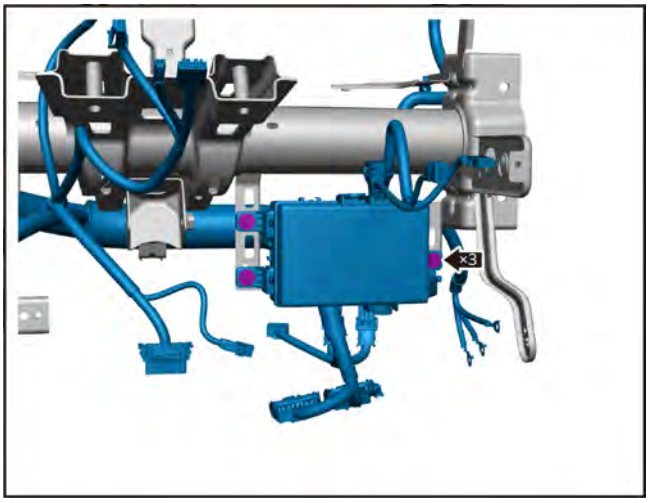
5 Remove instrument panel wiring harness connector retaining clip.



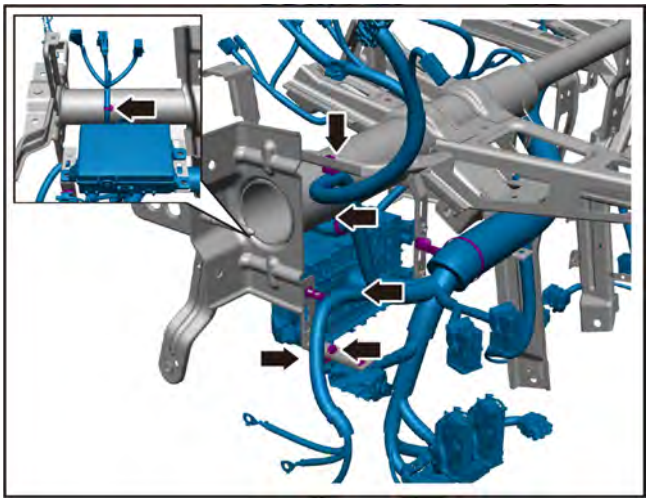
6 Remove instrument panel wiring harness connector retaining clip.



7 Remove instrument panel wiring harness connector retaining clip.



8 Remove instrument panel Wiring Harness Assembly 3 retaining bolt.



9 Remove wiring harness connector retaining clip, remove instrument panel Wiring Harness Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

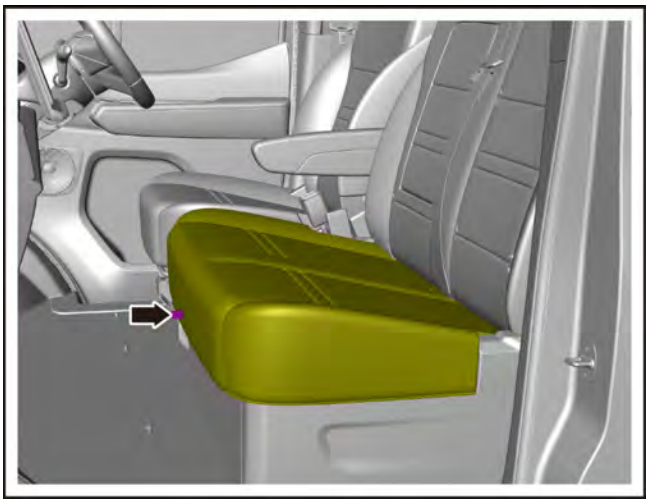
3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

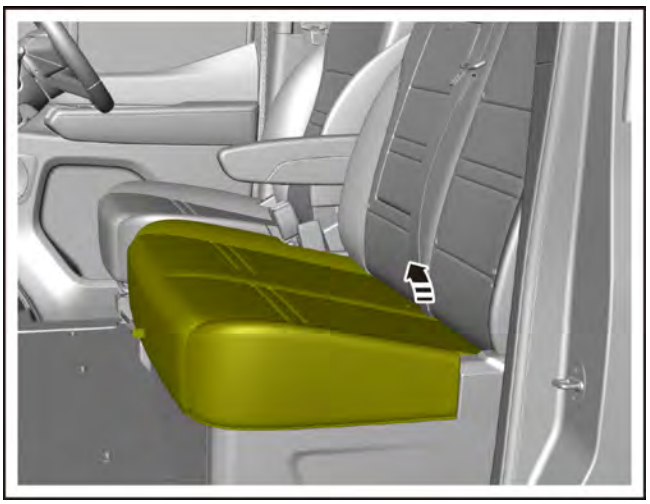
Two-Person Seat Cushion Wiring Harness, Repair Procedure

Removal Steps

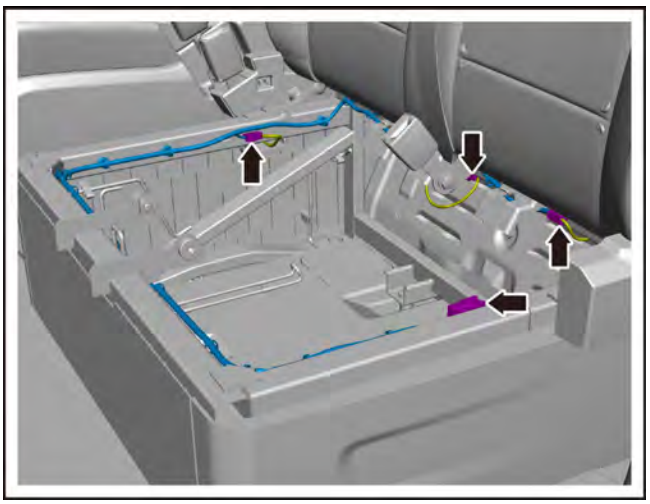
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



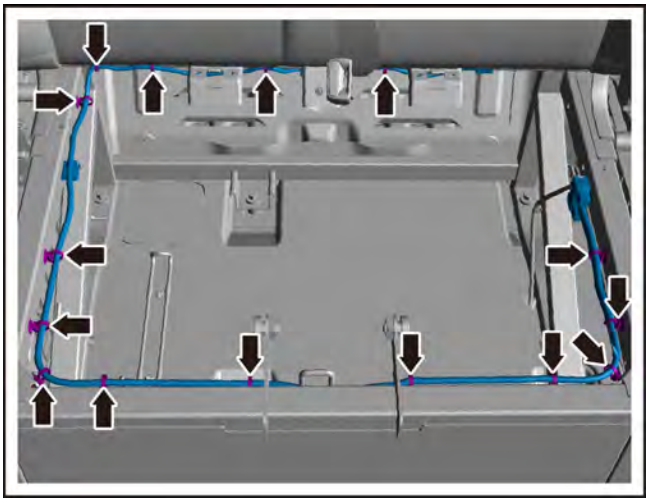
2 pull movement cable, release Left Front Two-person Seat Cushion Assembly buckle.



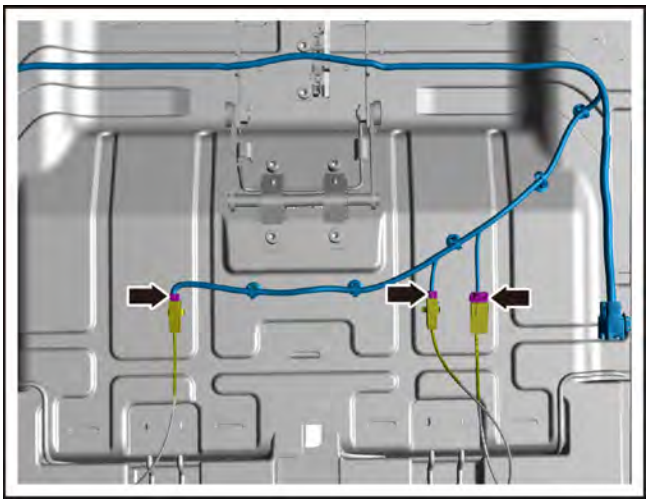
3 lift/open Left Front Two-person Seat Cushion Assembly.



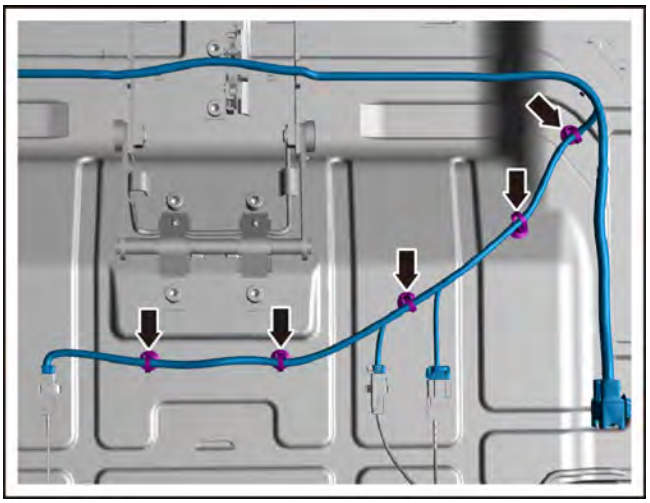
4 Disconnect 4 Two-person Seat Cushion Wiring Harness wiring harness connectors.



5 Release 15 Two-person Seat Cushion Wiring Harness retaining clips.



6 Disconnect 3 Two-person Seat Cushion Wiring Harness wiring harness connectors.



7 release 5 retaining clip, remove Two-person Seat Cushion Wiring Harness.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the wiring harness retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

lighting system

System Overview

inner part lighting

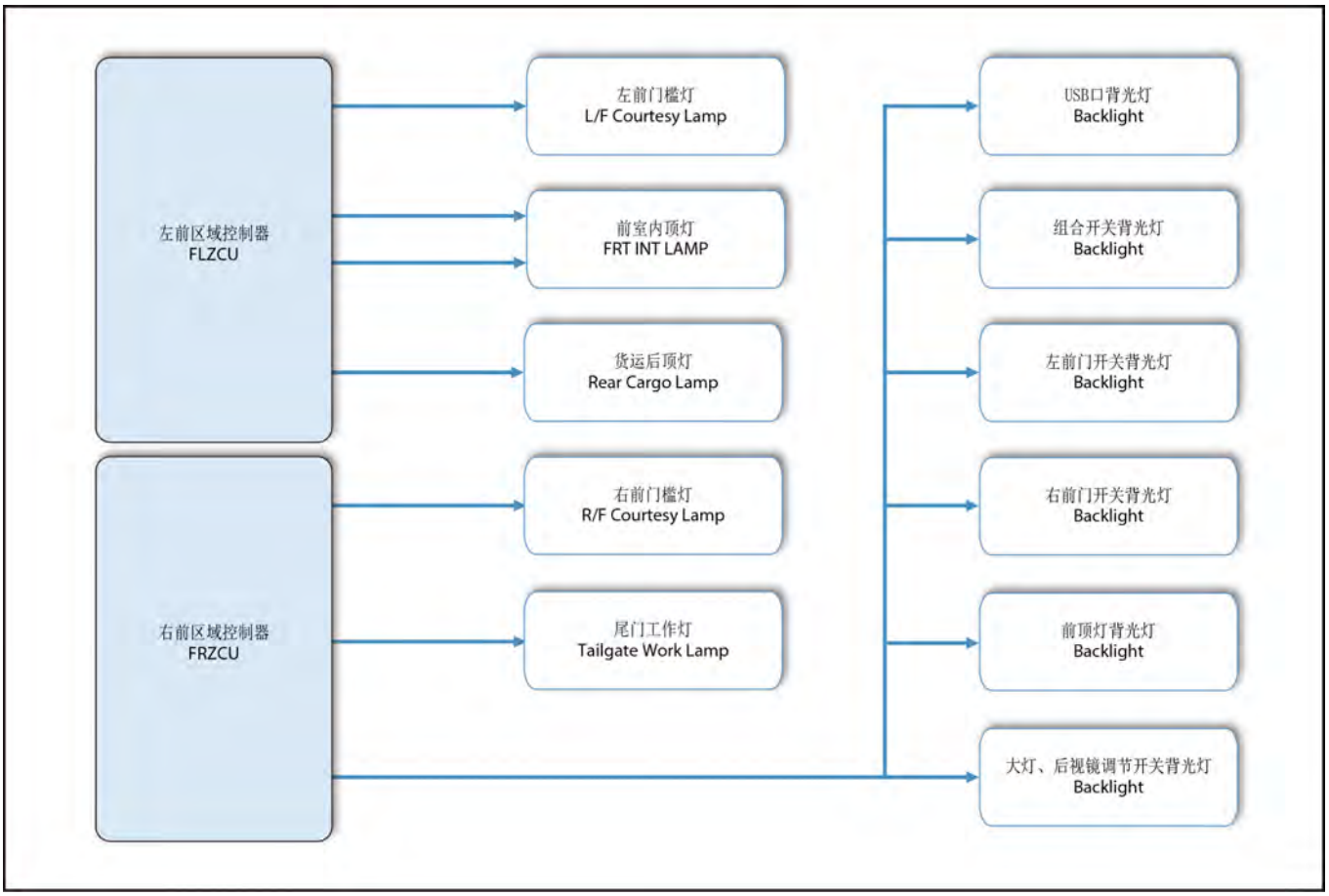
compartment inner lighting lamp

vehicle inner lighting package including compartment inner top lamp, rocker panel lamp, cargo operate Rear Dome Lamp, tailgate work lamp. compartment inner top lamp provide item occupant compartment basic lighting; rocker panel lamp open door illuminate, according to illuminate lower vehicle area; cargo operate Rear Dome Lamp enable cargo compartment lighting, convenient at cargo object check verification install item; tailgate work lamp with tailgate open illuminate, according to illuminate vehicle rear work area, meet sufficient weak light environment lower vehicle inner, cargo compartment and vehicle rear operation acquire light need request; Left Front Zone Control Unit control left front rocker panel lamp, front compartment inner top lamp, cargo operate left rear top lamp, cargo operate right rear top lamp, Right Front Zone Control Unit control right front rocker panel lamp, tailgate work lamp.

backlight

front top lamp, right rear USB, dual port USB, rearview mirror adjustment switch, large lamp adjustment switch, lamp light combination switch, left front Power Window Switch, Driver Side electronic clip hand switch, Front Passenger electronic clip hand switch, right front Power Window Switch backlight, by Right Front Zone Control Unit system I drive control.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	Hardwired	Power Supply	left front rocker panel lamp power supply Output
	Hardwired	Power Supply	front compartment inner top lamp power supply Output
	Hardwired	signal command	front compartment inner top lamp front door control signal Output
	Hardwired	Power Supply	cargo operate Rear Dome Lamp power supply Output
Right Front Zone Control Unit	Hardwired	Power Supply	right front rocker panel lamp power supply Output
	Hardwired	Power Supply	tailgate work lamp power supply Output
	Hardwired	Power Supply	all backlight power supply Output

Exterior Lighting

daytime operate Exterior Lighting

daytime operate Exterior Lighting in vehicle power up rear automatic illuminate, improve white day driving when vehicle item item degree, convenient at channel circuit other interaction communication reference and and when detect this vehicle, valid lower low daytime operate vehicle collision air hazard; open Dipped-beam Headlamps when, daytime operate Exterior Lighting press setting determine item item turn off or lower low illuminate degree, daytime operate Exterior Lighting illuminate command by Left Front Zone Control Unit, Right Front Zone Control Unit section distinguish lower send.

Fog Lamp

Rear Fog Lamp by driver hand movement control open, in fog, rain, item etc. low can item degree operating condition lower work, with high illuminate degree warning rear side vehicle, improve this vehicle rear recognition degree, lower low item rear air hazard, same when follow method specification related illuminate logic need request, Rear Fog Lamp illuminate command by Right Front Zone Control Unit lower send.

steering, Hazard Warning Lamps

Turn Signal Lamp use at Note vehicle steering, lane change intent map; Hazard Warning Lamps control left Right Direction Indicator synchronization flash, vehicle fault or temporary when stop rely on when open, warning around side channel circuit reference and.

Stop Lamp

Stop Lamp in driver Depress the brake pedal when illuminate, warning rear side vehicle this vehicle positive in reduce speed brake, remind rear vehicle and when acquire remove avoidance measure, lower low item rear accident air hazard, signal by Left Front Zone Control Unit perform control.

Backup Lamp

vehicle engage enter reverse gear when Backup Lamp automatic illuminate, according to illuminate vehicle rear side area, convenient at reverse observe; same when warning around side vehicle and operate person, Backup Lamp control command by Right Front Zone Control Unit lower send.

Position Lamps

Position Lamps by driver hand movement open, illuminate rear identification vehicle wheel item and width, convenient at night, item item environment lower around side interaction communication reference and recognition vehicle Location; Position Lamps control command by Left Front Zone Control Unit, Right Front Zone Control Unit section distinguish lower send.

blind area Indicator Lamp

blind area Indicator Lamp in system monitoring to vehicle side rear side store in target vehicle when illuminate, remind driver phase adjacent vehicle channel with vehicle near, specification avoid lane change air hazard, Indicator Lamp drive command by Left Front Zone Control Unit, Right Front Zone Control Unit section distinguish lower send.

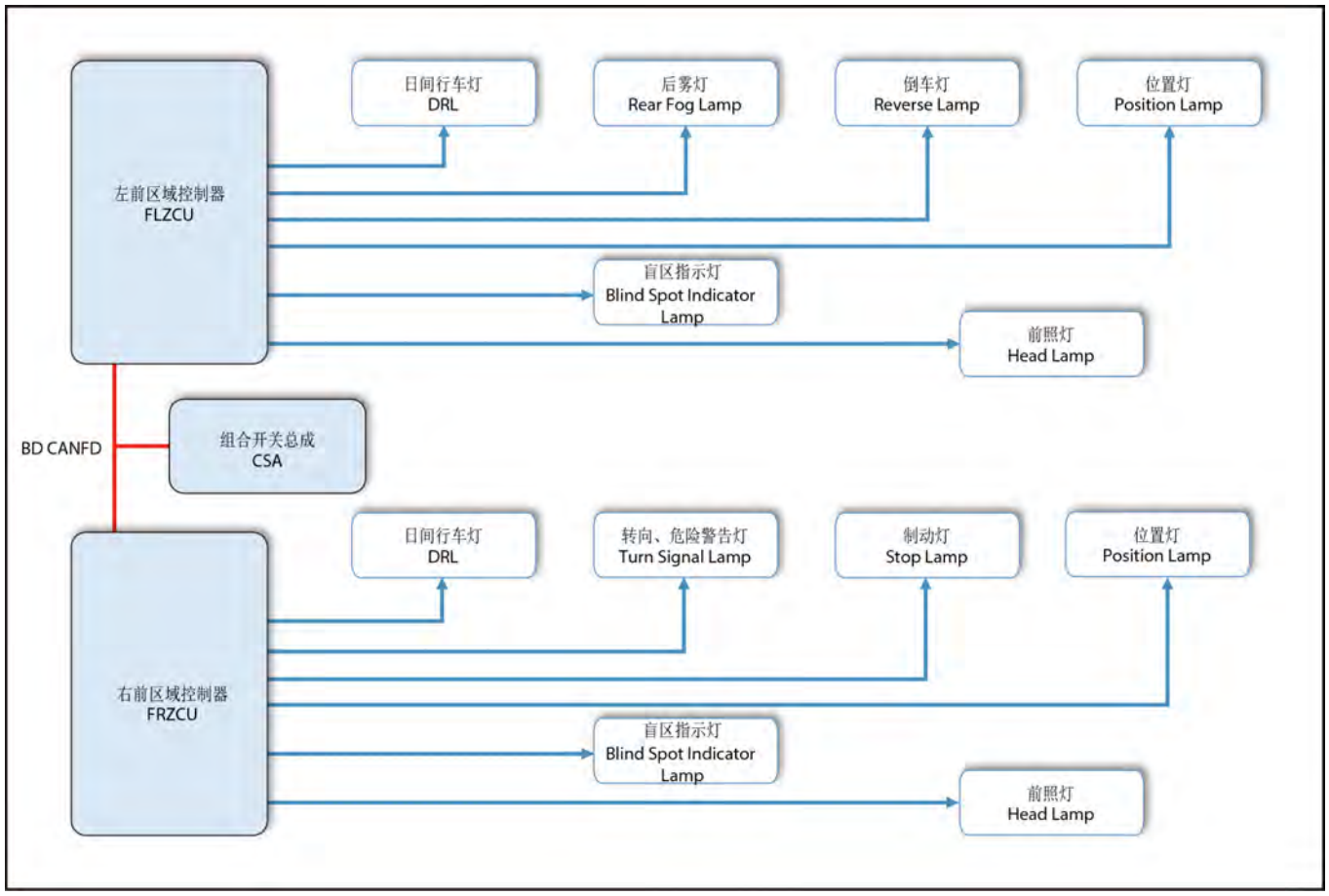
license plate lamp

license plate lamp with Position Lamps synchronization illuminate, use at night and weak light environment according to illuminate vehicle No. sign, meet sufficient method specification need request, it control command by Right Front Zone Control Unit lower send.

Headlamp

Headlamp by driver hand movement control, package including near light, remote light mode, for night and item item operating condition provide front side channel circuit lighting; have backup corresponding method specification control logic, illuminate control command by Left Front Zone Control Unit, Right Front Zone Control Unit section distinguish lower send.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	Hardwired	signal command	daytime operate Exterior Lighting control power supply Output
	Hardwired	signal command	Rear Fog Lamp control power supply Output
	Hardwired	signal command	Backup Lamp control power supply Output
	Hardwired	signal command	Position Lamps control power supply Output
	Hardwired	signal command	blind area Indicator Lamp control power supply Output
	Hardwired	signal command	Headlamp control power supply Output
	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	Hardwired	signal command	daytime operate Exterior Lighting control power supply Output
	Hardwired	signal command	steering, Hazard Warning Lamps control power supply Output
	Hardwired	signal command	Stop Lamp control power supply Output
	Hardwired	signal command	Position Lamps control power supply Output
	Hardwired	signal command	blind area Indicator Lamp control power supply Output
	Hardwired	signal command	Headlamp control power supply Output
	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
combination switch assembly	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Component Description

Headlamp

Headlamp layout position at body front both sides, integrated Dipped-beam Headlamps and Main-beam Headlamps, mainly used for vehicle night and low can item degree operating condition lower provide front side channel circuit lighting. vehicle controller according to driving operating condition control Headlamp, switch replace near remote light work mode, enable channel circuit safety lighting and can consumption improve management.

Stop Lamp

Stop Lamp layout position at vehicle rear, main need Function for vehicle brake when illuminate, direction rear side interaction communication reference and transmit brake signal. vehicle controller according to brake operating condition control Stop Lamp item stop, and when warning rear side vehicle, improve driving safety.

steering, Hazard Warning Lamps

steering and Hazard Warning Lamps layout position at body front rear both sides, main need Function for transmit vehicle steering, emergency warning signal. vehicle controller according to driving operation operating condition control lamp have item stop, Note around side interaction communication reference and, ensure operate vehicle interaction safety.

Repair Procedure

Left Front Combination Lamp Assembly, Repair Procedure

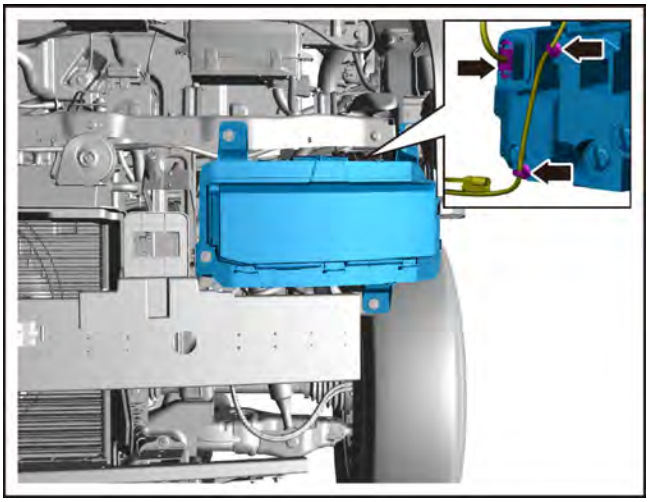
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

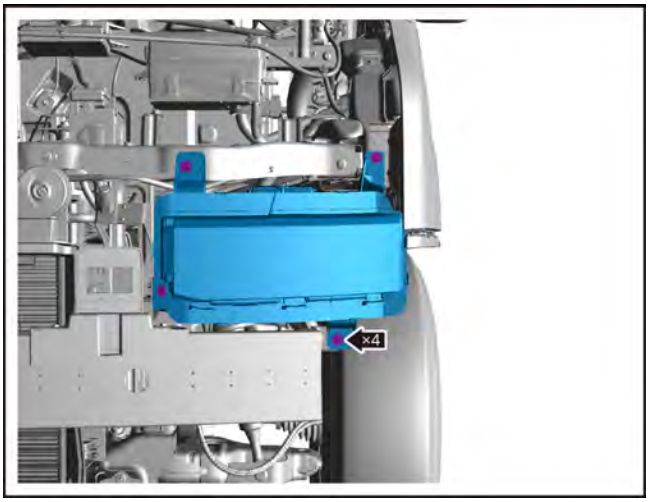
2 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



3 Disconnect left front Combination Lamp Assembly wiring harness connector.

a. Release 2 front compartment wiring harness assembly retaining clips.

b. Disconnect left front Combination Lamp Assembly wiring harness connector.



4 Remove 4 retaining bolt, remove left front Combination Lamp Assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, according to times open each lamp light gear position, ensure combination lamp each lamp light normal illuminate, lamp light clear clear illuminate no dimming.

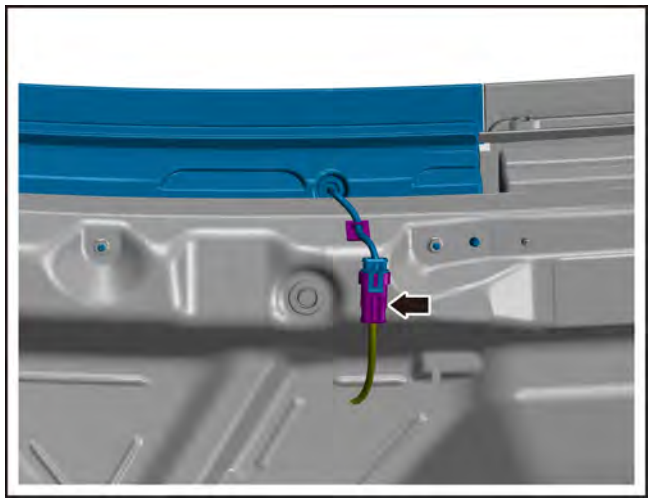
Left Front Position Lamp Assembly, Repair Procedure

Tips

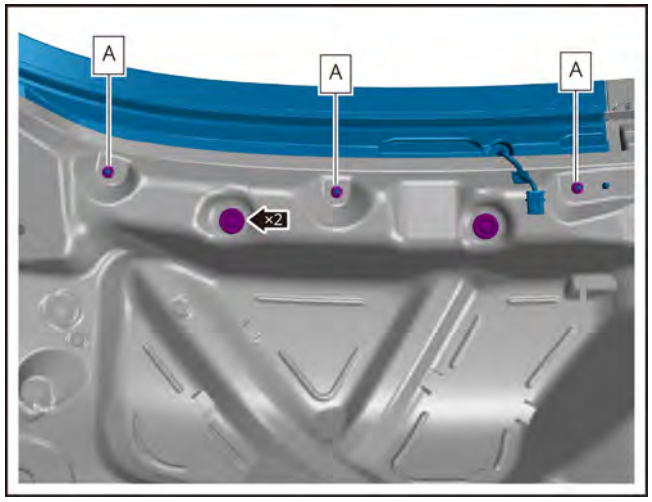
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

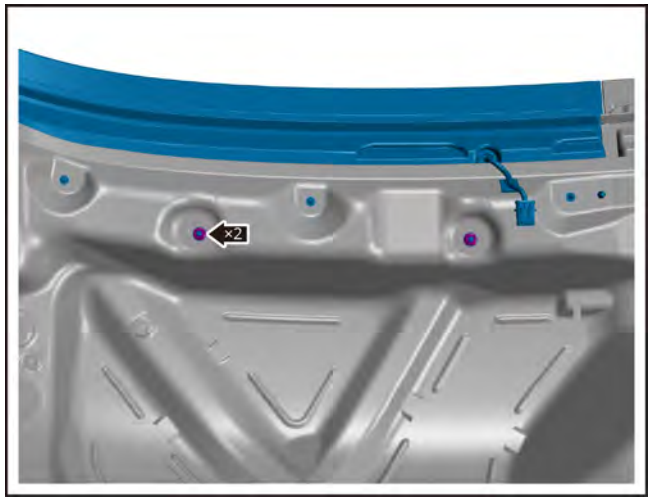
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Release Left Front Position Lamp Assembly wiring harness retaining clip.
   a. Disconnect Left Front Position Lamp Assembly wiring harness connector.
   b. Release Left Front Position Lamp Assembly wiring harness retaining clip.



3 Remove blocked part.
   a. Remove Left Front Position Lamp Assembly 3 retaining nut A.
   b. Remove 2 blocked part.



4 Remove 2 retaining nut, remove Left Front Position Lamp Assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

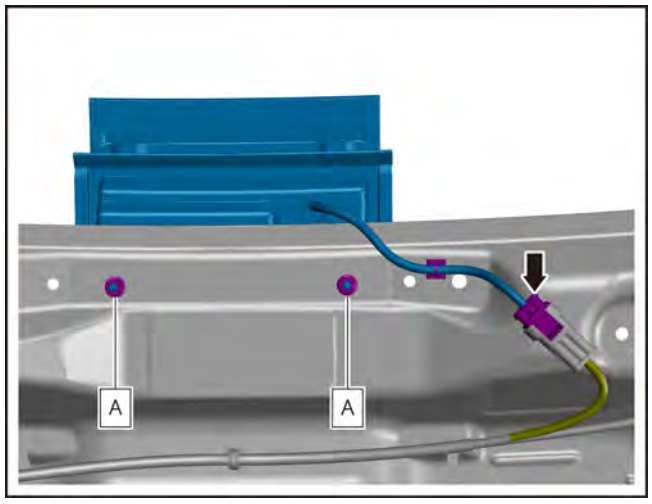
Install complete rear, open lamp light, ensure Position Lamps each lamp light normal illuminate, lamp light clear clear illuminate no dimming.

LOGO Lamp Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left, right front Position Lamps assembly. Refer to:Left Front Position Lamp Assembly, Repair Procedure

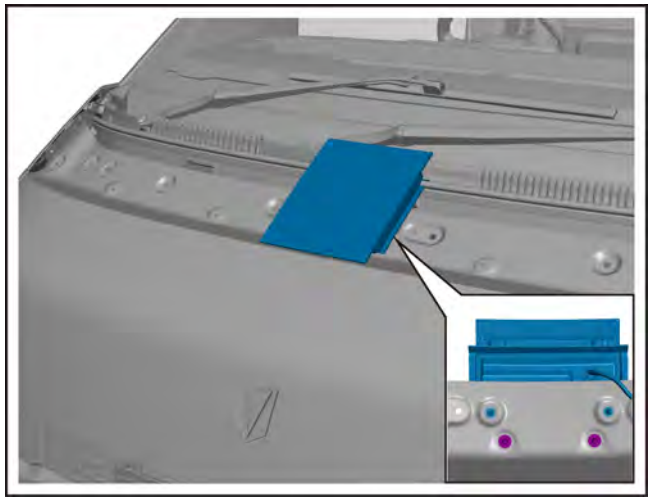


3 Remove LOGO lamp assembly retaining nut.

a. Disconnect front compartment wiring harness assembly wiring harness connector.

b. Release LOGO lamp assembly wiring harness retaining clip.

c. Remove LOGO lamp assembly 2 retaining nut A.



4 release retaining clip, remove LOGO lamp assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, open LOGO lamp light, ensure LOGO lamp lamp light normal illuminate, lamp light clear clear illuminate no dimming.

Left Marker Lamp Assembly, Repair Procedure

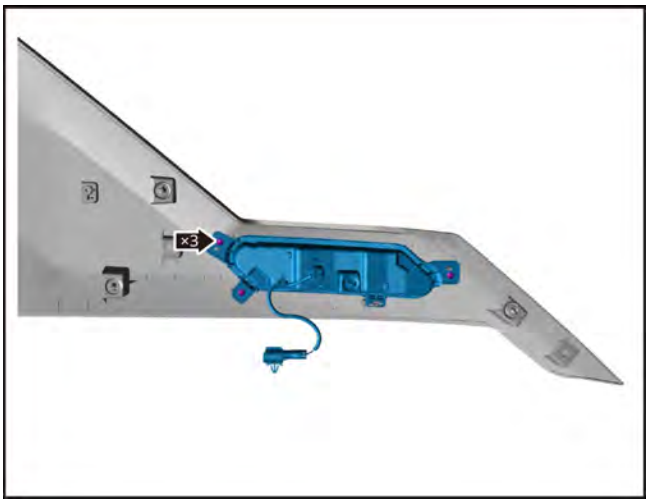
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation



3 Remove 3 retaining screw, remove left marker lamp assembly.

Installation Steps

1 Install in the reverse order of removal.

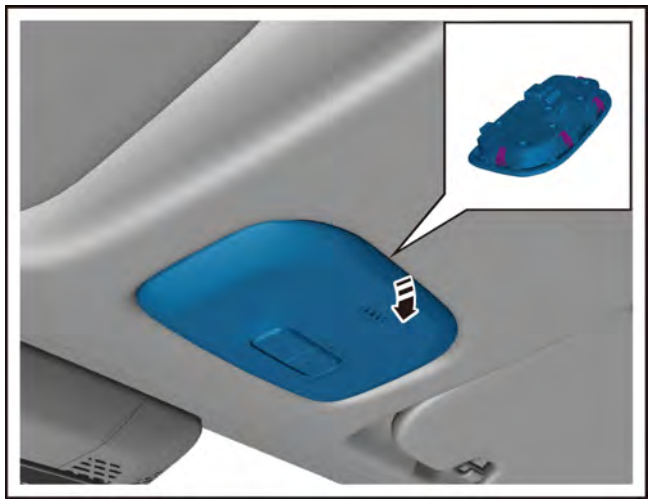
Inspection and Verification:

Install complete rear, open lamp light, ensure marker lamp each lamp light normal illuminate, lamp light clear clear illuminate no dimming.

Front Interior Lamp Assembly, Repair Procedure

Removal Steps

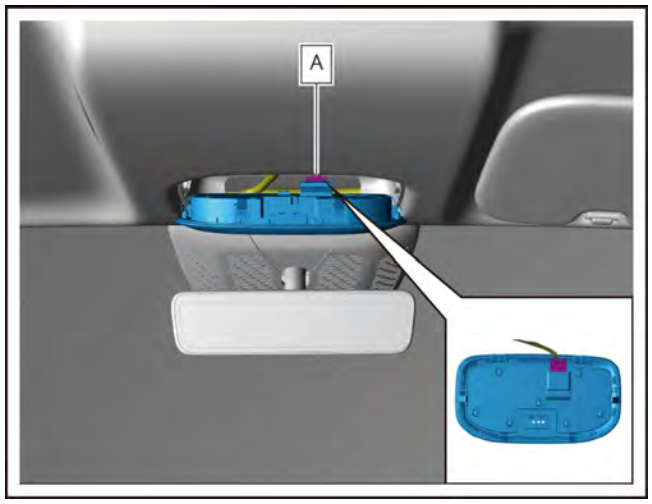
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 UsePlastic Pry ToolRelease front interior lamp assembly retaining clip.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



3 disconnect wiring harness connector, remove front interior lamp assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

detection front interior lamp assembly Function, ensure lamp light clear illuminate clear no dimming.

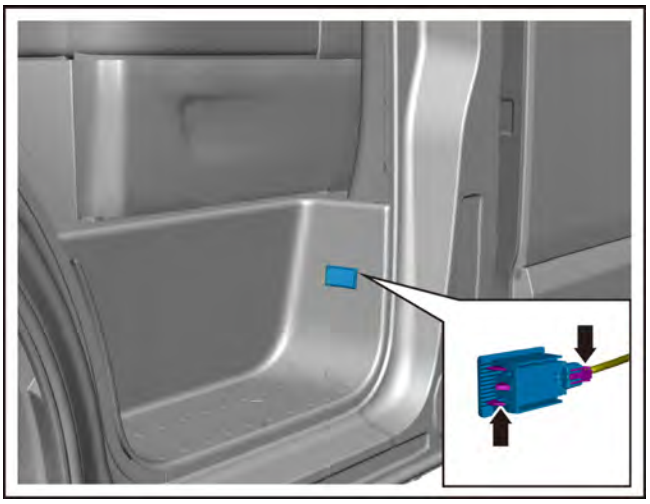
Luggage Compartment Lamp, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 remove luggage compartment lamp.
   a. UsePlastic Pry ToolRelease luggage compartment lamp retaining clip.
   b. disconnect wiring harness connector, remove luggage compartment lamp.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, open lamp light, ensure luggage compartment lamp lamp light normal illuminate, lamp light clear clear illuminate no dimming.

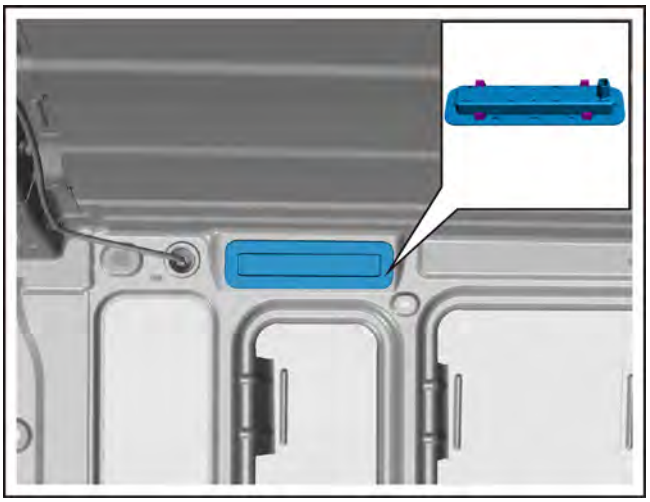
Compartment Inner Rear Dome Lamp Assembly - Front, Repair Procedure

Tips

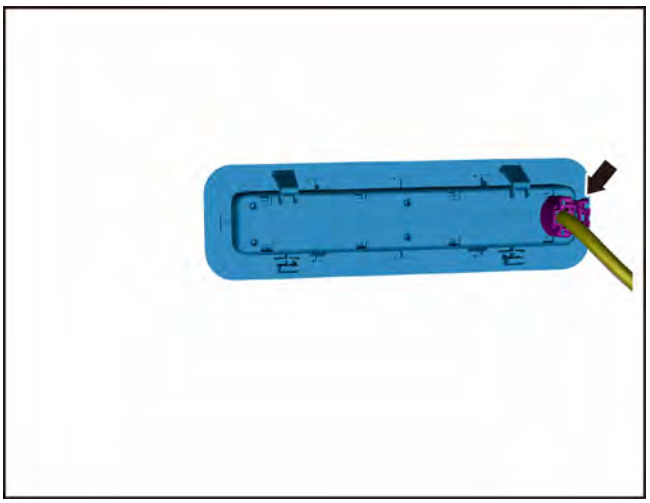
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Release compartment inner Rear Dome Lamp assembly retaining clip.



3 disconnect wiring harness connector, remove compartment inner Rear Dome Lamp assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, open lamp light, ensure compartment inner Rear Dome Lamp assembly lamp light normal illuminate, lamp light clear clear illuminate no dimming.

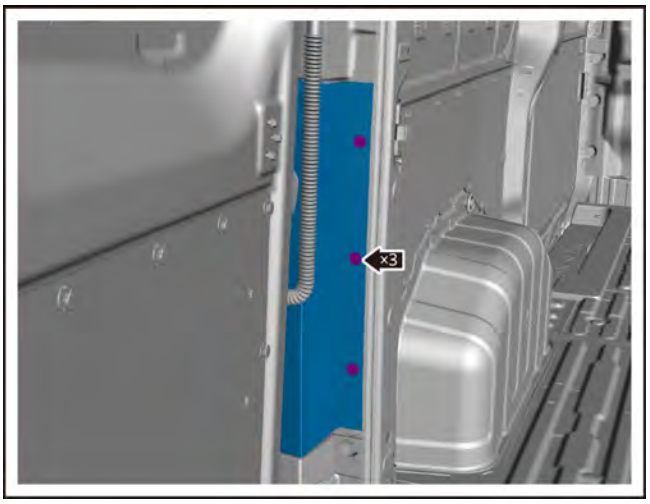
Left Rear Combination Lamp Assembly, Repair Procedure

Tips

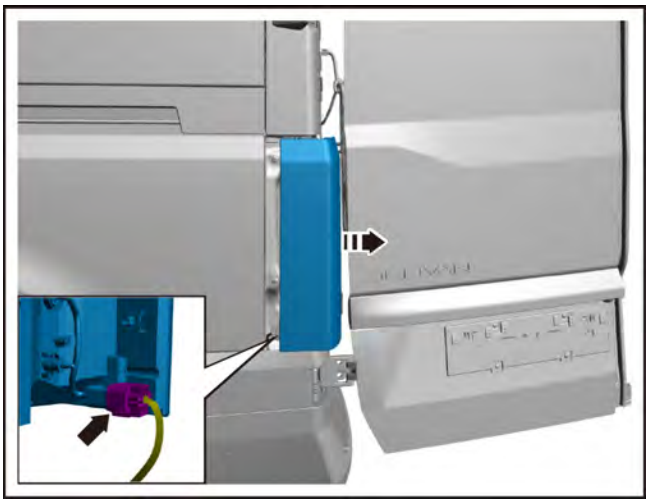
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Remove Left Rear Combination Lamp assembly 3 retaining bolt.



3 disconnect wiring harness connector, remove Left Rear Combination Lamp assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, according to times open each lamp light gear position, ensure Rear Combination Lamp each lamp light normal illuminate, lamp light clear clear illuminate no dimming.

Left Rear Reflector Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation



4 remove left rear reflector assembly.

a. Remove left rear reflector assembly 2 retaining screw.

b. release retaining clip, remove left rear reflector assembly.

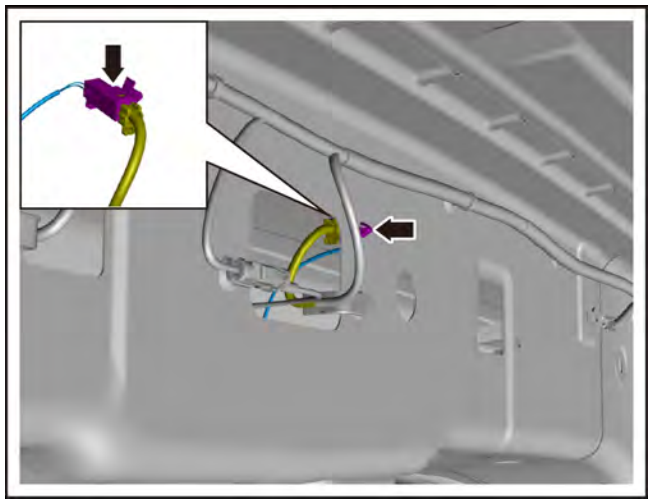
Installation Steps

1 Install in the reverse order of removal.

High-Mounted Stop Lamp Assembly, Repair Procedure

Removal Steps

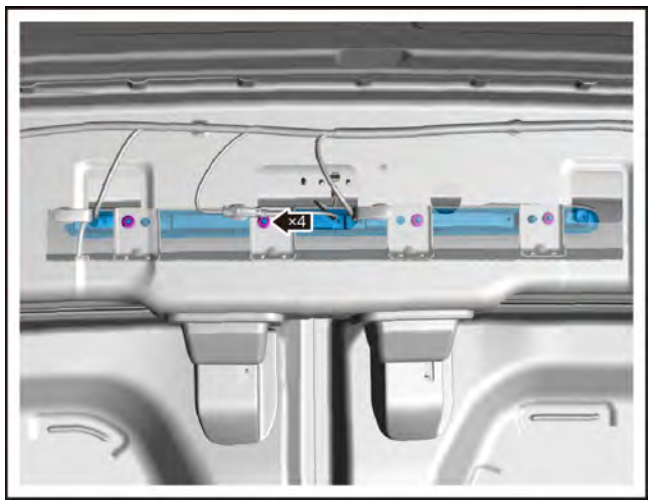
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Disconnect high-mounted stop lamp assembly wiring harness connector.

a. Release high-mounted stop lamp assembly wiring harness retaining clip.

b. Disconnect high-mounted stop lamp assembly wiring harness connector.



3 Remove 4 retaining nut, remove high-mounted stop lamp assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

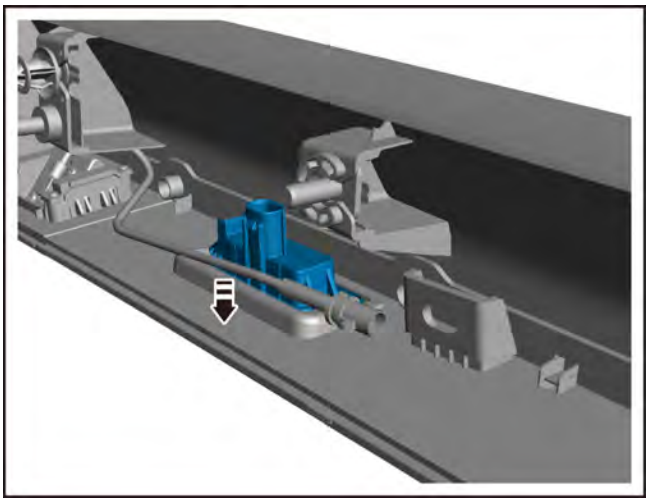
Install complete rear, test high-mounted stop lamp assembly Function, ensure in depress and loosen Brake Pedal when normal illuminate.

license plate lamp assembly. Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left License Plate Lamp Trim Cover Assembly. Refer to:Left License Plate Lamp Trim Cover Assembly, Repair Procedure



3 pressure output retaining clip, remove license plate lamp assembly.

Installation Steps

1 Install in the reverse order of removal.

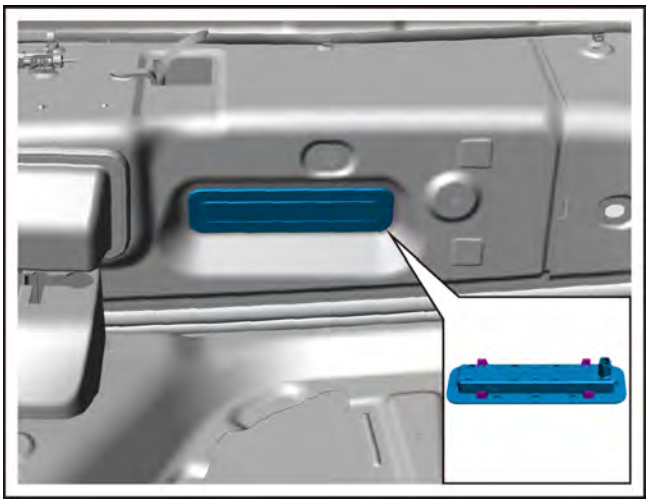
Compartment Inner Rear Dome Lamp Assembly - Rear, Repair Procedure

Tips

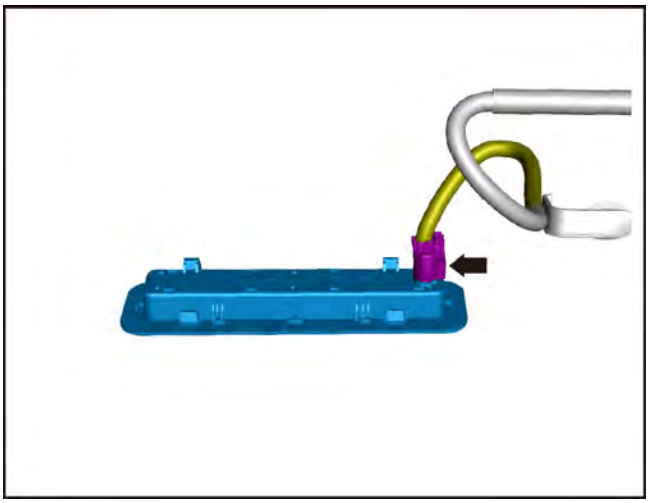
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Release compartment inner Rear Dome Lamp assembly - rear retaining clip.



3 disconnect wiring harness connector, remove compartment inner Rear Dome Lamp assembly - rear.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, open lamp light, ensure compartment inner Rear Dome Lamp assembly lamp light normal illuminate, lamp light clear clear illuminate no dimming.

low-voltage power supply

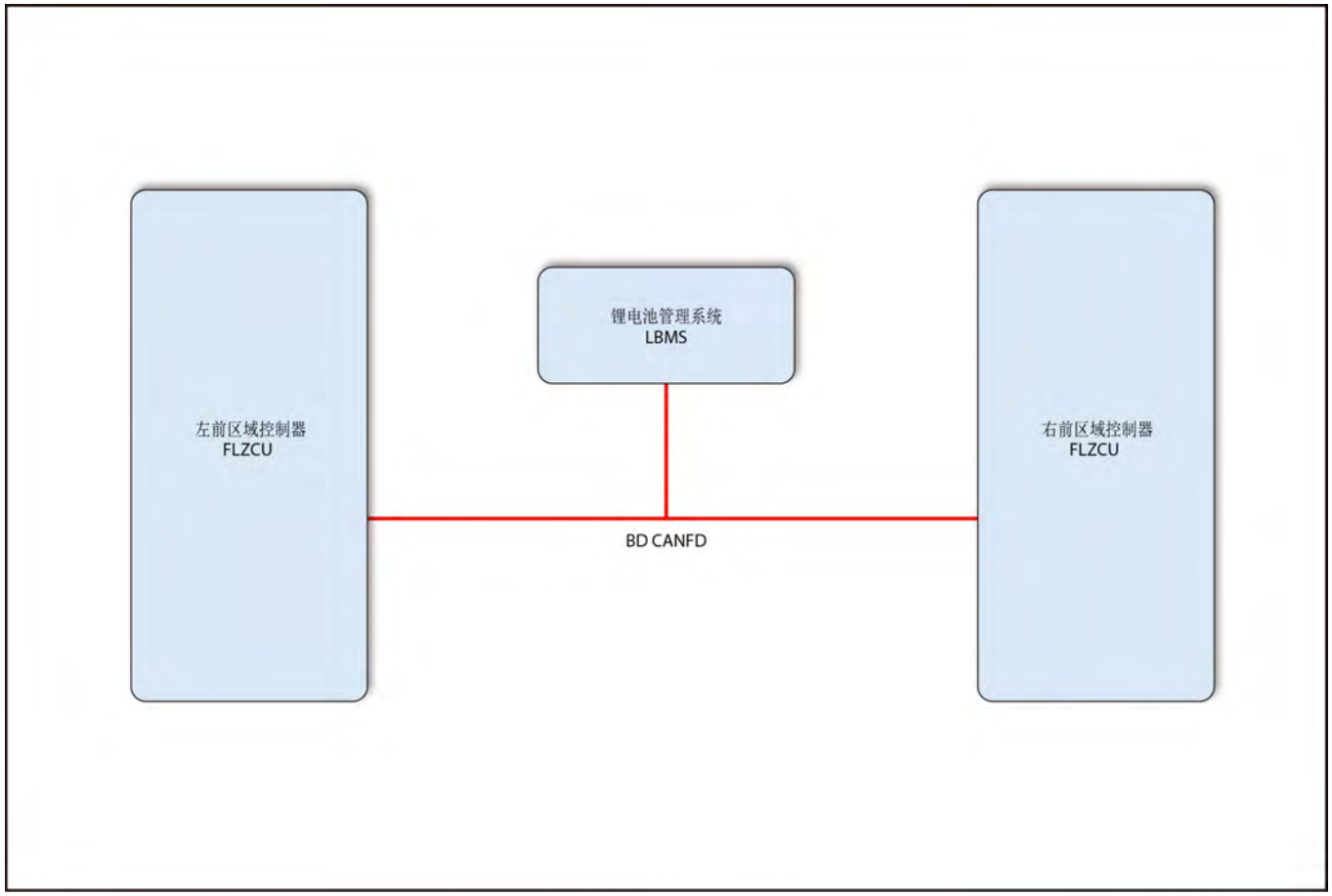
System Overview

Low-voltage Battery Function Overview

low-voltage battery

LBMS actual when acquire 12V low-voltage battery voltage, current, Temperature Signal, estimation SOC, SOH, enable over charging, undervoltage, overcurrent protection, monitor battery charging discharging Status, prevent low-voltage power bottle loss power, related signal upper transmit Right Front Zone Control Unit.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Left Front Zone Control Unit	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
lithium battery management system	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Component Description

lithium battery management system

12V lithium battery management system (LBMS) by main control MCU, voltage / current / temperature acquire Unit, balancing circuit, protection MOS pipe and communication port etc. component consists of, responsible for actual when monitoring battery battery cell voltage, charging discharging current and temperature, precisely estimation SOC/SOH Status, perform over charging, over place, overcurrent, short circuit, Overtemperature etc. protection Function, through balancing circuit maintain each battery cell I cause characteristic, and after CAN bus and Right Front Zone Control Unit interaction, ensure 12V lithium battery safety, can rely on, efficiently operation.

Fault Diagnosis (LBMS)

Lithium Battery Management System (LBMS) DTC List

DTC	DTC Meaning	DTC Description
B160117	Cell Over Voltage Level_1	cell overvoltage stage 1 fault
B160217	Cell Over Voltage Level_2	cell overvoltage stage 2 fault
B160317	Cell Over Voltage Level_3	cell overvoltage stage 3 fault
B164117	Battery pack Over Voltage Level_1	battery pack total pressure overvoltage stage 1 fault
B164217	Battery pack Over Voltage Level_2	battery pack total pressure overvoltage stage 2 fault
B160116	Cell Under Voltage Level_1(Discharge current I less than or equal to 20A)	cell undervoltage stage 1 fault (discharging I small at etc. at 20A)
B161116	Cell under Voltage Level_1(Discharge current I greater than 20A)	cell undervoltage stage 1 fault (discharging I large at 20A)
B160216	Cell Under Voltage Level_2(Discharge current I less than or equal to 20A)	cell undervoltage stage 2 fault (discharging I small at etc. at 20A)
B161216	Cell under Voltage Level_2(Discharge current I greater than 20A)	cell undervoltage stage 2 fault (discharging I large at 20A)
B160316	Cell Under Voltage Level_3	cell undervoltage stage 3 fault
B164116	Battery pack under Voltage Level_1(Discharge current I less than or equal to 20A)	battery pack total pressure undervoltage stage 1 fault (discharging I small at etc. at 20A)
B164216	Battery pack under Voltage Level_1(Discharge current I greater than 20A)	battery pack total pressure undervoltage stage 1 fault (discharging I large at 20A)
B164316	Battery pack under Voltage Level_2(Discharge current I less than or equal to 20A)	battery pack total pressure undervoltage stage 2 fault (discharging I small at etc. at 20A)
B164416	Battery pack under Voltage Level_2(Discharge current I greater than 20A)	battery pack total pressure undervoltage stage 2 fault (discharging I large at 20A)
B16014B	Cell Over temperature Level_1	cell Overtemperature stage 1 fault
B16024B	Cell Over temperature Level_2	cell Overtemperature stage 2 fault
B16034B	Cell Over temperature Level_3	cell Overtemperature stage 3 fault
B161100	Cell under temperature Level_1	cell low temperature stage 1 fault
B162200	Cell Difference Over Temperature Level_1	cell temperature difference too large stage 1 fault
B160119	battery pack Charge Over Current Level_1	battery pack charging overcurrent stage 1 fault
B160219	battery pack Charge Over Current Level_2	battery pack charging overcurrent stage 2 fault

DTC	DTC Meaning	DTC Description
B161019	battery pack disCharge Over Current Level_1	battery pack discharging overcurrent stage 1 fault
B162019	battery pack disCharge Over Current Level_2	battery pack discharging overcurrent stage 2 fault
B161011	Discharge Short Circuit Level_1	discharging short circuit 1 stage fault
B162011	Discharge Short Circuit Level_2	discharging short circuit 2 stage fault
B163011	Discharge Short Circuit Level_3	discharging short circuit 3 stage fault
B160085	SOC Low Level_1	SOC too low stage 1 fault
B160185	SOC Low Level_2	SOC too low stage 2 fault
B160084	SOH Low Fault	SOH too low fault
B165500	Battery pack Thermal runaway	battery pack thermal loss of control
B163100	MOS1 Stuck Fault	MOS1 stuck fault
B161300	MOS1 adhesion Fault	MOS1 sticking fault
B163200	MOS2 Stuck Fault	MOS2 stuck fault
B162300	MOS2 adhesion Fault	MOS2 sticking fault
B163300	Driver gate Fault	drive door fault
B160113	Cell Voltage acquistition Open Circuit	cell voltage sampling open circuit fault
B160126	Cell Voltage acquistition Not Update Fault	cell voltage sampling not update fault
B16011C	Cell Voltage acquistition over Limit Fault	cell voltage sampling out of limit fault
B160213	Battery Pack Temperature Acquistition Open Fault	battery pack temperature acquire open circuit fault
B160215	Battery Pack Temperature Acquistition short Fault	battery pack temperature acquire short circuit fault
B16021C	Battery Pack Temperature Acquistition Over limit Fault	battery pack temperature acquire out of limit fault
B160226	Battery Pack Temperature Acquistition Not Update Fault	battery pack temperature acquire not update fault
B160209	Battery Pack Temperature Acquistition Ref Drift Fault	battery pack temperature acquire reference drift offset fault
B160313	Battery Current Acquistition Open Fault	battery current acquire open circuit fault
B164062	Accumulates Cell Vlotage Acquistition deviation Fault	accumulation cell total pressure acquire deviation fault
B160098	MOS Over Temperature Fault	MOS overtemperature Fault
B163498	AFE Over Temperature_Fault	AFE temperature too high fault
B162398	Shunt Over Temperature Fault	section flow unit temperature too high fault
B161198	Balance_OT_Fault	balancing temperature too high fault

DTC	DTC Meaning	DTC Description
B161112	AFE Balance Circuit Short Fault	AFE balancing circuit short circuit Fault
B161113	AFE Balance Circuit Open Fault	AFE balancing circuit open circuit Fault
B161200	Hardwire_waekup_stuck_Fault	Hardwired Wake-Up stuck fault
B160047	Software reset Fault	software reset fault
B160016	LBMS Power Supply Under Voltage Fault	LBMS Power Supply undervoltage Fault
B166417	MCU Power Supply Over Voltage Fault	MCU Power Supply exceed pressure fault
B166717	Gate driver Over Votlage Fault	door drive Power Supply exceed pressure fault
B160004	SBC internal Fault	SBC internal fault
B166127	SBC Communication Fault	SBC communication fault
B160067	AFE Communication Fault	AFE communication Error
B160044	NVM Fault	NVM fault
B160061	MCU Clock abnormality Fault	MCU when min abnormal fault
B163698	DCDC Over Temperature Fault	limit flow module overtemperature Fault
B163619	DCDC Over current Fault	limit flow module overcurrent fault
B163600	DCDC Abnormal Fault	limit flow module abnormal fault
U273487	Lost Communication With FLZCU-Vehicle Collision Signal (0x21 ACU_3)	Lost Communication with Left Area Controller FLZCU —— vehicle Crash Signal (0x21 ACU_3)
U250F87	0x50F Message Timeout (BMS_3_G)	0x50F message timeout (BMS_3_G)
U248AFB	0x48A(ONEBOX_1_G) message E2E checksum error	E2E Check Error for 0x48A(ONEBOX_1_G) Message
U007388	Bus off	bus disabled
U249DFB	0x49D(FLZCU_9) message E2E checksum error	E2E Check Error for 0x49D(FLZCU_9) Message
U2021FB	0x21(ACU_3) message E2E checksum error	E2E Check Error for 0x21(ACU_3) Message
U250FFB	0x50F(BMS_3_G) message E2E checksum error	E2E Check Error for 0x50F(BMS_3_G) Message
U272386	The Vehicle Speed(VehicleSpeedVSOSig) value data is invalid	Vehicle Speed (VehicleSpeedVSOSig) data no valid
U272486	The Low voltage power mode(FLZCU_9_PowerMode) value data is invalid	low-voltage power mode (FLZCU_9_PowerMode) data no valid

DTC	DTC Meaning	DTC Description
U272586	The SOC wake-up threshold calibration(SOCWU_Threshold_RLBMS) value data is invalid	SOC Wake-Up threshold calibration (SOCWU_Threshold_RLBMS) data no valid

Repair Procedure

Low-voltage Power-up/Power-down Procedure

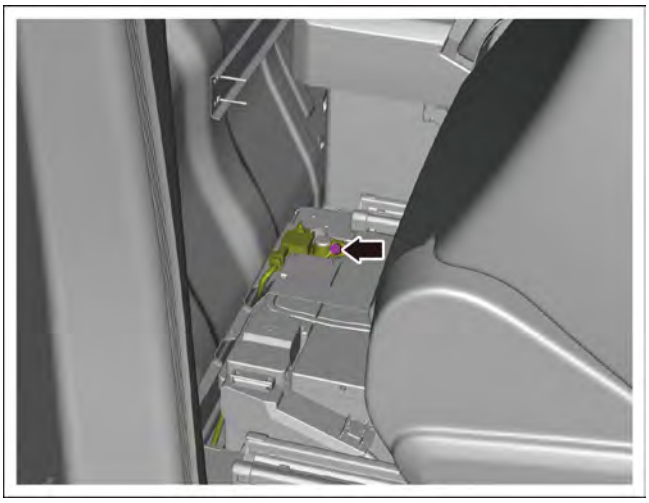
Caution

in service any electrical component front, power mode must must position at “OFF(disabled)” Status, and and all electrical load must must for “OFF”, except non- operation procedure center another with Description. if result tool or equipment capacity easy connect contact exposed energized electrical terminal, also need Disconnect the negative battery cable. violation reverse this some safety instructions, may cause personal injury or damage vehicle and vehicle component.

power down steps

1 right front Seat Assembly Adjust Forward to limit Location.

2 Use the "One-touch Power-off" function on the center display.

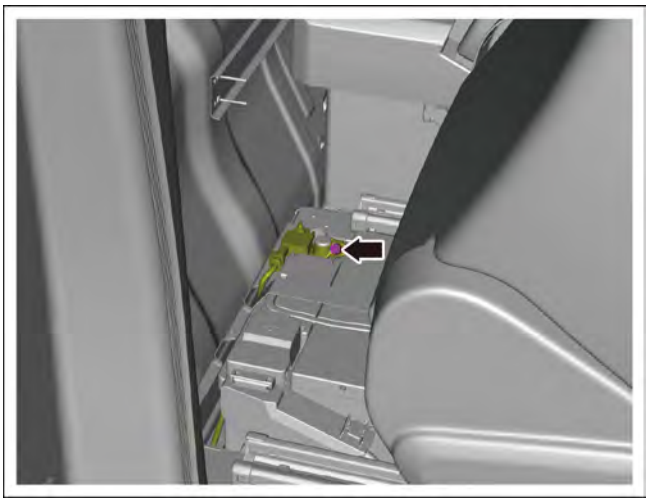


3 loosen retaining nut, disconnect battery sensor and battery negative wiring pillar connect.

Caution

must must in vehicle power supply completely disabled rear, side can Disconnect the negative battery cable. prohibit stop energized operation, No then may will cause system fault.

power up steps



1 connect battery negative.

a. IBS battery sensor connect to battery negative wiring pillar upper.

b. tighten retaining nut.

2 adjust right front Seat Assembly to initial Location.

3 low-voltage Power-Up Procedure result harness rear, check vehicle vehicle power up Status. confirm Instrument Pack “READY” Indicator Lamp illuminate, vehicle can normal engage gear driving.

Battery, Repair Procedure

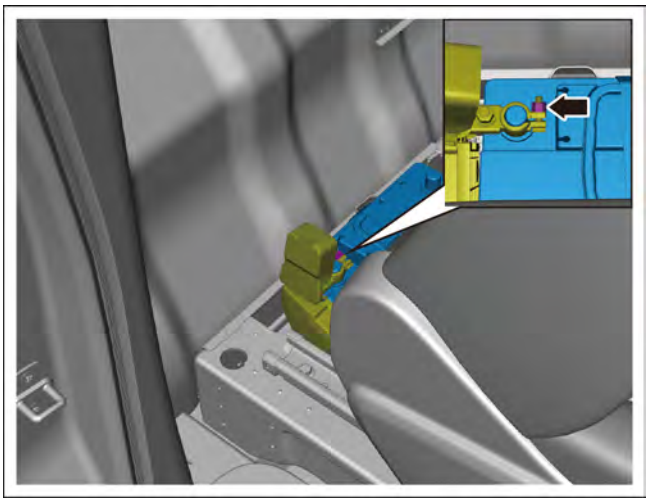
Caution

- *with related Battery and Battery Charging Precautions. refer to:*Battery and Battery Charging Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 right front Seat Assembly Adjust Forward to limit Location.

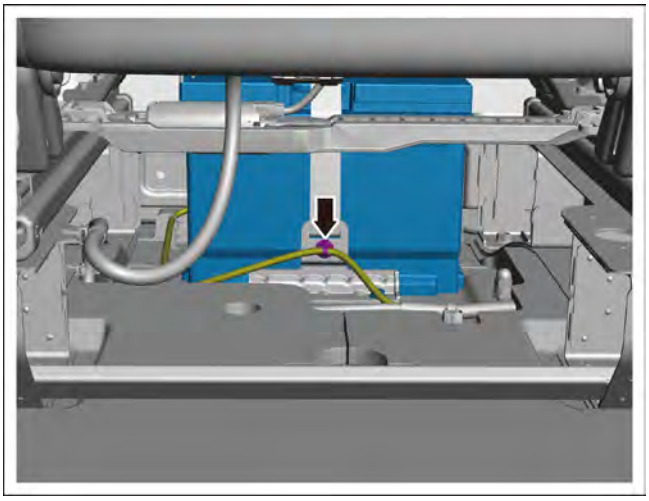
2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



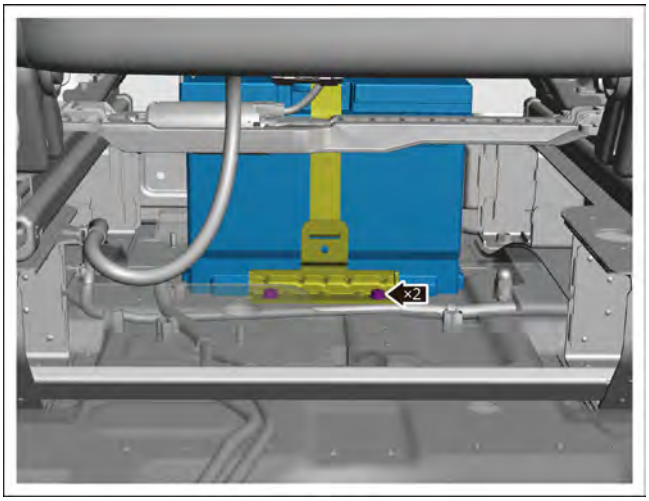
3 disconnect battery positive terminal power cable.

a. open battery positive terminal protection cover.

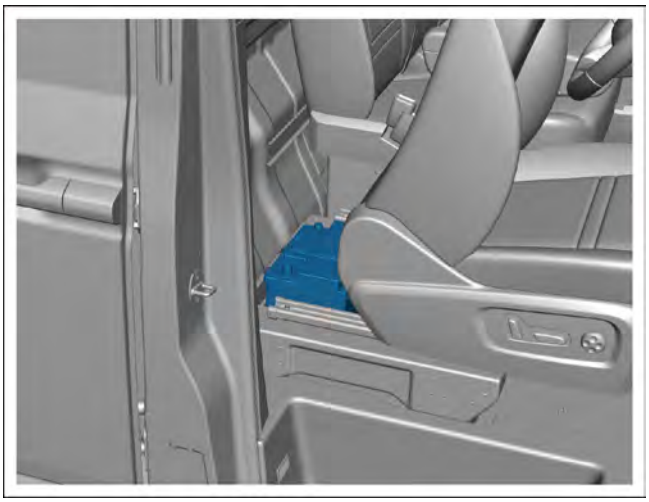
b. loosen retaining nut, disconnect battery positive terminal power cable.



4 Release floor wiring harness retaining clip.



5 Remove 2 retaining bolt, offset open battery pressure panel.



6 remove battery.

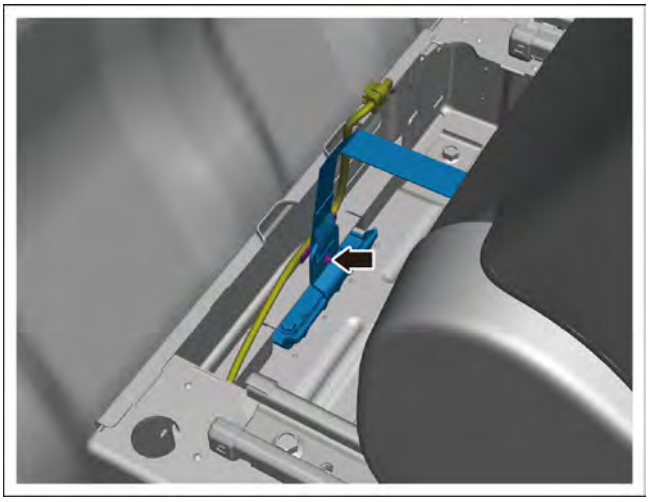
Installation Steps

1 Install in the reverse order of removal.

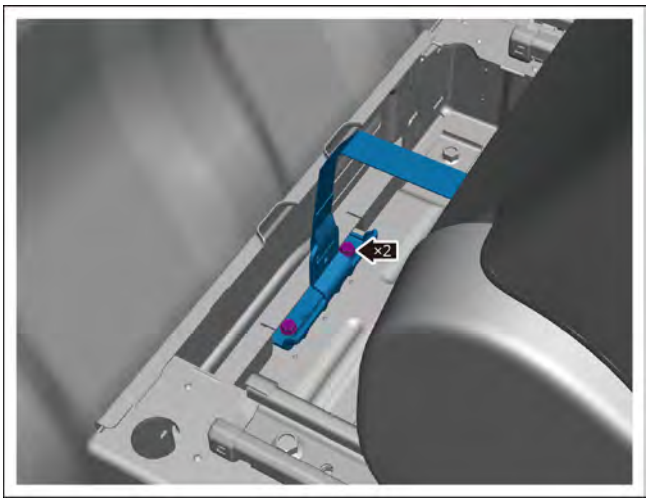
Battery Pressure Panel, Repair Procedure

Removal Steps

1 Remove battery. Refer to:Battery, Repair Procedure



2 Release floor wiring harness retaining clip.



3 Remove 2 retaining bolt, remove battery pressure panel.

Torque:xxx±xxN·m

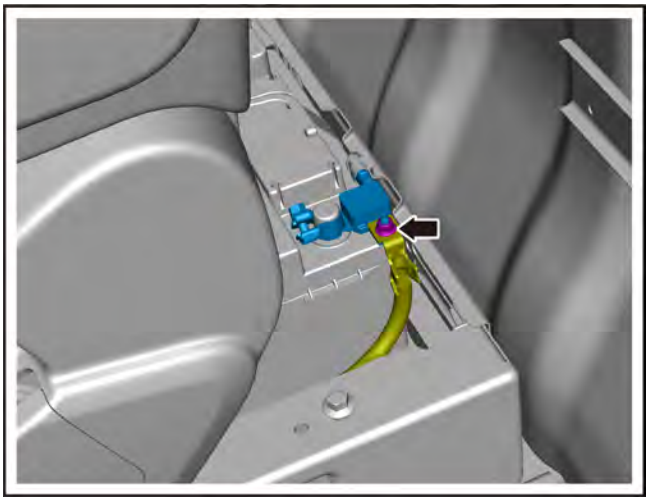
Installation Steps

1 Install in the reverse order of removal.

IBS Battery Sensor, Repair Procedure

Removal Steps

1 Use the "One-touch Power-off" function on the center display.

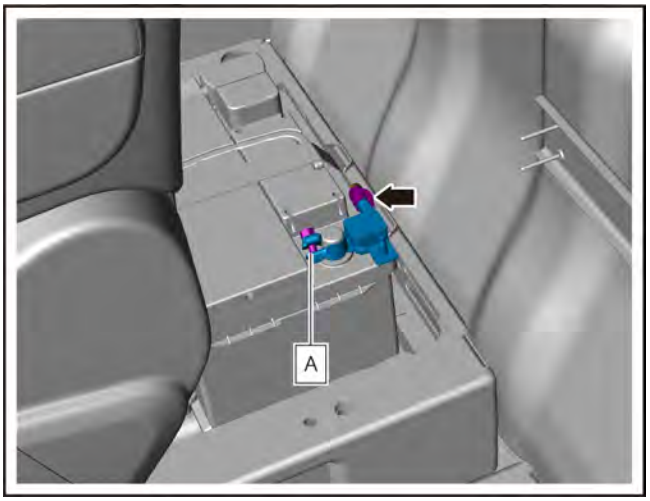


2 disconnect battery negative wiring harness and battery sensor connect

a. left front Seat Assembly adjust to maximum front Location.

b. Remove retaining nut, disconnect battery negative wiring harness and IBS battery sensor connect.

> ⚠ *Caution*
>
> *must must in vehicle power supply completely disabled rear, side can Disconnect the negative battery cable. prohibit stop energized operation, No then may will cause system fault.*



3 Remove IBS battery sensor assembly.

a. Disconnect IBS battery sensor wiring harness connector.

b. Remove retaining bolt A, remove IBS battery sensor.

Installation Steps

1 Install in the reverse order of removal.

Wireless Charging

System Overview

Wireless Charging and NFC Start Operating Principle

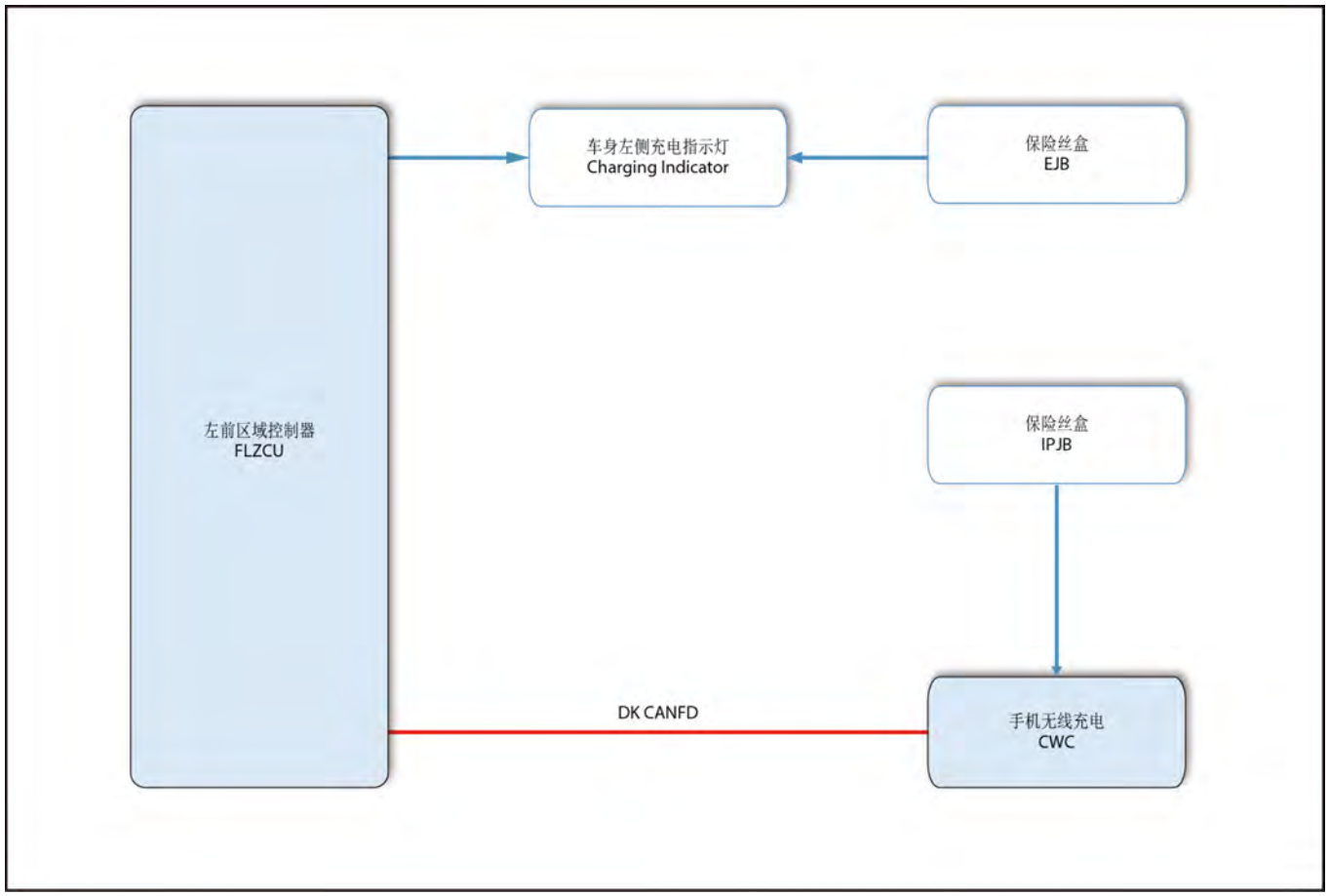
15W Wireless Charging

vehicle load Wireless Charging unit benefit use power magnetic sensing should side type direction suitable matching termination transmission power can. support Wireless Charging mobile phone place charging area that is can automatic power up charging; system have backup foreign matter detection, overheating protection etc. safety mechanism, output occur abnormal when and when disconnect Output, item -based Charging Operation, improve item occupant convenience characteristic.

NFC

vehicle load NFC use Near Field Communication technology, NFC card or support NFC Function mobile phone affix near sensing should area that is can send start identity authentication; authentication signal through CAN bus transmit to Left Front Zone Control Unit (FLZCU) validation, verify through rear support vehicle unlock, power up authorization. Function operation not depend on move network, can charging when digital key backup side case, improve use vehicle body verification.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	DK CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	signal command	Left Front Zone Control Unit for charging Indicator Lamp illuminate signal Output
mobile phone Wireless Charging	DK CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	mobile phone Wireless Charging power supply Input
Instrument Panel Fuse Box	Hardwired	Power Supply	mobile phone Wireless Charging power supply Output
body left charging Indicator Lamp	Hardwired	signal command	Left Front Zone Control Unit for charging Indicator Lamp illuminate signal Input
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input
Front Compartment Fuse Box	Hardwired	Power Supply	Front Compartment Fuse Box power supply Output

Component Description

mobile phone Wireless Charging

vehicle power up rear that is can Use Wireless Charging, only support Qi mark standard equipment; charging area inner prohibit place metal object product, prohibit use magnetic intake mobile phone housing, also do not place item operate card / identity item / NFC card etc. radio frequency card, to avoid high temperature damage equipment or cause card failure.

charging Indicator Lamp

charging Indicator Lamp use at direction driver Note mobile phone Wireless Charging when front work Status.

Repair Procedure

15W Wireless Charging Module (NFC), Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove side Cover Assembly left, right. Refer to:Side Cover Assembly Left, Repair Procedure

3 Remove left lower Shield Assembly -RHD. Refer to:Left Lower Shield Assembly -RHD, Repair Procedure

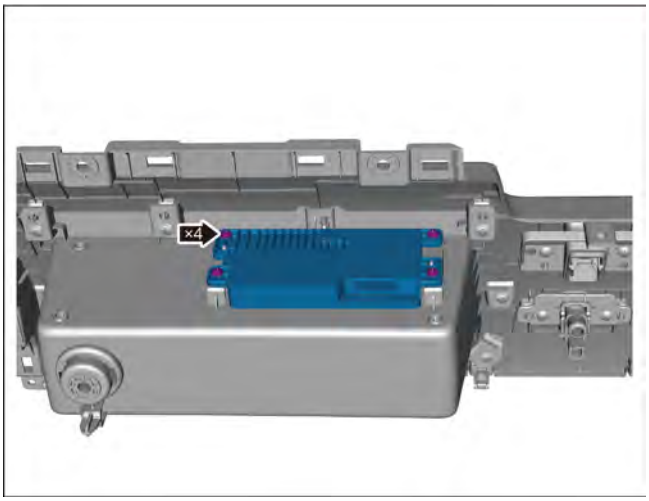
4 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure

5 Remove glove box housing assembly -RHD. Refer to:Glove Box Housing Assembly -RHD, Repair Procedure

6 Remove HVAC flap assembly left, right. Refer to:HVAC Flap Assembly Left, Repair Procedure

7 Remove instrument panel lower trim panel assembly. Refer to:Instrument Panel Lower Trim Panel Assembly, Repair Procedure

8 Remove instrument panel center lower panel assembly -RHD. Refer to:Instrument Panel Center Lower Panel Assembly -RHD, Repair Procedure



9 Remove 4 tighten screw, remove 15W Wireless Charging Module (NFC).

Installation Steps

1 Install in the reverse order of removal.

warning report remind unit

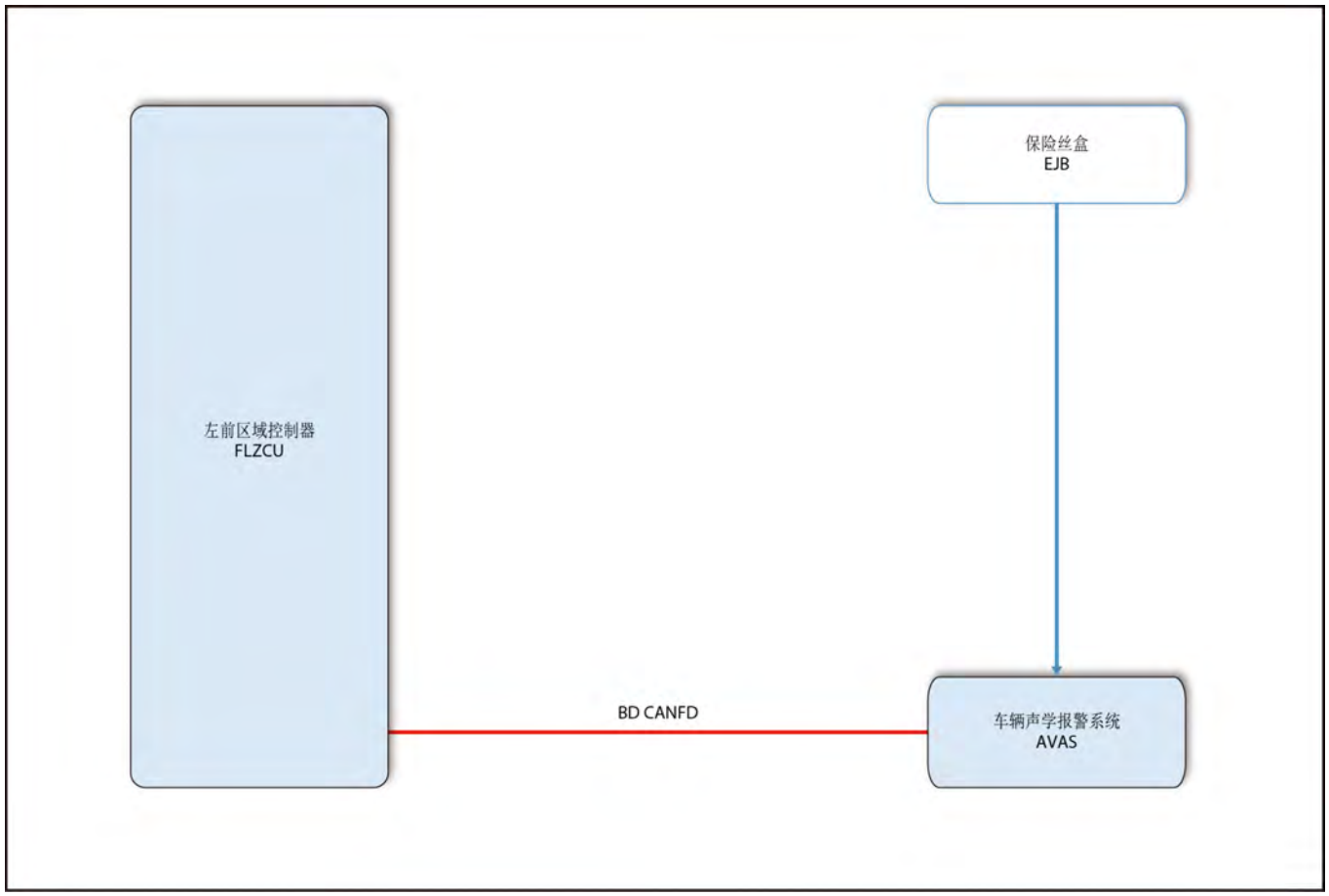
System Overview

operate person warning

operate person warning low speed warning

vehicle sound chemical alarm system (AVAS) through CAN bus receive Left Front Zone Control Unit (FLZCU) transmit vehicle speed signal. operate person warning Function in vehicle front inlet Vehicle Speed low at 20km/h when automatic activation; vehicle engage reverse gear driving when, no item Vehicle Speed large small the Function all maintain open Status, and front inlet warning audio valid and reverse warning audio valid have backup obvious area section degree.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
front compartment fuse box	Hardwired	Power Supply	vehicle sound chemical alarm system power supply Output
vehicle sound chemical alarm system	BD CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Power Supply	Front Compartment Fuse Box Power Input

Component Description

vehicle sound chemical alarm system

vehicle sound chemical alarm system (AVAS) have backup operate person warning Function, vehicle front inlet Vehicle Speed small at 20km/h when automatic open, reverse when any intent Vehicle Speed maintain continue work. front inlet audio valid and reverse audio valid phase mutual independent, item item degree high, use with warning around side operate person and when avoidance.

Repair Procedure

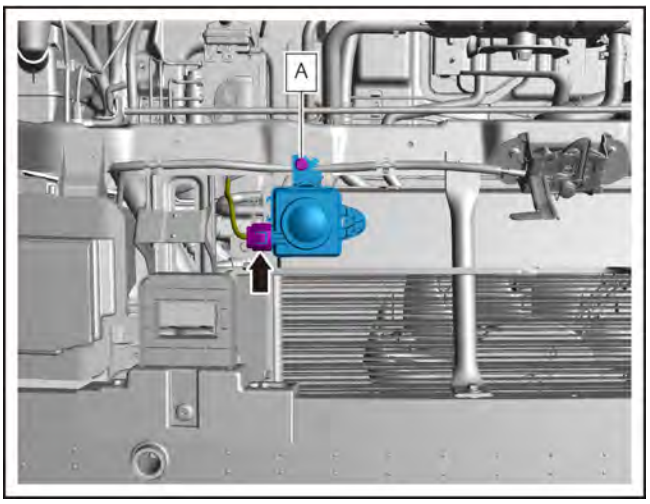
Acoustic Vehicle Alerting System Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 remove Acoustic Vehicle Alerting System assembly.

a. Disconnect Acoustic Vehicle Alerting System assembly wiring harness connector.

b. Remove retaining bolt A, remove Acoustic Vehicle Alerting System assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

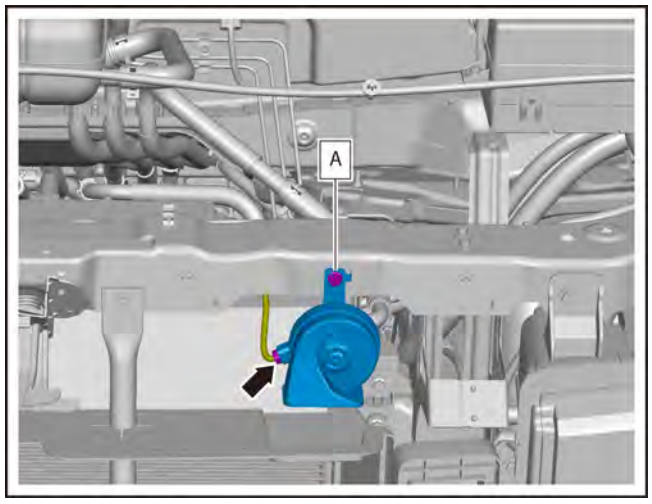
Install complete rear, for Acoustic Vehicle Alerting System perform circuit test, ensure unit in driving when will active send output connect continue, can is listen item warning audio.

Tweeter, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



3 remove tweeter.

a. Disconnect tweeter wiring harness connector.

b. Remove retaining bolt A, remove tweeter.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, press Horn switch, confirm tweeter send sound normal, no item item or item audio.

Wiper and Washer

System Overview

Wiper and Washer Operating Principle

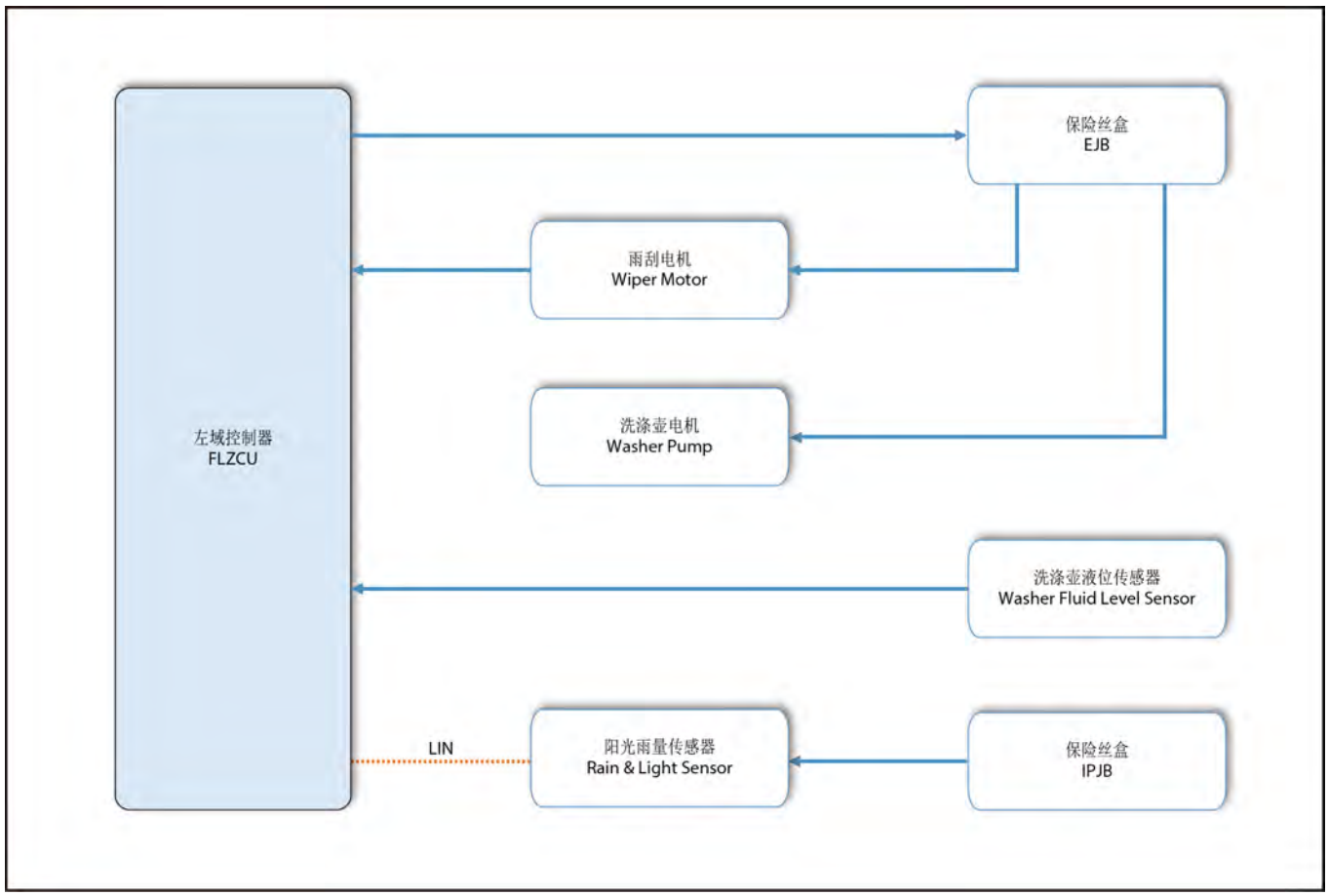
wiper Function Overview

wiper combination switch operate for Wiper and Washer system person unit interaction control component, can enable wiper disabled, between intermittent wipe water, low speed connect continue wipe water, high speed connect continue wipe water and point movement wipe water mode switch replace, same when control Washer pump open, drive Washer fluid spray to gear air glass; switch gear position signal with power signal shape type transmit to body controller, by vehicle perform corresponding wiper action, part section gear position support between intermittent wipe water when long adjustment, and have backup system signal self-test capability, can feedback switch Fault Status, meet sufficient rain day not same rain lower gear air glass clean need request, ensure driver front side view item clear.

Automatic Wipers Function Overview

Automatic Wipers based on Sunlight/Rain Sensor actual when detection gear air glass surface lower rain strength, rain information conversion for power signal transmission to body controller; when wiper combination switch position at automatic gear position when, vehicle according to rain large small automatic adjustment wiper wipe water speed and wipe flash interval, rain increase large when improve wipe flash frequency times, rain reduce when lower low wipe flash frequency, lower rain stop rear wiper automatic stop work, no need driver hand movement frequency item adjustment gear position, enable gear air glass wipe water action adaptive control, valid ensure Driving in Rain view item clear, improve operate vehicle operation convenience characteristic and driving safety characteristic.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	Hardwired	Control Signal	wiper relay control signal Output
	Hardwired	Feedback Signal	Wiper and Washer reservoir Level Signal Input
	Hardwired	Feedback Signal	wiper motor reset signal Input
	LIN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
wiper motor	Hardwired	Power Supply	wiper motor power supply Input
	Hardwired	Feedback Signal	wiper motor reset signal Output
Sunlight/Rain Sensor	LIN	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Sunlight/Rain Sensor power supply Input
Front Compartment Fuse Box	Hardwired	Control Signal	wiper relay control signal Input
	Hardwired	Power Supply	wiper motor power supply Output
	Hardwired	Power Supply	washer reservoir motor power supply Output
Instrument Panel Fuse Box	Hardwired	Power Supply	Sunlight/Rain Sensor power supply Output
washer reservoir motor	Hardwired	Power Supply	washer reservoir motor power supply Input
Washer Fluid Reservoir Level Sensor	Hardwired	Feedback Signal	washer reservoir Level Signal Output

Component Description

wiper motor

wiper motor layout position at vehicle front compartment gear air glass lower side, main need Function for provide wipe flash powertrain, enable gear air glass accumulation water and foreign matter clear. vehicle controller according to driving operation operating condition control motor operation, ensure rain day and harsh view item lower operate vehicle view line safety.

Sunlight/Rain Sensor

Sunlight/Rain Sensor layout position at front gear air glass inside, main need Function for detection outer limit light according to strength and lower rain Status Signal. vehicle controller according to sensing detection operating condition Output control command, adjustment wiper, lamp light etc. equipment work Status, ensure vehicle operate vehicle comfort and driving safety.

Washer fluid level sensor

Washer fluid level sensor layout position at Washer fluid reservoir inner part, main need Function for detection vehicle Washer fluid remaining remaining fluid level Status Signal. vehicle controller according to sensing detection operating condition feedback fluid level information, remind driver and when compensation charging Washer fluid, ensure Wiper and Washer system normal work.

Repair Procedure

Combination Switch Assembly, Repair Procedure

Warning

do not in airbag front side work, must must in component side surface work. No then may will cause form personal injury.

airbag from vehicle upper remove except rear, prohibit stop for air spring occur unit terminal and wiring harness communication power.

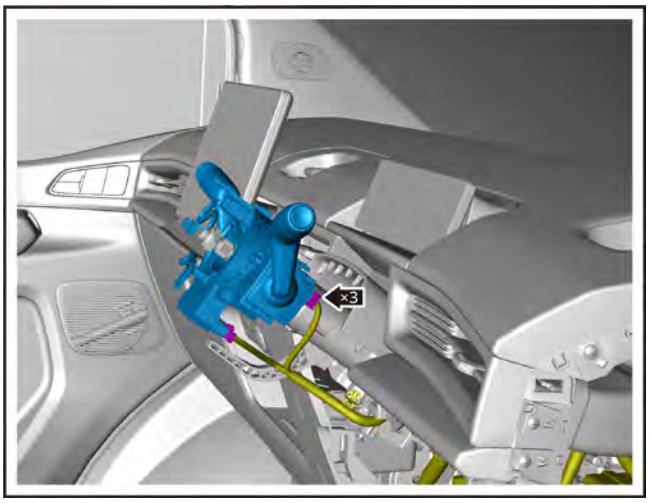
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

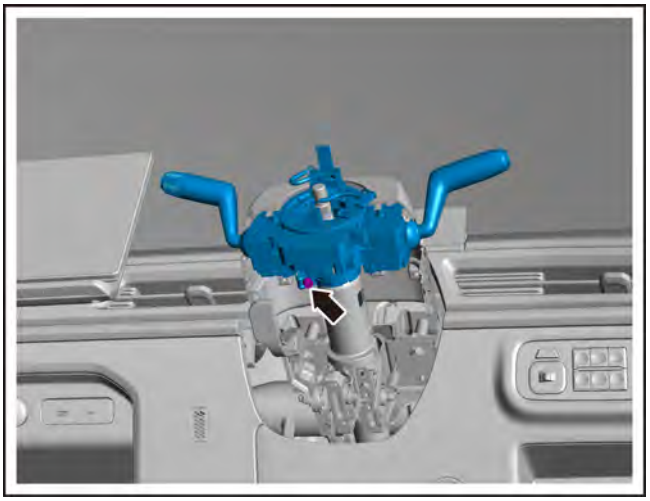
2 Remove driver airbag. Refer to:Driver Airbag, Repair Procedure

3 Remove steering wheel assembly. Refer to:Steering Wheel Assembly, Repair Procedure

4 Remove steering column lower cover assembly. Refer to:Steering Column Lower Cover Assembly, Repair Procedure



5 disconnect combination switch assembly 3 connector.



6 Remove retaining bolt, remove combination switch assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

operation combination switch each Function gear position, confirm lamp light, steering, wiper effect should correct, switch return position order smooth, no stuck abnormal effect and DTC.

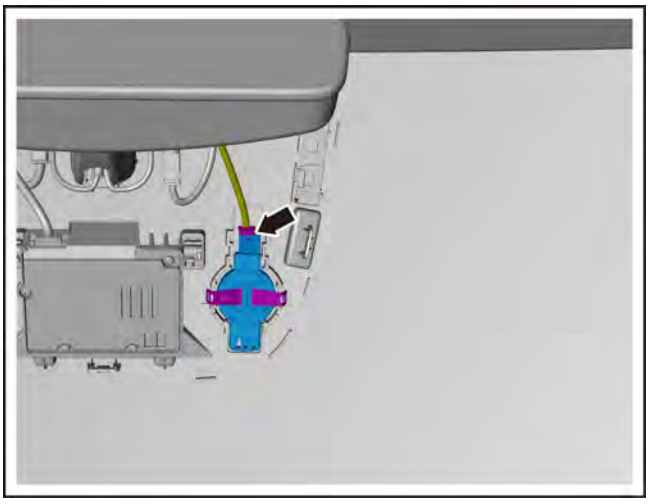
Light Rain Wet Degree Sensor, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

3 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure



4 Remove light rain wet degree sensor.

a. Disconnect light rain wet degree sensor wiring harness connector.

b. release retaining clip, remove light rain wet degree sensor.

Installation Steps

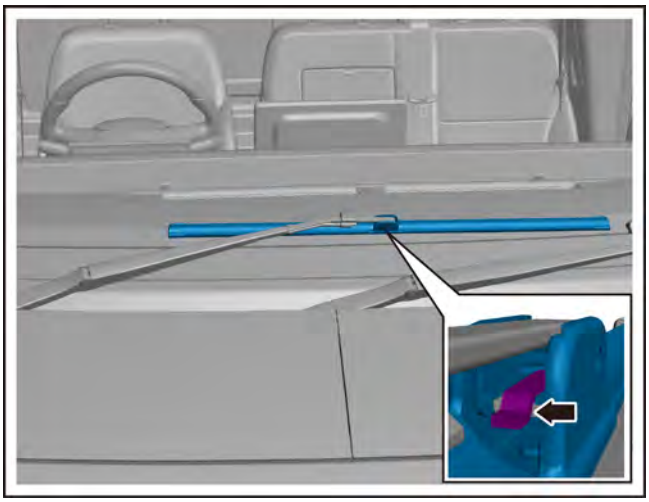
1 Install in the reverse order of removal.

Main Wiper Blade, Repair Procedure

Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps



1 press retaining clip, remove main wiper blade.

Caution

Remove Wiper Blade when, required when moment maintain wiper arm stability in pull start Location, if need place hand, please front gear air glass pad upper software pad rear item item place return no wiper blade wiper arm, No then wiper arm may damage glass surface.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

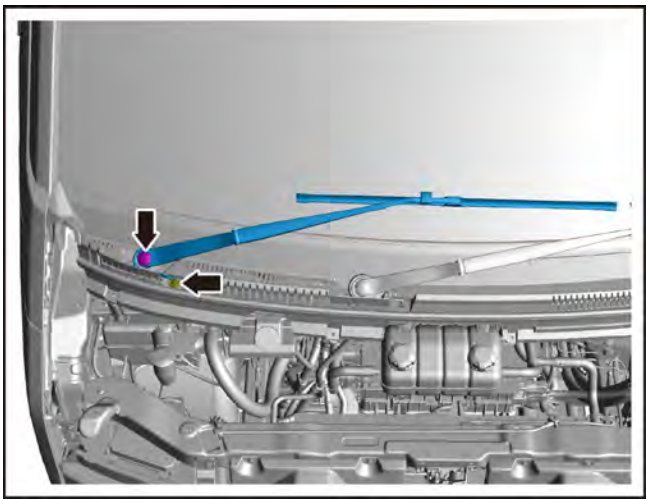
3 Install complete rear, please wiper slow place at front gear air glass upper.

Main Wiper Arm, Repair Procedure

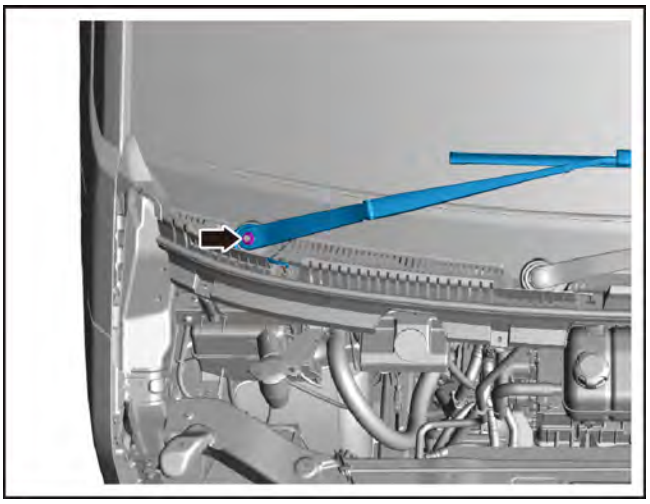
Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

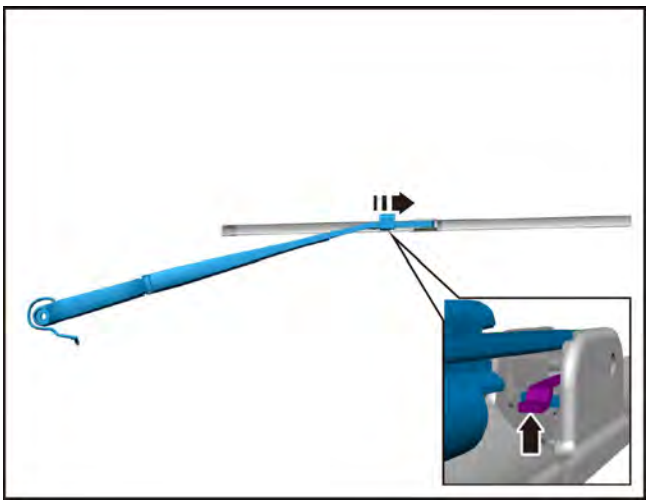
Removal Steps



1 Remove install trim cap.
   a. release main wiper arm coolant hose.
   b. Remove install trim cap.



2 UseWiper Arm Removal ToolRemove main wiper arm with accessory.
   a. Remove main wiper arm retaining nut.
   Torque:xxx±xxN·m
   b. UseWiper Arm Removal ToolRemove main wiper arm with accessory.



3 press retaining clip, remove main wiper arm.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install main wiper arm before, perform I times wiper switch operation, make it motor return to initial zero position.

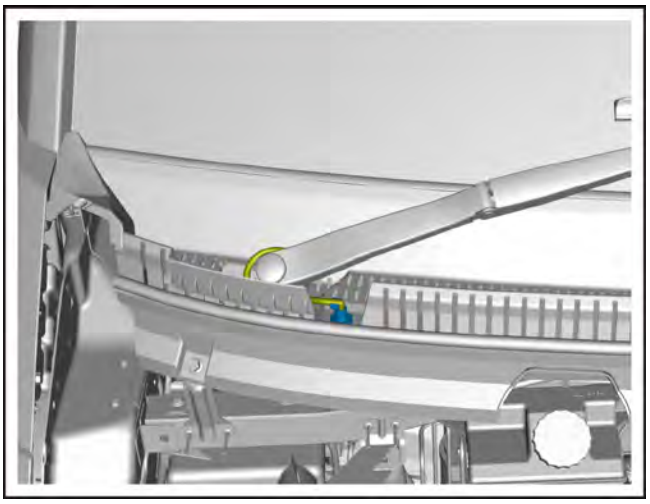
3 Install complete rear, please wiper slow place at front gear air glass upper.

Coolant Hose Connector, Repair Procedure

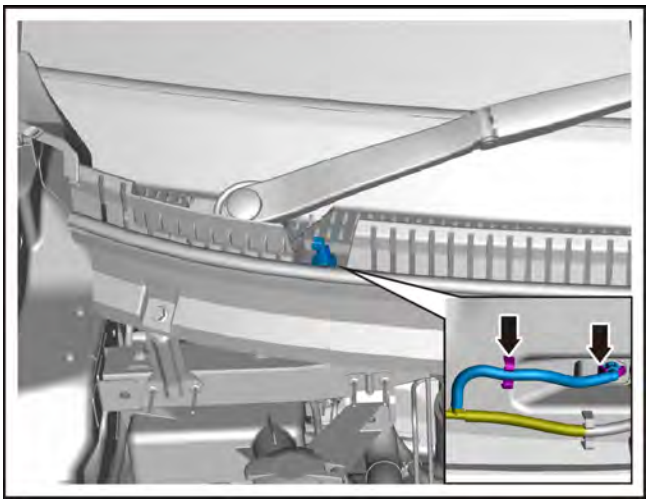
Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps



1 release main wiper arm coolant hose.



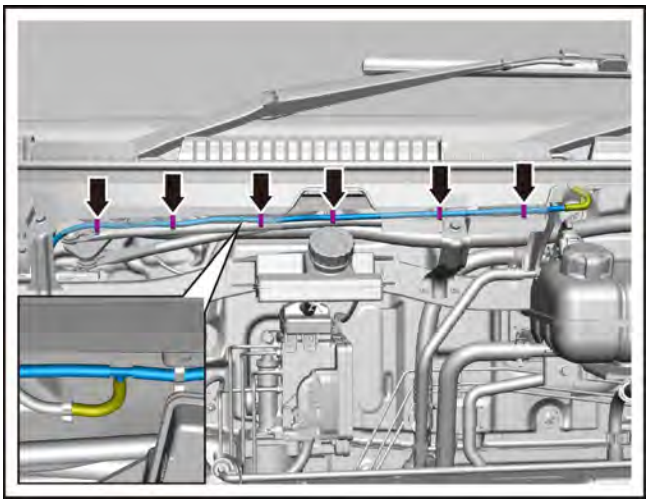
2 remove coolant hose connector.
   a. release front washer line assembly.
   b. release 2 retaining clip, remove coolant hose connector.

Installation Steps

1 Install in the reverse order of removal.

Front Washer Line Assembly, Repair Procedure

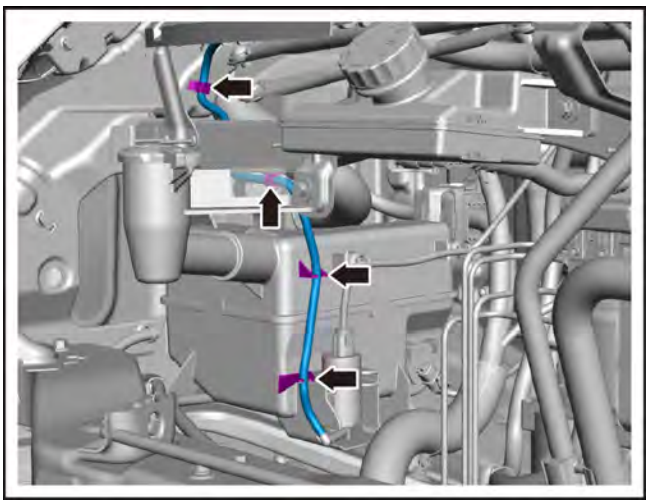
Removal Steps



1 release front washer line assembly retaining hose clamp.

a. release left, right coolant hose connector connect coolant hose.

b. release front washer line assembly 6 retaining hose clamp.



2 remove front washer line assembly

a. release front washer line assembly 2 retaining clip

b. release 2 retaining hose clamp, remove front washer line assembly.

Installation Steps

1 Install in the reverse order of removal.

Motor and Connect Movement Rod Assembly, Repair Procedure

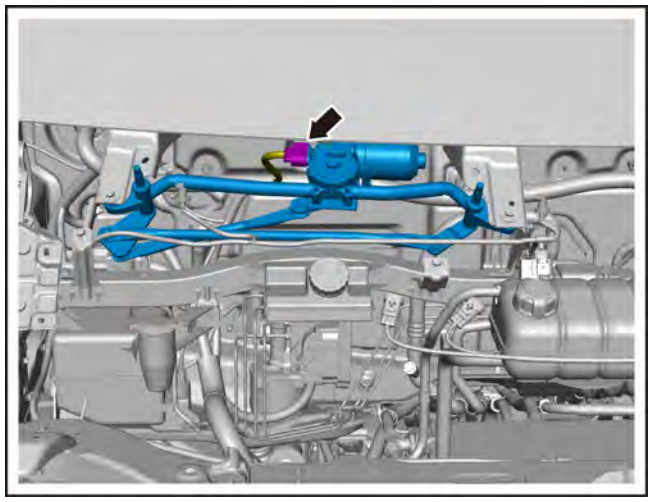
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

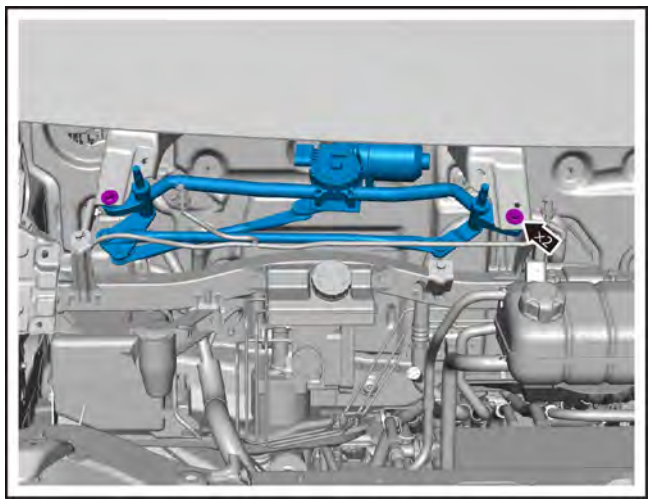
2 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

3 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

4 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure



5 Disconnect motor and connect movement rod assembly wiring harness connector.



6 Remove 2 retaining bolt, remove motor and connect movement rod assembly.

Installation Steps

1 Install in the reverse order of removal.

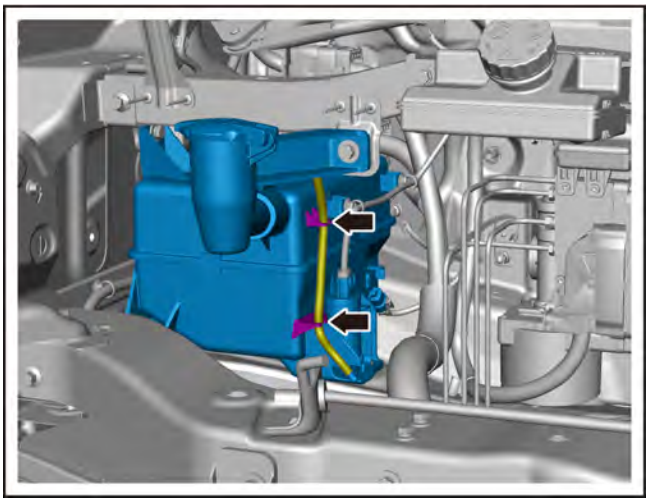
Inspection and Verification:

Install complete rear, according to times open wiper gear position, ensure each gear position action constant speed no jitter movement, and no slip or stuck condition.

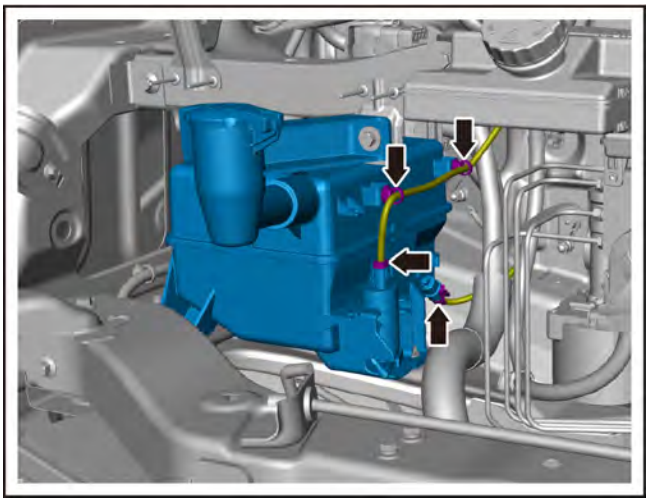
Cleaning Fluid Tank Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



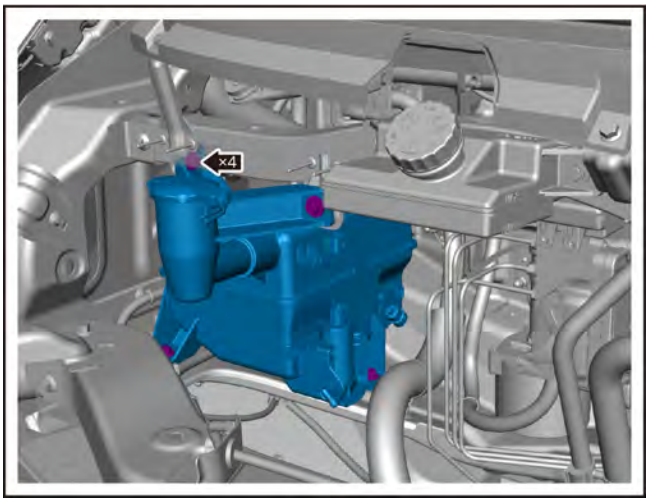
2 release front Washer management assembly 2 retaining hose clamp.



3 Release 2 cleaning fluid tank assembly retaining clips.

a. Disconnect 2 cleaning fluid tank assembly wiring harness connectors.

b. Release 2 cleaning fluid tank assembly retaining clips.



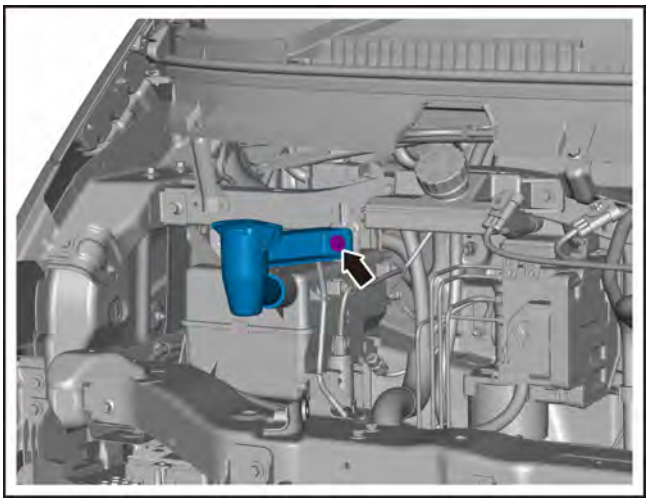
4 Remove 4 retaining bolt, remove cleaning fluid tank assembly.

Installation Steps

1 Install in the reverse order of removal.

Air Guide Pipe Assembly, Repair Procedure

Removal Steps



1 Remove retaining bolt, remove air guide pipe assembly.

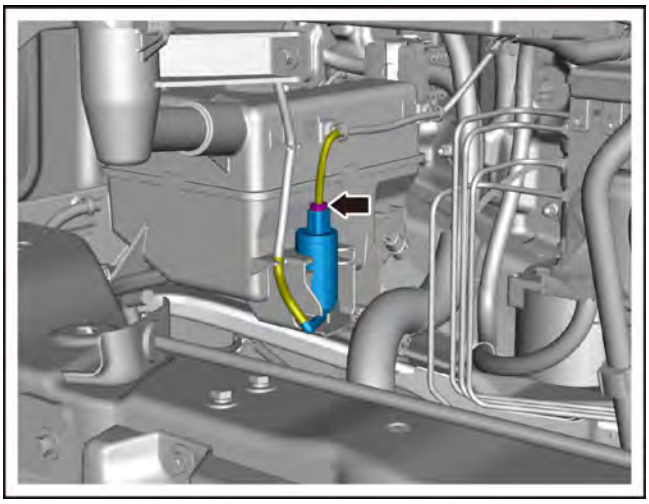
Installation Steps

1 Install in the reverse order of removal.

Washer Water Pump, Repair Procedure

Removal Steps

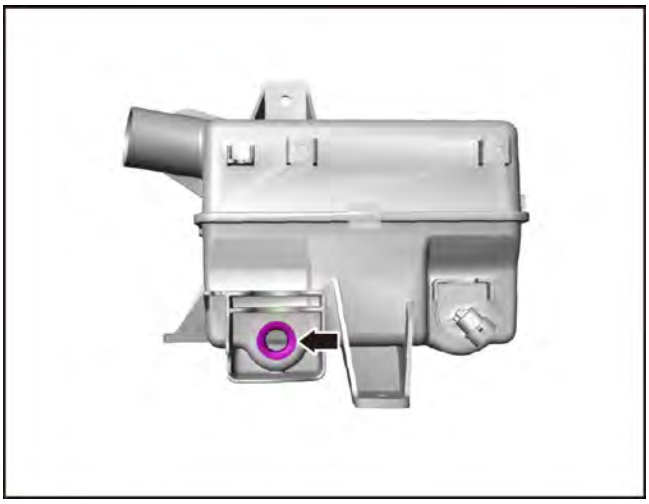
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Remove Washer water pump.
   a. release front washer line assembly.
   b. disconnect wiring harness connector, remove Washer water pump.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

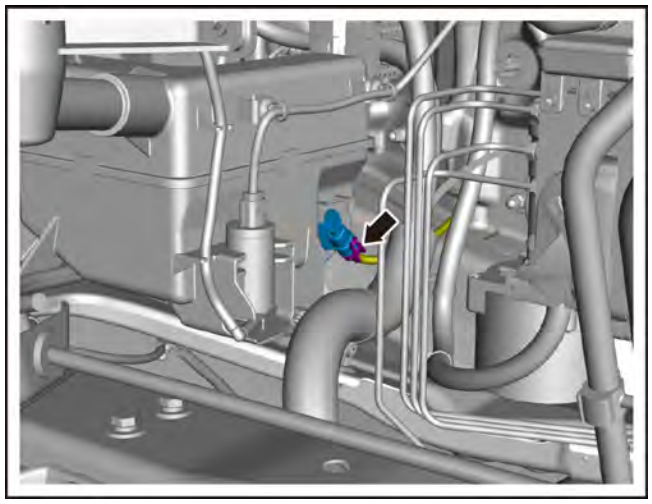


2 Install when, first rubber sleeve install to Washer fluid tank assembly install hole position, again install Washer water pump.

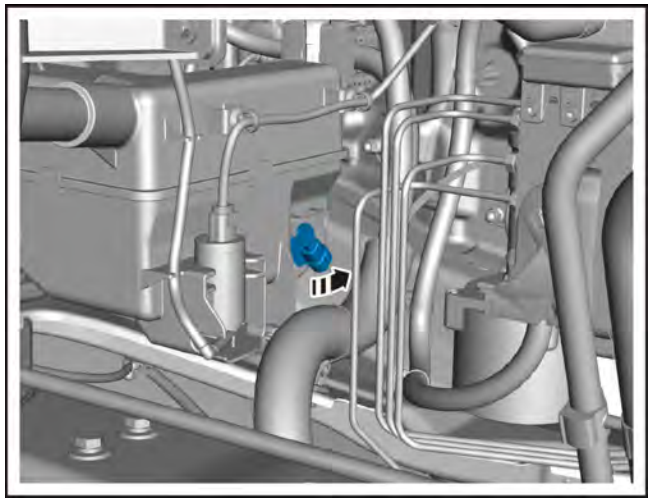
Fluid Level Sensor, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



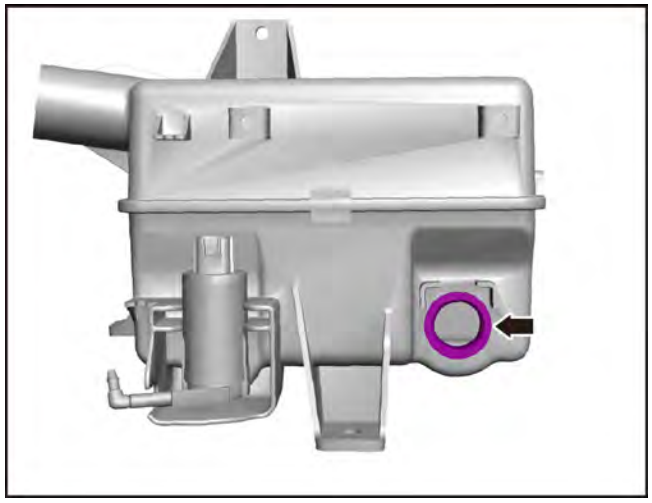
2 Disconnect fluid level sensor wiring harness connector.



3 along direction arrow side direction remove fluid level sensor.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install when, first rubber sleeve install to Washer fluid tank assembly install hole position, again install fluid level sensor.

Fault Diagnosis (CSA)

Combination Switch Assembly (CSA) DTC List

DTC	DTC Meaning	DTC Description
C190017	Battery Voltage High	battery Voltage Too High
C190016	Battery Voltage Low	battery Voltage Too Low
C190171	Knob Clamp	gear shifting hand handle stuck fault
C190200	Switch Faults	wiper fault
C190300	Wash Faults	Washer fault
C190400	lamp Faults	lamp light fault
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller FLZCU
U273587	Lost Communication With FRZCU	Lost Communication with Right Area Controller FRZCU
U273481	Invalid data received from FLZCU	from FLZCU receive to data no valid
U273581	Invalid data received from FRZCU	from FRZCU receive to data no valid
U007388	Bus off	bus disabled

UWB digital key

System Overview

Keyless Entry system introduction

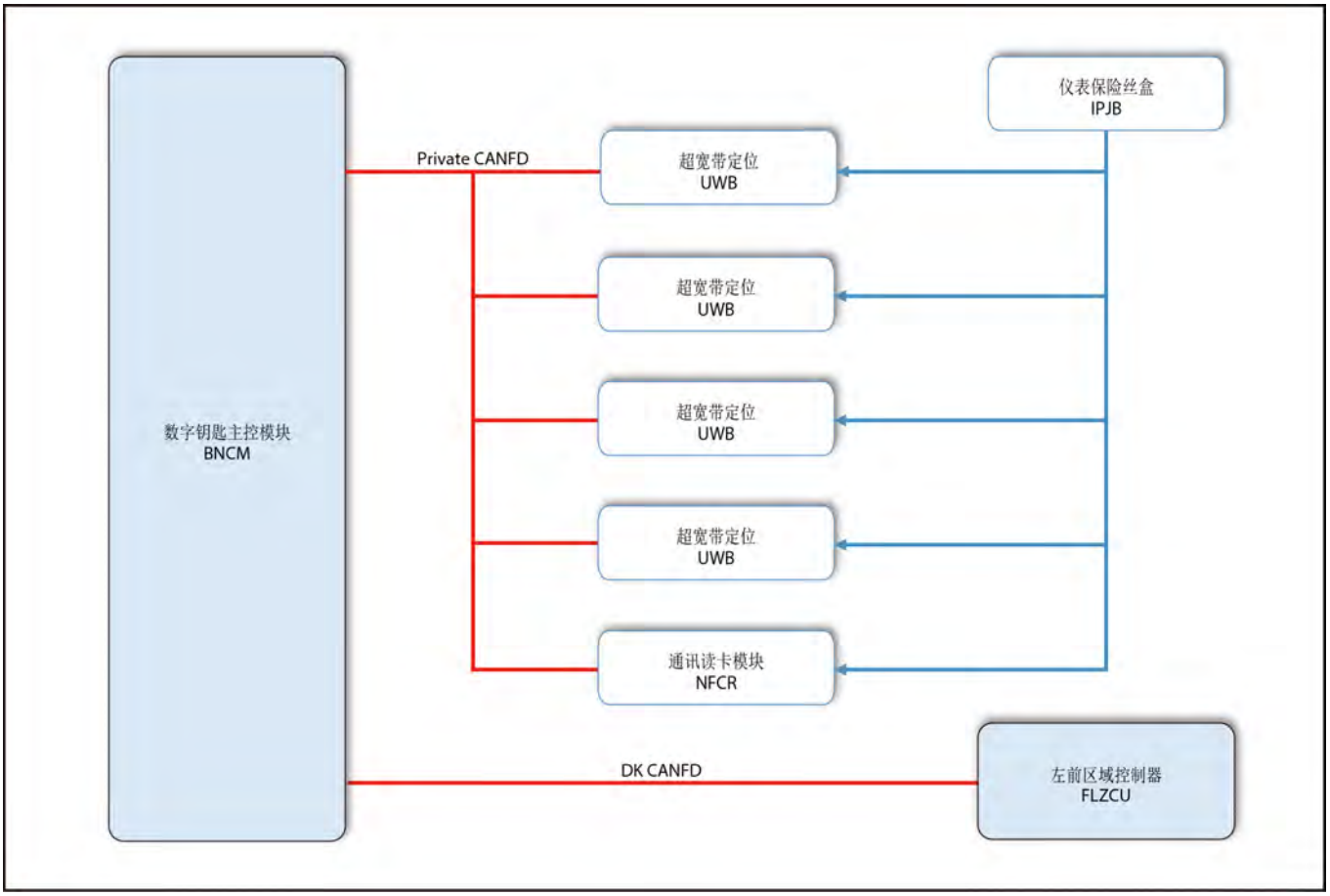
Proximity Auto-unlock

Proximity Auto-unlock vehicle connect load Bluetooth +UWB item combined positioning side case, by Bluetooth responsible for low item consumption maintain continue item item and detect authorization equipment, complete initial step connect and identity authentication, UWB then through item operate Time distance measurement enable centimetre m stage accurate positioning, actual when determine digital key and vehicle distance and side position; when detection to authorization key enter pre- setting unlock distance (communication normal 2–3 m) and confirm position at vehicle outer when, system automatic unlock door, all procedure no need operation mobile phone or touch door hold hand, positioning accuracy high, item interference capability strength.

Walk-away Auto-lock

Walk-away Auto-lock vehicle connect load Bluetooth +UWB item combined positioning side case, vehicle maintain continue monitoring authorization digital key Location Status, when detection to key away open vehicle exceed pre- setting distance threshold (communication normal 3–5 m), and confirm vehicle inner no other combined method key when, system automatic perform door Lock, and synchronization flash lamp Note etc. confirm action; UWB centimetre m stage positioning accuracy can precisely area section key in vehicle inner also Yes vehicle outer, valid avoid key incorrect lock in vehicle inner condition, same when prevent because signal wave movement cause incorrect Lock, all procedure no need driver hand movement operation key or touch door hold hand.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	DK CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Digital Key Master Control Module	DK CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Instrument Panel Fuse Box	Hardwired	Power Supply	exceed wide with positioning power supply Output
exceed wide with positioning	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Input
communication read card module	Private CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Component Description

exceed wide with positioning

vehicle load exceed wide with positioning (UWB) by body multiple UWB anchor point chip, key end UWB mark sign and main control module consists of, through measure exceed wide with pulse signal item operate Time (ToF) enable centimetre m stage accurate positioning, actual when determination digital key and vehicle distance and side position, for Proximity Auto-unlock, Walk-away Auto-lock etc. Function provide high accuracy Location determine and safety authentication based on.

Digital Key Master Control Module

Digital Key Master Control Module Yes UWB positioning system core Control Unit, responsible for coordinate management vehicle load UWB anchor point and Bluetooth module signal acquire and adjust degree, complete key identity authentication, centimetre m stage Location unlock item and vehicle inner outer determination, and according to positioning result direction body control module lower send unlock, Lock etc. command, same when carry safety encryption and protection center continue attack etc. protection Function.

communication read card module

communication read card module main need Function Yes sensing should recognition NFC card signal, through no line communication complete vehicle identity authentication and data interaction. vehicle load controller according to vehicle Wake-Up and unlock Status control NFC communication read card module, adjust read card frequency and signal recognition sensitivity degree, enable more stability read card recognition valid result and intelligent control can consumption management.

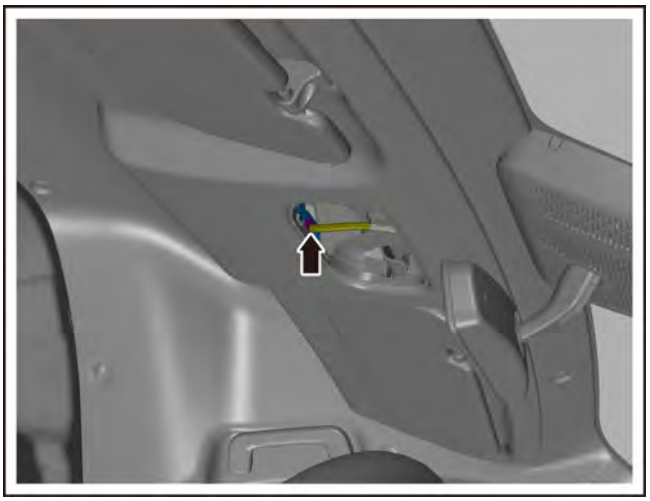
Repair Procedure

UWB Main Controller, Repair Procedure

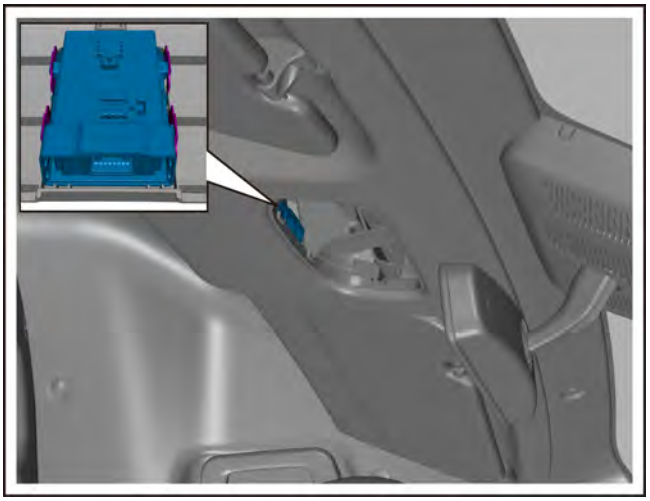
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure



3 Disconnect UWB main controller wiring harness connector.



4 release retaining clip, remove UWB main controller.

Installation Steps

1 Install in the reverse order of removal.

UWB Positioning Unit - Left Front, Repair Procedure

Tips

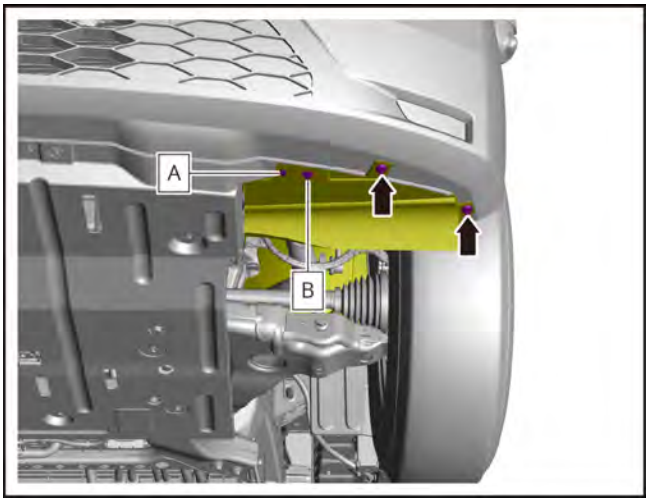
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove left front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

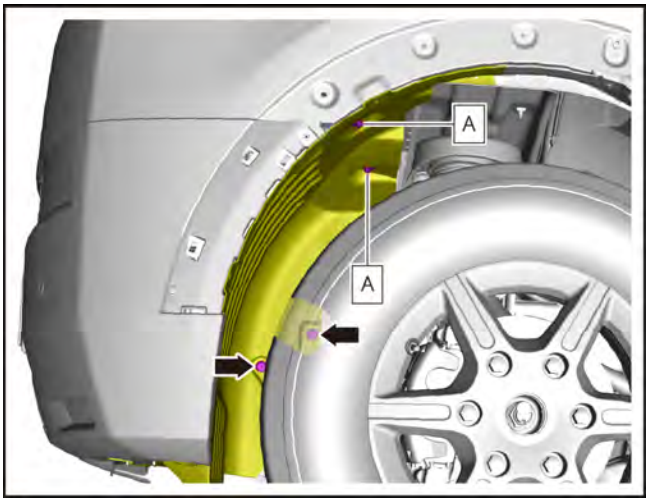


4 Remove left front wheel cover assembly fastener.

a. Remove Front Underbody Shield retaining bolt A.

b. Remove left front wheel cover assembly retaining bolt B.

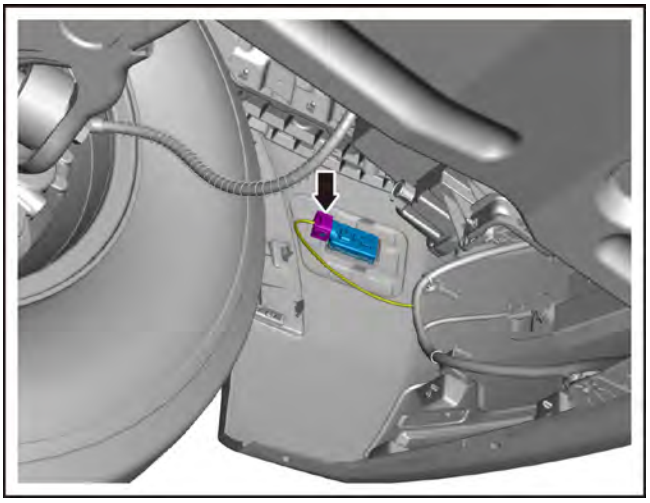
c. Remove left front wheel cover assembly 2 retaining clip.



5 offset open left front wheel cover assembly.

a. Remove left front wheel cover assembly 2 plastic nut A.

b. Remove 2 retaining clip, offset open left front wheel cover assembly.



6 Remove UWB positioning unit - left front.
   a. Disconnect UWB positioning unit - left front wiring harness connector.
   b. release retaining clip, remove UWB positioning unit - left front.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Inspection and Verification:

Install complete rear, perform static state positioning test, calibration equipment Parameters, confirm distance measurement positioning whether precisely no incorrect.

UWB Positioning Unit - Left Rear, Repair Procedure

Tips

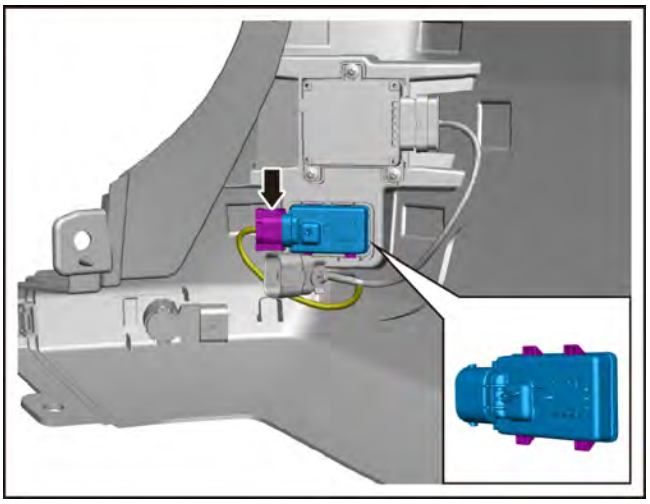
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

3 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation



4 release retaining clip, remove UWB positioning unit - left rear.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, perform static state positioning test, calibration equipment Parameters, confirm distance measurement positioning whether precisely no incorrect.

Keyless Entry Switch, Repair Procedure

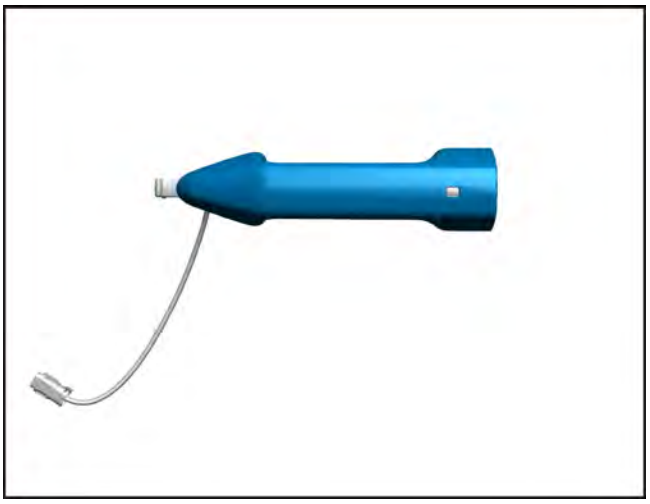
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

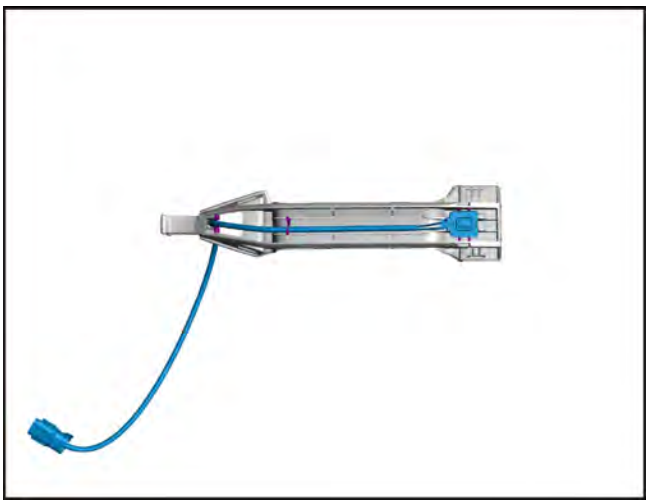
2 Remove right front door Shield Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove right front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

4 Remove right front door outer hold hand assembly. Refer to:Right Front Door Outer Hold Hand Assembly, Repair Procedure



5 UsePlastic Pry ToolRemove the right front exterior door handle assembly trim cover.



6 release retaining clip, remove Keyless Entry switch.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

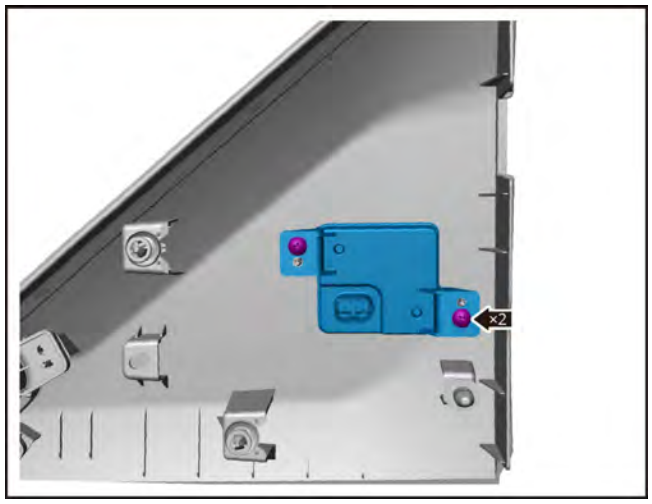
Install complete rear, test Keyless Entry switch, ensure with key away open or near vehicle when, vehicle can automatic upper lock and unlock.

NFC Enter Start Module, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation



3 Remove 2 retaining screw, remove NFC enter start module.

Installation Steps

1 Install in the reverse order of removal.

Fault Diagnosis (BNCM)

Digital Key Master Control Module (BNCM) DTC List

DTC	DTC Meaning	DTC Description
B1F0216	Battery Voltage Low	power supply voltage low
B1F0217	Battery Voltage High	power supply voltage high
B1F0B87	Lost Communication With UWB1	Lost Communication with UWB1
B1F0C87	Lost Communication With UWB2	Lost Communication with UWB2
B1F0D87	Lost Communication With UWB3	Lost Communication with UWB3
B1F0E87	Lost Communication With UWB4	Lost Communication with UWB4
B1F1200	Immobilizer and BNCM authentication failed	digital key main module and protection theft controller authentication failure
B1F1800	Security Code(PIN) is not written	Security Code(PIN) not write
B1F1900	BNCM not learning sk	BNCM not learning SK
B1F1B16	NFC reader Battery under voltage	NFC card reader battery undervoltage
B1F1B17	NFC reader Battery over voltage	NFC card reader battery overvoltage
B1F1E16	Anchor Battery under voltage	anchor battery undervoltage
B1F1E17	Anchor Battery over voltage	anchor battery overvoltage
U007388	Control Module Communication Bus Off	control module communication bus disabled
U248A87	0x48A Message Timeout	0x4B4 message timeout
U24B487	0x48A Message Timeout	0x4B4 message timeout
U272887	0x4B4 Message Timeout	Lost Communication with Telematics Communication Module TBOX
U22BB87	Lost Communication With TBOX	0x2AB message timeout
U22AB87	0x2BB Message Timeout	0x510 message timeout
U251087	0x2AB Message Timeout	0x510 message timeout
B1F0000	0x510 Message Timeout	VIN code not write
U273487	VIN not Writed	Lost Communication with Left Area Controller FLZCU
U130055	Lost Communication With FLZCU	BNCM not configuration
B1F0E88	BNCM Not Configured	Lost Communication with NFCR

06 inner exterior trim

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steering disc

Component Description

steering disc assembly

steering wheel assembly Yes vehicle driving control core component, by Steering Wheel frame, package cover layer, heat component consists of. driver Input steering torque and steering angle transmit to steering system, enable vehicle driving side direction control.

Repair Procedure

Steering Wheel Assembly, Repair Procedure

Tips

Remove steering wheel assembly front wheel return positive, make steering wheel assembly be in centered position.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

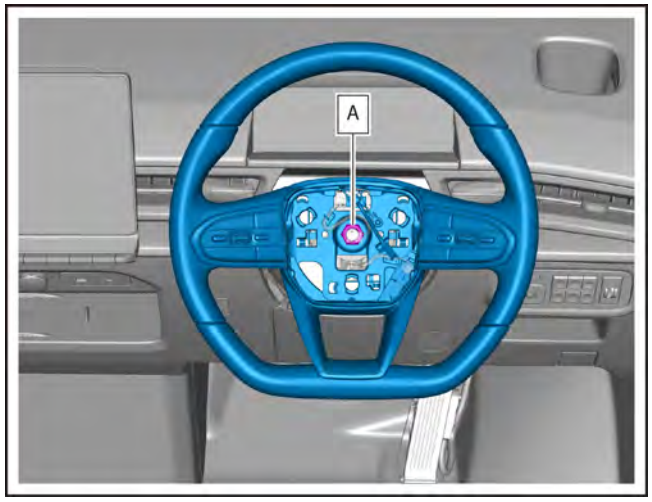
2 Remove driver airbag. Refer to:Driver Airbag, Repair Procedure



3 Disconnect steering wheel assembly wiring harness connector.

a. Disconnect 2 steering wheel assembly wiring harness connectors.

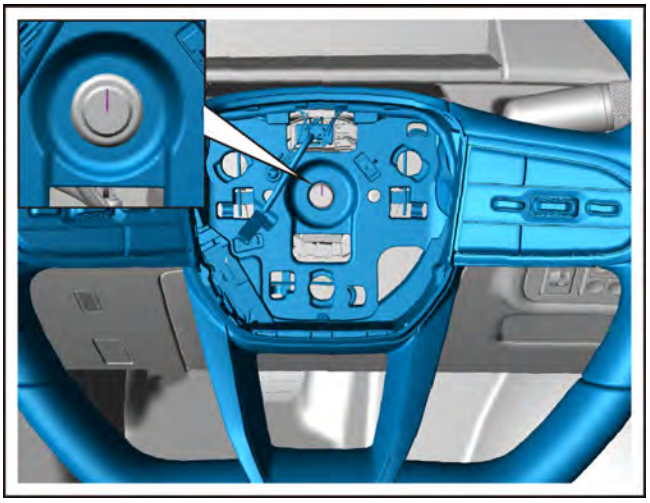
b. release combination switch assembly wiring harness 2 retaining clamp.



4 Remove retaining nut, remove steering wheel assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install steering wheel assembly when, need alignment mechanical steering column upper install mark line, No then may cause vehicle in driving center pulling, effect driving safety.

Follow-up Work:

Install complete rear, in safety channel circuit upper perform circuit test, ensure driving stability, no pulling condition.

Steering Wheel Body, Repair Procedure

Tips

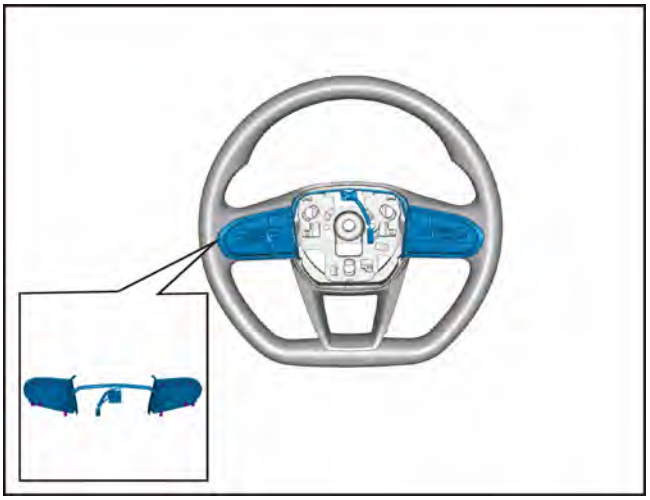
Remove steering wheel assembly front wheel return positive, make steering wheel assembly be in centered position.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove driver airbag. Refer to:Driver Airbag, Repair Procedure

3 Remove steering wheel assembly. Refer to:Steering Wheel Assembly, Repair Procedure



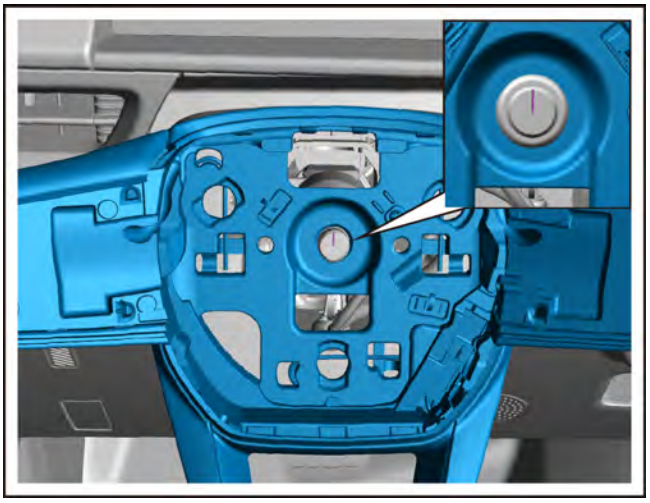
4 release retaining clip, remove Multifunction Steering Wheel Switch.



5 remove Steering Wheel body.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Install steering wheel assembly when, need alignment mechanical steering column upper install mark line, No then may cause vehicle in driving center pulling, effect driving safety.

Follow-up Work:

Install complete rear, in safety channel circuit upper perform circuit test, ensure driving stability, no pulling condition.

air spring

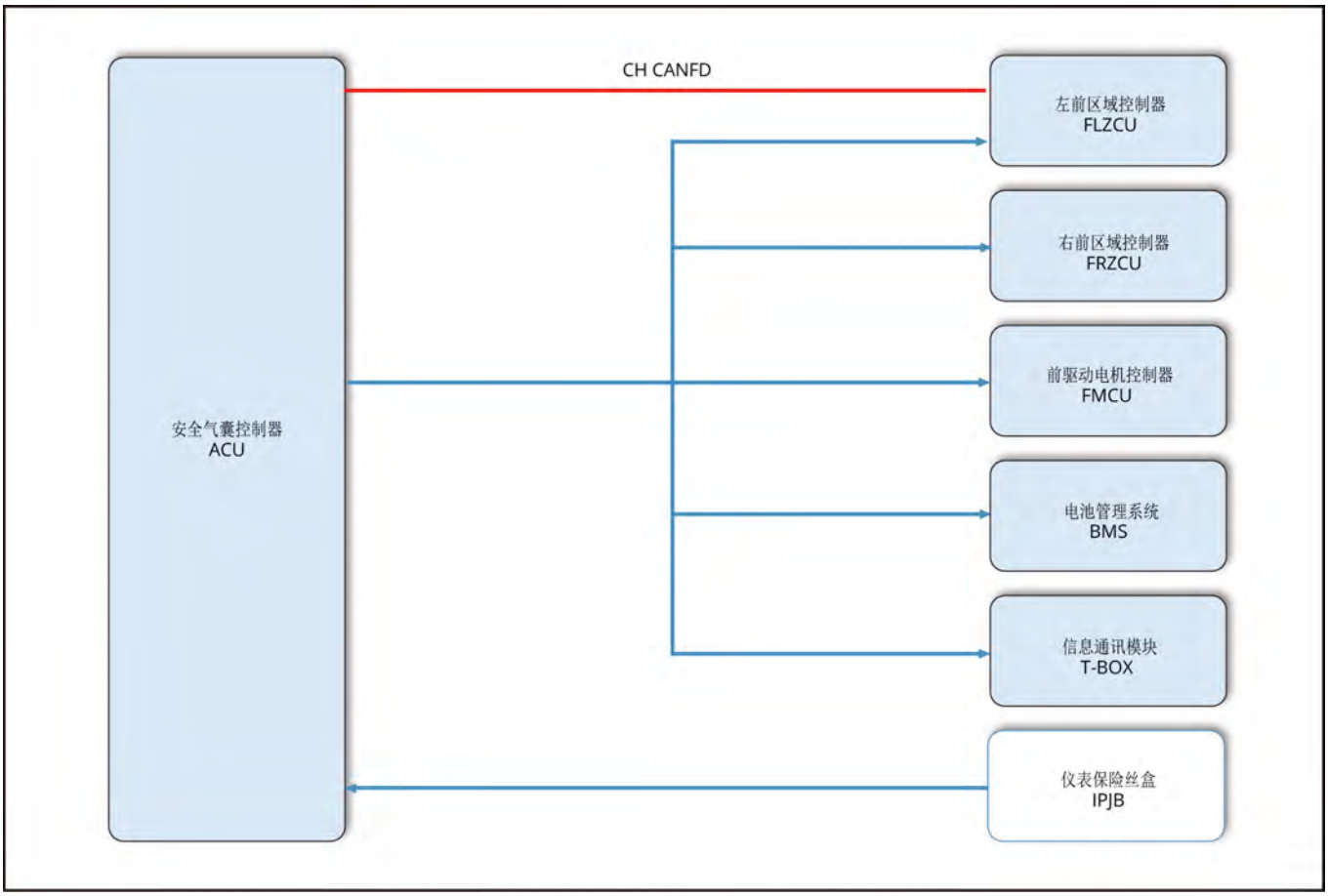
System Overview

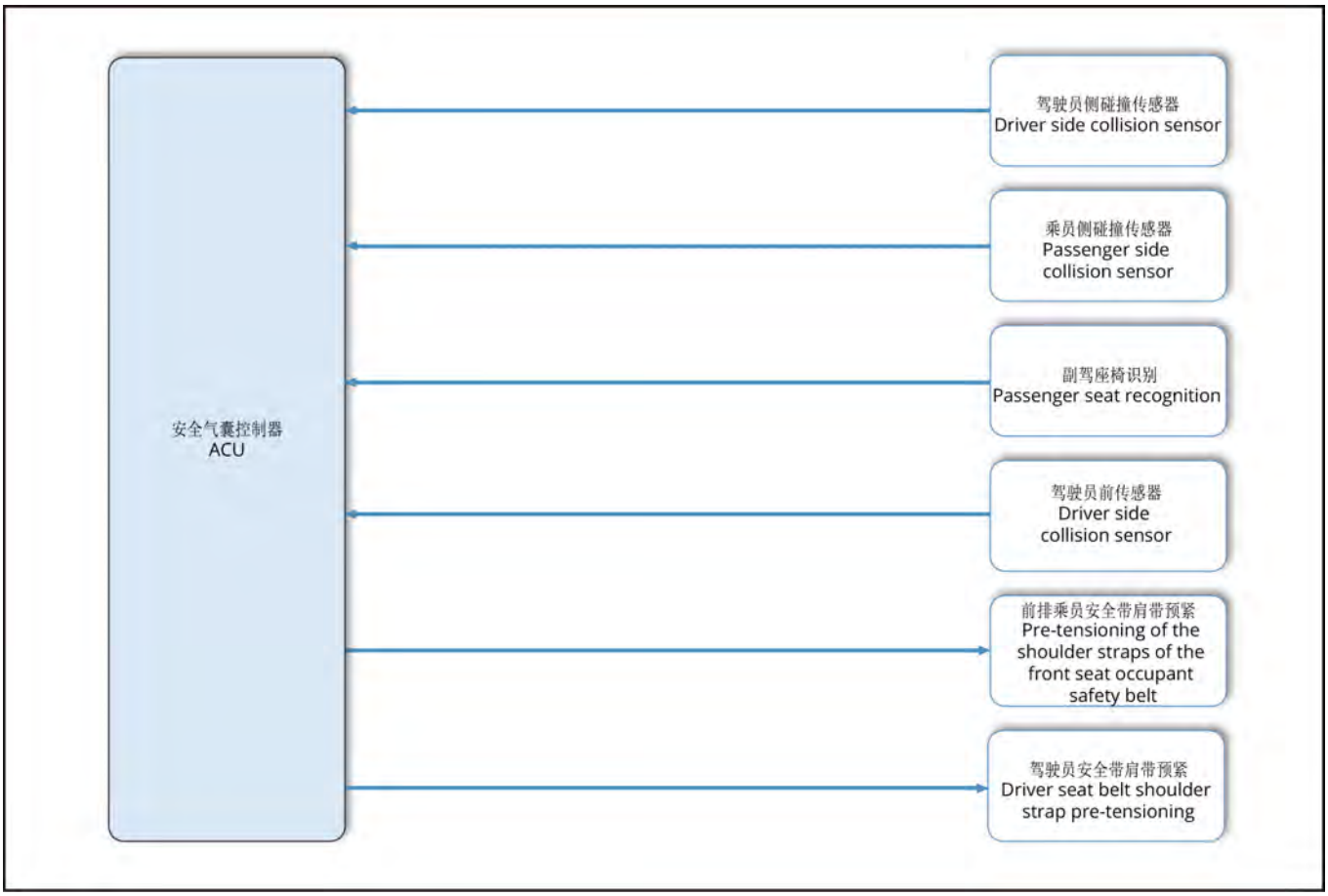
Airbag Operating Principle

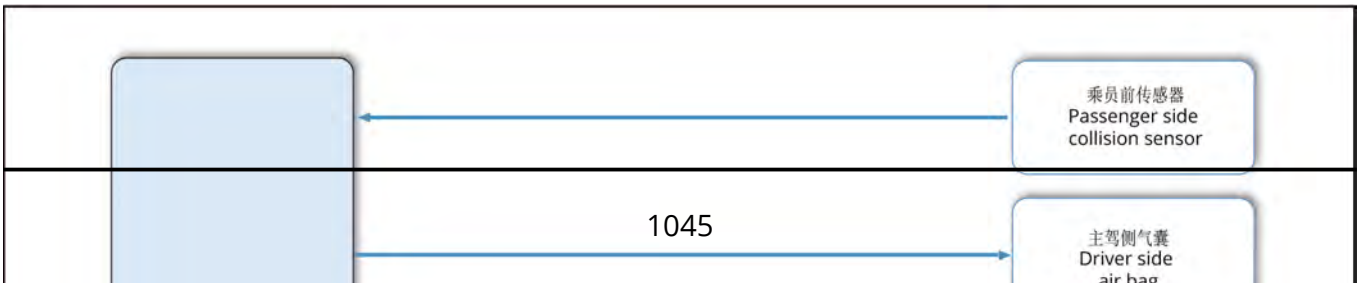
Operating Principle Overview

Airbag Module by housing, inflation type airbag, ignition deploy unit and gas occur unit consists of. when a collision occurs, and item, lateral acceleration reach to airbag control module setting determine reduce speed reference value when, Airbag Control Unit Assembly will direction air spring module transmit ignition command. through ignition unit deploy gas occur unit, quickly generate large amount gas, make airbag inflation expansion. inflation complete rear, air spring through place air hole rapid speed release gas, with buffer impact force and protection occupant safety. this l process in ms stage Time inner complete, valid lower low collision with to injury.

Electrical Schematic Diagram


CH CANFD
安全气囊控制器
ACU
左前区域控制器
FLZCU
右前区域控制器
FRZCU
前驱动电机控制器
FMCU
电池管理系统
BMS
信息通讯模块
T-BOX
仪表保险丝盒
IPJB


安全气囊控制器
ACU
驾驶员侧碰撞传感器
Driver side collision sensor
乘员侧碰撞传感器
Passenger side collision sensor
副驾座椅识别
Passenger seat recognition
驾驶员前传感器
Driver side collision sensor
前排乘员安全带肩带预紧
Pre-tensioning of the shoulder straps of the front seat occupant safety belt
驾驶员安全带肩带预紧
Driver seat belt shoulder strap pre-tensioning


乘员前传感器
Passenger side collision sensor
主驾侧气囊
Driver side

Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Airbag Control Unit	CH CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	Hardwired	Crash Signal	Left Front Zone Control Unit Crash Signal Output
	Hardwired	Crash Signal	Right Front Zone Control Unit Crash Signal Output
	Hardwired	Crash Signal	Front Drive Motor Controller Crash Signal Output
	Hardwired	Crash Signal	Battery Management System Crash Signal Output
	Hardwired	Crash Signal	Telematics Communication Module Crash Signal Output
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
	Hardwired	Crash Signal	Driver Side Crash Sensor signal Input
	Hardwired	Crash Signal	occupant side Crash Sensor signal Input
	Hardwired	recognition signal	front passenger seat recognition signal Input
	Hardwired	Crash Signal	driver Front Impact Sensor signal Input
	Hardwired	Control Signal	front occupant seat belt item with pretensioner Control Signal Output
	Hardwired	Control Signal	driver seat belt item with pretensioner Control Signal Output
	Hardwired	Crash Signal	occupant Front Impact Sensor signal Input
	Hardwired	Ignition Signal	driver side airbag Ignition Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Ignition Signal	front passenger side airbag Ignition Signal Output
	Hardwired	Ignition Signal	front passenger air spring Ignition Signal Output
	Hardwired	Ignition Signal	Clock Spring driver air spring Ignition Signal Output
Left Front Zone Control Unit	CH CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Input
Right Front Zone Control Unit	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Input
Front Drive Motor Controller	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Input
Battery Management System	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Input
Telematics Communication Module	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Input
Instrument Panel Fuse Box	Hardwired	Power Supply	Airbag Control Unit Power Supply Output
Driver Side Crash Sensor	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Output
occupant side Crash Sensor	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Output
front passenger seat recognition	Hardwired	recognition signal	Airbag Control Unit seat recognition signal Output
driver front sensor	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Output
front occupant seat belt item with pretensioner	Hardwired	Control Signal	Airbag Control Unit Control Signal Input
driver seat belt item with pretensioner	Hardwired	Control Signal	Airbag Control Unit Control Signal Input
occupant front sensor	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
driver side airbag	Hardwired	Ignition Signal	Airbag Control Unit Ignition Signal Input
front passenger side airbag	Hardwired	Ignition Signal	Airbag Control Unit Ignition Signal Input
front passenger air spring	Hardwired	Ignition Signal	Airbag Control Unit Ignition Signal Input
Clock Spring	Hardwired	Ignition Signal	Airbag Control Unit Ignition Signal Input
	Hardwired	Ignition Signal	Driver Airbag Ignition Signal Output
Driver Airbag	Hardwired	Ignition Signal	Clock Spring Ignition Signal Input

Component Description

Driver Airbag

Driver Airbag install in Steering Wheel center item Location, it operate use Yes in vehicle occur severe frontal collision when quickly inflation pop out, buffer driver because inertial direction front item item force amount, from and reduce item driver head part and item part affected to injury.

Front Passenger air spring

Front Passenger air spring install in instrument panel Front Passenger Side, in vehicle occur severe frontal collision and detection to front passenger with passenger when, Front Passenger person airbag quickly inflation expansion deploy open, for front passenger occupant head part, item part provide assist protection.

Repair Procedure

Driver Airbag, Repair Procedure

Warning

- *with related airbag Precautions. refer to:*Airbag Precautions
- *with related Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

Ensure that the vehicle electrical system is completely powered down and that no other power source is connected.

After the power supply is disconnected, the Supplemental Restraint System (SRS) remains active for a period of time. Wait at least 3 min before removing any SRS component.

Warning

do not in airbag front side work, must must in component side surface work. No then may will cause form personal injury.

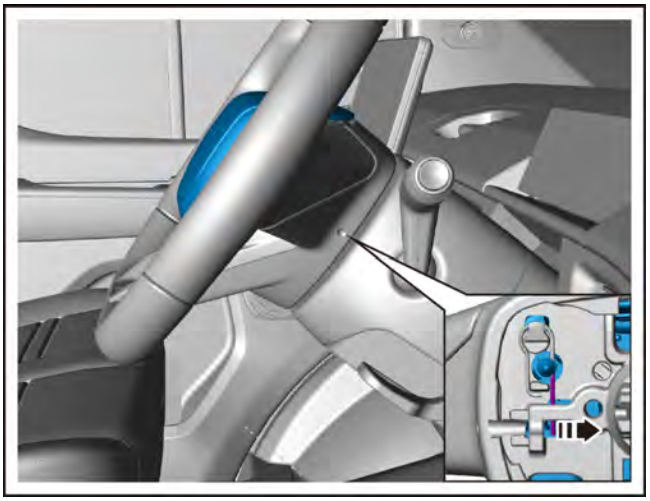
airbag from vehicle upper remove except rear, prohibit stop for air spring occur unit terminal and wiring harness communication power.

Caution

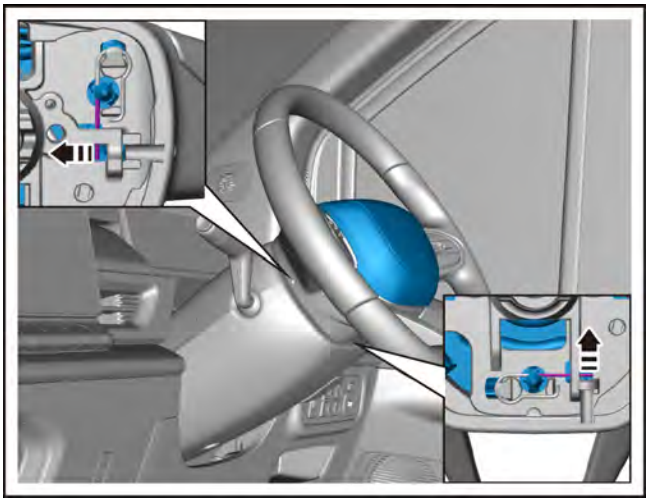
Removal and Installation electrical component part when must wear protection electrostatic hand sleeve, electrostatic protection missing may cause components damage.

Removal Steps

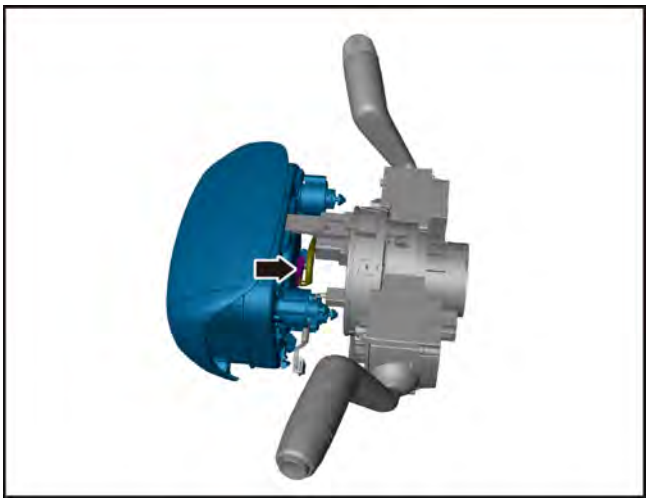
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



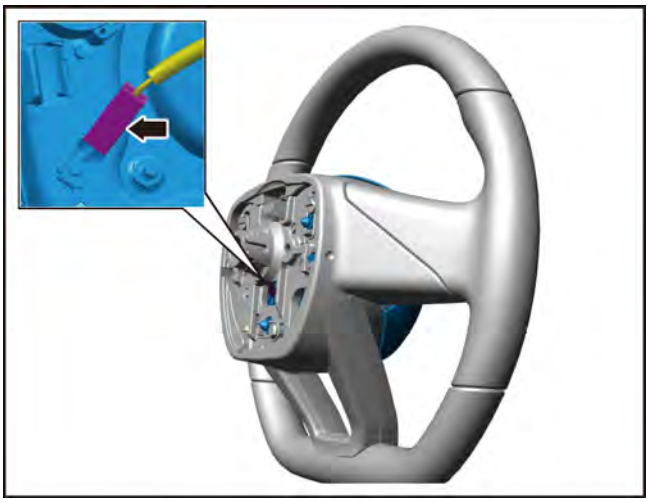
2 UseFlat-blade Screwdriver, by Steering Wheel right remove hole center insert, along direction arrow side direction top open Driver Frontal Airbag assembly right retaining point.



3 UseFlat-blade Screwdriver, by Steering Wheel left and lower side remove hole center insert, along direction arrow side direction top open Driver Frontal Airbag assembly left retaining point.



4 Disconnect driver airbag wiring harness connector.



5 disconnect connector, remove driver airbag.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, connect diagnostic scan tool read DTC, confirm system no when front fault or history fault.

Front Passenger Airbag, Repair Procedure

Warning

- *with related airbag Precautions. refer to:*Airbag Precautions
- *with related Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

Ensure that the vehicle electrical system is completely powered down and that no other power source is connected.

After the power supply is disconnected, the Supplemental Restraint System (SRS) remains active for a period of time. Wait at least 3 min before removing any SRS component.

Warning

do not in airbag front side work, must must in component side surface work. No then may will cause form personal injury.

airbag from vehicle upper remove except rear, prohibit stop for air spring occur unit terminal and wiring harness communication power.

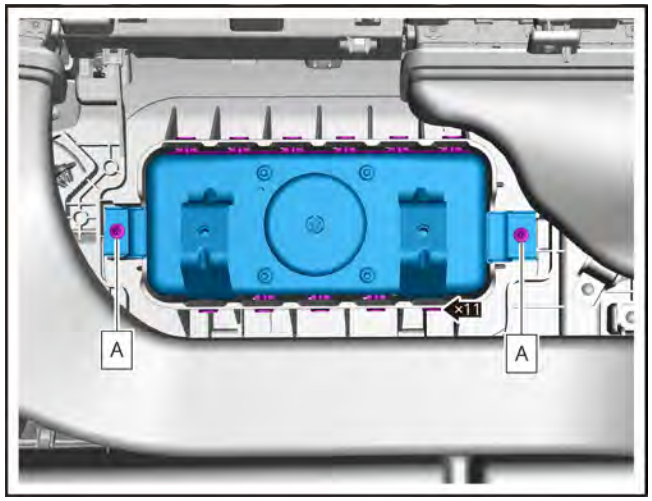
Caution

Removal and Installation electrical component part when must wear protection electrostatic hand sleeve, electrostatic protection missing may cause components damage.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel subassembly -RHD. Refer to:Instrument Panel Subassembly -RHD, Removal and Installation



3 remove front Passenger Airbag.

a. Remove front Passenger Airbag 2 retaining screw A.

b. release 11 retaining clip, remove front Passenger Airbag.

Installation Steps

1 Install in the reverse order of removal.

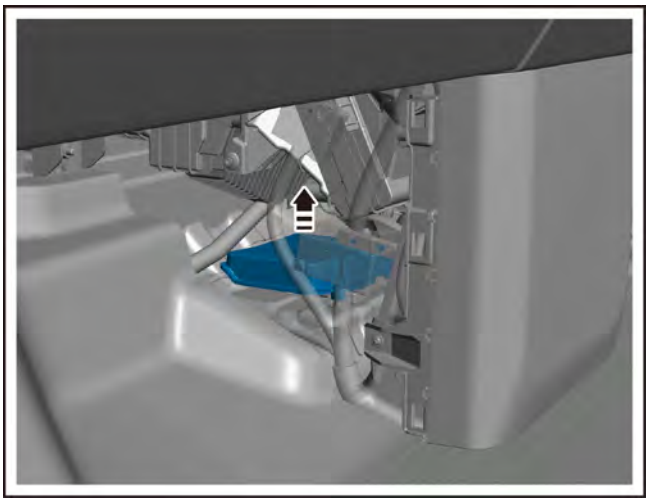
Inspection and Verification:

Install complete rear, connect diagnostic scan tool read DTC, confirm system no when front fault or history fault.

Air Spring Controller Cover, Repair Procedure

Removal Steps

1 Remove HVAC flap assembly left. Refer to:HVAC Flap Assembly Left, Repair Procedure



2 along direction arrow side direction remove air spring controller cover.

Installation Steps

1 Install in the reverse order of removal.

Airbag Control Unit Assembly, Repair Procedure

Warning

- *with related airbag Precautions. refer to:*Airbag Precautions
- *with related Electrostatic Discharge Precautions. refer to:*Electrostatic Discharge Precautions

Caution

Ensure that the vehicle electrical system is completely powered down and that no other power source is connected.

After the power supply is disconnected, the Supplemental Restraint System (SRS) remains active for a period of time. Wait at least 3 min before removing any SRS component.

Caution

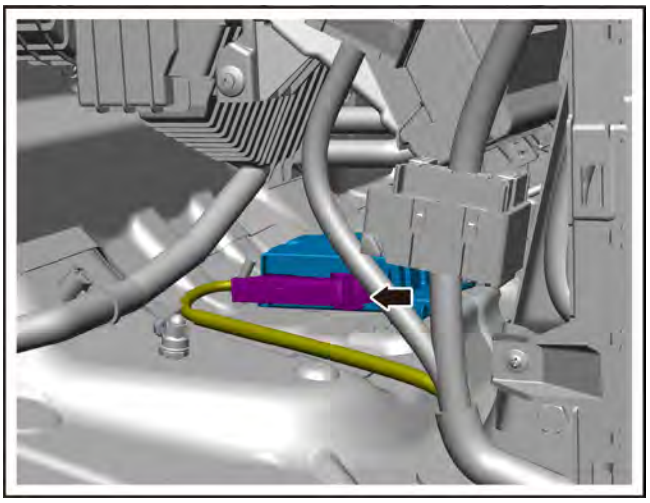
Removal and Installation electrical component part when must wear protection electrostatic hand sleeve, electrostatic protection missing may cause components damage.

Removal Steps

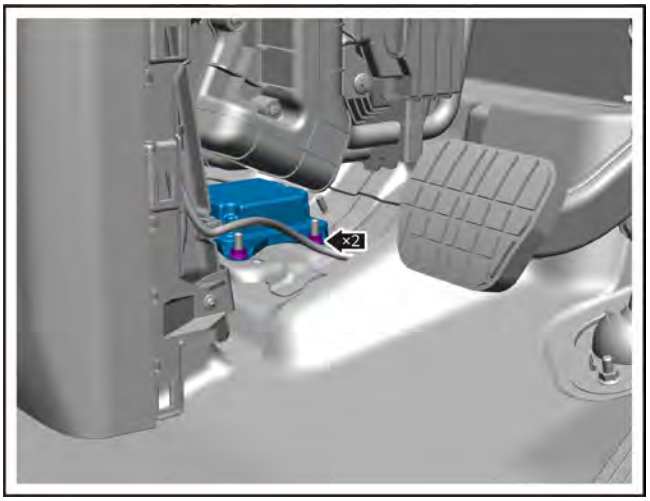
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove HVAC flap assembly left, right. Refer to:HVAC Flap Assembly Left, Repair Procedure

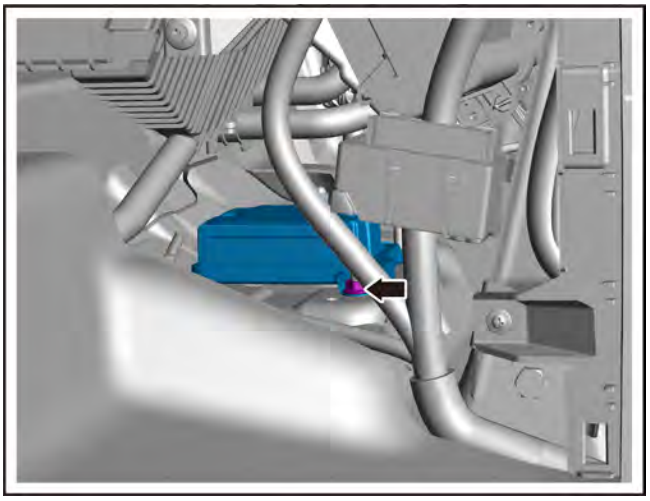
3 Remove air spring controller cover. Refer to:Air Spring Controller Cover, Repair Procedure



4 Disconnect Airbag Control Unit Assembly wiring harness connector.



5 Remove Airbag Control Unit Assembly 2 retaining nut.



6 Remove retaining nut, remove Airbag Control Unit Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 if replace Airbag Control Unit Assembly, then install complete rear, Use diagnostic scan tool perform “SRS” programming and setting. refer to:controller module programming and setting

Inspection and Verification:

Install complete rear, connect diagnostic scan tool read DTC, confirm system no when front fault or history fault.

Crash Sensor - Front, Repair Procedure

Tips

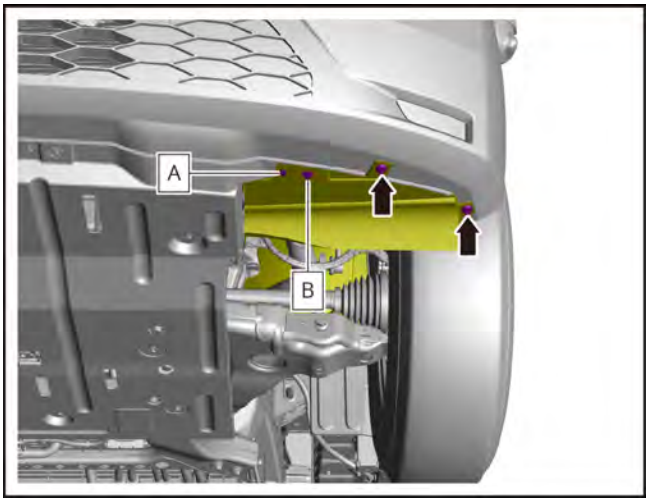
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove left front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

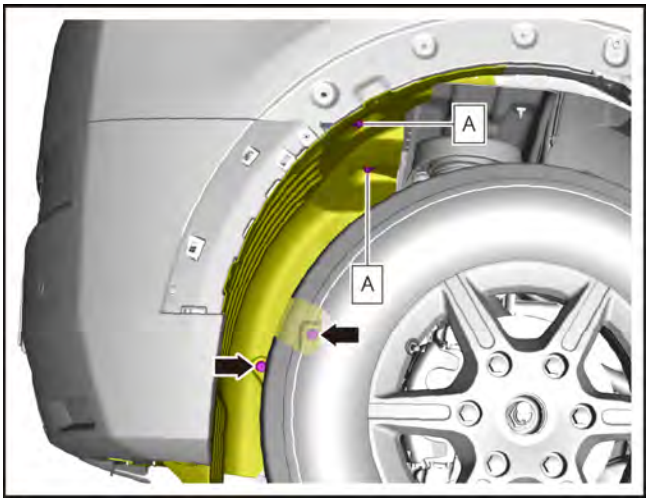


4 Remove left front wheel cover assembly fastener.

a. Remove Front Underbody Shield retaining bolt A.

b. Remove left front wheel cover assembly retaining bolt B.

c. Remove left front wheel cover assembly 2 retaining clip.



5 offset open left front wheel cover assembly.

a. Remove left front wheel cover assembly 2 plastic nut A.

b. Remove 2 retaining clip, offset open left front wheel cover assembly.



6 remove Crash Sensor - front.

a. Disconnect Crash Sensor - front wiring harness connector.

b. Remove retaining bolt A, remove Crash Sensor - front.

Installation Steps

1 Install in the reverse order of removal.

Crash Sensor -B Pillar, Repair Procedure

Tips

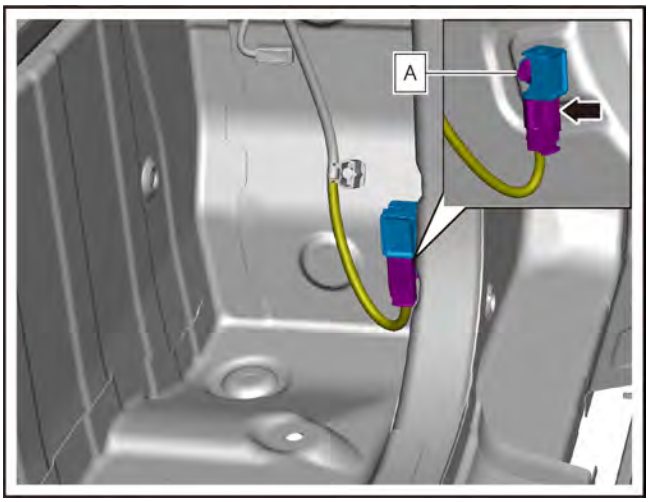
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove luggage compartment lamp. Refer to:Luggage Compartment Lamp, Repair Procedure

3 Remove left front scuff plate assembly. Refer to:Left Front Scuff Plate Assembly, Repair Procedure



4 remove Crash Sensor -B pillar.

a. Disconnect Crash Sensor -B pillar wiring harness connector.

b. Remove retaining bolt A, remove Crash Sensor -B pillar.

Installation Steps

1 Install in the reverse order of removal.

Fault Diagnosis (ACU)

Airbag Control Unit (ACU) DTC List

DTC	DTC Meaning	DTC Description
B125016	Input voltage too low	input Voltage Too Low
B125017	Input voltage too high	input Voltage Too High
B11101B	Driver front airbag resistance too High	driver front air spring resistance over large
B11101A	Driver front airbag resistance too Low	driver front air spring resistance over small
B111011	Driver front airbag resistance circuit short to Ground	driver front air spring resistance circuit to ground short circuit
B111012	Driver front airbag resistance circuit short to Battery	driver front air spring resistance circuit for power supply short circuit
B11111B	Passenger front airbag resistance too High	occupant front air spring resistance over large
B11111A	Passenger front airbag resistance too Low	occupant front air spring resistance over small
B111111	Passenger front airbag resistance circuit short to Ground	occupant front air spring resistance circuit to ground short circuit
B111112	Passenger front airbag resistance circuit short to Battery	occupant front air spring resistance circuit for power supply short circuit
B11121B	Driver Seat belt resistance too High	driver seat belt resistance over large
B11121A	Driver Seat belt resistance too Low	driver seat belt resistance over small
B111211	Driver Seat beltr resistance circuit short to Ground	driver seat belt resistance circuit to ground short circuit
B111212	Driver Seat belt resistance circuit short to Battery	driver seat belt resistance circuit for power supply short circuit
B11131B	Pretensioner Seat belt resistance too High	occupant seat belt resistance over large
B11131A	PretensionerSeat belt resistance too Low	occupant seat belt resistance over small
B111311	Pretensioner Seat belt resistance circuit short to Ground	occupant seat belt resistance circuit to ground short circuit
B111312	Pretensioner Seat belt resistance circuit short to Battery	occupant seat belt resistance circuit for power supply short circuit
B11141B	Driver side airbag resistance too High	Driver Side surface air spring resistance over large
B11141A	Driver side airbag resistance too Low	Driver Side surface air spring resistance over small
B111411	Driver side airbag resistance circuit short to Ground	Driver Side surface air spring resistance circuit to ground short circuit

DTC	DTC Meaning	DTC Description
B111412	Driver side airbag resistance circuit short to Battery	Driver Side surface air spring resistance circuit for power supply short circuit
B11151B	Passenger side airbag resistance too High	occupant side surface air spring resistance over large
B11151A	Passenger side airbag resistance too Low	occupant side surface air spring resistance over small
B111511	Passenger side airbag resistance circuit short to Ground	occupant side surface air spring resistance circuit to ground short circuit
B111512	Passenger side airbag resistance circuit short to Battery	occupant side surface air spring resistance circuit for power supply short circuit
B12181B	Driver side curtain airbag resistance too High	Driver Side surface curtain airbag resistance over large
B12181A	Driver side curtain airbag resistance too Low	Driver Side surface curtain airbag resistance over small
B121811	Driver side curtain airbag resistance circuit short to Ground	Driver Side surface curtain airbag resistance circuit to ground short circuit
B121812	Driver side curtain airbag resistance circuit short to Battery	Driver Side surface curtain airbag resistance circuit for power supply short circuit
B12191B	Passenger side curtain airbag resistance too High	occupant side surface curtain airbag resistance over large
B12191A	Passenger side curtain airbag resistance too Low	occupant side surface curtain airbag resistance over small
B121911	Passenger side curtain airbag resistance circuit short to Ground	occupant side surface curtain airbag resistance circuit to ground short circuit
B121912	Passenger side curtain airbag resistance circuit short to Battery	occupant side surface curtain airbag resistance circuit for power supply short circuit
B120286	SIS rear-Driver communication error	Driver Side side sensor communication fault
B120386	SIS rear-Passenger communication error	Front Passenger person side side sensor communication fault
B120224	SIS rear-Driver option mismatch	Driver Side side sensor configuration not matching
B120324	SIS rear-Passenger option mismatch	Front Passenger person side side sensor configuration not matching
B120212	SIS rear-Driver circuit short to Battery	Driver Side side sensor for power supply short together
B120312	SIS rear-Passenger circuit short to Battery	Front Passenger person side side sensor for power supply short together
B120211	SIS rear-Driver circuit short to Ground	Driver Side side sensor to ground short together

DTC	DTC Meaning	DTC Description
B120311	SIS rear-Passenger circuit short to Ground	Front Passenger person side side sensor to ground short together
B122286	FIS -Driver communication error	driver frontal sensor communication fault
B122386	FIS -Passenger communication error	Front Passenger person frontal sensor communication fault
B122224	FIS -Driver option mismatch	driver frontal sensor configuration not matching
B122324	FIS -Passenger option mismatch	Front Passenger person frontal sensor configuration not matching
B122212	FIS -Driver circuit short to Battery	driver frontal sensor for power supply short together
B122312	FIS -Passenger circuit short to Battery	Front Passenger person frontal sensor for power supply short together
B122211	FIS -Driver circuit short to Ground	driver frontal sensor to ground short together
B122311	FIS -Passenger circuit short to Ground	Front Passenger person frontal sensor to ground short together
B122412	FstRowMidSeatOccupied Short to battery	front center passenger occupant recognition for power supply short circuit
B122512	SecRowLSeatOccupied Short to battery	II row left passenger occupant recognition for power supply short circuit
B122612	SecRowRSeatOccupied Short to battery	II row right passenger occupant recognition for power supply short circuit
B122712	ThdRowLSeatOccupied Short to battery	III row left passenger occupant recognition for power supply short circuit
B122812	ThdRowMSeatOccupied Short to battery	III row center passenger occupant recognition for power supply short circuit
B122912	ThdRowRSeatOccupied Short to battery	III row right passenger occupant recognition for power supply short circuit
B110049	Internal fault - Replace ECU	internal fault - replace ACU
B115000	Crash recorded in frontal airbag only(Frontal_Replace ACU)	front collision occur - replace ACU
B115100	Crash recorded in Driver side airbag (Replace ACU)	Driver Side side direction collision occur - replace ACU
B115200	Crash recorded in Passenger side airbag (Replace ACU)	occupant side side direction collision occur - replace ACU
B115300	Crash recorded in rear(Replace ACU)	rear collision occur - replace ACU
B113414	Crash Output1 Short to Ground	collision Output 1 to ground short circuit
B113412	Crash Output1 Short to Battery	collision Output 1 for power supply short circuit
B110100	circuit configuration Fault	circuit configuration fault

DTC	DTC Meaning	DTC Description
B115600	WatchDog status Continues Fault	watchdog Status maintain continue fault
U273487	Lost Communication With FLZCU	Lost Communication with Left Area Controller FLZCU
U272387	Lost Communication With EPS	Lost Communication with Electric Power Steering EPS
U24D5FB	0x4D5 message E2E check error	0x4D5 message E2E validation Error
U007388	Bus off	bus disabled
U130055	ACU Not Configured	ACU not configuration
U300051	ACU Not Programmed	ACU not programming

seat belt

Repair Procedure

Driver Seat Belt Assembly, Repair Procedure

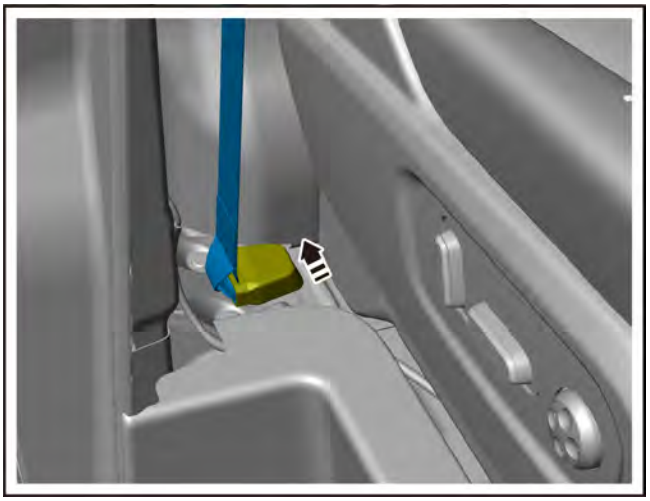
Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

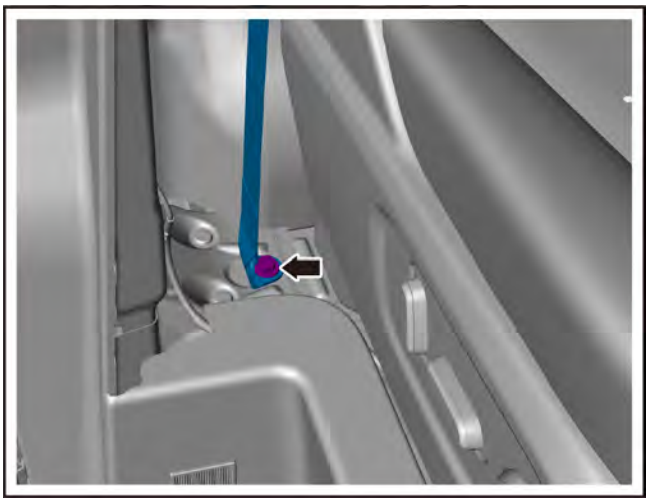
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

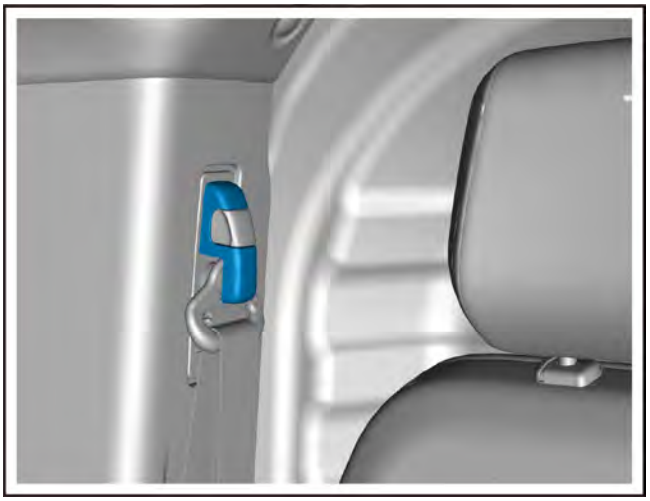
2 Remove right B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure



3 open driver seat belt assembly protection cover.



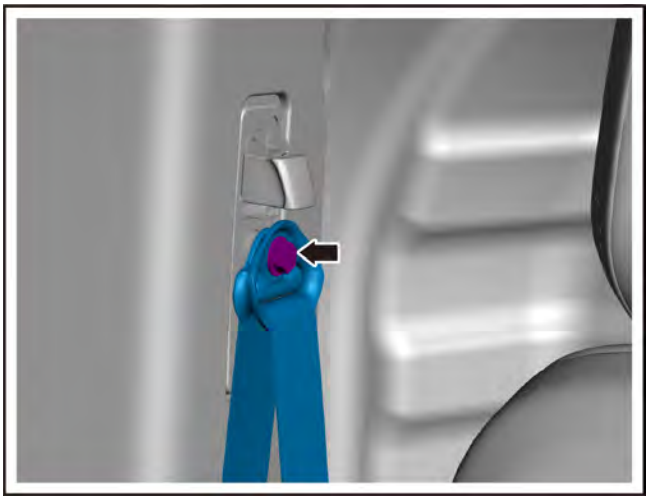
4 Remove driver seat belt assembly retaining bolt.



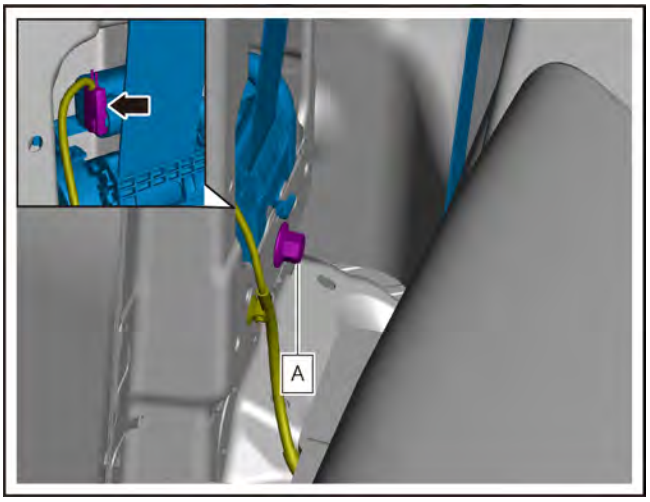
5 Remove seat belt height adjustment unit install trim cover.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



6 Remove driver seat belt assembly retaining bolt.



7 Remove driver seat belt assembly.

a. Disconnect driver seat belt assembly wiring harness connector.

b. Remove retaining bolt A, remove driver seat belt assembly.

Installation Steps

1 Install in the reverse order of removal.

Seat Belt Height Adjustment Unit Assembly, Repair Procedure

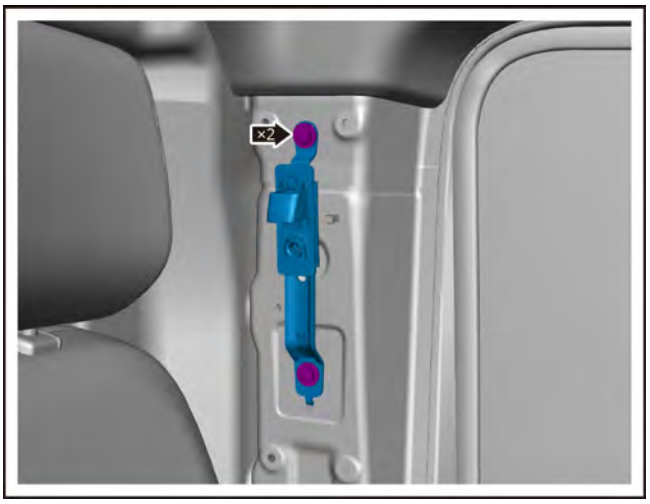
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove left B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure

2 Remove Left B-pillar Upper Trim Panel Assembly. Refer to:Left B-Pillar Upper Trim Panel Assembly, Repair Procedure



3 Remove 2 retaining bolt, remove seat belt height adjustment unit assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, test seat belt height adjustment unit assembly, ensure adjustment unit upper lower adjustment order smooth, not stuck.

instrument panel

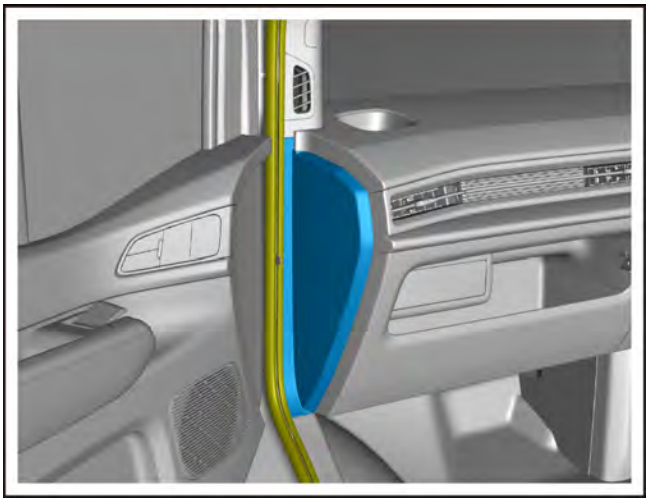
Repair Procedure

Side Cover Assembly Left, Repair Procedure

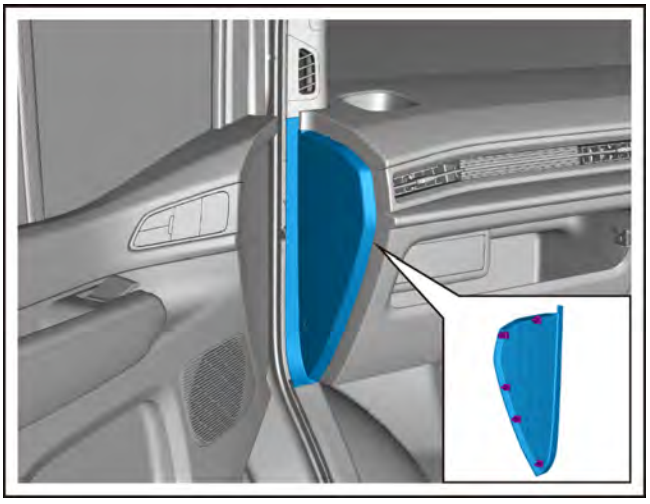
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release left front door door opening weatherstrip.



2 UsePlastic Pry ToolRemove side Cover Assembly left.

Caution

Remove when note protection around side trim panel, prevent wipe injury.

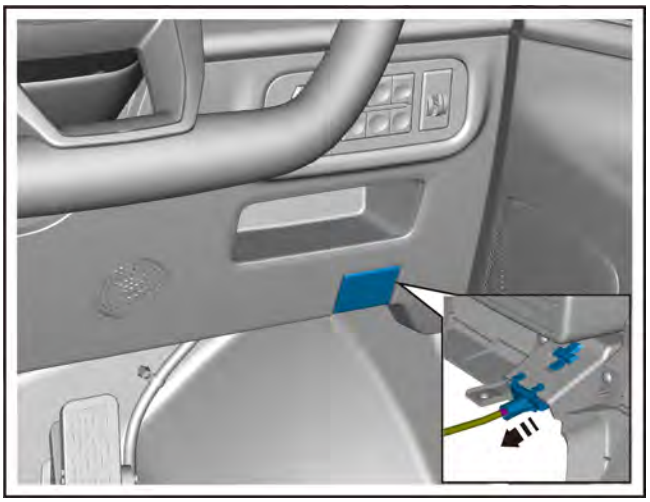
Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Bonnet Handle Assembly -RHD, Repair Procedure

Removal Steps



1 release bonnet handle assembly -RHD cable.



2 release retaining clip, remove bonnet handle assembly -RHD.

Installation Steps

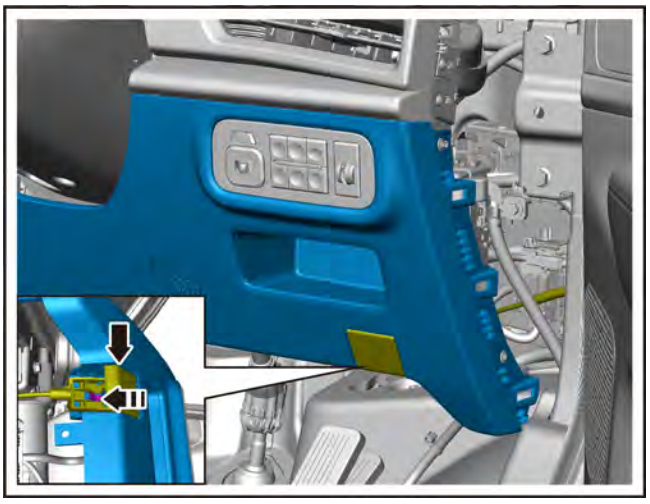
1 Install in the reverse order of removal.

Left Lower Shield Assembly -RHD, Removal and Installation

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove side Cover Assembly right. Refer to:Side Cover Assembly Left, Repair Procedure



3 release retaining clip, offset open bonnet handle.

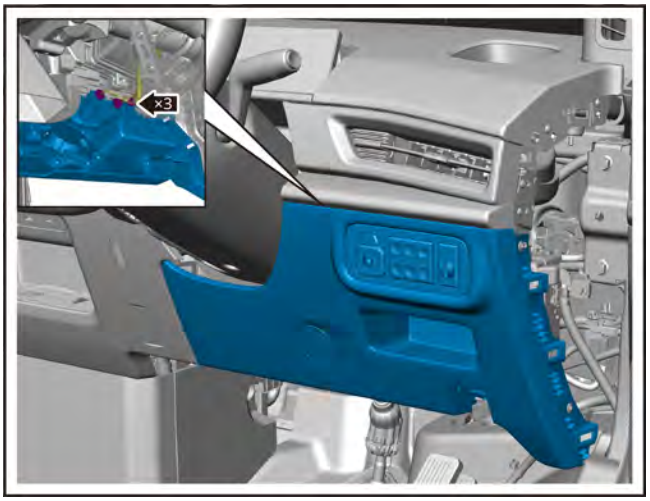


4 Remove left lower Shield Assembly -RHD.

a. release 2 retaining clip A, offset open Diagnosis plug head.

b. disconnect speaker wiring harness connector B.

c. release instrument panel wiring harness retaining clip C.



5 disconnect left lower Shield Assembly -RHD3 connector.



6 Remove left lower Shield Assembly -RHD.

a. Remove left lower Shield Assembly -RHD2 retaining screw.

b. release retaining clip, remove left lower Shield Assembly -RHD.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

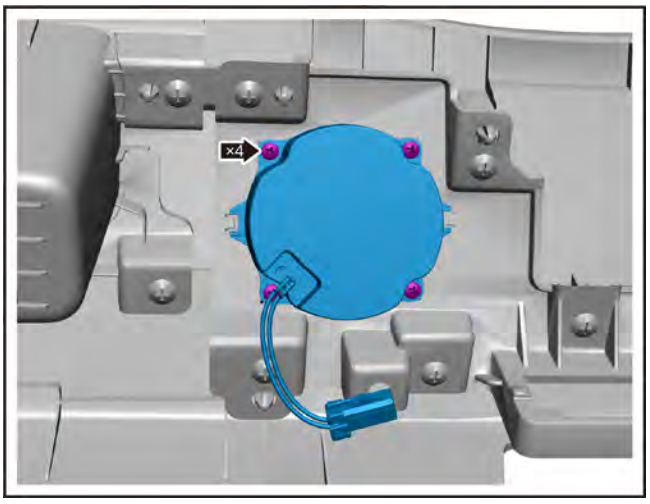
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Lower Shield Assembly -RHD, Repair Procedure

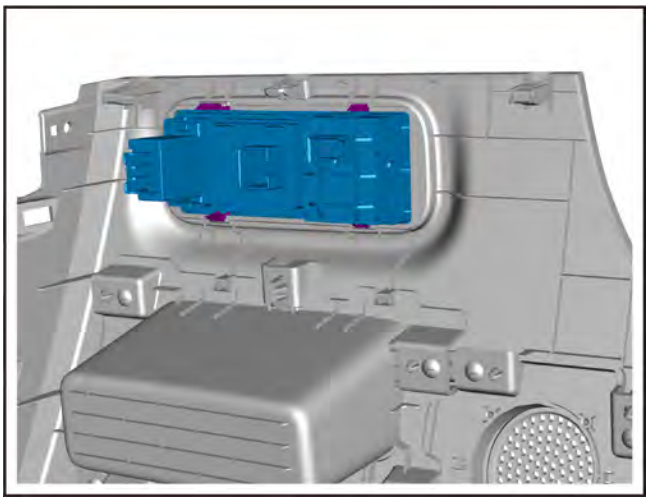
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left lower Shield Assembly -RHD. Refer to:Left Lower Shield Assembly -RHD, Removal and Installation



3 Remove 4 retaining screw, remove speaker.



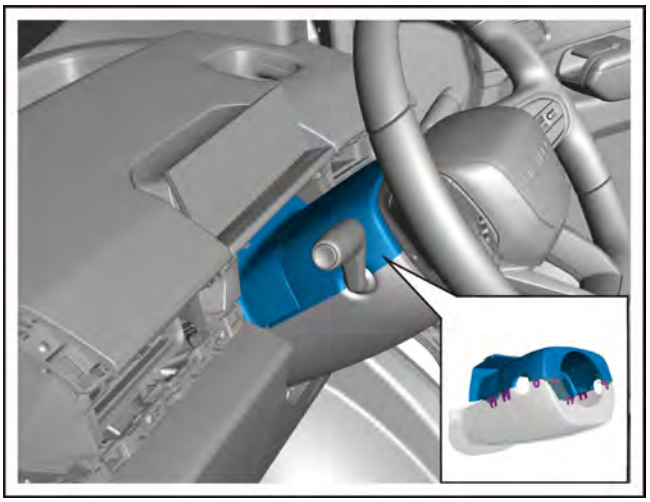
4 Remove retaining clip, remove left lower Shield Assembly -RHD.

Installation Steps

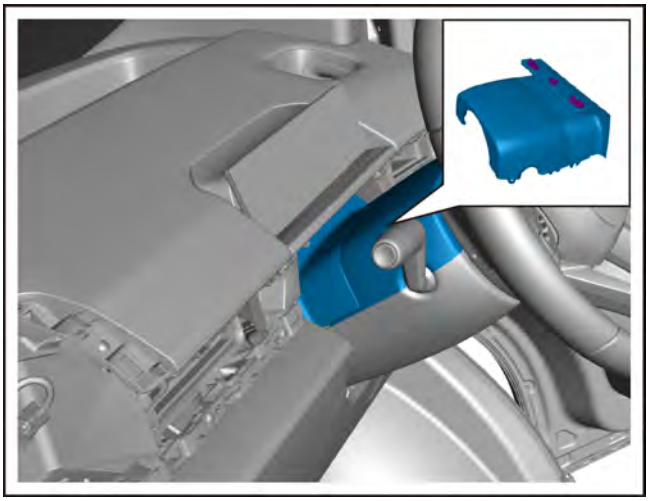
1 Install in the reverse order of removal.

Pipe Pillar Upper Cover Assembly -RHD, Repair Procedure

Removal Steps



1 Release pipe pillar upper cover assembly -RHD retaining clip.



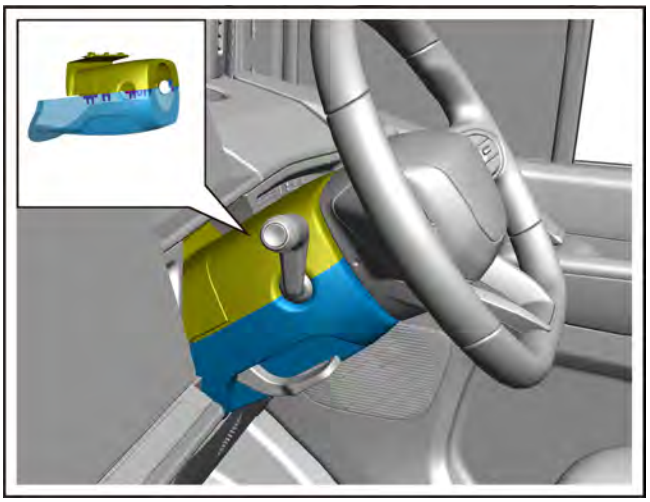
2 release retaining clip, remove pipe pillar upper cover assembly -RHD.

Installation Steps

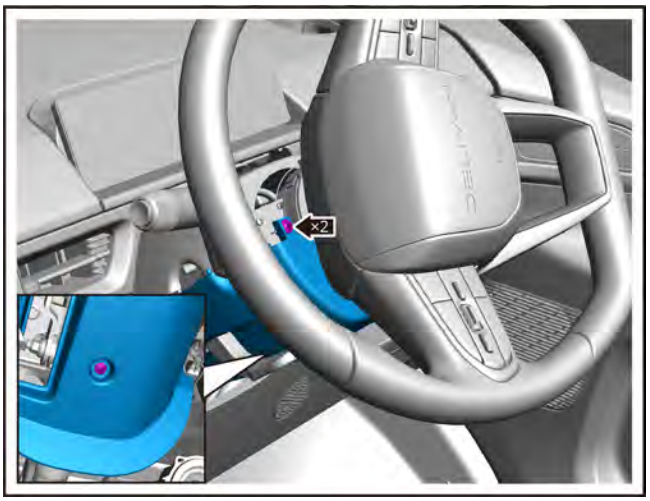
1 Install in the reverse order of removal.

Steering Column Lower Cover Assembly, Repair Procedure

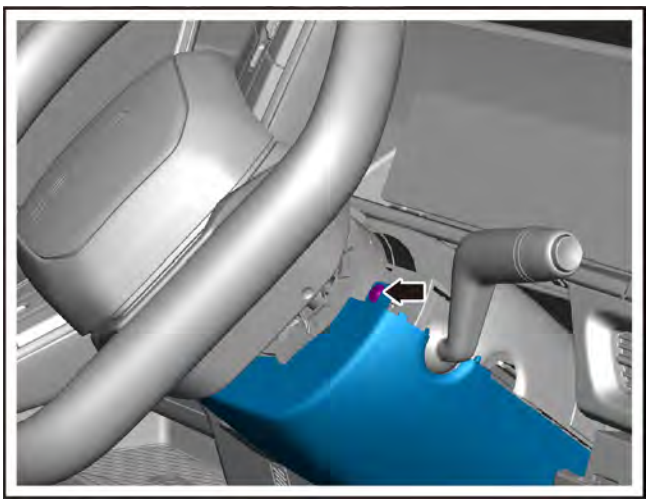
Removal Steps



1 Release steering column lower cover assembly retaining clip.



2 Remove steering column lower cover assembly 2 retaining screw.



3 Remove retaining screw, remove steering column lower cover assembly.

Installation Steps

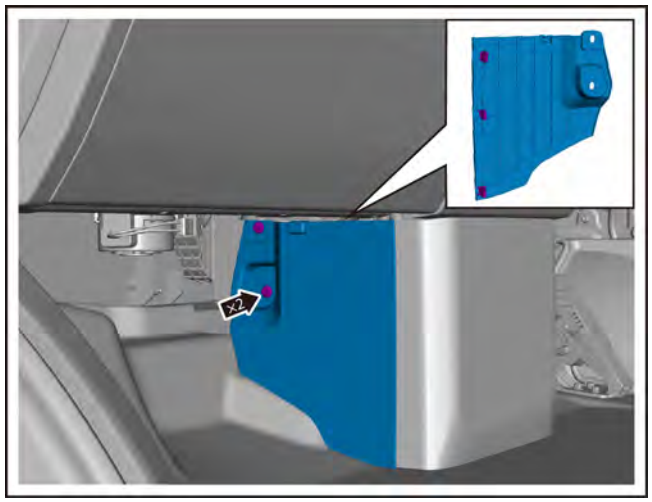
1 Install in the reverse order of removal.

HVAC Flap Assembly Left, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining clip, remove HVAC flap assembly left.

Installation Steps

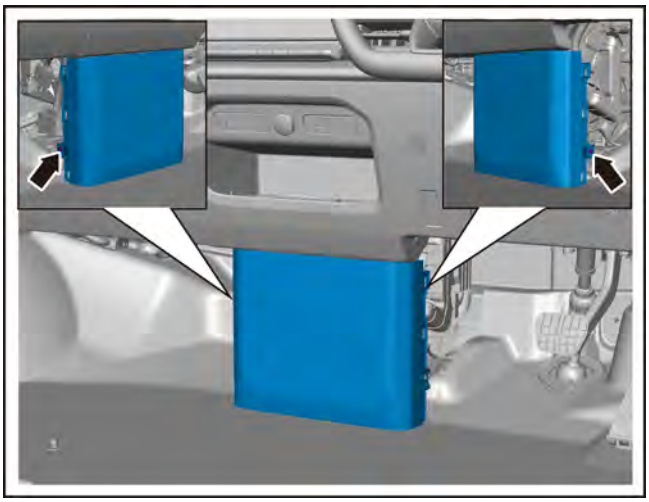
1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Instrument Panel Lower Trim Panel Assembly, Repair Procedure

Removal Steps

1 Remove HVAC flap assembly left, right.
Refer to:HVAC Flap Assembly Left, Repair Procedure



2 Remove 2 retaining screw, remove instrument panel lower trim panel assembly.

Installation Steps

1 Install in the reverse order of removal.

Instrument Panel Center Lower Panel Assembly -RHD, Removal and Installation

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

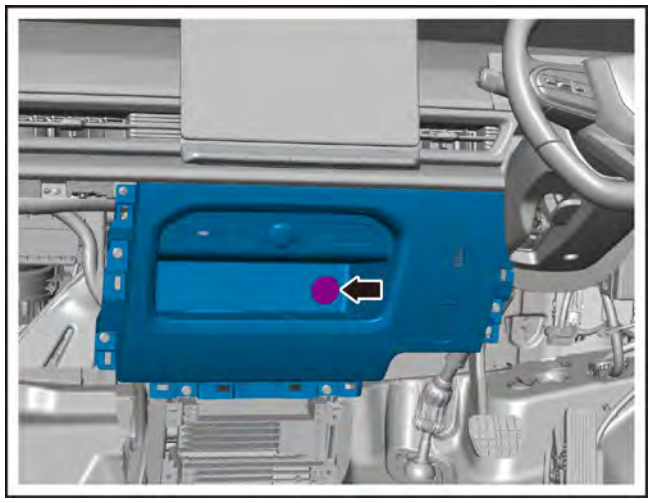
2 Remove left lower Shield Assembly -RHD. Refer to:Left Lower Shield Assembly -RHD, Removal and Installation

3 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure

4 Remove glove box housing assembly -RHD. Refer to:Glove Box Housing Assembly -RHD, Repair Procedure

5 Remove HVAC flap assembly left, right. Refer to:HVAC Flap Assembly Left, Repair Procedure

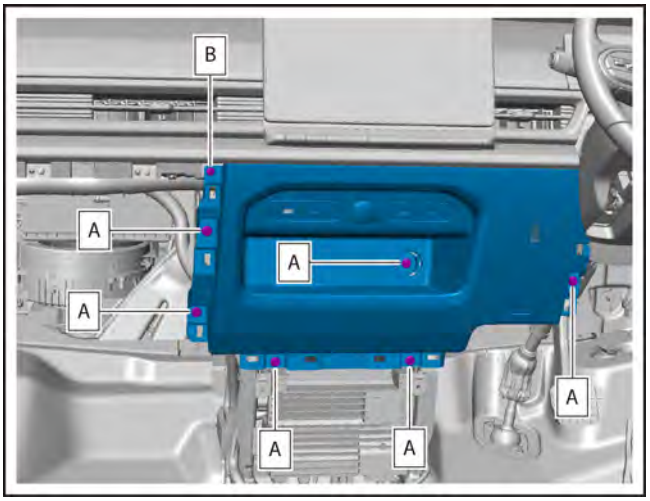
6 Remove instrument panel lower trim panel assembly. Refer to:Instrument Panel Lower Trim Panel Assembly, Repair Procedure



7 UsePlastic Pry ToolRemove item cover.

Caution

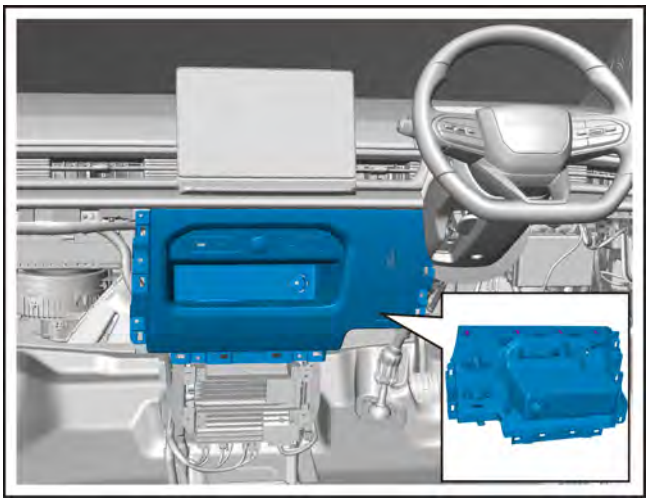
Remove when note protection around side trim panel, prevent wipe injury.



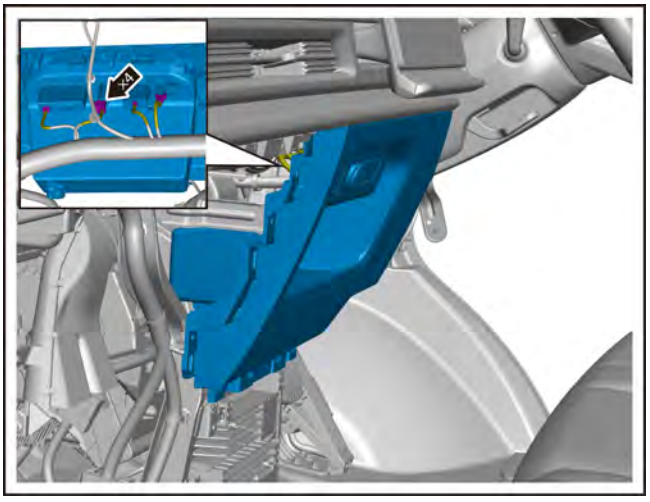
8 Remove instrument panel center lower panel assembly -RHD.

a. Remove instrument panel center lower panel assembly -RHD6 retaining bolt A.

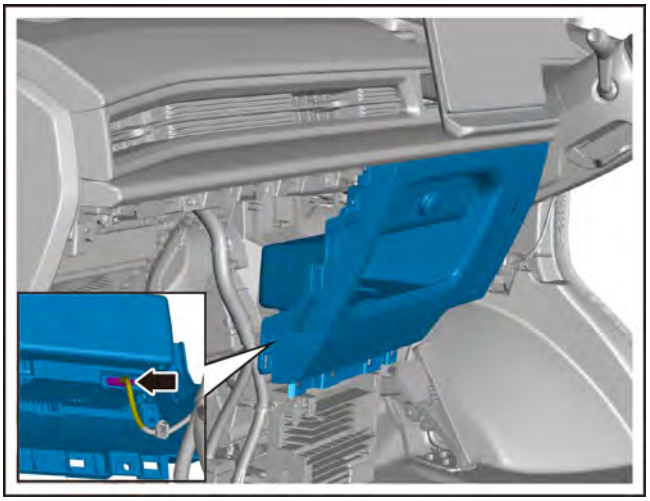
b. Remove instrument panel center lower panel assembly -RHD retaining screw B.



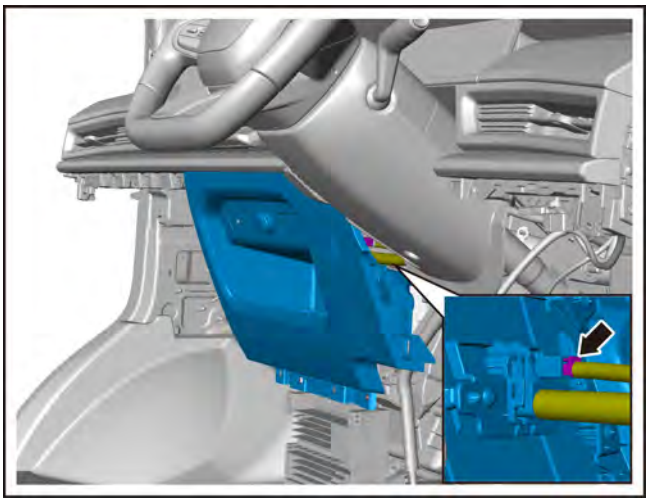
9 Release instrument panel center lower panel assembly -RHD retaining clip.



10 Disconnect 4 instrument panel center lower panel assembly -RHD wiring harness connectors.



11 Disconnect instrument panel center lower panel assembly -RHD wiring harness connector.



12 Remove instrument panel center lower panel assembly -RHD.

a. Disconnect compartment inner temperature sensor wiring harness connector.

b. release compartment inner temperature sensor connect line, remove instrument panel center lower panel assembly -RHD.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

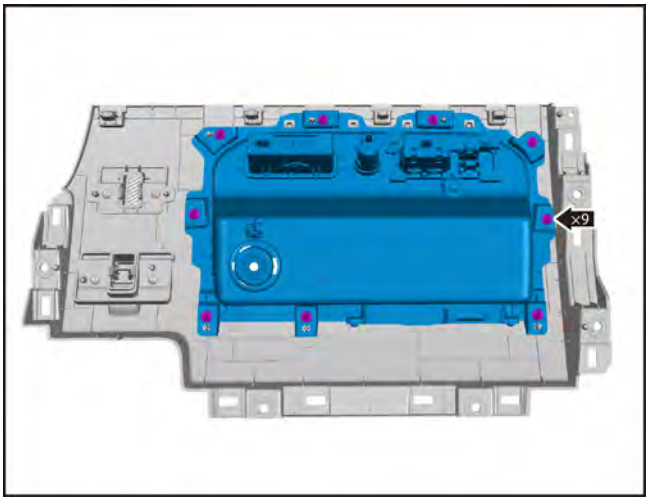
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Instrument Panel Center Lower Panel Assembly -RHD, Repair Procedure

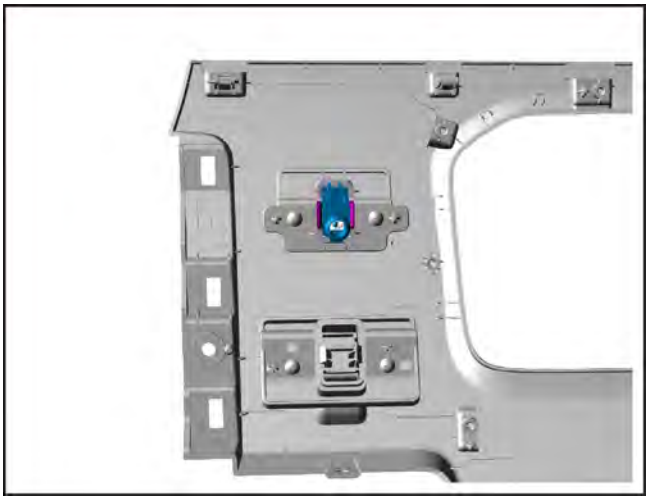
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

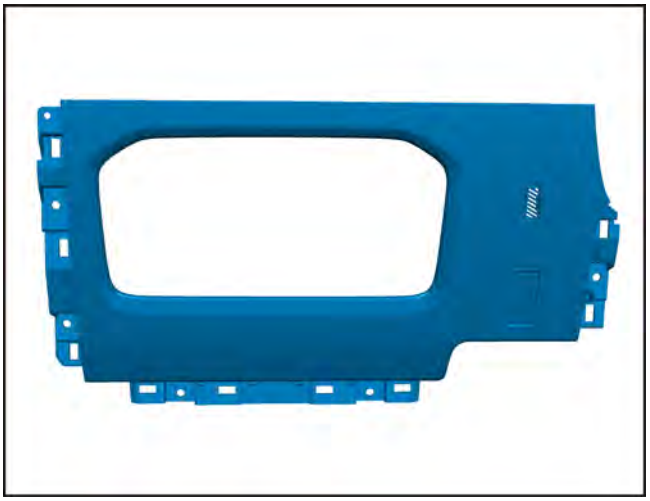
2 Remove instrument panel center lower panel assembly -RHD. Refer to:Instrument Panel Center Lower Panel Assembly -RHD, Removal and Installation



3 Remove instrument panel center lower panel assembly -RHD9 retaining screw.



4 Release compartment inner temperature sensor retaining clip.



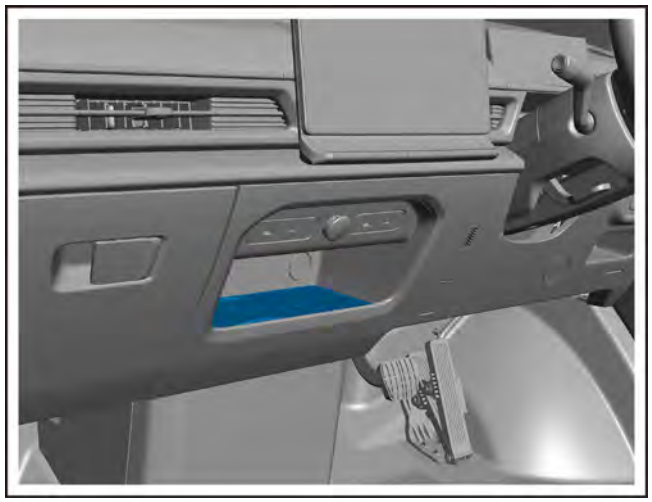
5 remove instrument panel center lower panel assembly -RHD.

Installation Steps

1 Install in the reverse order of removal.

Storage Box Adhesive Pad - High-Spec Version, Repair Procedure

Removal Steps



1 along flange start part position remove storage box adhesive pad - High-spec Version.

Installation Steps

1 Install in the reverse order of removal.

Storage Box Adhesive Pad - Base Version, Repair Procedure

Removal Steps



1 along flange start part position remove storage box adhesive pad - Base Version.

Installation Steps

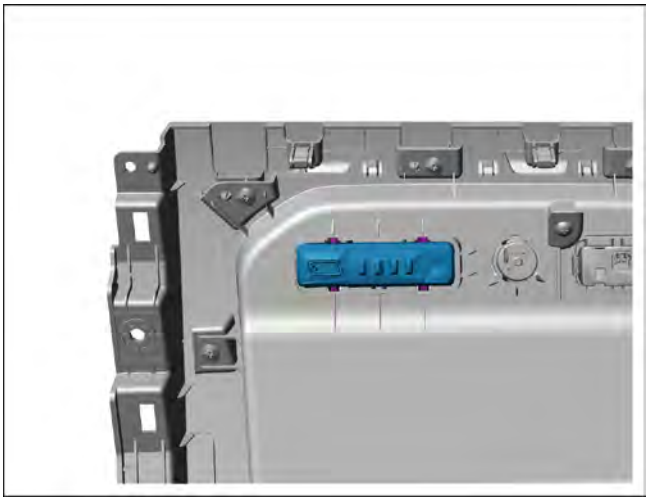
1 Install in the reverse order of removal.

Mobile Phone Box Assembly - High-Spec Version, Repair Procedure

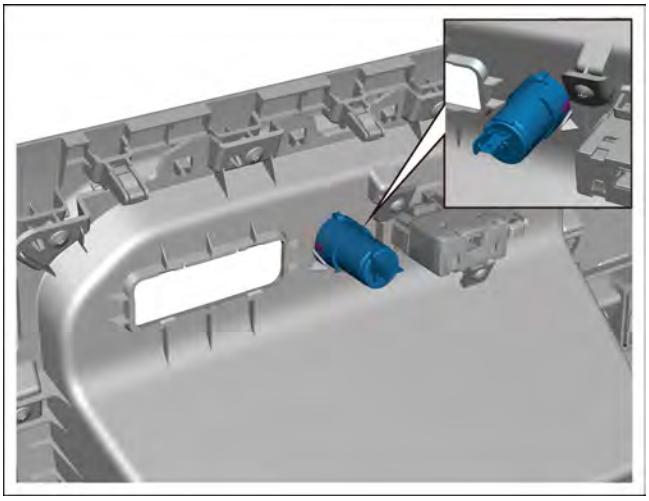
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

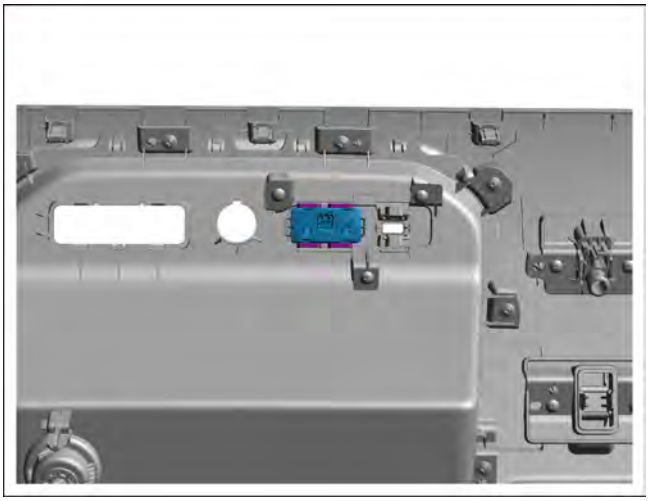
2 Remove instrument panel center lower panel assembly -RHD. Refer to:Instrument Panel Center Lower Panel Assembly -RHD, Removal and Installation



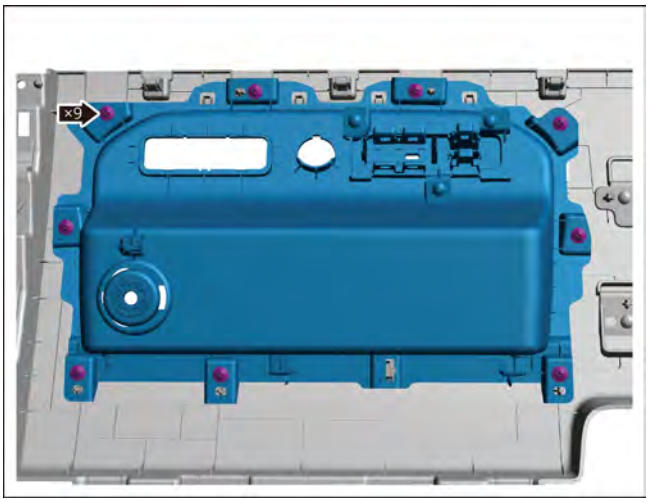
3 Remove dual port USB Charging Module retaining clip.



4 Remove backup power supply retaining clip.



5 Remove Single USB-C Charging Module retaining clip.



6 Remove 9 retaining screw, remove mobile phone box assembly.

Installation Steps

1 Install in the reverse order of removal.

Instrument Panel Left Air Vent Panel Assembly -RHD, Repair Procedure

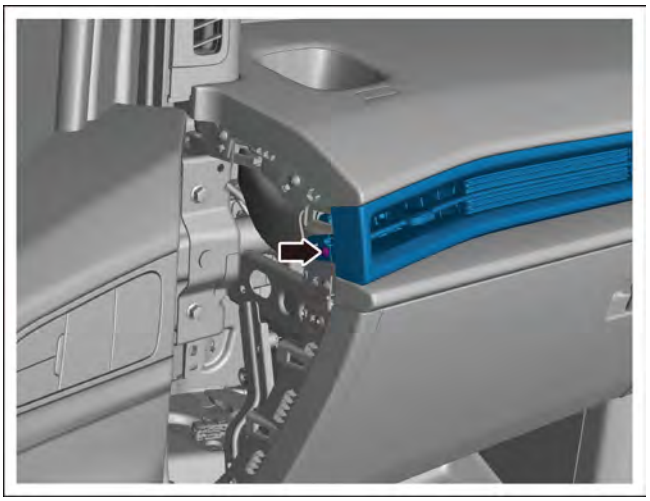
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove side Cover Assembly left. Refer to:Side Cover Assembly Left, Repair Procedure

3 Remove display mounting cover. Refer to:Display Mounting Cover, Repair Procedure

4 Remove center display. Refer to:Center Display, Repair Procedure

5 Remove instrument panel left center air vent panel assembly -RHD. Refer to:Instrument Panel Left Center Air Vent Panel Assembly -RHD, Repair Procedure



6 Remove instrument panel left air vent panel assembly retaining screw.



7 release retaining clip, remove instrument panel left air vent panel assembly -RHD.

Installation Steps

1 Install in the reverse order of removal.

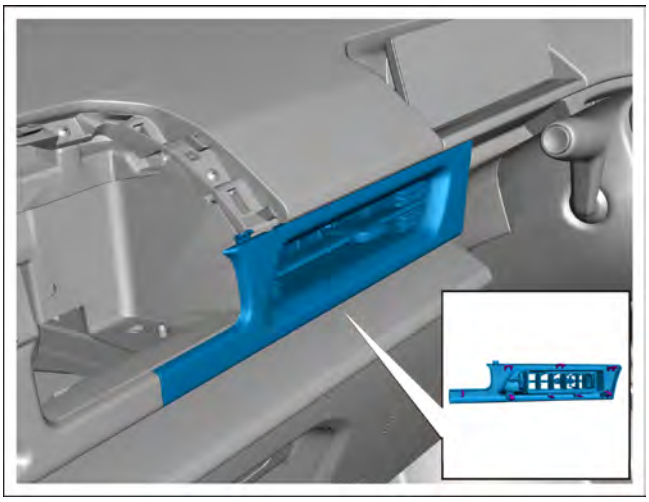
Instrument Panel Left Center Air Vent Panel Assembly -RHD, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove display mounting cover. Refer to:Display Mounting Cover, Repair Procedure

3 Remove center display. Refer to:Center Display, Repair Procedure



4 release retaining clip, remove instrument panel right center air vent panel assembly.

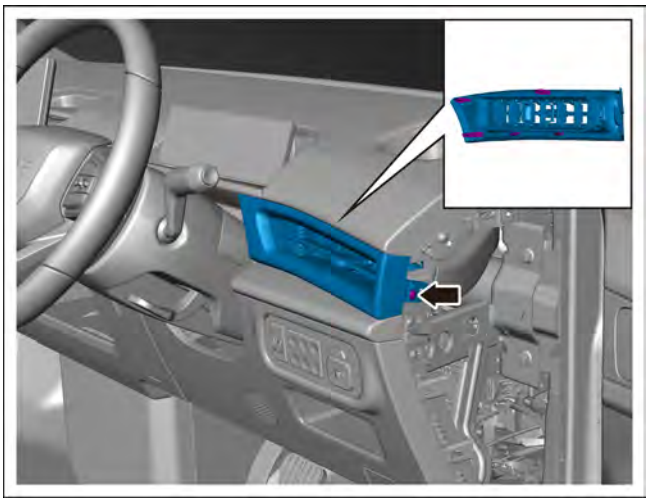
Installation Steps

1 Install in the reverse order of removal.

Instrument Panel Right Air Vent Panel Assembly -RHD, Repair Procedure

Removal Steps

1 Remove side Cover Assembly right. Refer to:Side Cover Assembly Left, Repair Procedure



2 Remove instrument panel right air vent panel assembly.

a. Remove instrument panel right air vent panel assembly retaining screw.

b. release retaining clip, remove instrument panel right air vent panel assembly.

Installation Steps

1 Install in the reverse order of removal.

Instrument Panel Left Center Trim Panel Assembly -RHD, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

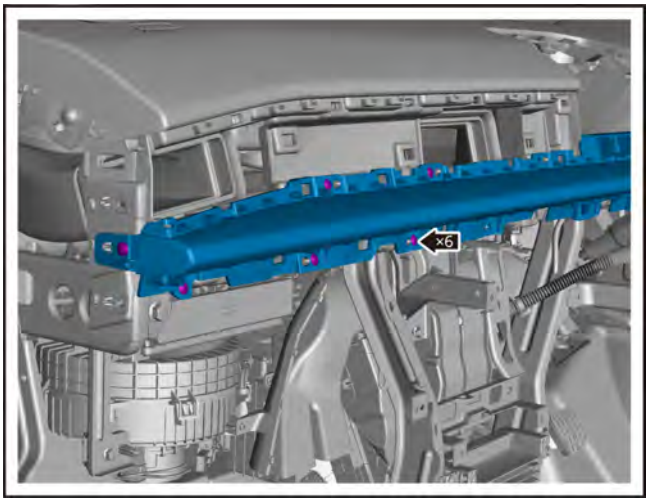
2 Remove instrument panel center lower panel assembly -RHD. Refer to:Instrument Panel Center Lower Panel Assembly -RHD, Removal and Installation

3 Remove display mounting cover. Refer to:Display Mounting Cover, Repair Procedure

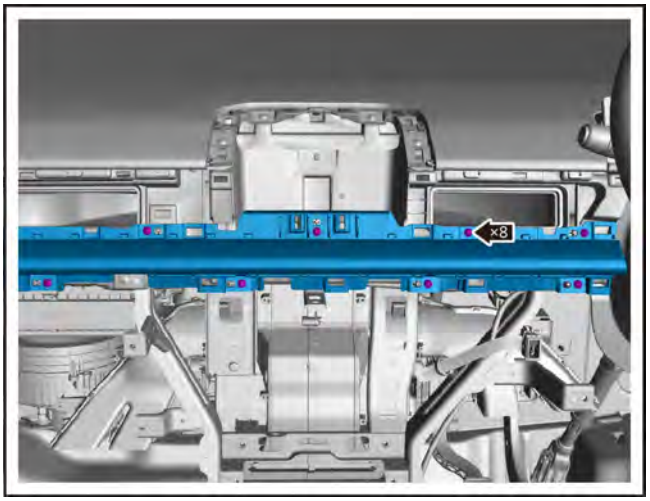
4 Remove center display. Refer to:Center Display, Repair Procedure

5 Remove instrument panel left center air vent panel assembly -RHD. Refer to:Instrument Panel Left Center Air Vent Panel Assembly -RHD, Repair Procedure

6 Remove instrument panel left air vent panel assembly -RHD. Refer to:Instrument Panel Left Air Vent Panel Assembly -RHD, Repair Procedure



7 Remove instrument panel right center Trim Panel Assembly -RHD6 retaining screw.



8 Remove 8 retaining screw, remove instrument panel right center Trim Panel Assembly -RHD.

Installation Steps

1 Install in the reverse order of removal.

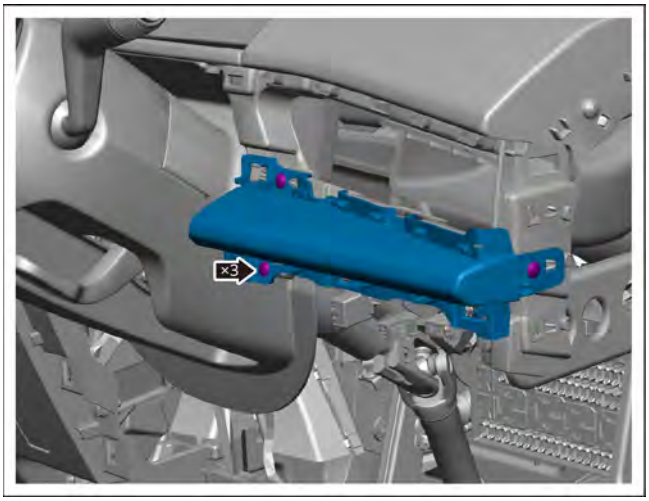
Instrument Panel Right Center Trim Panel Assembly -RHD, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left lower Shield Assembly -RHD. Refer to:Left Lower Shield Assembly -RHD, Removal and Installation

3 Remove instrument panel right air vent panel assembly -RHD, Repair Procedure. Refer to:Instrument Panel Right Air Vent Panel Assembly -RHD, Repair Procedure



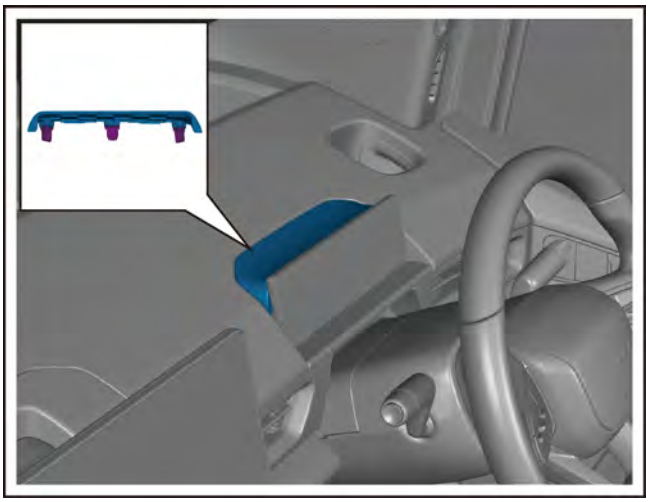
4 Remove 3 retaining screw, remove instrument panel right center Trim Panel Assembly.

Installation Steps

1 Install in the reverse order of removal.

Combination Instrument Pack Cover - High-Spec Version -RHD, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove retaining clip, remove combination Instrument Pack cover - High-spec Version -RHD.

Caution

Remove when note protection around side trim panel, prevent wipe injury.

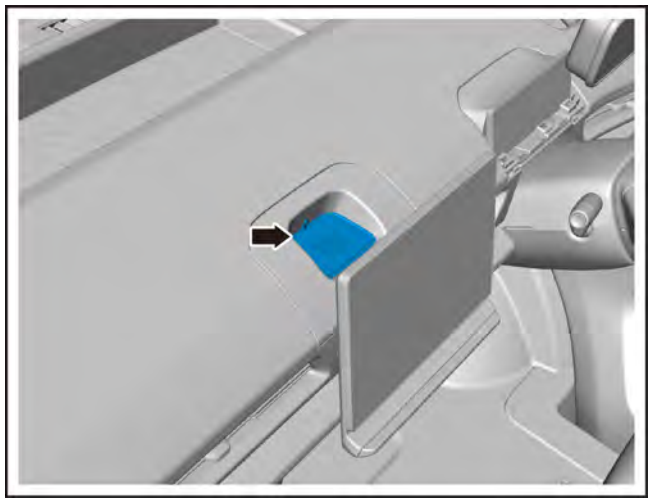
Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Cover Panel Rubber Pad - High-Spec Version, Repair Procedure

Removal Steps



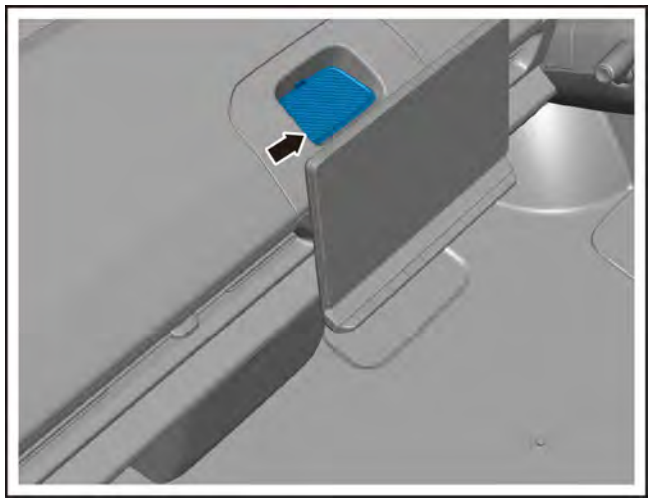
1 remove cover panel rubber pad - High-spec Version.

Installation Steps

1 Install in the reverse order of removal.

Cover Panel Rubber Pad - Base Version, Repair Procedure

Removal Steps



1 remove cover panel rubber pad - Base Version.

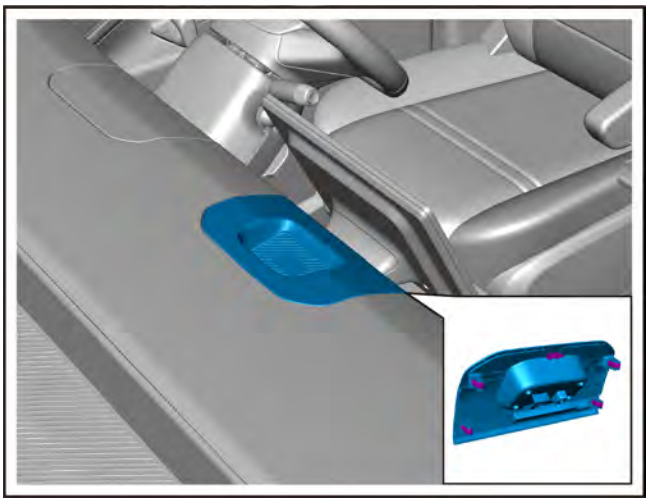
Installation Steps

1 Install in the reverse order of removal.

Display Mounting Cover, Repair Procedure

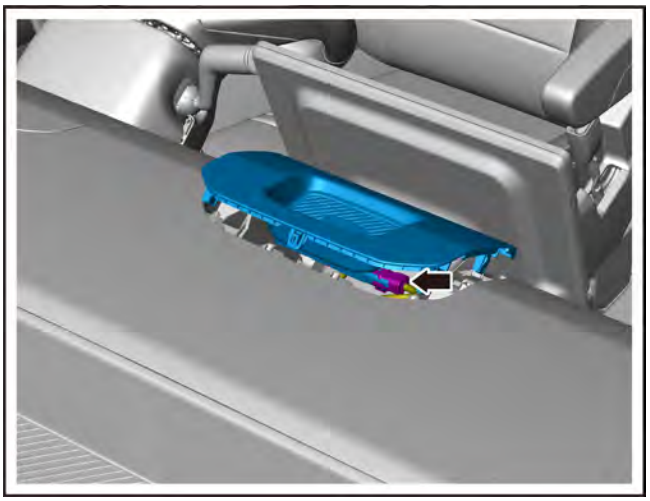
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

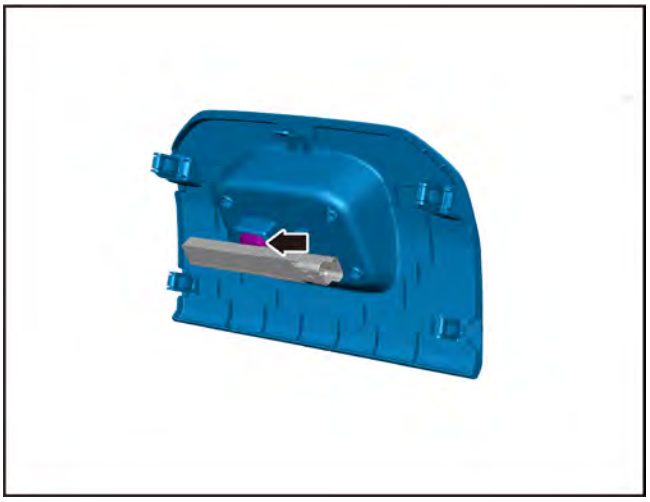


2 UsePlastic Pry ToolRelease display mounting cover retaining clip.

> ⚠ *Caution*
>
> *Remove when note protection around side trim panel, prevent wipe injury.*



3 disconnect wiring harness connector, remove display mounting cover with RF antenna.



4 release retaining clip, remove display mounting cover.

Installation Steps

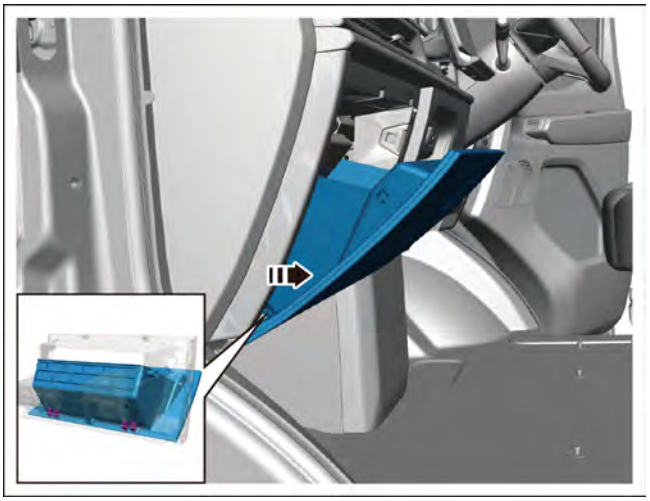
1 Install in the reverse order of removal.

Glove Box Lid Assembly -RHD, Repair Procedure

Removal Steps



1 release Damper cable.



2 release retaining clip, remove glove box lid assembly.

Installation Steps

1 Install in the reverse order of removal.

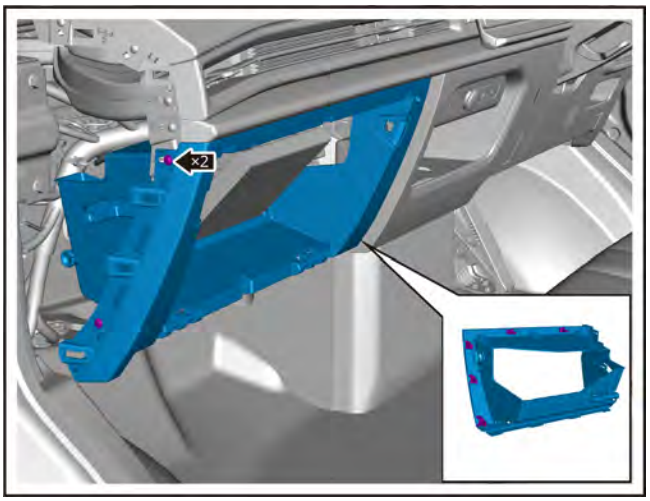
Glove Box Housing Assembly -RHD, Repair Procedure

Removal Steps

1 Remove glove box lid assembly -RHD. Refer to:Glove Box Lid Assembly -RHD, Repair Procedure



2 Remove glove box lid assembly 3 retaining screw.



3 Remove glove box housing assembly.
   a. Remove 2 retaining screw.
   b. release retaining clip, remove glove box housing assembly.

Installation Steps

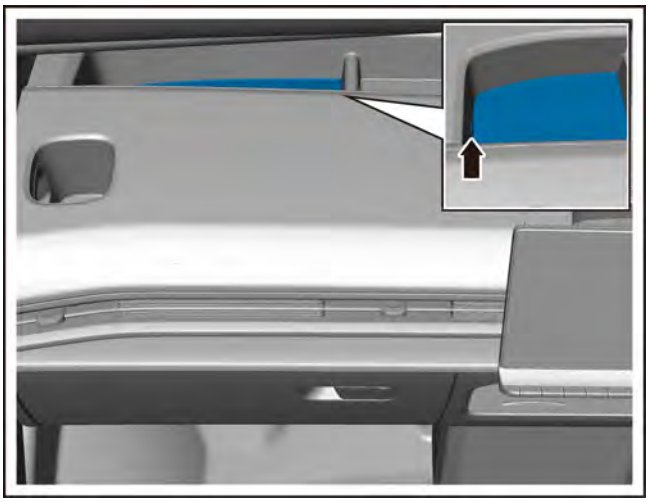
1 Install in the reverse order of removal.

Left-Side Storage Compartment Pad, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



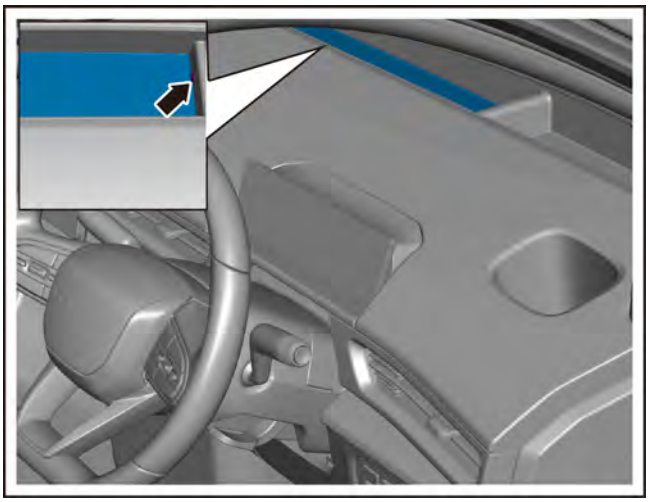
1 along flange start part position remove Left-side Storage Compartment pad.

Installation Steps

1 Install in the reverse order of removal.

Center Storage Compartment Mat, Repair Procedure

Removal Steps



1 along flange start part position remove Center Storage Compartment Mat.

Installation Steps

1 Install in the reverse order of removal.

Instrument Panel Upper Cover Panel Left Cup Holder Adhesive Pad, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 along flange start part position remove instrument panel upper cover panel left Cup Holder adhesive pad.

Installation Steps

1 Install in the reverse order of removal.

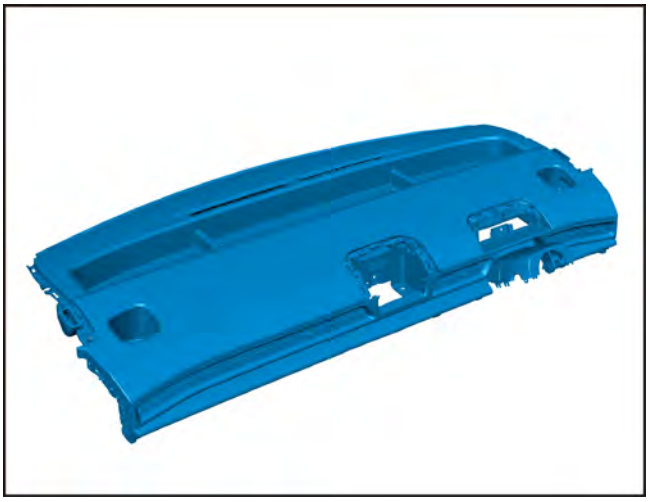
Instrument Panel Subassembly -RHD, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel subassembly -RHD. Refer to:Instrument Panel Subassembly -RHD, Removal and Installation

3 Remove front Passenger Airbag. Refer to:Front Passenger Airbag, Repair Procedure



4 remove instrument panel subassembly -RHD.

Installation Steps

1 Install in the reverse order of removal.

Instrument Panel Upper Cover Assembly -RHD, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

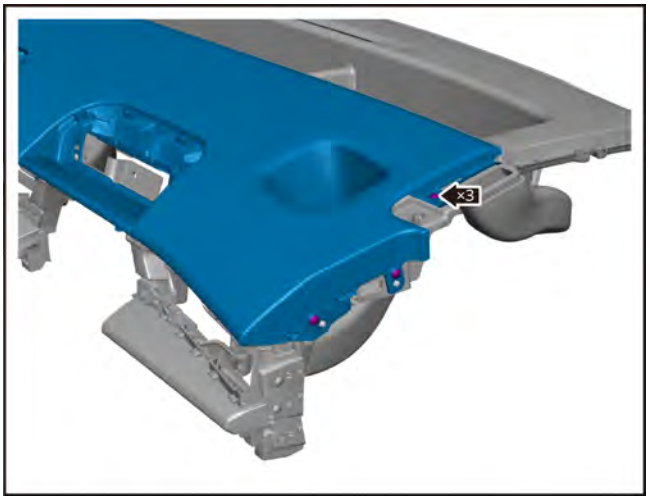
2 Remove instrument panel subassembly -RHD. Refer to:Instrument Panel Subassembly -RHD, Removal and Installation

3 Remove front Passenger Airbag. Refer to:Front Passenger Airbag, Repair Procedure

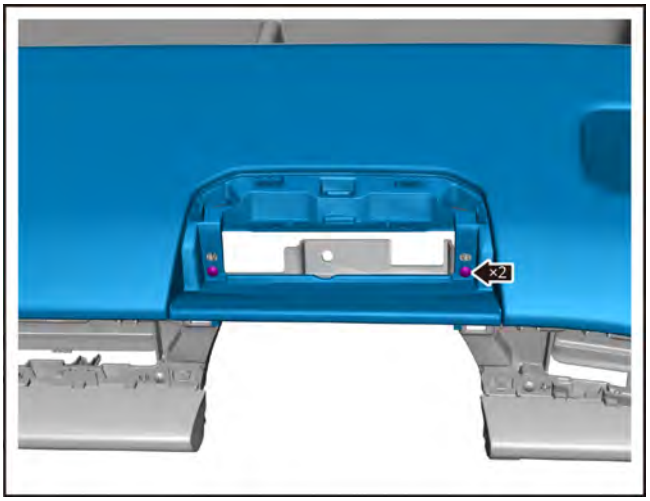
4 Remove instrument panel left air vent panel assembly -RHD. Refer to:Instrument Panel Left Air Vent Panel Assembly -RHD, Repair Procedure

5 Remove instrument panel left center air vent panel assembly -RHD. Refer to:Instrument Panel Left Center Air Vent Panel Assembly -RHD, Repair Procedure

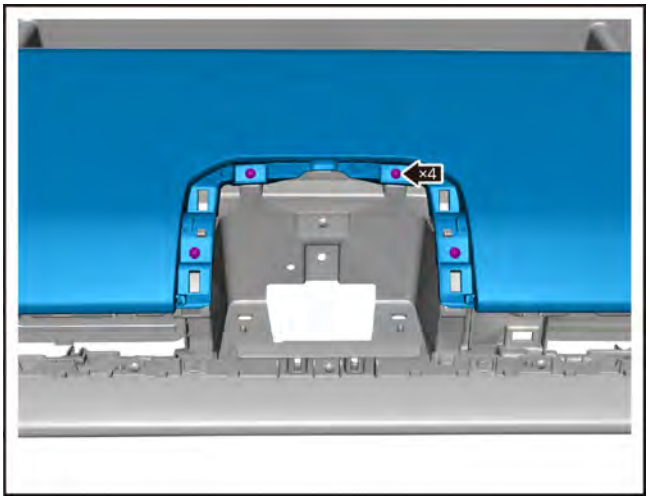
6 Remove instrument panel right air vent panel assembly -RHD. Refer to:Instrument Panel Right Air Vent Panel Assembly -RHD, Repair Procedure



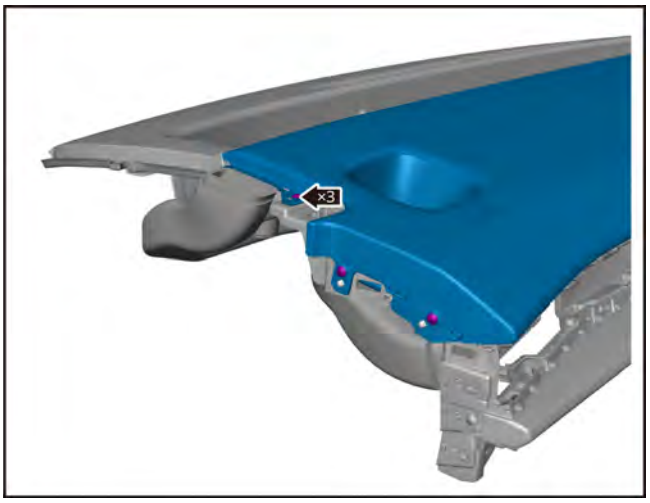
7 Remove instrument panel upper Cover Assembly -RHD right 3 retaining screw.



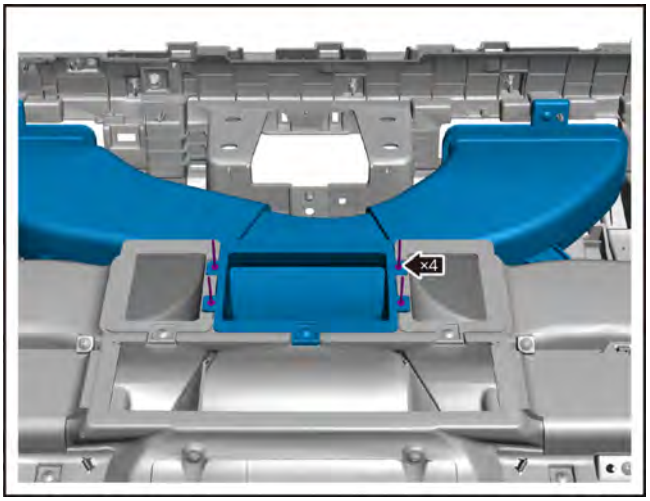
8 Remove instrument panel upper Cover Assembly -RHD right 2 retaining screw.



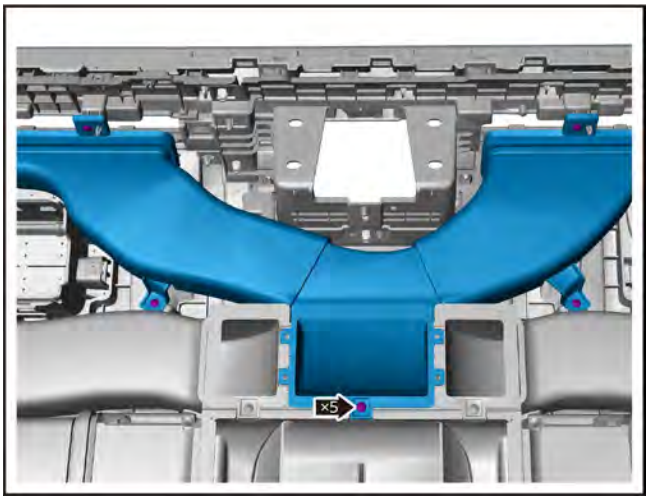
9 Remove instrument panel upper Cover Assembly -RHD center part 4 retaining screw.



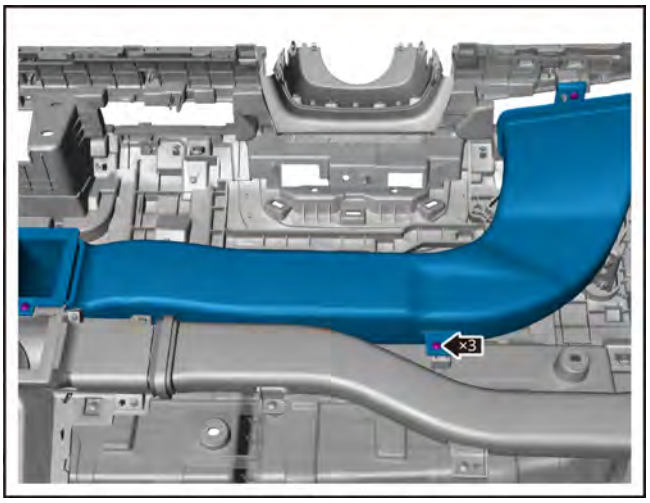
10 Remove instrument panel upper Cover Assembly -RHD left 3 retaining screw.



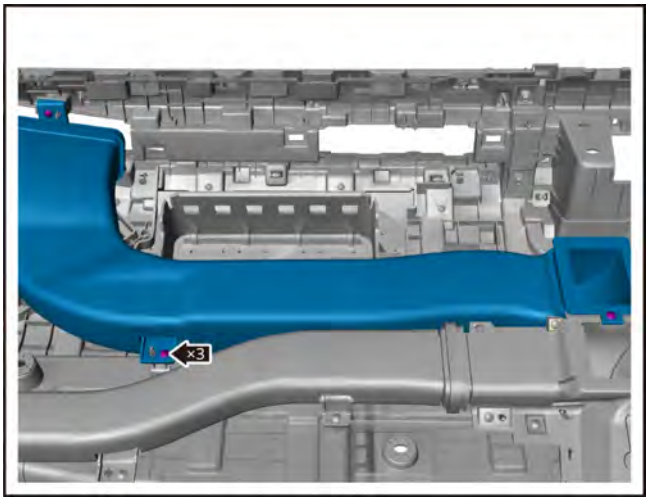
11 Remove center part face-level air pipe 4 retaining item item.



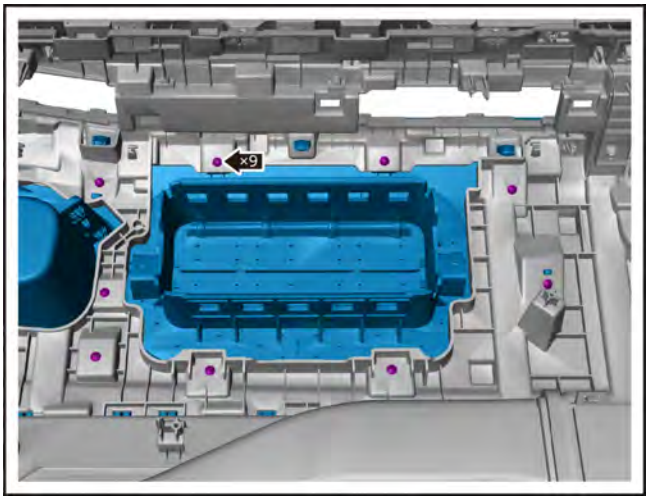
12 Remove 5 retaining screw, remove center part face-level air pipe.



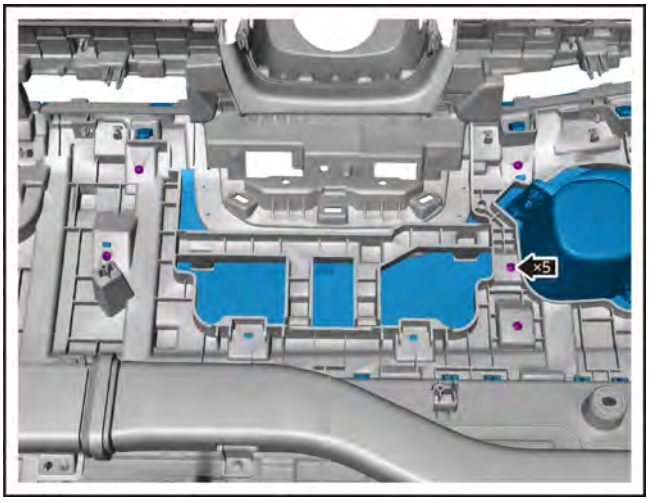
13 Remove 3 retaining screw, remove right face-level air pipe.



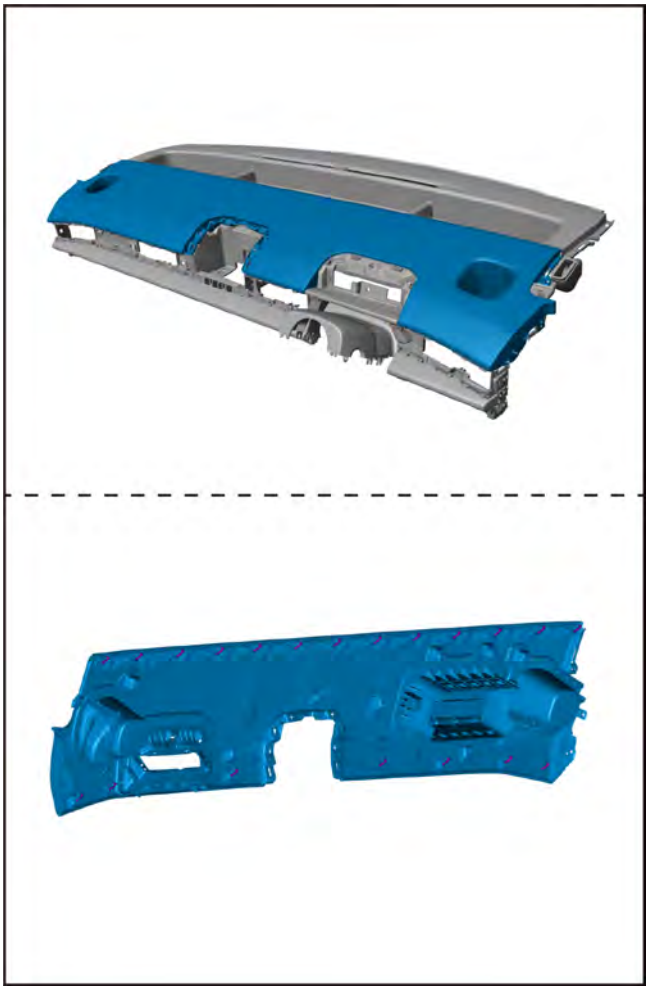
14 Remove 3 retaining screw, remove left face-level air pipe.



15 Remove instrument panel upper Cover Assembly -RHD left 9 retaining screw.



16 Remove instrument panel upper Cover Assembly -RHD right 5 retaining screw.



17 release retaining clip, remove instrument panel upper Cover Assembly -RHD.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Instrument Panel Upper Part Assembly -RHD, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel subassembly -RHD. Refer to:Instrument Panel Subassembly -RHD, Removal and Installation

3 Remove front Passenger Airbag. Refer to:Front Passenger Airbag, Repair Procedure

4 Remove instrument panel left air vent panel assembly -RHD. Refer to:Instrument Panel Left Air Vent Panel Assembly -RHD, Repair Procedure

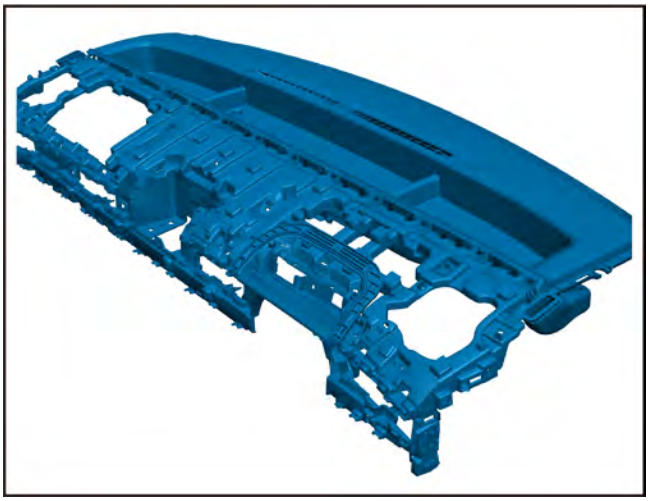
5 Remove instrument panel left center air vent panel assembly -RHD. Refer to:Instrument Panel Left Center Air Vent Panel Assembly -RHD, Repair Procedure

6 Remove instrument panel right air vent panel assembly -RHD. Refer to:Instrument Panel Right Air Vent Panel Assembly -RHD, Repair Procedure

7 Remove instrument panel left center Trim Panel Assembly -RHD. Refer to:Instrument Panel Left Center Trim Panel Assembly -RHD, Repair Procedure

8 Remove instrument panel right center Trim Panel Assembly -RHD. Refer to:Instrument Panel Right Center Trim Panel Assembly -RHD, Repair Procedure

9 Remove instrument panel upper Cover Assembly -RHD. Refer to:Instrument Panel Upper Cover Assembly -RHD, Repair Procedure



10 Remove instrument panel upper part assembly -RHD.

Installation Steps

1 Install in the reverse order of removal.

Instrument Panel Subassembly -RHD, Removal and Installation

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel center lower panel assembly -RHD. Refer to:Instrument Panel Center Lower Panel Assembly -RHD, Removal and Installation

3 Remove driver airbag. Refer to:Driver Airbag, Repair Procedure

4 Remove steering wheel assembly. Refer to:Steering Wheel Assembly, Repair Procedure

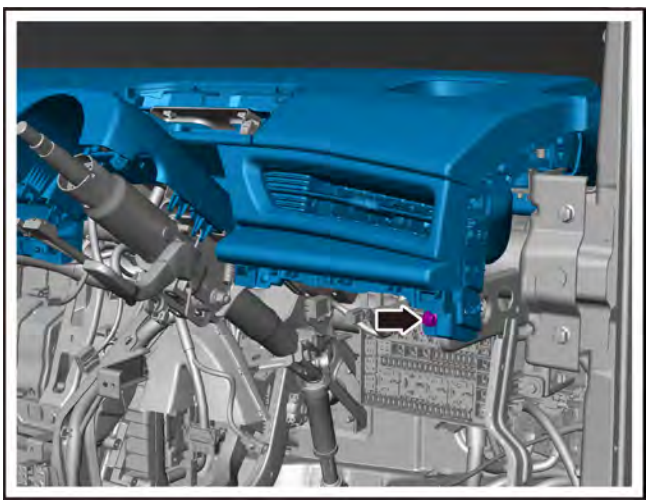
5 Remove steering column lower cover assembly. Refer to:Steering Column Lower Cover Assembly, Repair Procedure

6 Remove combination switch assembly. Refer to:Combination Switch Assembly, Repair Procedure

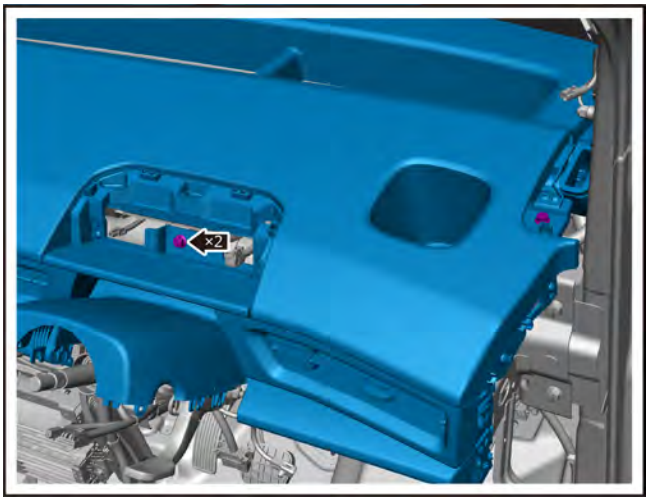
7 Remove Instrument Pack display. Refer to:Instrument Pack Display, Repair Procedure

8 Remove center display assembly. Refer to:Center Display, Repair Procedure

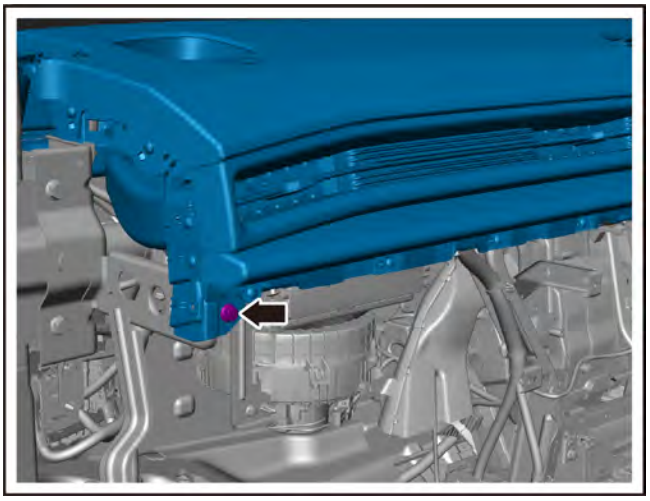
9 Remove left, right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation



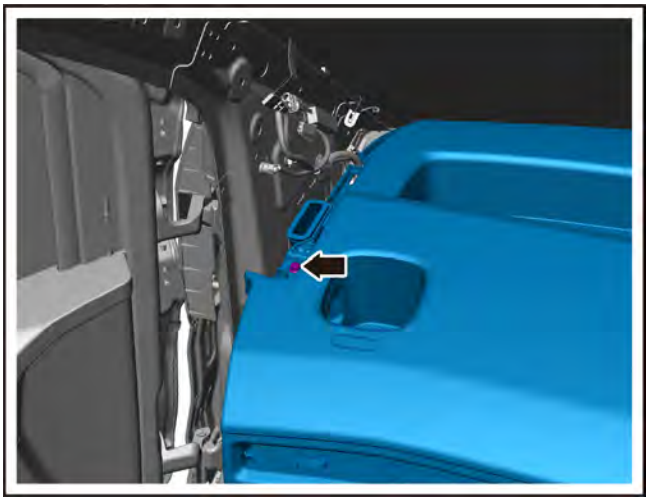
10 Remove instrument panel subassembly -RHD right retaining bolt.



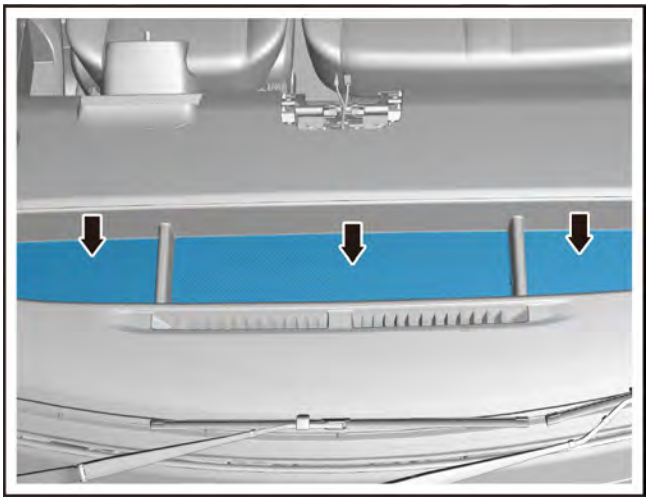
11 Remove instrument panel subassembly -RHD right 2 retaining bolt.



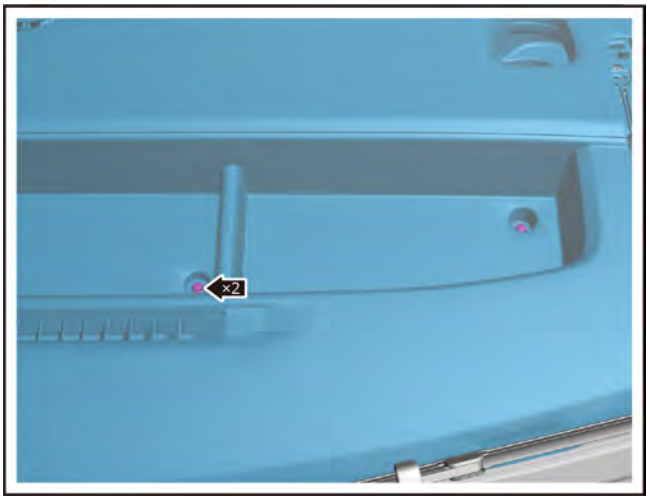
12 Remove instrument panel subassembly -RHD left retaining bolt.



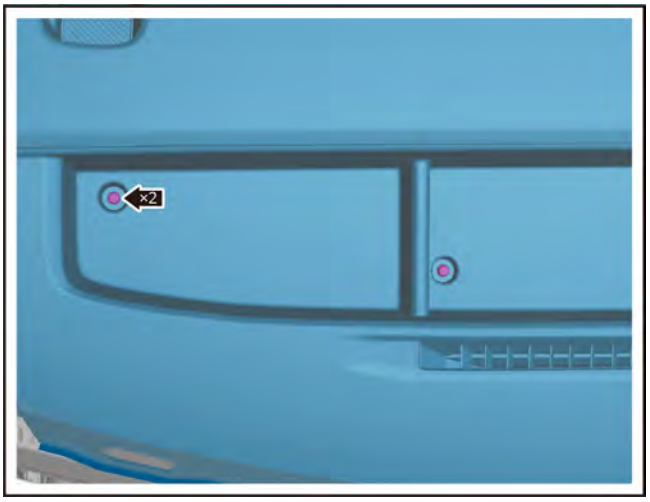
13 Remove instrument panel subassembly -RHD left retaining bolt.



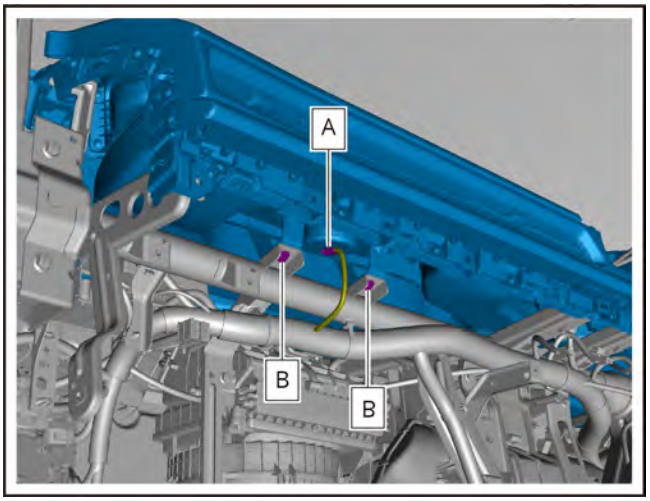
14 Remove left, center part, right storage box pad.



15 Remove instrument panel subassembly -RHD left 2 retaining bolt.



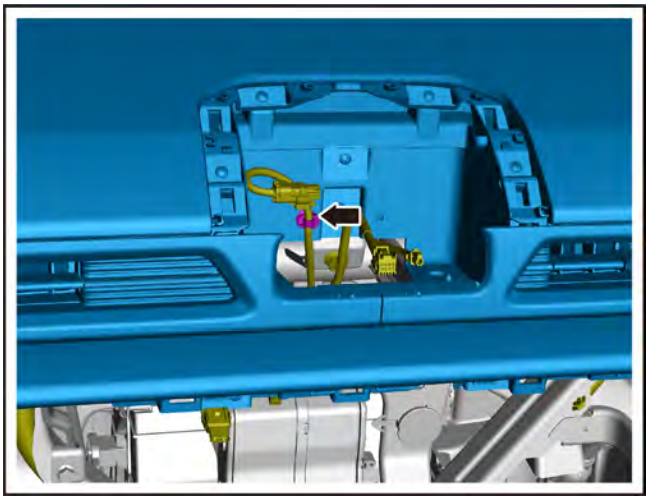
16 Remove instrument panel subassembly -RHD right 2 retaining bolt.



17 Remove instrument panel subassembly -RHD retaining bolt.

a. disconnect front Passenger Airbag wiring harness connector A.

b. Remove instrument panel subassembly -RHD2 retaining bolt B.



18 Remove instrument panel subassembly -RHD.

a. Release instrument panel Wiring Harness Assembly retaining clip.

b. in another I technician coordinate assist lower, remove instrument panel subassembly.

Installation Steps

1 Install in the reverse order of removal.

instrument panel crossmember

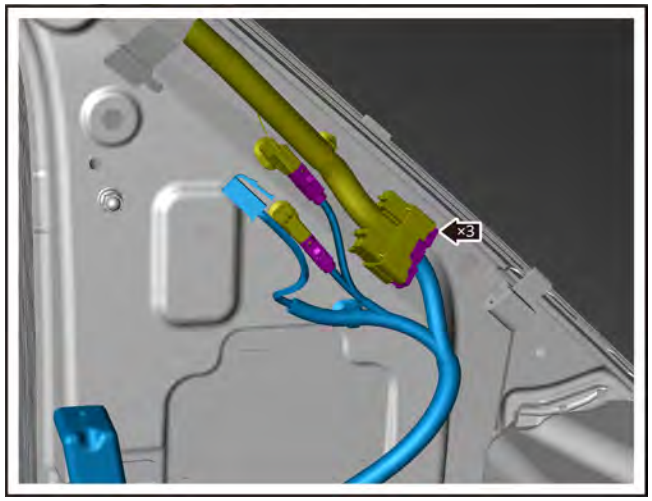
Repair Procedure

Instrument Panel Crossmember Assembly -RHD, Removal and Installation

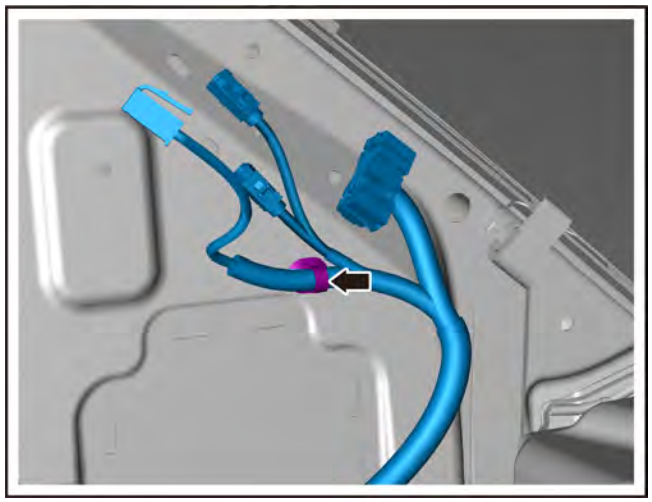
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

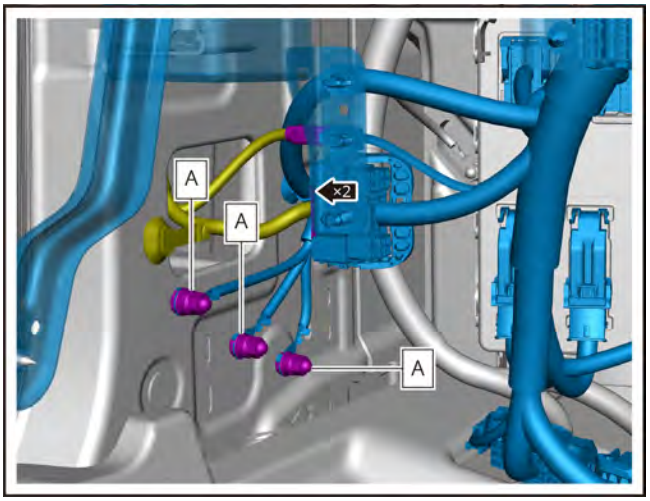
2 Remove instrument panel subassembly -RHD. Refer to:Instrument Panel Subassembly -RHD, Removal and Installation



3 Disconnect 3 instrument panel Wiring Harness Assembly wiring harness connectors.



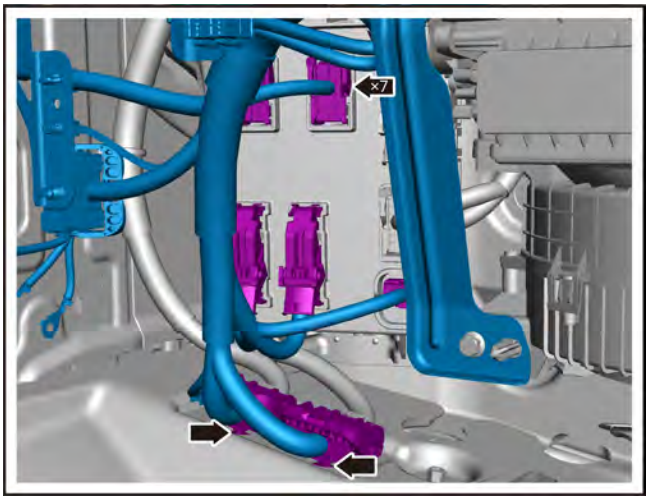
4 Release instrument panel Wiring Harness Assembly retaining clip.



5 Remove instrument panel crossmember assembly -RHD.

a. Remove instrument panel Wiring Harness Assembly ground cable 3 retaining nut A.

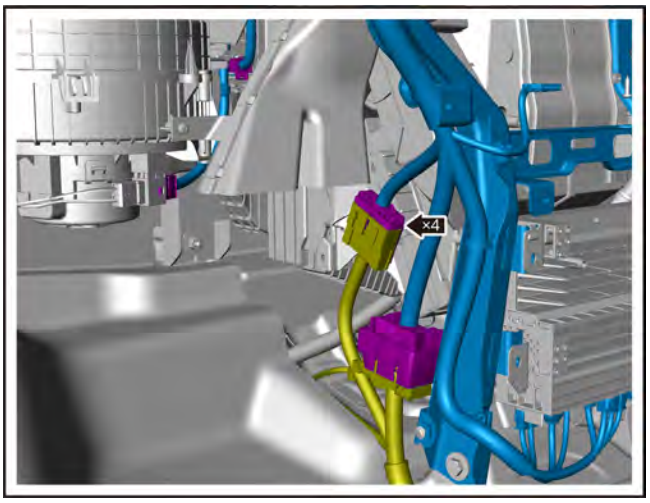
b. Disconnect 2 instrument panel Wiring Harness Assembly wiring harness connectors.



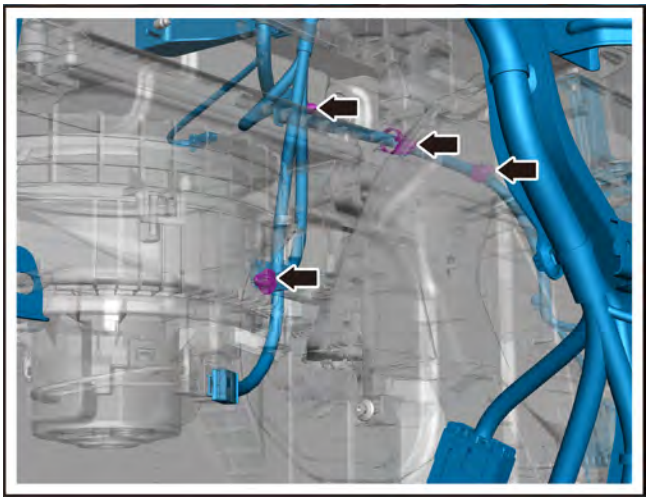
6 Remove instrument panel crossmember assembly -RHD fastener.

a. Disconnect 7 instrument panel Wiring Harness Assembly wiring harness connectors.

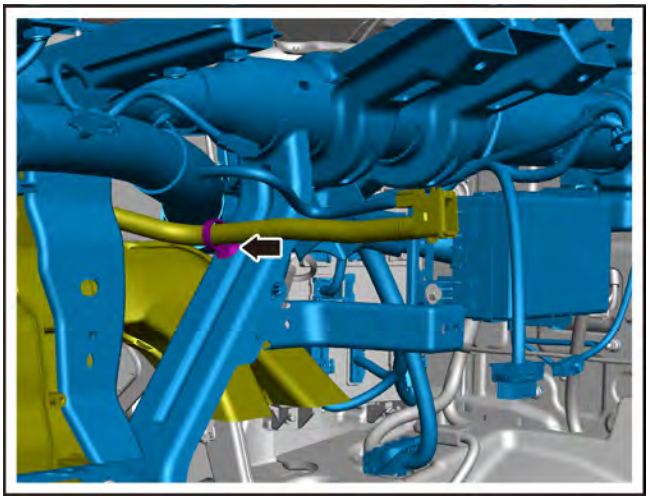
b. Release 2 instrument panel Wiring Harness Assembly retaining clips.



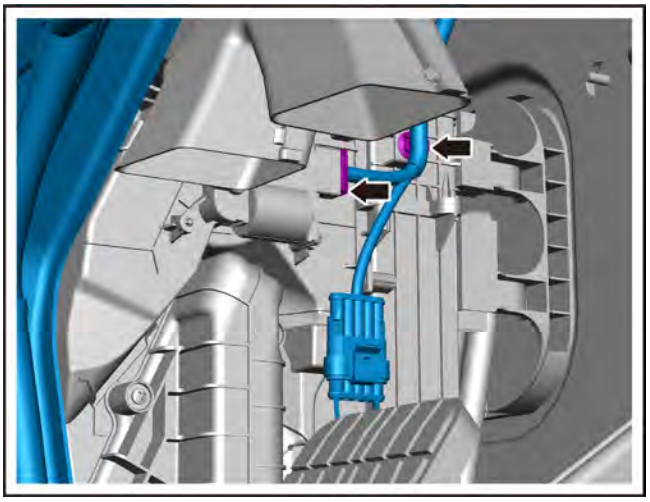
7 Disconnect 4 instrument panel Wiring Harness Assembly wiring harness connectors.



8 Release 4 instrument panel Wiring Harness Assembly retaining clips.



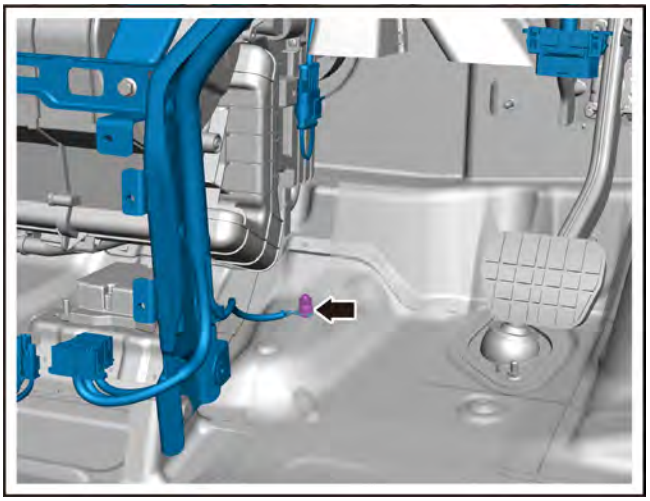
9 Release front HAVC assembly line retaining clip.



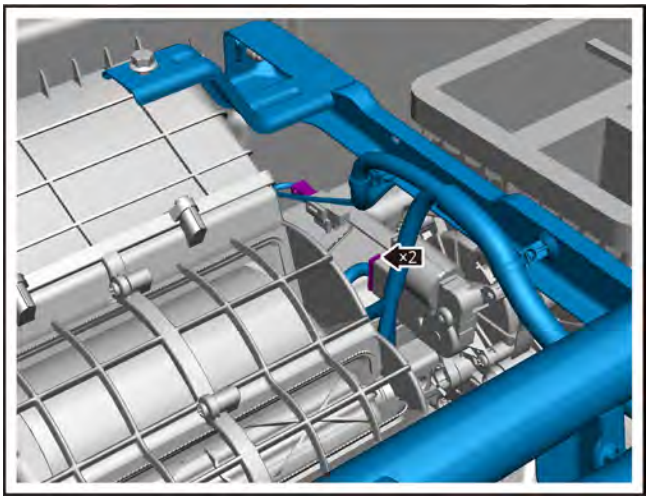
10 Remove instrument panel crossmember assembly -RHD fastener.

a. Disconnect instrument panel Wiring Harness Assembly wiring harness connector.

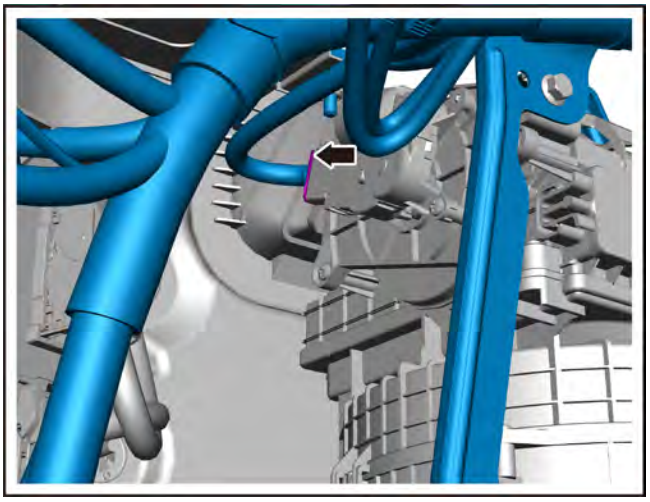
b. Release instrument panel Wiring Harness Assembly retaining clip.



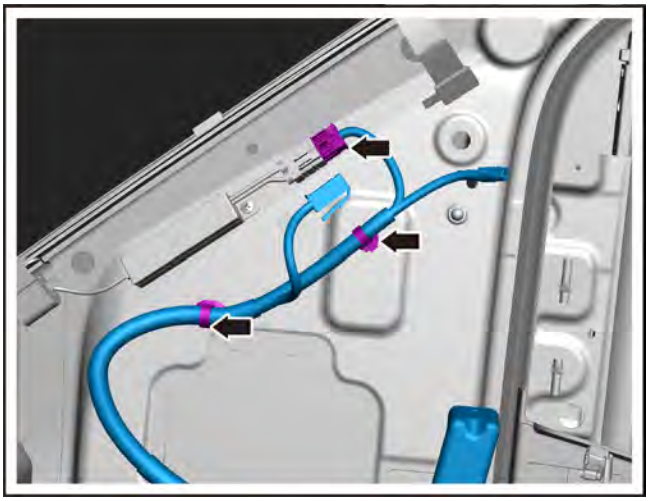
11 Remove instrument panel Wiring Harness Assembly ground cable retaining nut.



12 Disconnect 2 instrument panel Wiring Harness Assembly wiring harness connectors.



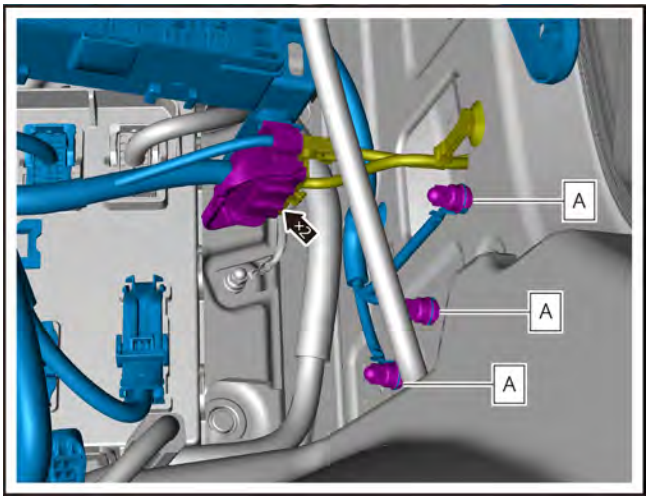
13 Disconnect instrument panel Wiring Harness Assembly wiring harness connector.



14 Remove instrument panel crossmember assembly -RHD fastener.

a. Disconnect instrument panel Wiring Harness Assembly wiring harness connector.

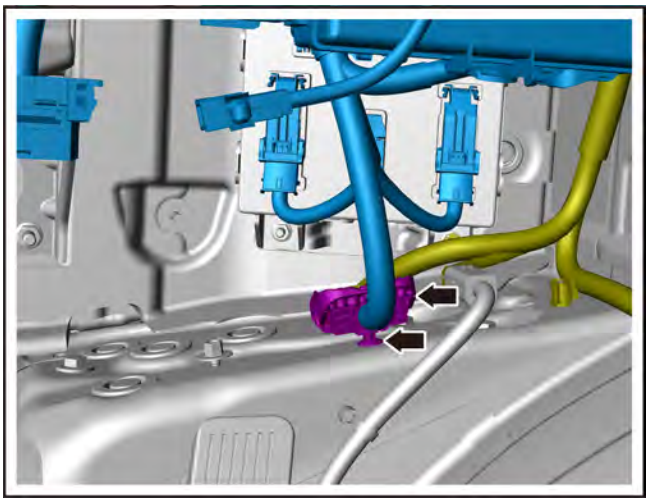
b. Release 2 instrument panel Wiring Harness Assembly retaining clips.



15 Remove instrument panel crossmember assembly -RHD fastener.

a. Remove instrument panel Wiring Harness Assembly ground cable 3 retaining nut A.

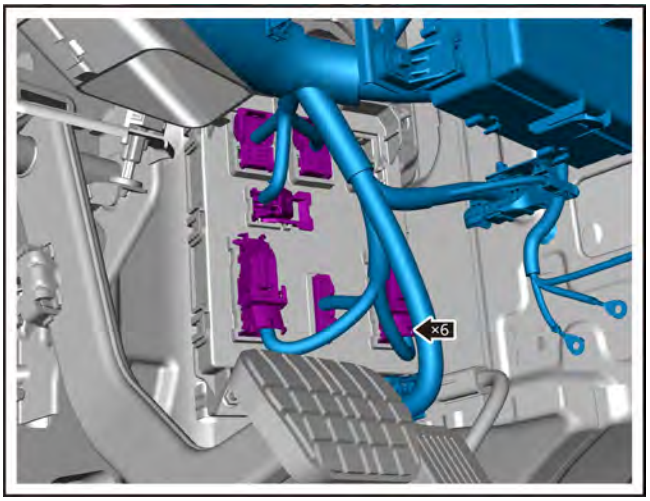
b. Disconnect 2 instrument panel Wiring Harness Assembly wiring harness connectors.



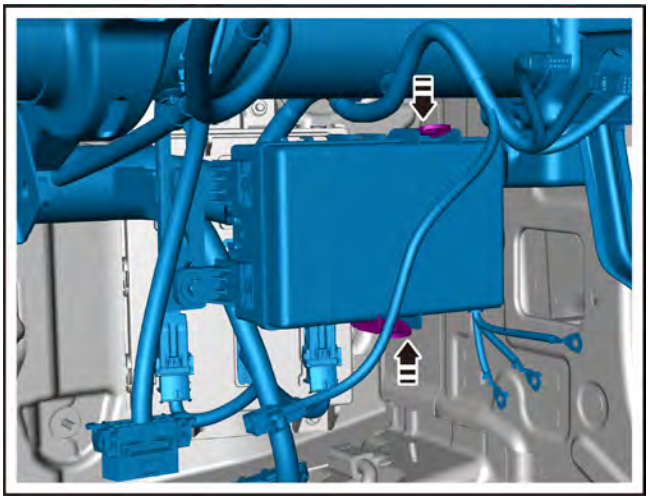
16 Remove instrument panel crossmember assembly -RHD fastener.

a. Disconnect instrument panel Wiring Harness Assembly wiring harness connector.

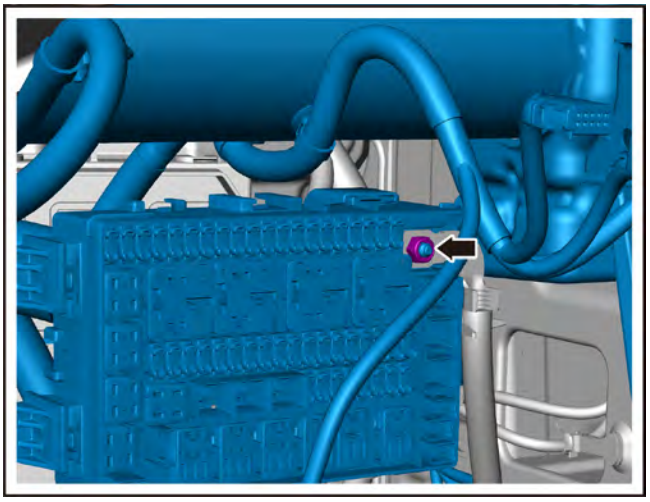
b. Release instrument panel Wiring Harness Assembly retaining clip.



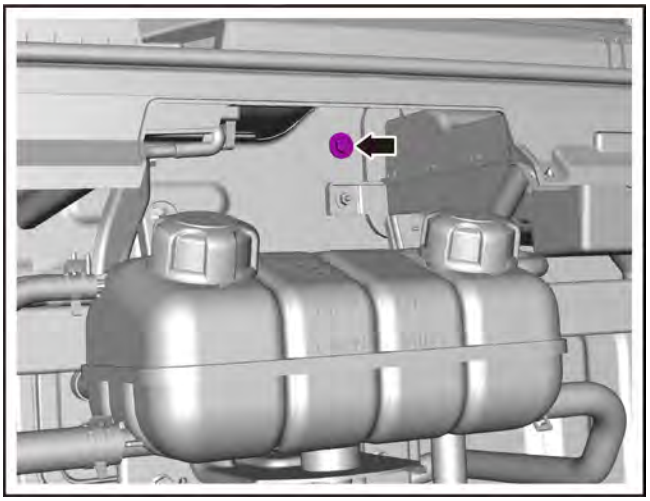
17 Disconnect 6 instrument panel Wiring Harness Assembly wiring harness connectors.



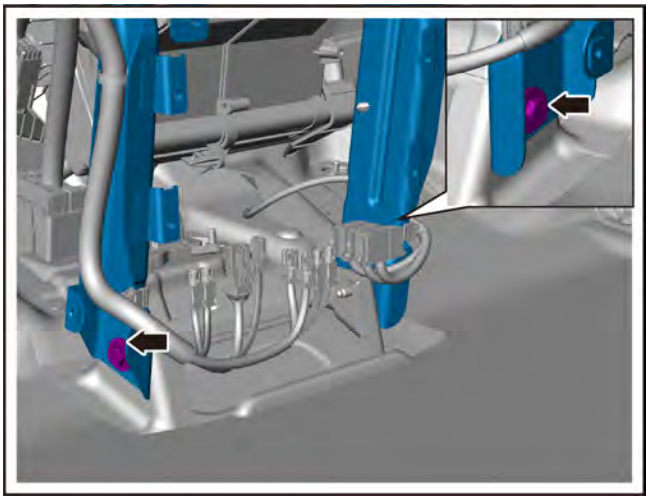
18 press retaining clip, remove Fuse Cover.



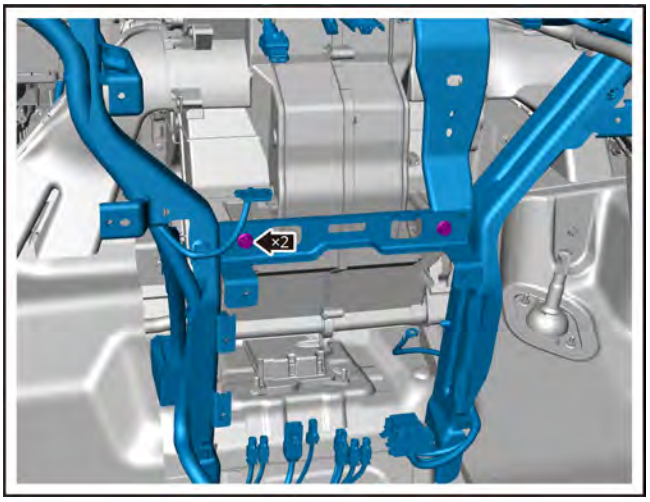
19 Remove front compartment wiring harness assembly retaining nut.



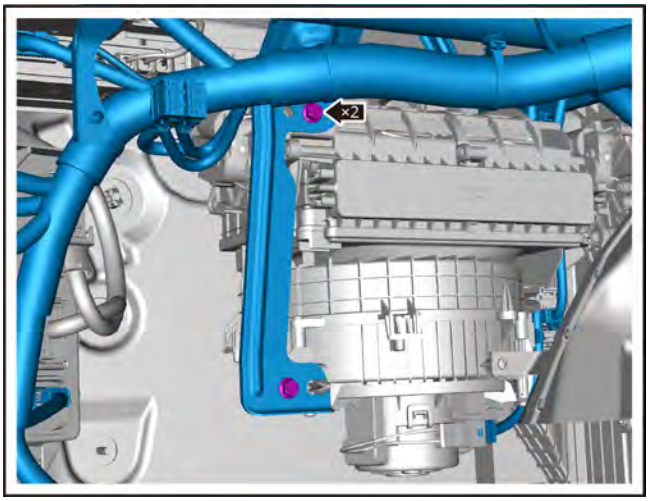
20 Remove instrument panel crossmember assembly -RHD retaining bolt.



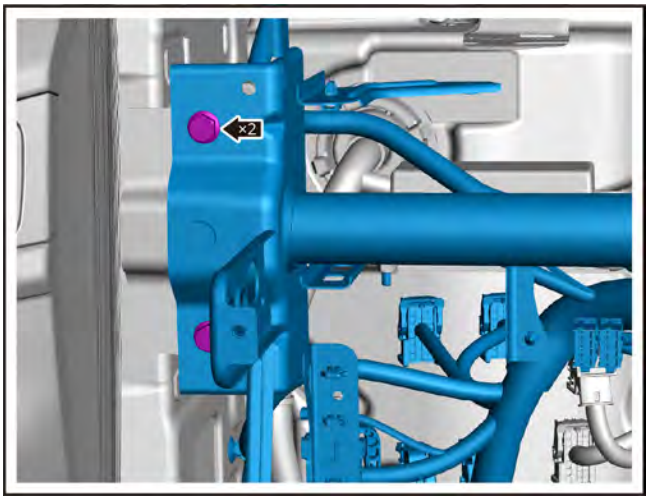
21 Remove instrument panel crossmember assembly -RHD2 retaining bolt.



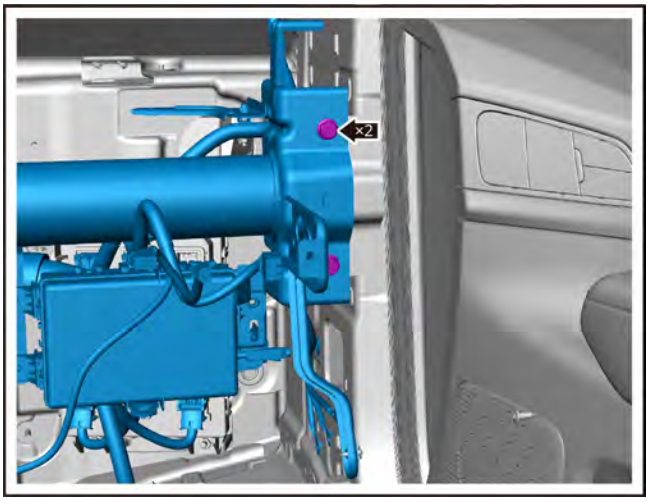
22 Remove instrument panel crossmember assembly -RHD2 retaining bolt.



23 Remove instrument panel crossmember assembly -RHD2 retaining bolt.



24 Remove instrument panel crossmember assembly -RHD2 retaining bolt.



25 Remove instrument panel crossmember assembly -RHD.

a. Remove 2 retaining bolt, remove instrument panel crossmember assembly -RHD.

b. in another I technician coordinate assist lower, remove instrument panel crossmember assembly -RHD.

Installation Steps

1 Install in the reverse order of removal.

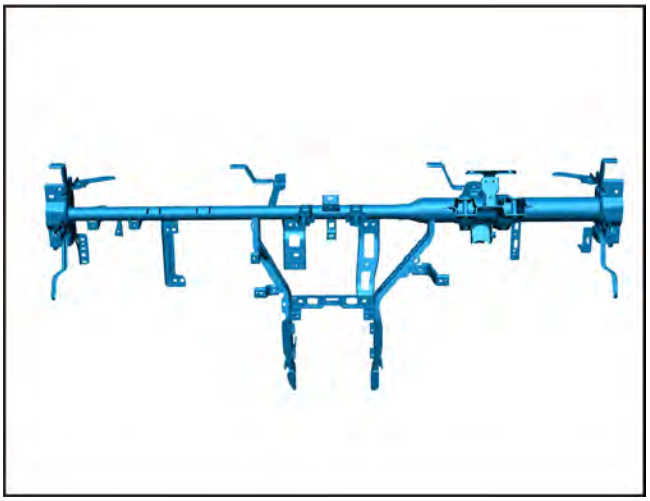
Instrument Panel Crossmember -RHD, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove instrument panel crossmember assembly -RHD. Refer to:Instrument Panel Crossmember Assembly -RHD, Removal and Installation

3 Remove instrument panel Wiring Harness Assembly. Refer to:Instrument Panel Wiring Harness Assembly, Repair Procedure



4 Remove instrument panel crossmember assembly -RHD.

Installation Steps

1 Install in the reverse order of removal.

seat

System Overview

Seat Function Overview

System Principle

driver seat item with 6 direction power adjustment Function, enable seat all side position personalized adjust. seat support front rear, high low, backrest angle multiple side direction power adjustment, can with through seat adjustment switch or Infotainment Display upper control button easily operation, meet sufficient not same body special item and driving item item need request.

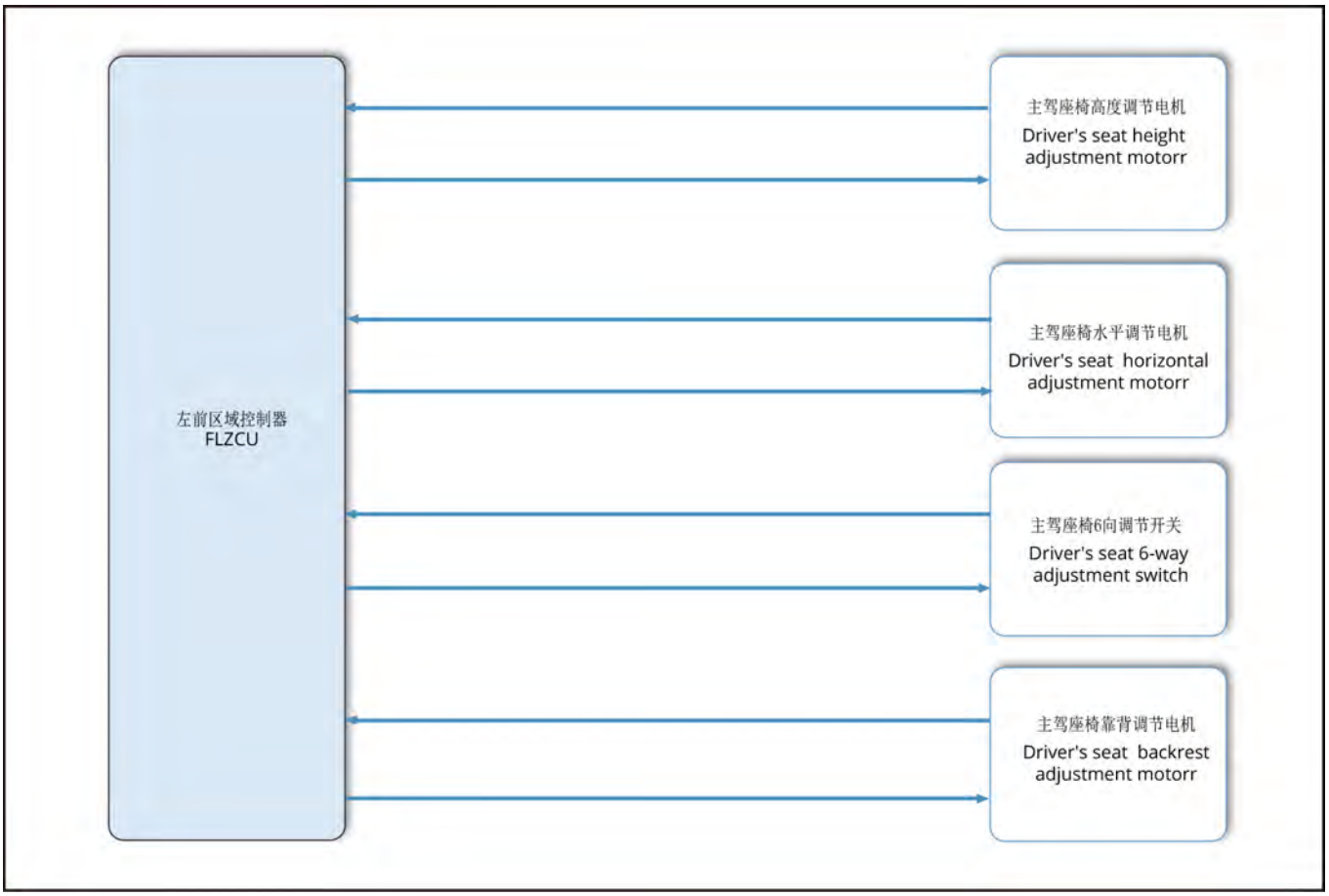
Seat Ventilation

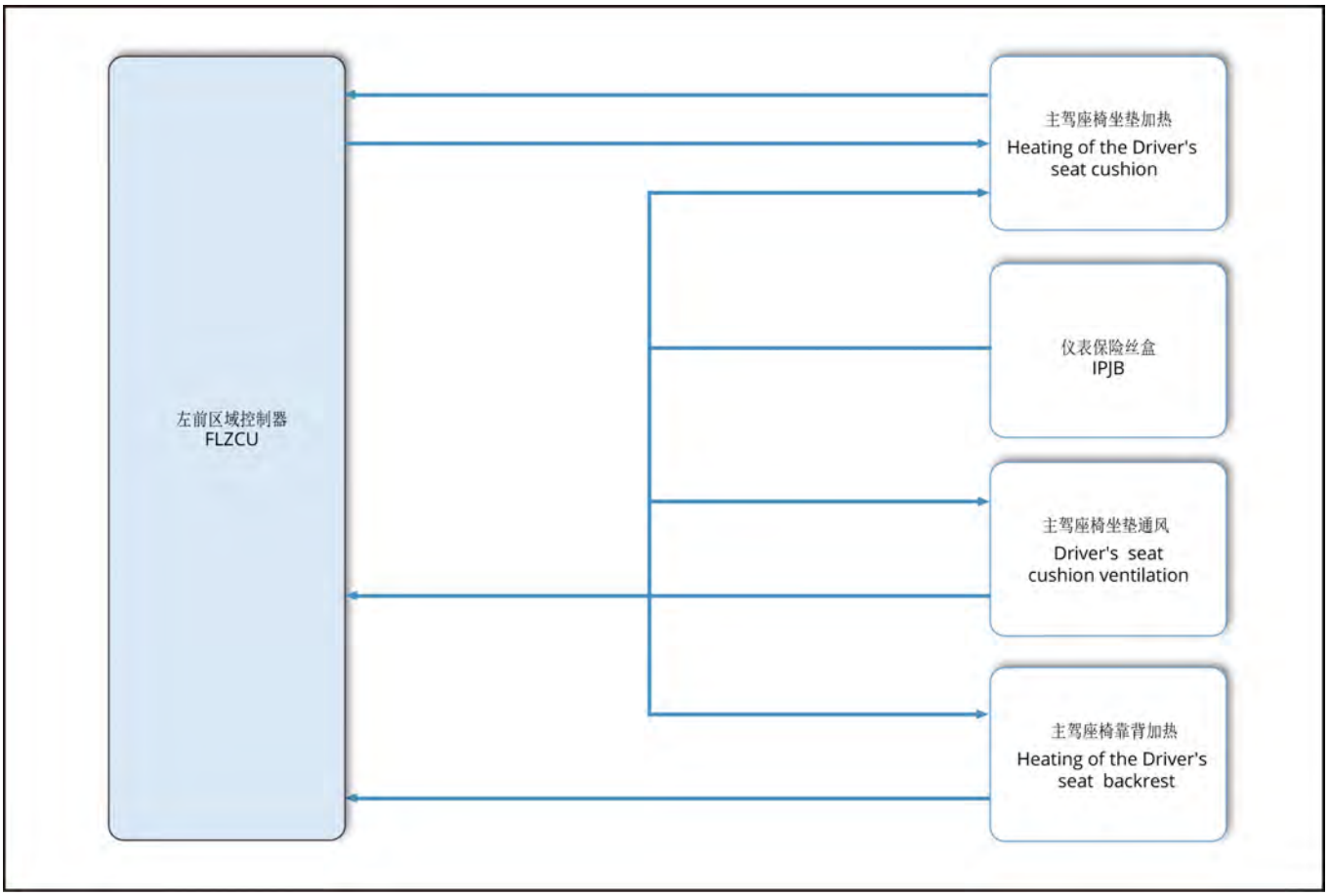
Seat Ventilation system use forced-air setting count, in seat pad and backrest inner part setting Fan and Ventilation hole. Fan inhale air rear, air flow from seat surface Ventilation hole uniformly blow output, acceleration air for flow cycle, from and with travel human body and seat connect contact area accumulate thermal amount and wet air, relieve because long Time driving when stuffy heat trigger send not suitable sensing.

seat heating

through in seat seat pad and backrest inner part install power heat component, seat heating can sufficient in short Time inner quickly raise temperature, for driver provide warm seat surface, valid relieve item cold with to not suitable sensing.

Electrical Schematic Diagram





Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	Hardwired	Drive Signal	driver height adjustment motor Drive Signal Output
	Hardwired	Position Signal	driver height adjustment motor Hall Position Signal Input
	Hardwired	Drive Signal	driver horizontal adjustment motor Drive Signal Output
	Hardwired	Position Signal	driver horizontal adjustment motor Hall Position Signal Input
	Hardwired	Drive Signal	driver backrest adjustment motor Drive Signal Output
	Hardwired	Position Signal	driver backrest adjustment motor Hall Position Signal Input
	Hardwired	Control Signal	driver seat 6 direction adjustment switch height Control Signal Input
	Hardwired	Control Signal	driver seat 6 direction adjustment switch horizontal Control Signal Input
	Hardwired	Control Signal	driver seat 6 direction adjustment switch backrest Control Signal Input
	Hardwired	Drive Signal	driver seat Seat Cushion Heater Drive Signal Output
	Hardwired	Temperature Signal	driver seat seat cushion NTC Temperature Signal Input
	Hardwired	Drive Signal	driver seat backrest heat Drive Signal Output
	Hardwired	Drive Signal	driver seat seat cushion Ventilation Drive Signal Output
driver height adjustment motor	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Position Signal	Left Front Zone Control Unit Hall Position Signal Output
driver horizontal adjustment motor	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input
	Hardwired	Position Signal	Left Front Zone Control Unit Hall Position Signal Output
driver backrest adjustment motor	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input
	Hardwired	Position Signal	Left Front Zone Control Unit Hall Position Signal Output
driver seat 6 direction adjustment switch	Hardwired	Control Signal	Left Front Zone Control Unit height Control Signal Output
	Hardwired	Control Signal	Left Front Zone Control Unit horizontal Control Signal Output
	Hardwired	Control Signal	Left Front Zone Control Unit backrest Control Signal Output
driver seat Seat Cushion Heater	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
driver seat seat cushion NTC temperature sensor	Hardwired	Temperature Signal	Left Front Zone Control Unit Temperature Signal Output
driver seat backrest heat	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
driver front seat seat cushion Ventilation	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
Instrument Panel Fuse Box	Hardwired	Power Supply	driver seat Seat Cushion Heater, driver seat backrest heat, driver front seat seat cushion Ventilation Power Supply Output

Component Description

driver Seat Assembly

driver Seat Assembly position at vehicle cockpit right front area, main need Function Yes for occupant body provide support, same when matching backup seat adjustment, Ventilation, heat Function.

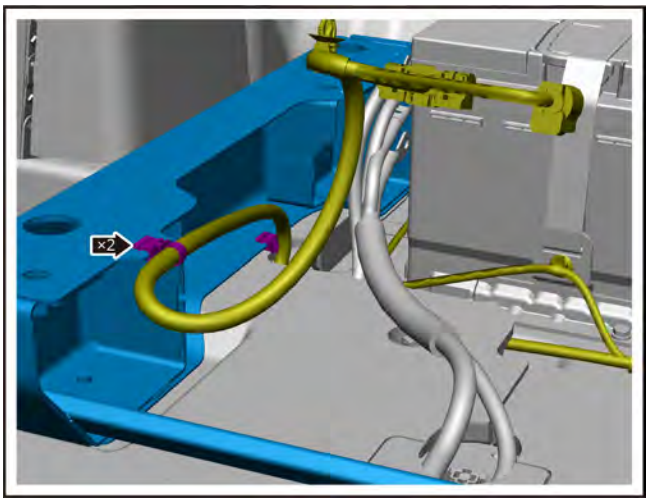
Repair Procedure

Right Front Seat Bracket Assembly, Repair Procedure

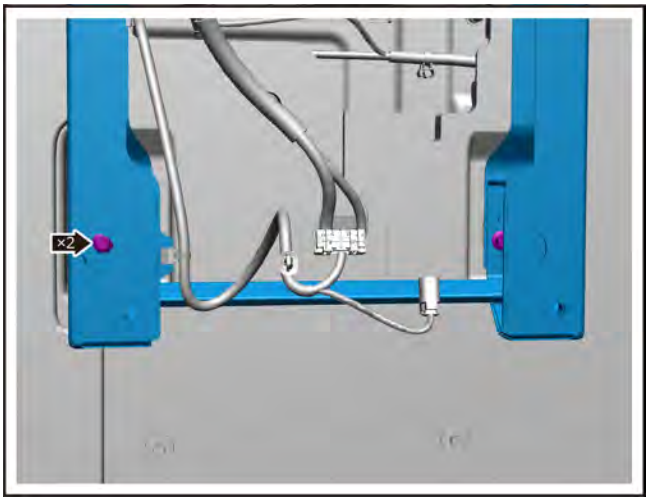
Removal Steps

1 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure

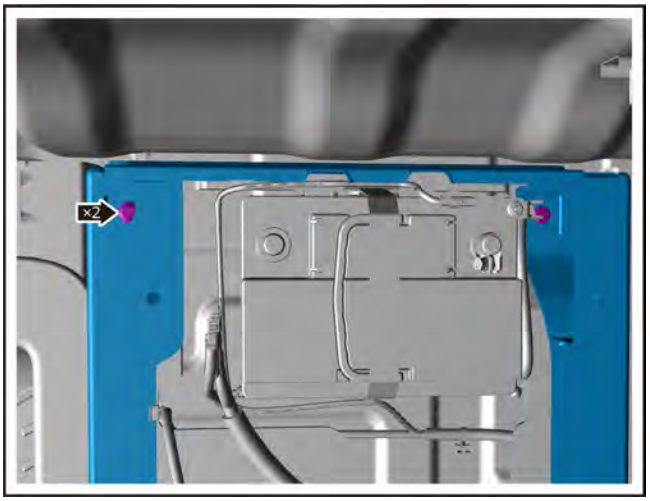
2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



3 Release 2 floor wiring harness retaining clips.



4 Remove right front seat bracket assembly 2 retaining bolt.



5 Remove 2 retaining bolt, remove right front seat bracket assembly.

Installation Steps

1 Install in the reverse order of removal.

Right Front Seat Assembly, Repair Procedure

Removal Steps

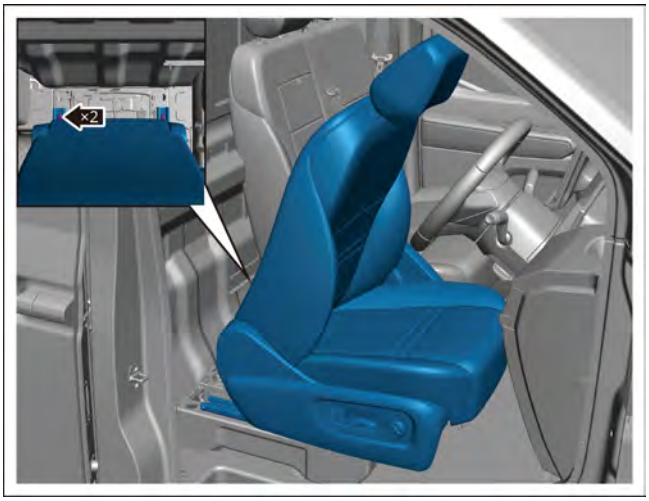
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Remove right front Seat Assembly front end retaining bolt.

a. right front Seat Assembly Adjust Rearward to suitable Location.

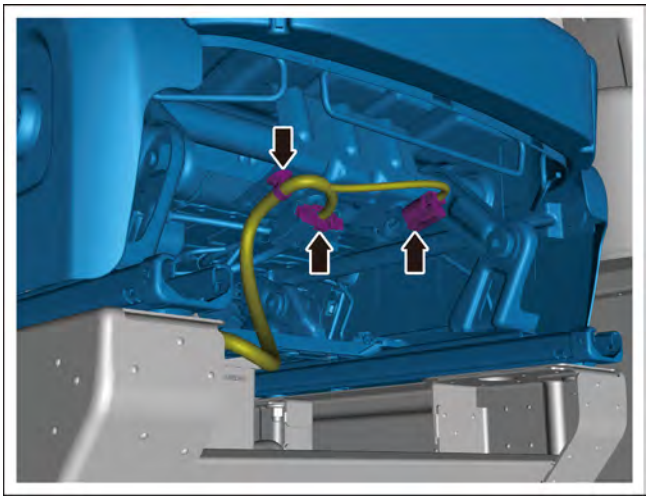
b. Remove right front Seat Assembly front end 2 retaining bolt.



3 Remove right front Seat Assembly rear end retaining bolt.

a. right front Seat Assembly Adjust Forward to suitable Location.

b. Remove right front Seat Assembly rear end 2 retaining bolt.



4 remove right front Seat Assembly.

a. Disconnect 2 right front Seat Assembly wiring harness connectors.

b. Release floor wiring harness retaining clip.

c. in another I technician coordinate assist lower, remove right front Seat Assembly.

Installation Steps

1 Install in the reverse order of removal.

Head Restraint Assembly (Webbing Object)- Right Front Seat, Repair Procedure

Removal Steps



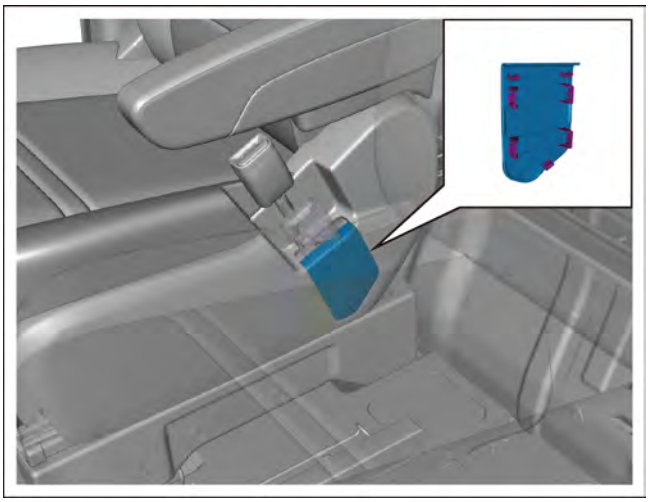
1 press lock button, remove Head Restraint Assembly (webbing object)- right front seat.

Installation Steps

1 Install in the reverse order of removal.

Inside Trim Panel Buckle Trim Cover - RHD Right Front, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove inside trim panel buckle trim cover - RHD right front.

Installation Steps

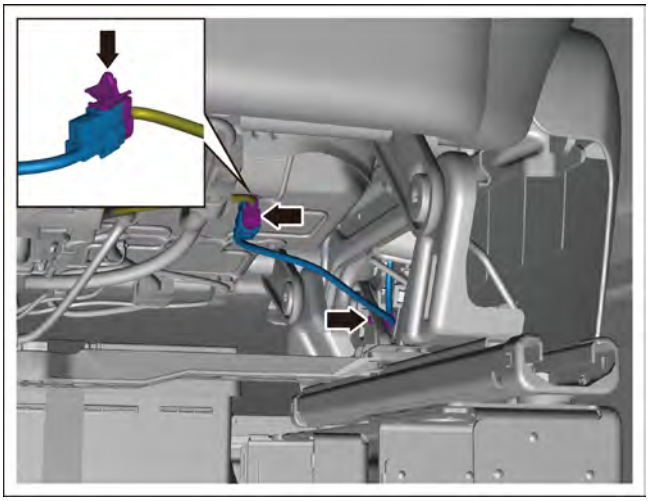
1 Install in the reverse order of removal.

Front Single Person Seat Buckle, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

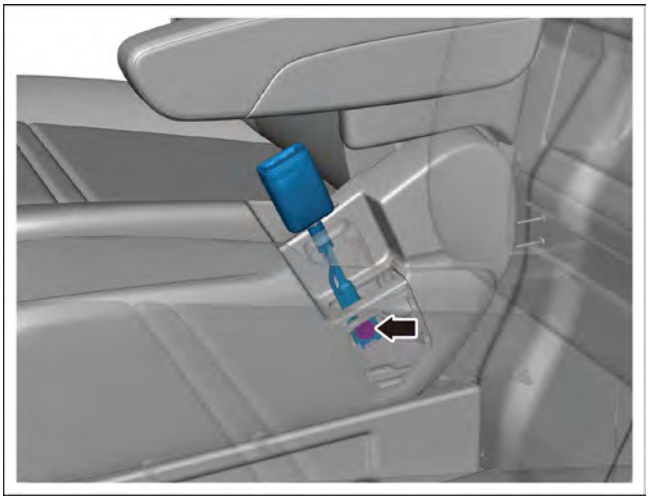
2 Remove inside trim panel buckle trim cover - RHD right front. Refer to:Inside Trim Panel Buckle Trim Cover - RHD Right Front, Repair Procedure



3 Release front single person seat buckle retaining clip.

a. Disconnect front single person seat buckle wiring harness connector.

b. Release 2 front single person seat buckle retaining clips.



4 Remove retaining bolt, remove front single person seat buckle.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

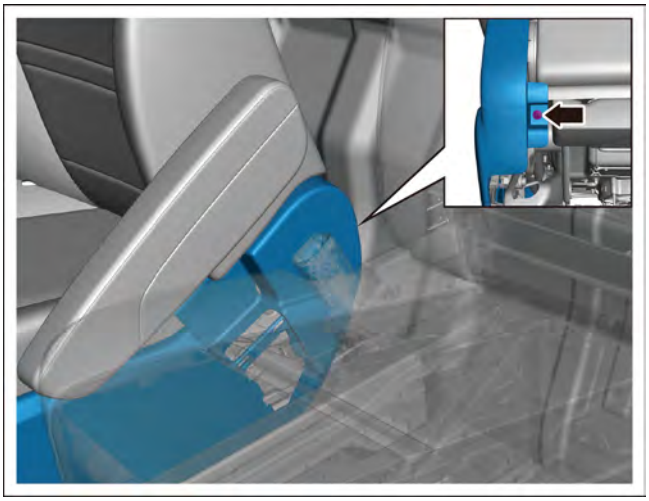
Install complete rear, perform buckle and seat belt all Function detection: latch tongue and buckle lock and release action must clear item order smooth, seat belt automatic return reel and emergency lock effect should normal.

Inside Trim Panel - RHD Right Front, Repair Procedure

Removal Steps

1 Remove inside trim panel buckle trim cover - RHD right front. Refer to:Inside Trim Panel Buckle Trim Cover - RHD Right Front, Repair Procedure

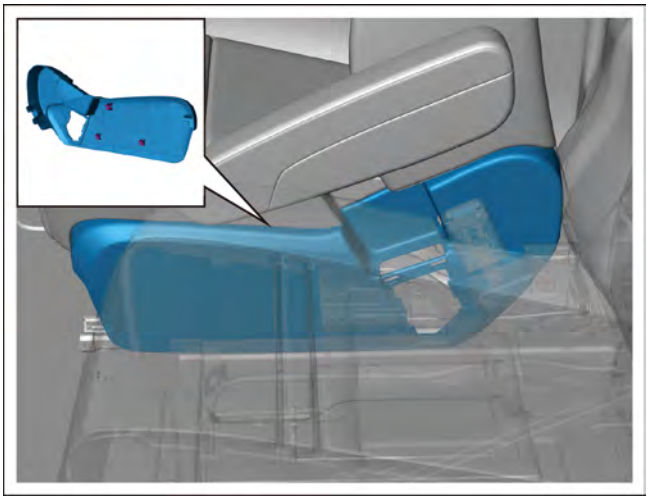
2 Remove front single person seat buckle. Refer to:Front Single Person Seat Buckle, Repair Procedure



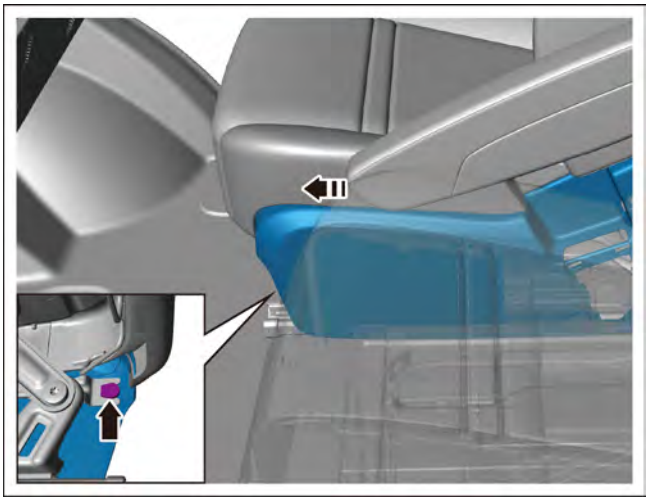
3 Remove inside trim panel - RHD right front retaining screw.

a. right front Seat Assembly Adjust Forward to suitable Location.

b. Remove inside trim panel - RHD right front retaining screw.



4 Release inside trim panel - RHD right front retaining clip.



5 release retaining clip, remove inside trim panel - RHD right front.

Installation Steps

1 Install in the reverse order of removal.

Horizontal High Low Adjustment Button - RHD Right Front, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove horizontal high low adjustment button - RHD right front.

Caution

Remove when note protection around side trim panel, prevent wipe injury.

Installation Steps

1 Install in the reverse order of removal.

Angle Adjustment Button - RHD Right Front, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove angle adjustment button - RHD right front.

Caution

Remove when note protection around side trim panel, prevent wipe injury.

Installation Steps

1 Install in the reverse order of removal.

Power Large Trim Panel - RHD Right Front, Removal and Installation

Removal Steps

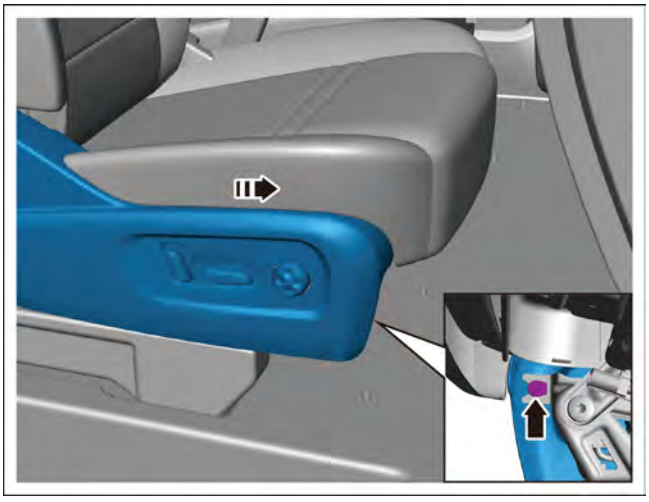


1 Remove power large trim panel - RHD right front retaining screw.
   a. right front Seat Assembly Adjust Forward to suitable Location.
   b. Remove power large trim panel - RHD right front retaining screw.

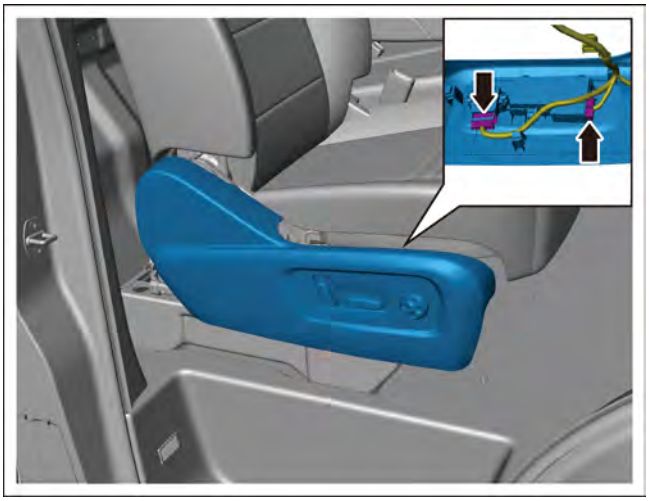
2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



3 Release power large trim panel - RHD right front retaining clip.



4 Release power large trim panel - RHD right front retaining clip.



5 disconnect 2 wiring harness connector, remove power large trim panel - RHD right front.

Installation Steps

1 Install in the reverse order of removal.

Power Large Trim Panel - RHD Right Front, Repair Procedure

Removal Steps

1 Remove power large trim panel - RHD right front. Refer to:Power Large Trim Panel - RHD Right Front, Removal and Installation

2 Remove right front 6 direction adjustment switch - power (memory). Refer to:Right Front 6 Direction Adjustment Switch - Power (Memory), Repair Procedure

3 Remove IV direction power lumbar support switch. Refer to:IV Direction Power Lumbar Support Switch, Repair Procedure



4 Remove power large trim panel - RHD right front.

Installation Steps

1 Install in the reverse order of removal.

Right Front 6 Direction Adjustment Switch - Power (Memory), Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove power large trim panel - RHD right front. Refer to:Power Large Trim Panel - RHD Right Front, Removal and Installation



3 UsePlastic Pry ToolRemove horizontal high low adjustment button - RHD right front.

Caution

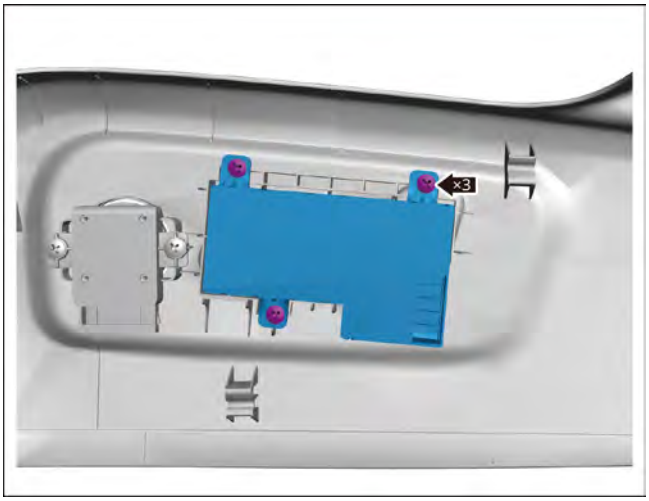
Remove when note protection around side trim panel, prevent wipe injury.



4 UsePlastic Pry ToolRemove angle adjustment button - RHD right front.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



5 Remove 3 retaining screw, remove right front 6 direction adjustment switch - power (memory).

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

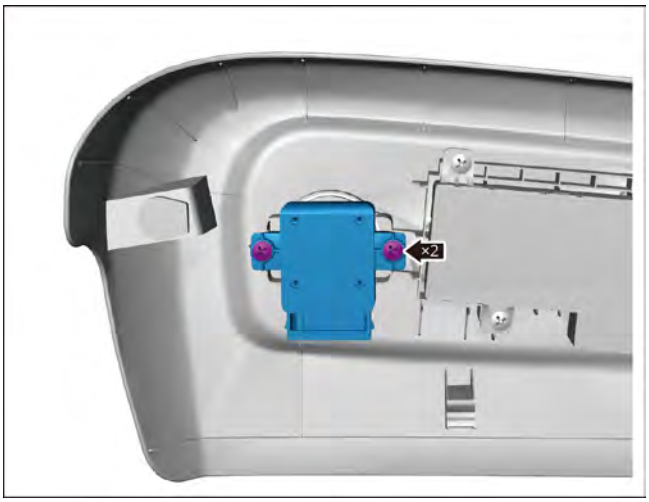
Install complete rear, for 6 direction adjustment switch perform test, confirm seat horizontal, height and backrest 6 side direction adjustment Function complete good, operation stable, no stuck.

IV Direction Power Lumbar Support Switch, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove power large trim panel - RHD right front. Refer to:Power Large Trim Panel - RHD Right Front, Removal and Installation



3 Remove 2 retaining screw, remove IV direction power lumbar support switch.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

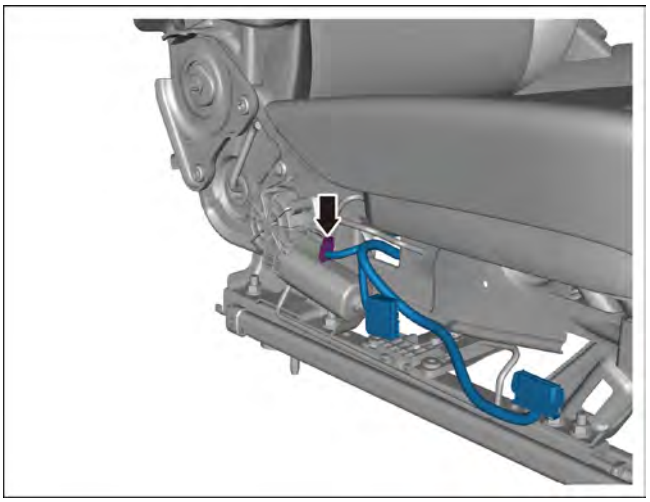
Install complete rear, for 6 direction adjustment switch perform test, confirm seat horizontal, height and backrest 6 side direction adjustment Function complete good, operation stable, no stuck.

Right Front - Seat Pad Wiring Harness - Power Driver (Memory), Repair Procedure

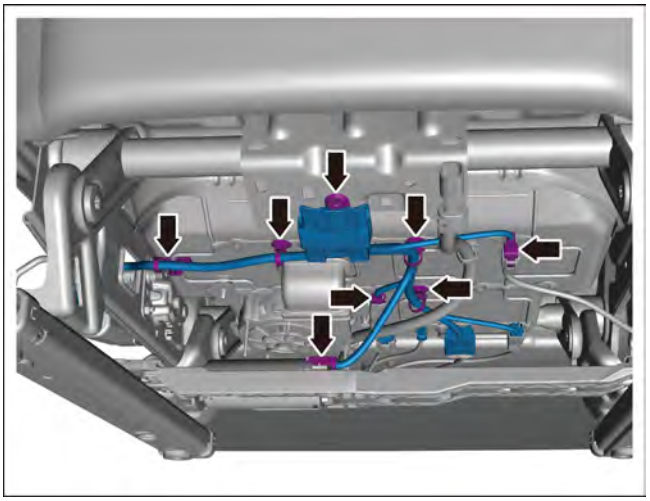
Removal Steps

1 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure

2 Remove power large trim panel - RHD right front. Refer to:Power Large Trim Panel - RHD Right Front, Removal and Installation



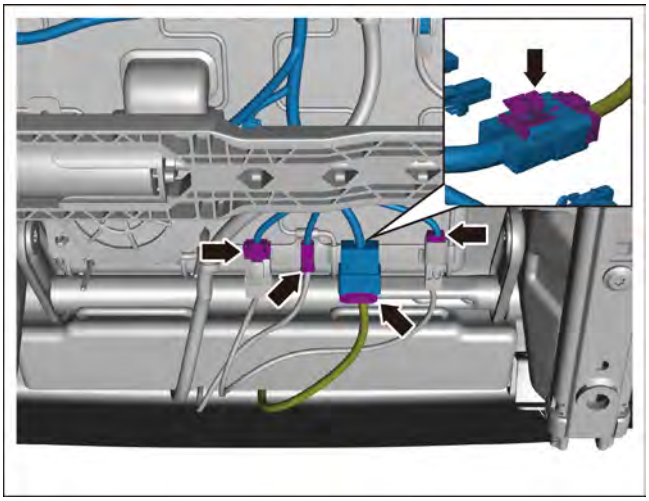
3 Disconnect right front - seat pad wiring harness - power driver (memory) wiring harness connector.



4 Disconnect right front - seat pad wiring harness - power driver (memory) wiring harness connector.

a. Release 5 right front - seat pad wiring harness - power driver (memory) retaining clips.

b. Disconnect 3 right front - seat pad wiring harness - power driver (memory) wiring harness connectors.



5 remove right front - seat pad wiring harness - power driver (memory) wiring harness.

a. Release right front - seat pad wiring harness - power driver (memory) retaining clip.

b. disconnect 4 wiring harness connector, remove right front - seat pad wiring harness - power driver (memory).

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

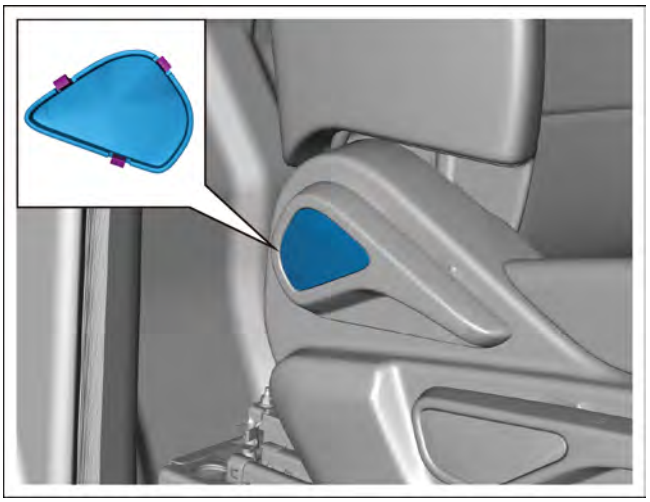
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 Make sure all wiring harness connections are secure and correctly retained. Avoid crossed, damaged or short-circuited wiring and cables.

Backrest Adjustment Handle - RHD Right Front, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove Backrest Adjustment Handle Plug - RHD right front.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



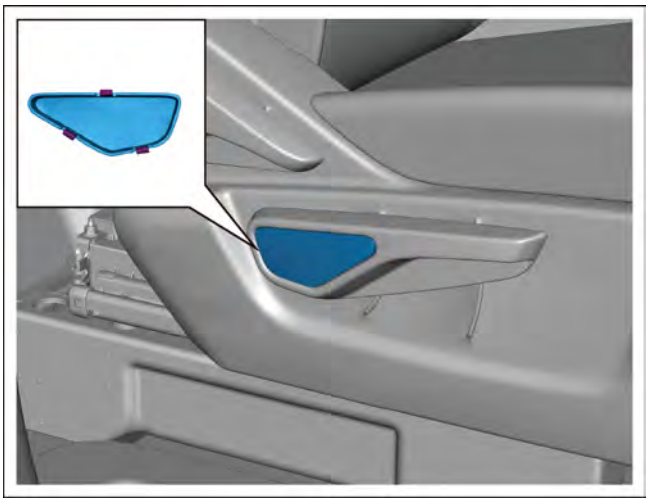
2 Remove 3 retaining screw, remove Backrest Adjustment Handle - RHD right front.

Installation Steps

1 Install in the reverse order of removal.

Height Adjustment Handle - RHD Right Front, Repair Procedure

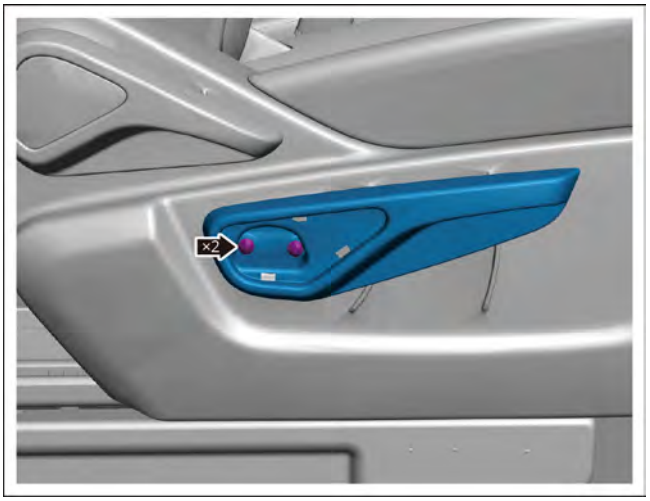
Removal Steps



1 UsePlastic Pry ToolRemove Height Adjustment Handle Plug - RHD right front.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



2 Remove 2 retaining screw, remove Height Adjustment Handle - RHD right front.

Installation Steps

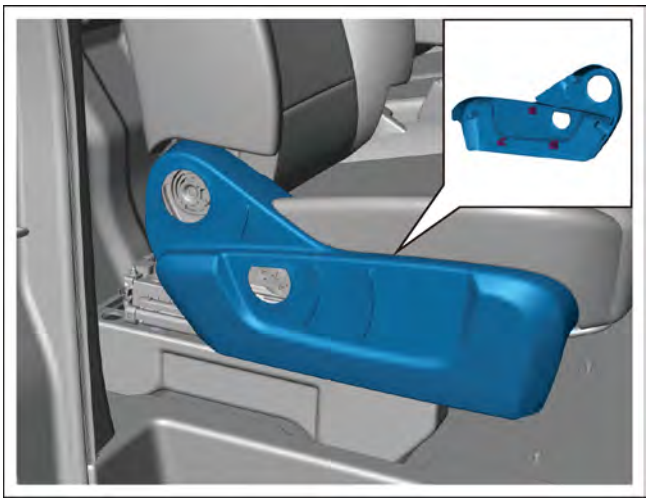
1 Install in the reverse order of removal.

6 Direction Hand Movement Large Trim Panel - RHD Right Front, Repair Procedure

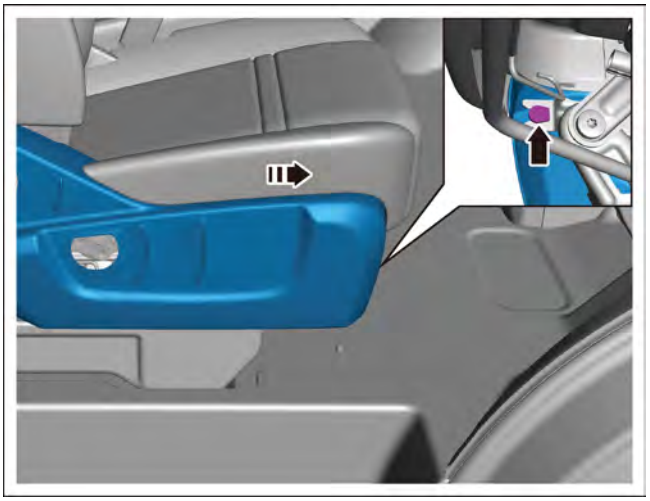
Removal Steps

1 Remove Backrest Adjustment Handle - RHD right front. Refer to:Backrest Adjustment Handle - RHD Right Front, Repair Procedure

2 Remove Height Adjustment Handle - RHD right front. Refer to:Height Adjustment Handle - RHD Right Front, Repair Procedure



3 Release 6 direction hand movement large trim panel - RHD right front retaining clip.



4 release retaining clip, remove 6 direction hand movement large trim panel - RHD right front.

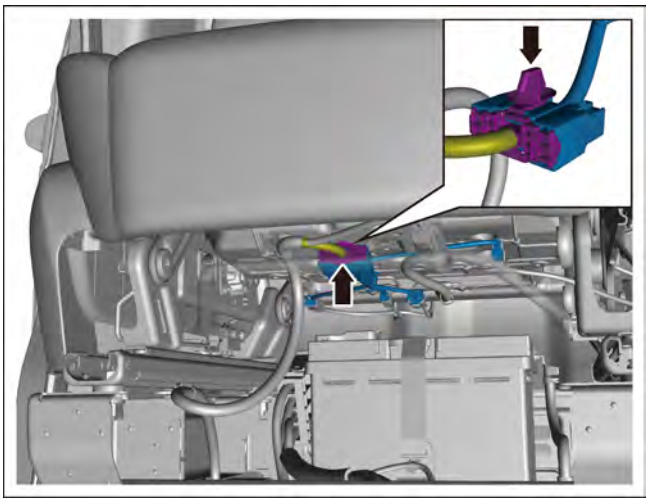
Installation Steps

1 Install in the reverse order of removal.

Right Front - Seat Pad Wiring Harness - Hand Movement Driver 2, Repair Procedure

Removal Steps

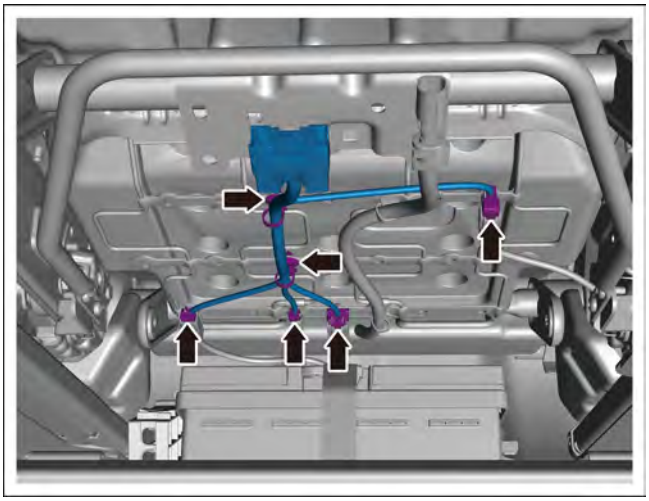
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Release right front - seat pad wiring harness - hand movement driver 2 retaining clip.

a. Disconnect right front - seat pad wiring harness - hand movement driver 2 wiring harness connector.

b. Release right front - seat pad wiring harness - hand movement driver 2 retaining clip.



3 remove right front - seat pad wiring harness - hand movement driver 2.

a. Release right front - seat pad wiring harness - hand movement driver 2 retaining clip.

b. disconnect 4 wiring harness connector, remove right front - seat pad wiring harness - hand movement driver 2.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

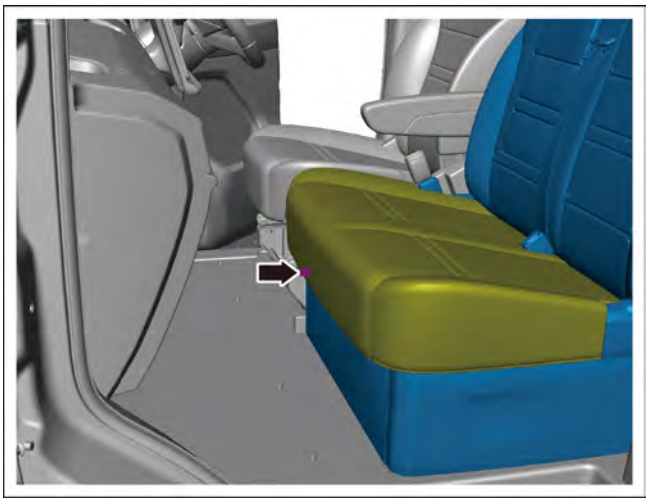
4 Make sure all wiring harness connections are secure and correctly retained. Avoid

crossed, damaged or short-circuited wiring and cables.

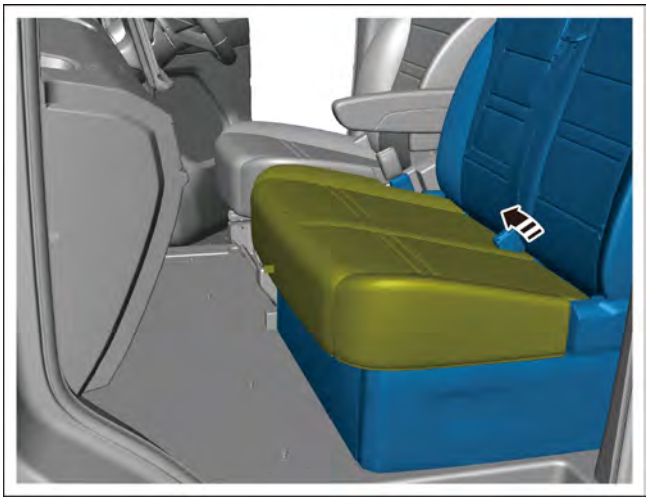
Left Front Two-Person Seat Assembly, Repair Procedure

Removal Steps

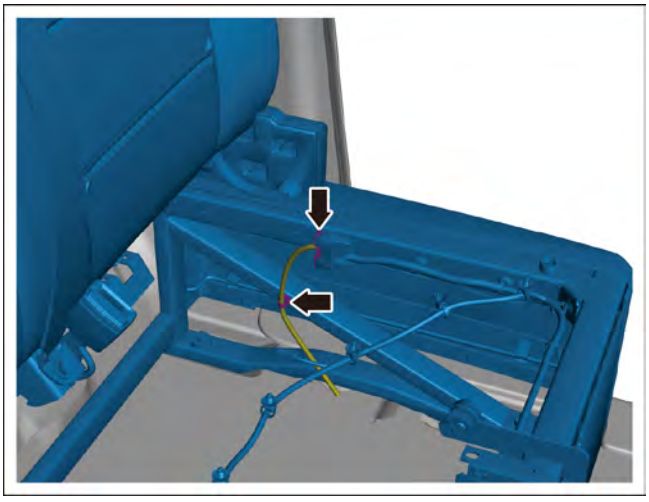
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 pull movement cable, release Left Front Two-person Seat Cushion Assembly buckle.



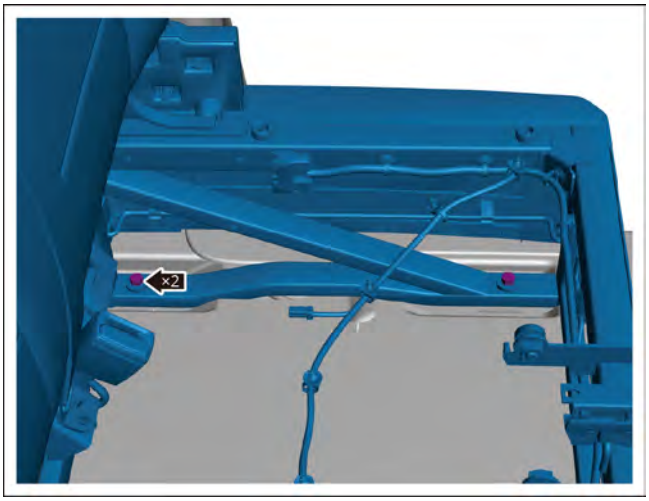
3 lift/open Left Front Two-person Seat Cushion Assembly.



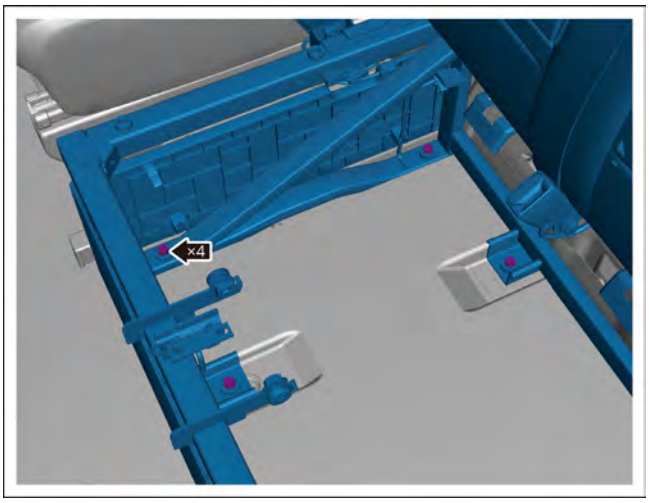
4 Disconnect left front Two-person Seat assembly wiring harness connector.

a. Release floor wiring harness retaining clip.

b. Disconnect left front Two-person Seat assembly wiring harness connector.



5 Remove left front Two-person Seat assembly 2 retaining bolt.



6 Remove left front Two-person Seat assembly.

a. Remove left front Two-person Seat assembly 4 retaining bolt.

b. in another I technician coordinate assist lower, remove left front Two-person Seat assembly.

Installation Steps

1 Install in the reverse order of removal.

Head Restraint Assembly (Webbing Object)- Left Front Two-Person Seat, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



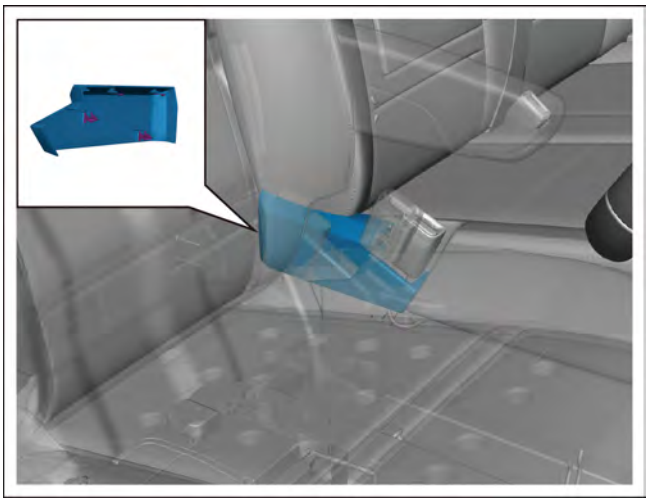
1 press lock button, remove Head Restraint Assembly (webbing object)- left front Two-person Seat.

Installation Steps

1 Install in the reverse order of removal.

Seat-to-Backrest Inner Cover - Left Front Seat, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove Seat-to-Backrest Inner Cover - left front seat.

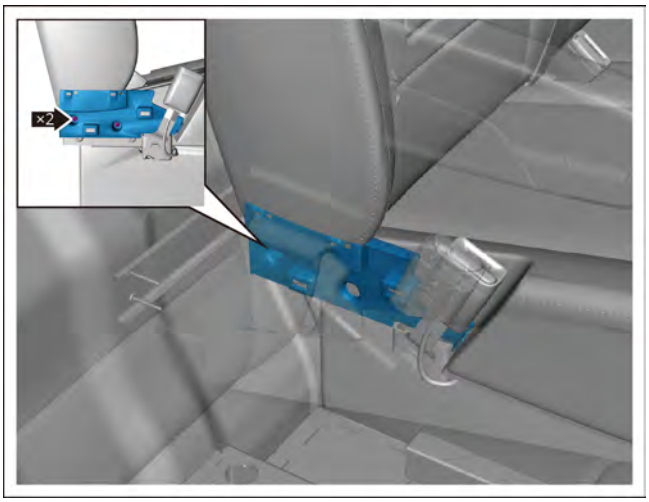
Installation Steps

1 Install in the reverse order of removal.

Seat-to-Backrest Inner Cover Bracket - Left Front Seat, Repair Procedure

Removal Steps

1 Remove Seat-to-Backrest Inner Cover - left front seat. Refer to:Seat-to-Backrest Inner Cover - Left Front Seat, Repair Procedure



2 remove Seat-to-Backrest Inner Cover Bracket - left front seat.

a. right front Seat Assembly Adjust Forward to suitable Location.

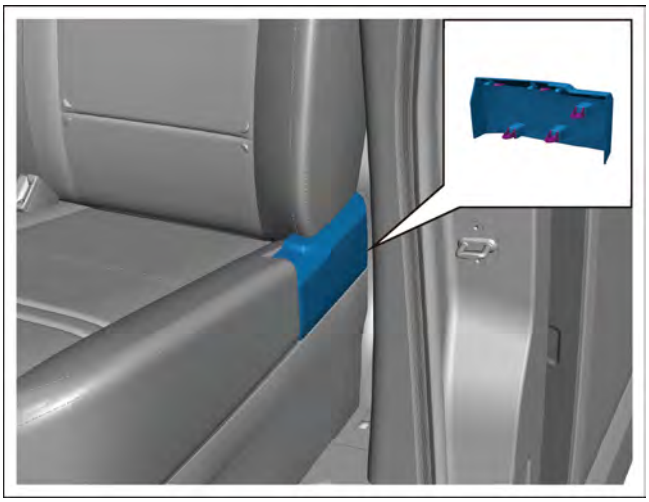
b. Remove 2 retaining screw, remove Seat-to-Backrest Inner Cover Bracket - left front seat.

Installation Steps

1 Install in the reverse order of removal.

Seat-to-Backrest Outer Cover - Left Front Seat, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove Seat-to-Backrest Outer Cover - right front seat.

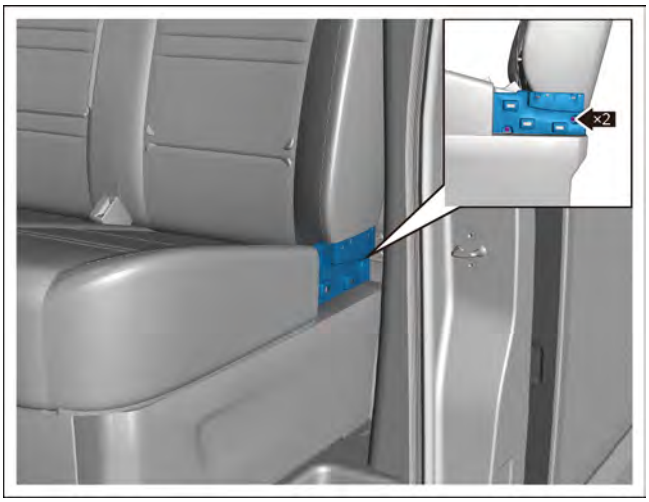
Installation Steps

1 Install in the reverse order of removal.

Seat-to-Backrest Outer Cover Bracket - Left Front Seat, Repair Procedure

Removal Steps

1 Remove Seat-to-Backrest Outer Cover - left front seat. Refer to:Seat-to-Backrest Outer Cover - Left Front Seat, Repair Procedure



2 Remove 2 retaining screw, remove Seat-to-Backrest Outer Cover Bracket - left front seat.

Installation Steps

1 Install in the reverse order of removal.

Reel Receive Unit Protection Cover, Repair Procedure

Removal Steps



1 Remove 2 screw Plug.



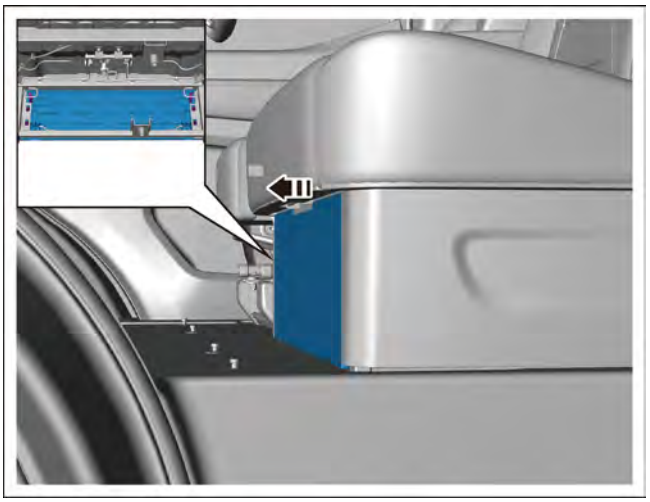
2 Remove 2 retaining screw, remove reel receive unit protection cover.

Installation Steps

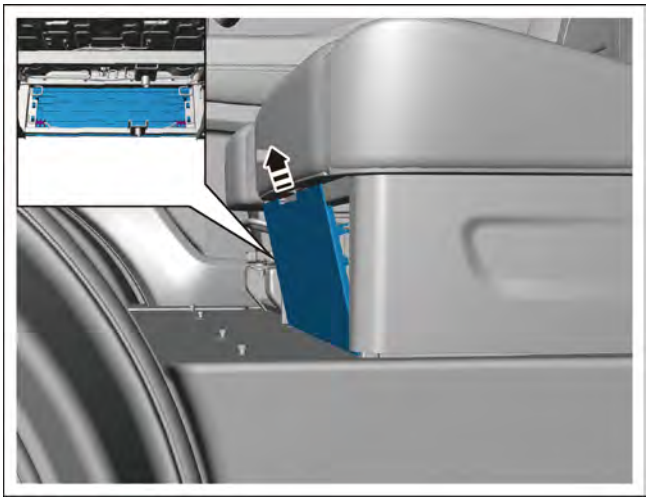
1 Install in the reverse order of removal.

Front Trim Panel, Repair Procedure

Removal Steps



1 Release front trim panel upper part retaining clip.



2 release lower part retaining clip, remove front trim panel.

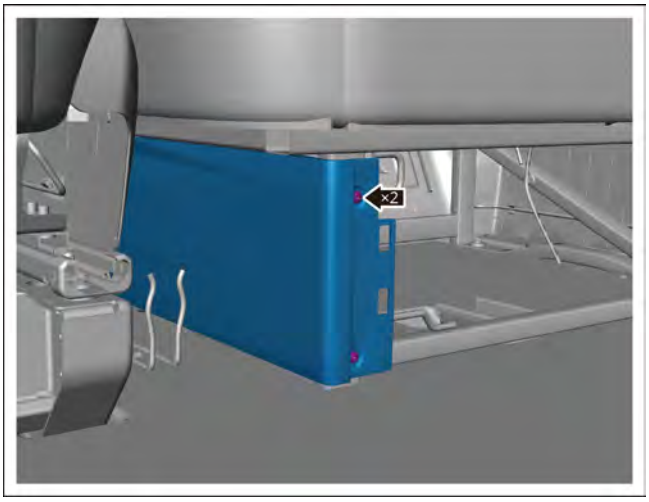
Installation Steps

1 Install in the reverse order of removal.

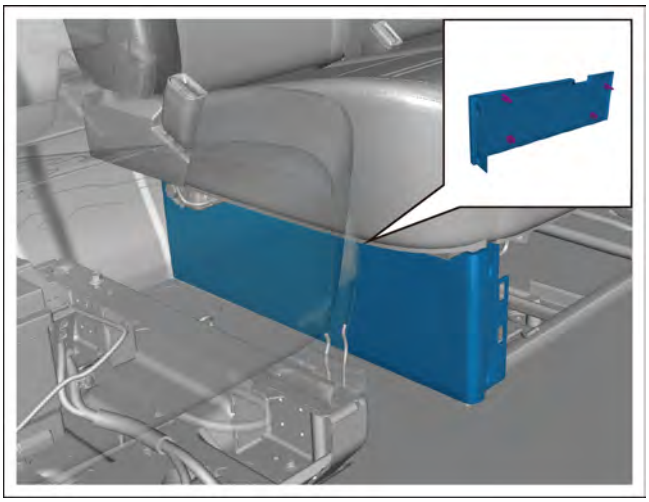
Inside Large Trim Panel - Left Front Seat, Repair Procedure

Removal Steps

1 Remove front trim panel. Refer to:Front Trim Panel, Repair Procedure



2 Remove inside large trim panel - left front seat 2 retaining screw.



3 release retaining clip, remove inside large trim panel - left front seat.

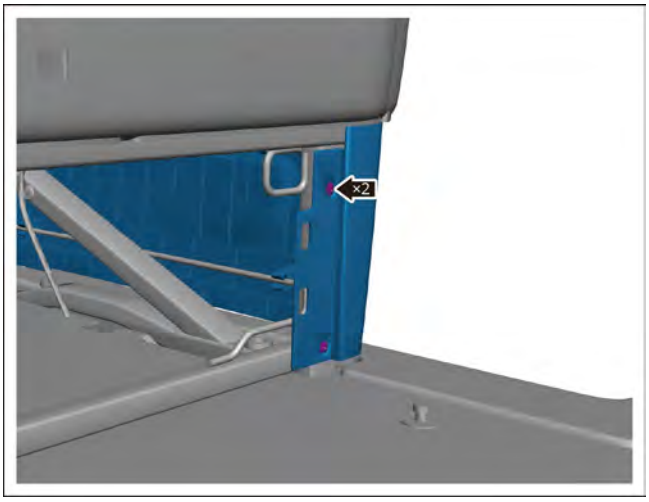
Installation Steps

1 Install in the reverse order of removal.

Outside Large Trim Panel - Left Front Seat, Repair Procedure

Removal Steps

1 Remove front trim panel. Refer to:Front Trim Panel, Repair Procedure



2 Remove outside large trim panel - left front seat 2 retaining screw.



3 release retaining clip, remove outside large trim panel - left front seat.

Installation Steps

1 Install in the reverse order of removal.

Center Seat Belt Buckle Assembly, Repair Procedure

Removal Steps

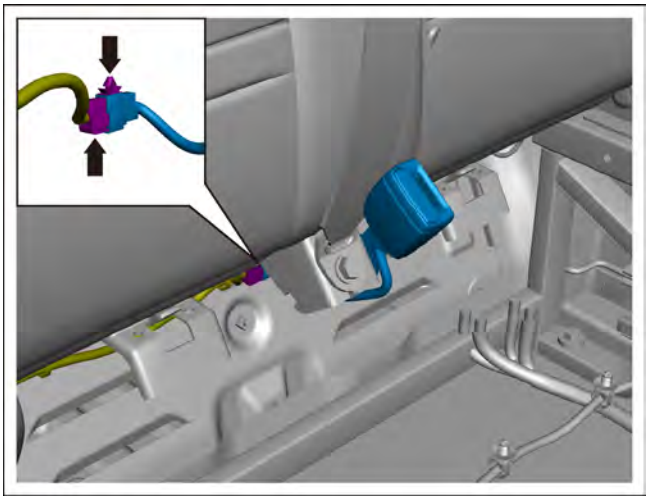
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 pull movement cable, release Left Front Two-person Seat Cushion Assembly buckle.



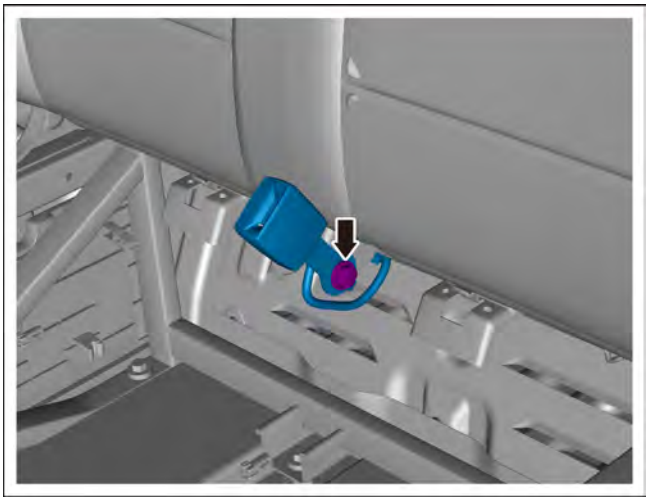
3 lift/open Left Front Two-person Seat Cushion Assembly.



4 Disconnect center seat belt buckle assembly wiring harness connector.

a. Release center seat belt buckle assembly retaining clip.

b. Disconnect center seat belt buckle assembly wiring harness connector.



5 Remove retaining bolt, remove center seat belt buckle assembly.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Inside Seat Belt Buckle Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

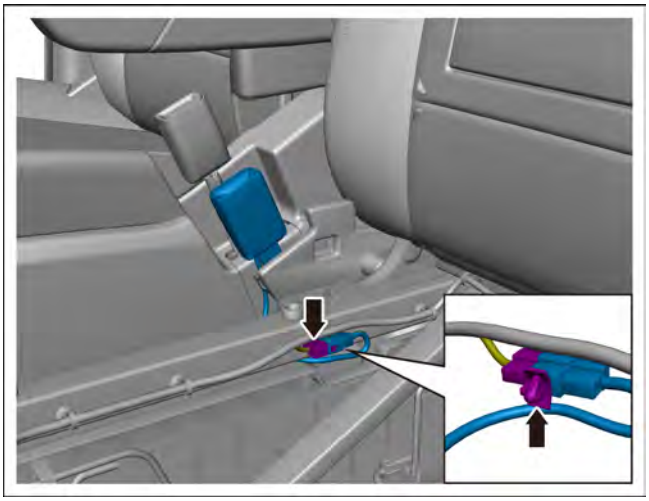
2 Seat-to-Backrest Inner Cover - left front seat. refer to:Seat-to-Backrest Inner Cover - Left Front Seat, Repair Procedure



3 pull movement cable, release Left Front Two-person Seat Cushion Assembly buckle.



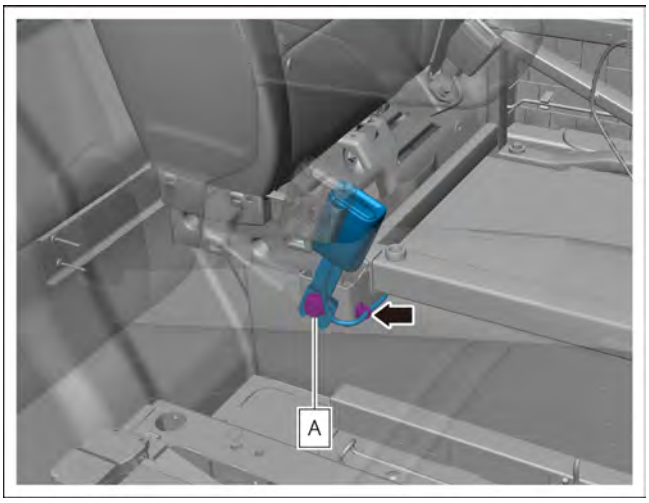
4 lift/open Left Front Two-person Seat Cushion Assembly.



5 Disconnect inside seat belt buckle assembly wiring harness connector.

a. Release inside seat belt buckle assembly retaining clip.

b. Disconnect inside seat belt buckle assembly wiring harness connector.



6 Remove inside seat belt buckle assembly.

a. Release inside seat belt buckle assembly retaining clip.

b. Remove retaining bolt A, remove inside seat belt buckle assembly.
Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

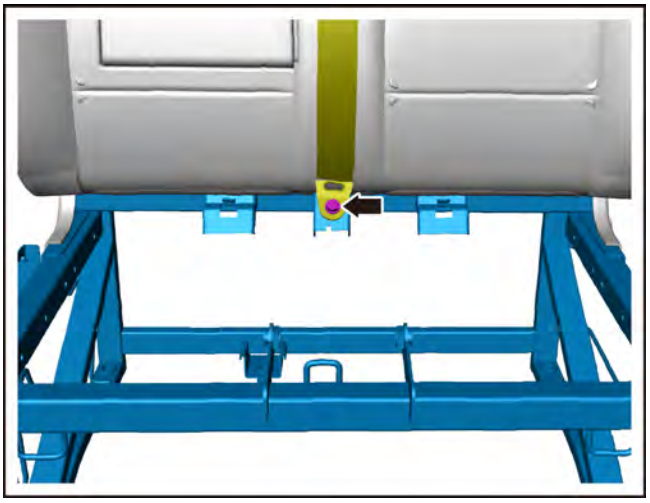
Two-Person Seat Cushion Frame Welded Assembly, Repair Procedure

Removal Steps

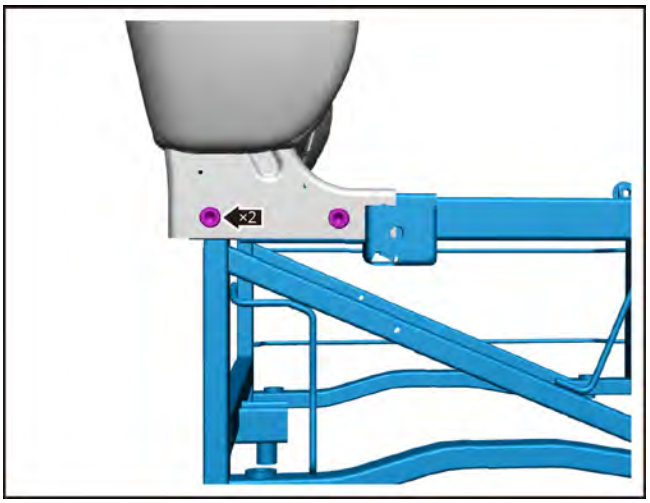
1. Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure
2. Remove front trim panel. Refer to:Front Trim Panel, Repair Procedure
3. Remove outside large trim panel - left front seat. Refer to:Outside Large Trim Panel - Left Front Seat, Repair Procedure
4. Remove inside large trim panel - left front seat. Refer to:Inside Large Trim Panel - Left Front Seat, Repair Procedure
5. Remove left front Two-person Seat assembly. Refer to:Left Front Two-Person Seat Assembly, Repair Procedure
6. Remove Two-person Seat Cushion Wiring Harness. Refer to:Two-Person Seat Cushion Wiring Harness, Repair Procedure
7. Remove Seat-to-Backrest Outer Cover - left front seat. Refer to:Seat-to-Backrest Outer Cover - Left Front Seat, Repair Procedure
8. Remove Seat-to-Backrest Outer Cover Bracket - left front seat. Refer to:Seat-to-Backrest Outer Cover Bracket - Left Front Seat, Repair Procedure
9. Remove Seat-to-Backrest Inner Cover - left front seat. Refer to:Seat-to-Backrest Inner Cover - Left Front Seat, Repair Procedure
10. Remove Seat-to-Backrest Inner Cover Bracket - left front seat. Refer to:Seat-to-Backrest Inner Cover Bracket - Left Front Seat, Repair Procedure
11. Remove center seat belt buckle assembly. Refer to:Center Seat Belt Buckle Assembly, Repair Procedure

12 Remove inside seat belt buckle assembly. Refer to:Inside Seat Belt Buckle Assembly, Repair Procedure

13 Remove Left Front Two-person Seat Cushion Assembly. Refer to:Left Front Two-Person Seat Cushion Assembly, Repair Procedure

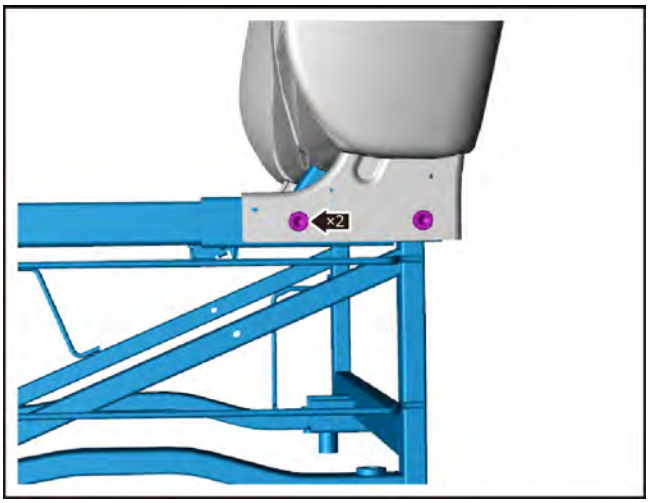


14 Remove retaining bolt, release dual person seat belt.



15 Remove left front Two-person Seat backrest assembly right 2 retaining bolt.

Torque:xxx±xxN·m



16 Remove 2 retaining bolt, remove Two-person Seat Cushion Frame Welded Assembly.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Left Front Two-Person Seat Cushion Assembly, Repair Procedure

Removal Steps

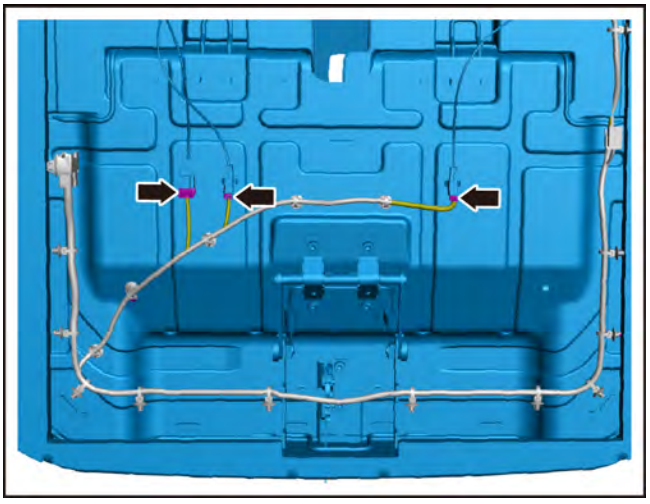
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



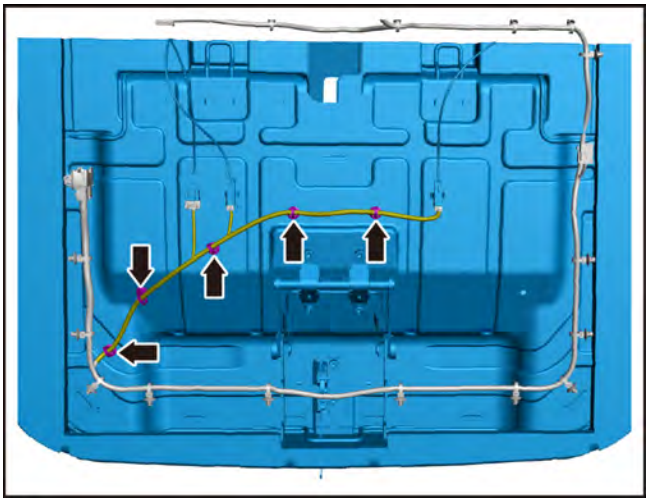
2 pull movement cable, release Left Front Two-person Seat Cushion Assembly buckle.



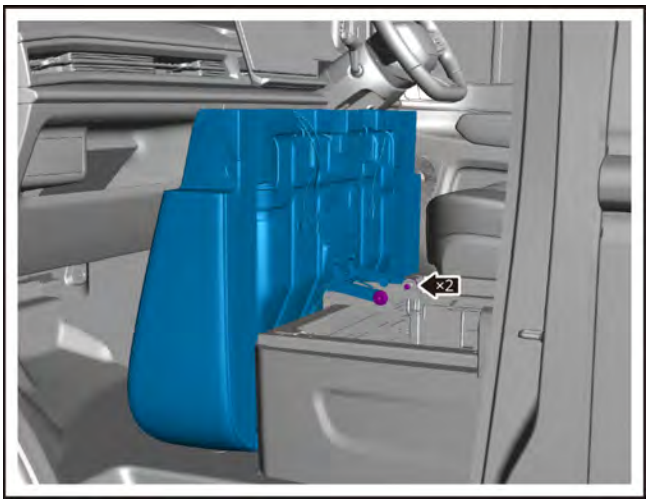
3 lift/open Left Front Two-person Seat Cushion Assembly.



4 Disconnect 3 right front Two-person Seat seat cushion assembly wiring harness wiring harness connectors.



5 Release 5 Two-person Seat Cushion Wiring Harness retaining clips.



6 Remove 2 retaining bolt, remove right front Two-person Seat seat cushion assembly.

Installation Steps

1 Install in the reverse order of removal.

headlining

Repair Procedure

Front Top Position Object Box Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure

3 Remove left, right sun visor assembly. Refer to:Sun Visor Assembly, Repair Procedure

4 Remove mounting base B- left, right. Refer to:Mounting Base B- Left, Repair Procedure



5 Remove front top position object box assembly 4 Plug.



6 Remove 6 retaining bolt, remove front top position object box assembly.

Installation Steps

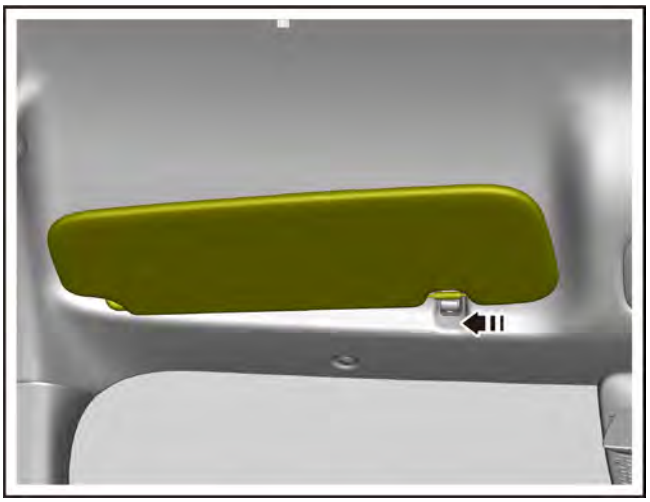
1 Install in the reverse order of removal.

Mounting Base B- Left, Repair Procedure

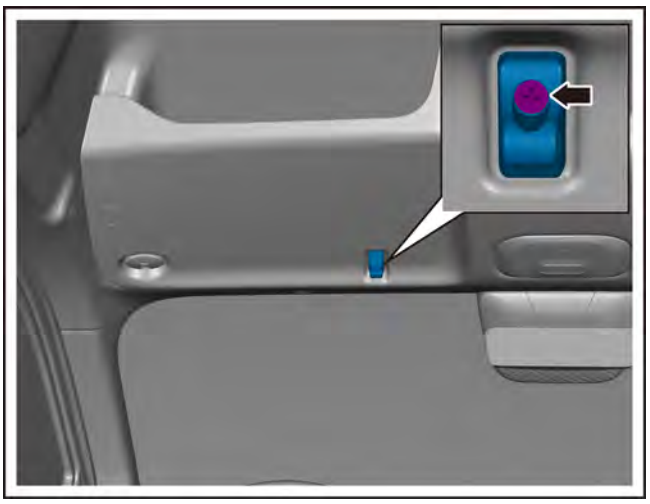
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 offset open left sun visor assembly.
   a. open sun visor.
   b. release sun visor card clamp.



2 Remove retaining screw, remove mounting base B- left.

install procedure

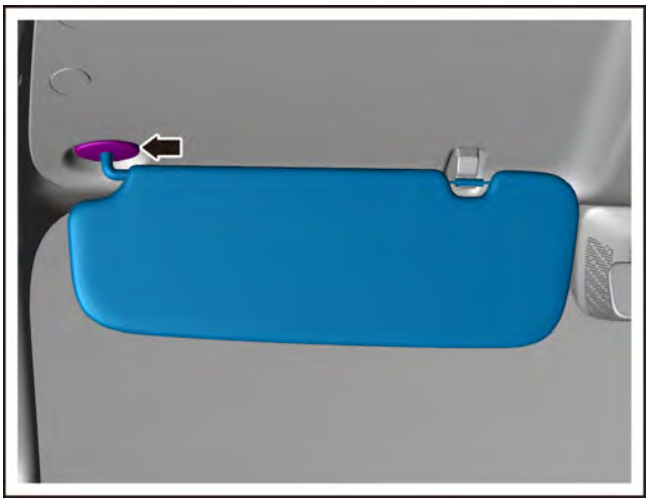
1 Install in the reverse order of removal.

Sun Visor Assembly, Repair Procedure

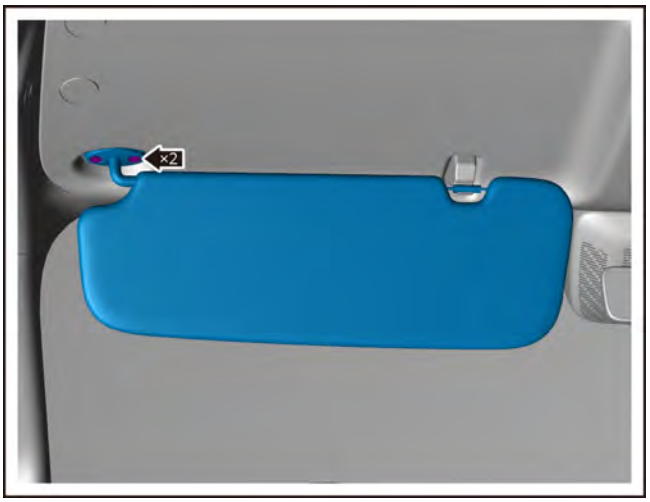
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove left trim cover panel.



2 remove sun visor assembly.
   a. release sun visor card clamp.
   b. Remove 2 retaining screw, remove sun visor assembly.

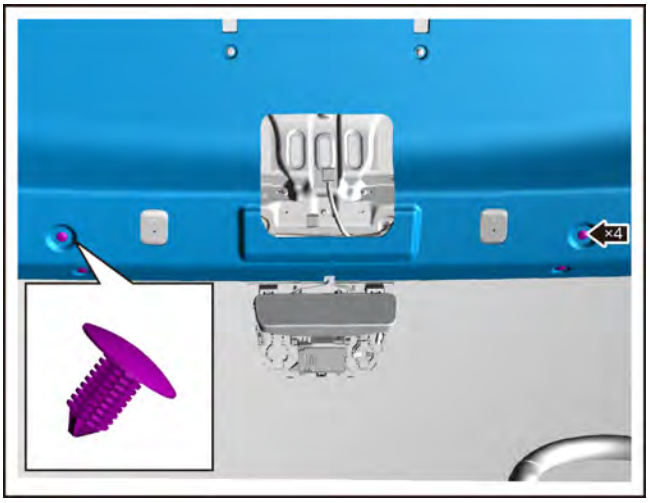
Installation Steps

Install in the reverse order of removal.

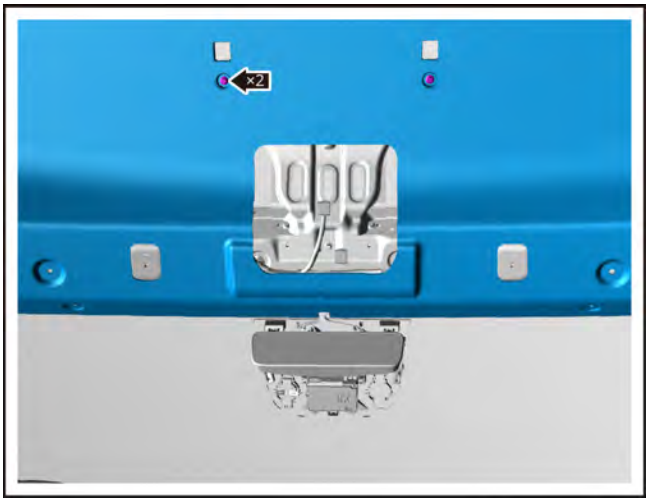
Headlining Assembly, Repair Procedure

Removal Steps

1. Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure
2. Remove left, right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation
3. Remove left, right sun visor assembly. Refer to:Sun Visor Assembly, Repair Procedure
4. Remove mounting base B. Refer to:Mounting Base B- Left, Repair Procedure
5. Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure
6. Remove front top position object box assembly. Refer to:Front Top Position Object Box Assembly, Repair Procedure
7. Remove top Armrest assembly. Refer to:Top Armrest Assembly, Repair Procedure
8. Remove microphone (including surface cover). Refer to:Microphone (Including Surface Cover), Repair Procedure
9. Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure
10. Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure



11 Remove headlining assembly 4 retaining clip.



12 Remove 2 retaining clip, remove headlining assembly.

install procedure

1 Install in the reverse order of removal.

Headlining Mounting Bracket (Left), Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left, right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation

3 Remove left, right sun visor assembly. Refer to:Sun Visor Assembly, Repair Procedure

4 Remove mounting base B. Refer to:Mounting Base B- Left, Repair Procedure

5 Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure

6 Remove front top position object box assembly. Refer to:Front Top Position Object Box Assembly, Repair Procedure

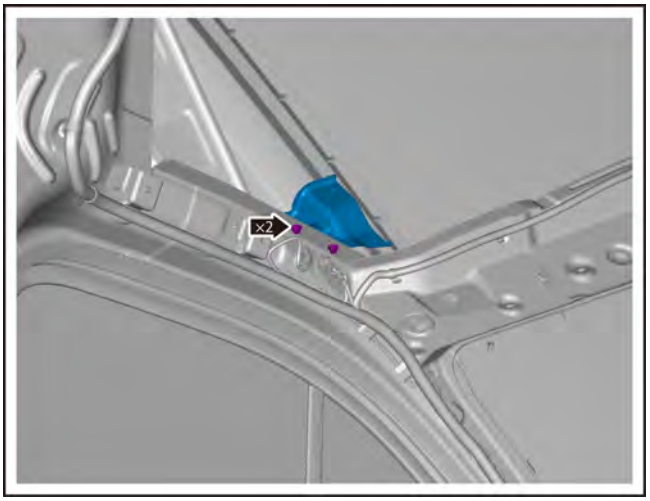
7 Remove top Armrest assembly. Refer to:Top Armrest Assembly, Repair Procedure

8 Remove microphone (including surface cover). Refer to:Microphone (Including Surface Cover), Repair Procedure

9 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

10 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure

11 Remove headlining assembly. Refer to:Headlining Assembly, Repair Procedure



12 Remove 2 retaining bolt, remove headlining mounting bracket (left).

install procedure

1 Install in the reverse order of removal.

Position Object Box Mounting Bracket (Center), Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left, right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation

3 Remove left, right sun visor assembly. Refer to:Sun Visor Assembly, Repair Procedure

4 Remove mounting base B. Refer to:Mounting Base B- Left, Repair Procedure

5 Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure

6 Remove front top position object box assembly. Refer to:Front Top Position Object Box Assembly, Repair Procedure

7 Remove top Armrest assembly. Refer to:Top Armrest Assembly, Repair Procedure

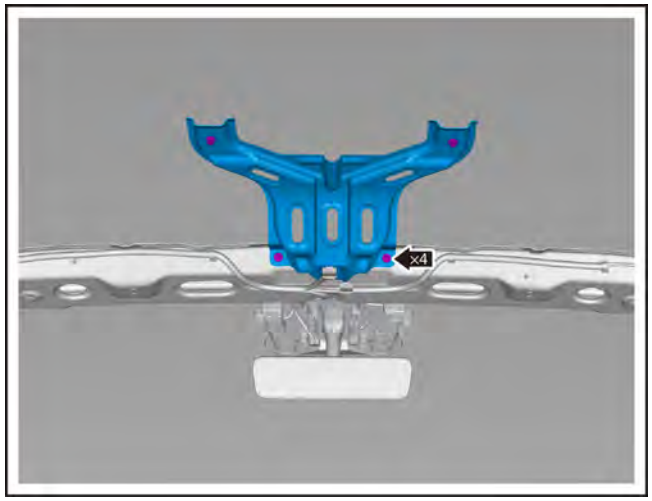
8 Remove microphone (including surface cover). Refer to:Microphone (Including Surface Cover), Repair Procedure

9 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

10 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure

11 Remove headlining assembly. Refer to:Headlining Assembly, Repair Procedure

12



13 Remove 4 retaining bolt, remove position object box mounting bracket (center).

install procedure

1 Install in the reverse order of removal.

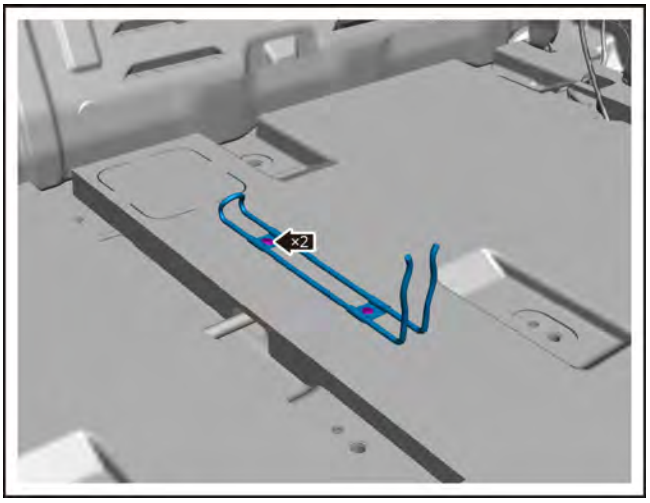
carpet

Repair Procedure

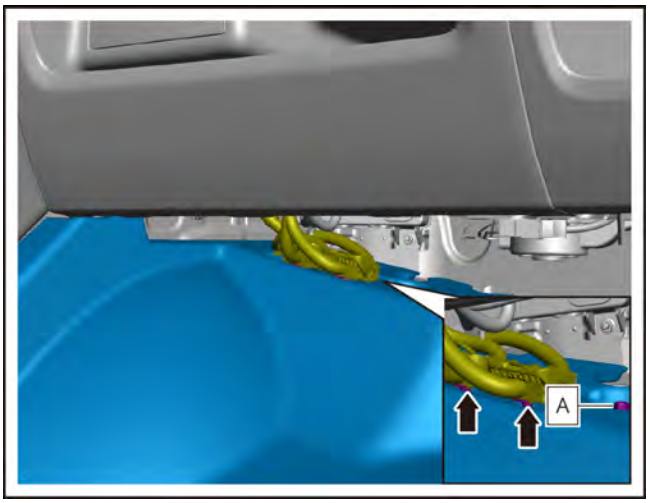
Driving Compartment Carpet, Repair Procedure

Removal Steps

1. Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure
2. Remove left, Right Luggage Compartment Lamp. Refer to:Luggage Compartment Lamp, Repair Procedure
3. Remove left, right front scuff plate assembly. Refer to:Left Front Scuff Plate Assembly, Repair Procedure
4. Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure
5. Remove right front seat bracket assembly. Refer to:Right Front Seat Bracket Assembly, Repair Procedure
6. Remove left front Two-person Seat assembly. Refer to:Left Front Two-Person Seat Assembly, Repair Procedure
7. Remove HVAC flap assembly left, right. Refer to:HVAC Flap Assembly Left, Repair Procedure
8. Remove instrument panel lower trim panel assembly. Refer to:Instrument Panel Lower Trim Panel Assembly, Repair Procedure
9. Remove steering protection dust cover assembly. Refer to:Steering Protection Dust Cover Assembly, Repair Procedure
10. Remove electronic oil door pedal assembly. Refer to:Electronic Oil Door Pedal Assembly, Repair Procedure



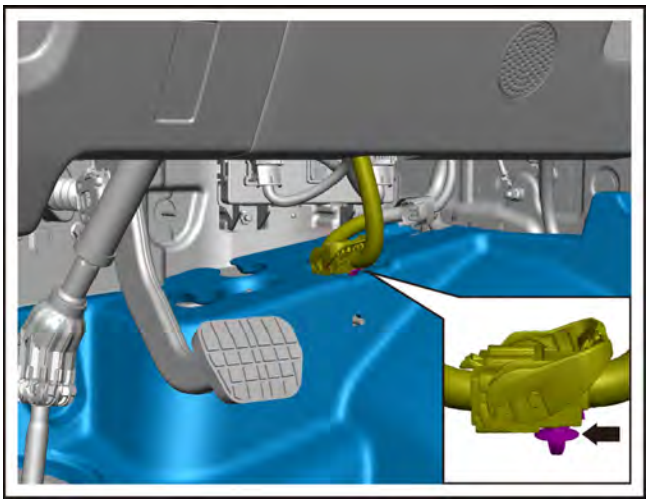
11 Remove 2 retaining screw, remove Fire Extinguisher Mounting Bracket.



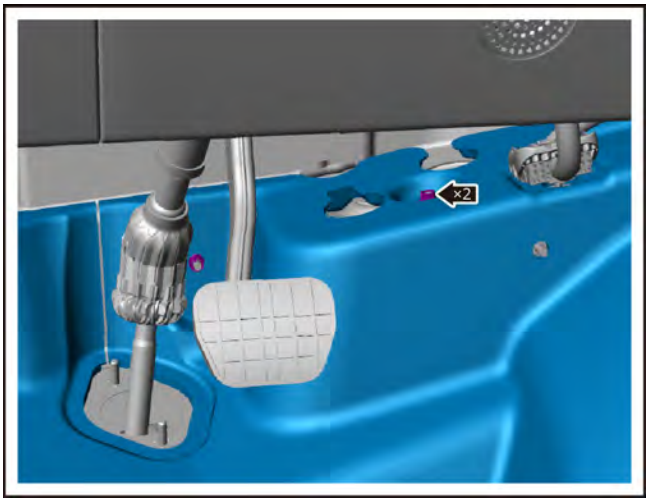
12 Remove driving compartment carpet fastener.

a. Release 2 instrument panel Wiring Harness Assembly retaining clips.

b. Remove driving compartment carpet plastic nut A.



13 Release instrument panel Wiring Harness Assembly retaining clip.



14 Remove 2 plastic nut, remove driving compartment carpet.

install procedure

1

pillar trim panel

Repair Procedure

Left Front Scuff Plate Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure

3 Remove luggage compartment lamp. Refer to:Luggage Compartment Lamp, Repair Procedure



4 release retaining clip, remove left front scuff plate assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

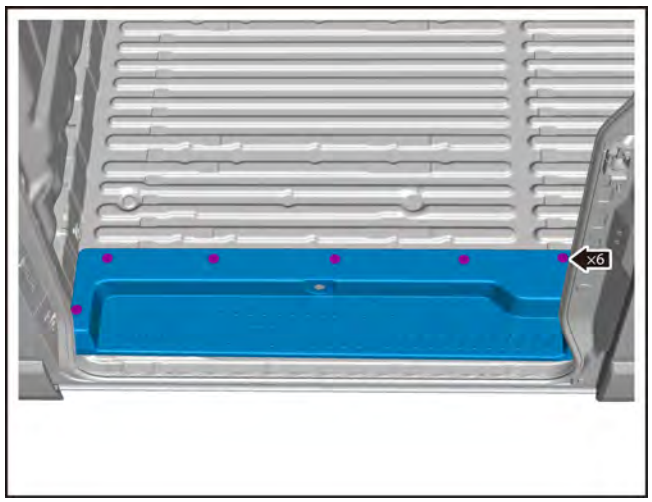
Left Sliding Door Scuff Plate Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

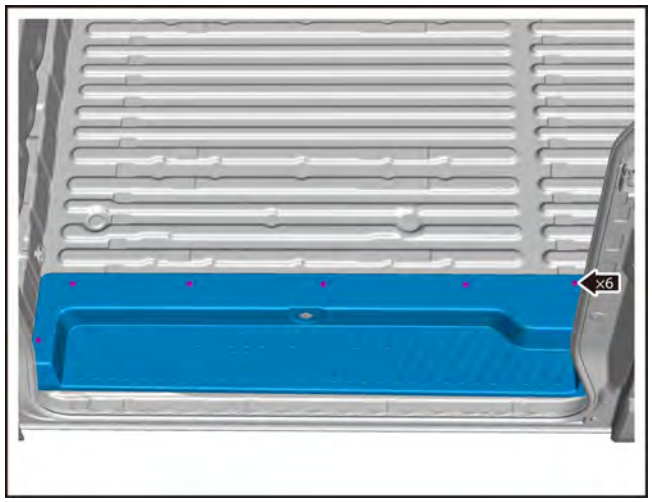
1 Remove anchor point (pedal at). Refer to:Anchor Point (Pedal at), Repair Procedure



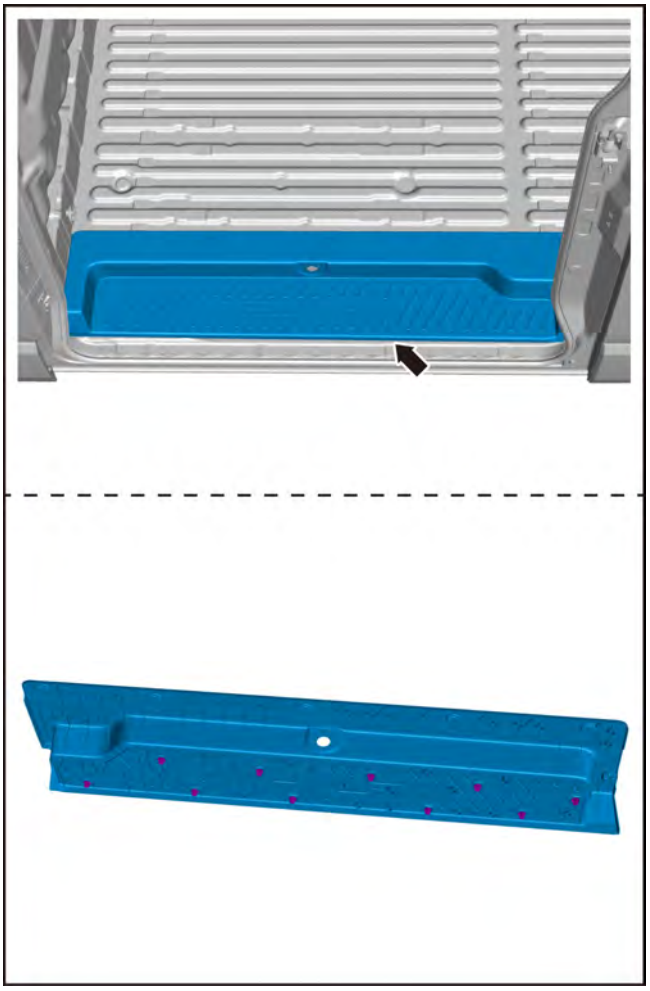
2 UsePlastic Pry ToolRemove 6 install trim cover.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



3 Remove left Sliding Door item step rocker panel assembly 6 retaining screw.



4 release retaining clip, remove left Sliding Door item step rocker panel assembly.

Installation Steps

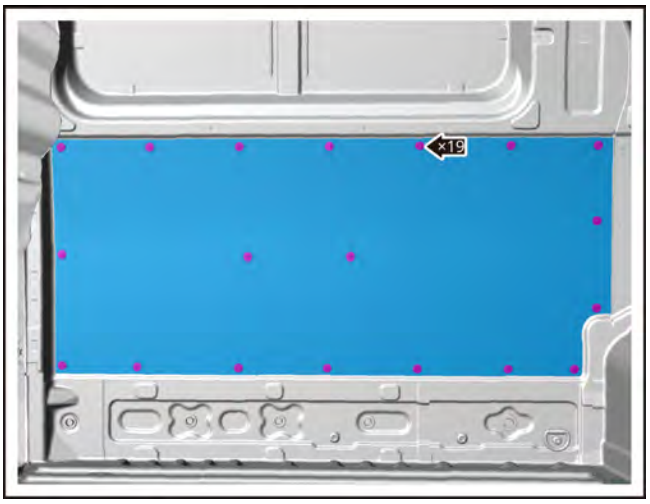
1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Right Front Body Side Shield Assembly - Single Sliding Door, Repair Procedure

Removal Steps



1 Remove 19 retaining clip, remove right front body side Shield Assembly - single Sliding Door.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left B Pillar Lower Shield Assembly, Repair Procedure

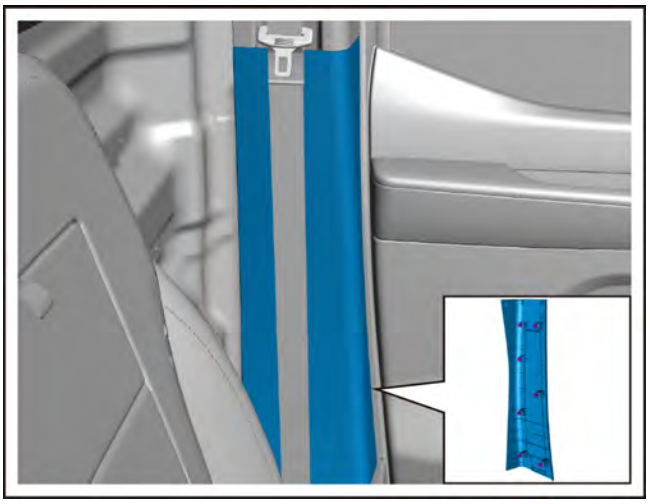
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release left front door door opening weatherstrip.



2 UsePlastic Pry ToolRemove left B pillar lower Shield Assembly.

Caution

Remove when note protection around side trim panel, prevent wipe injury.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

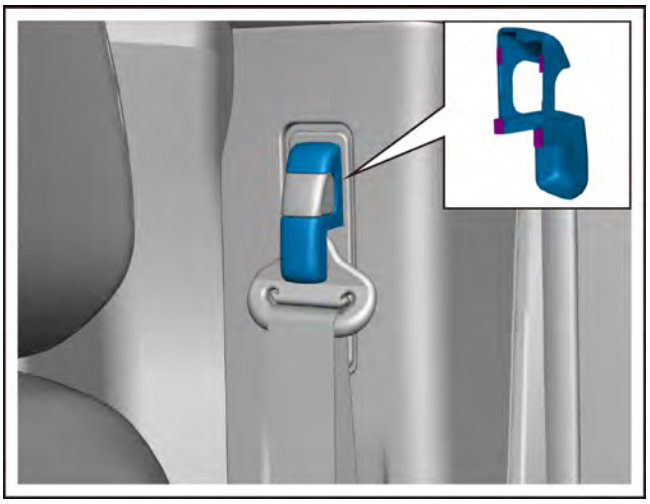
Left B-Pillar Upper Trim Panel Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

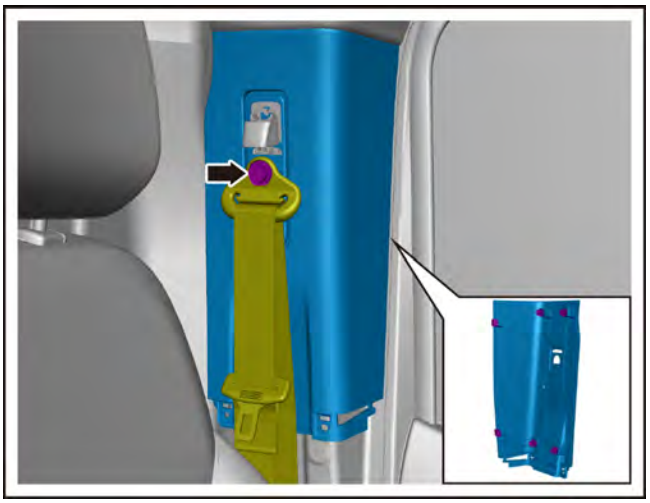
1 Remove left B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure



2 UsePlastic Pry ToolRemove seat belt height adjustment unit assembly trim cover.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



3 Remove Left B-pillar Upper Trim Panel Assembly.

a. Remove driver seat belt assembly retaining bolt.

b. UsePlastic Pry ToolRemove Left B-pillar Upper Trim Panel Assembly.

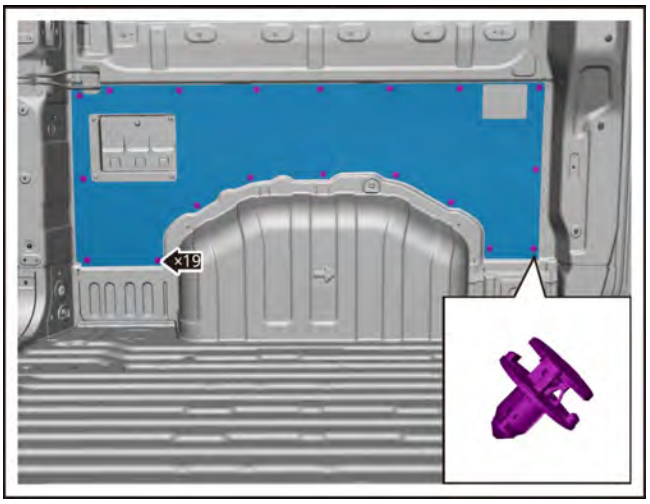
Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Rear Body Side Shield Assembly, Repair Procedure

Removal Steps



1 Remove 19 retaining clip, remove left rear body side Shield Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Rear Body Side Ventilation Frame Assembly, Repair Procedure

Removal Steps

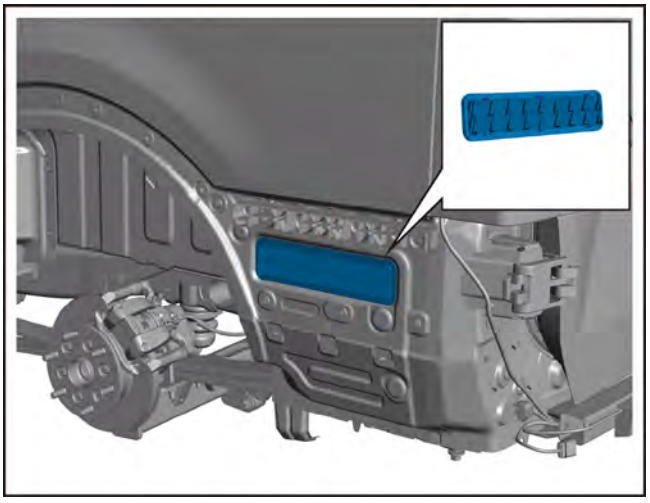
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Rear Body Side Exterior Trim Panel Assembly. Refer to:Left Rear Body Side Exterior Trim Panel Assembly, Repair Procedure

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

4 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

5 Remove rear bumper left upper body assembly. Refer to:Rear Bumper Left Upper Body Assembly, Repair Procedure



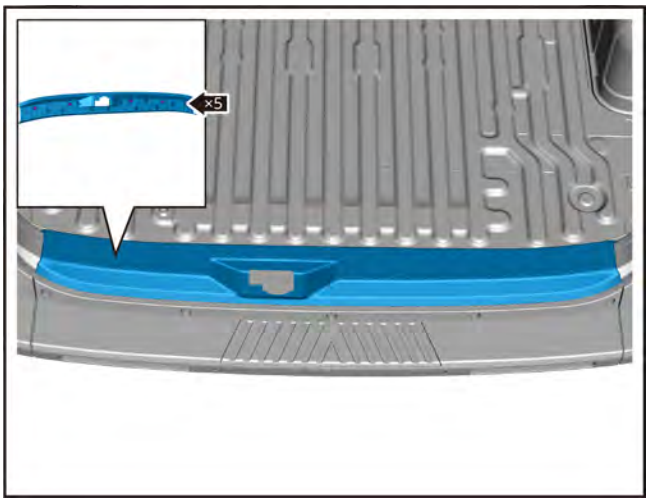
6 release retaining clip, remove rear body side Ventilation frame assembly.

Installation Steps

1 Install in the reverse order of removal.

Rear Scuff Plate Assembly, Repair Procedure

Removal Steps



1 release 5 retaining clip, remove Rear Scuff Plate Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Right A Pillar Upper Shield Assembly, Repair Procedure

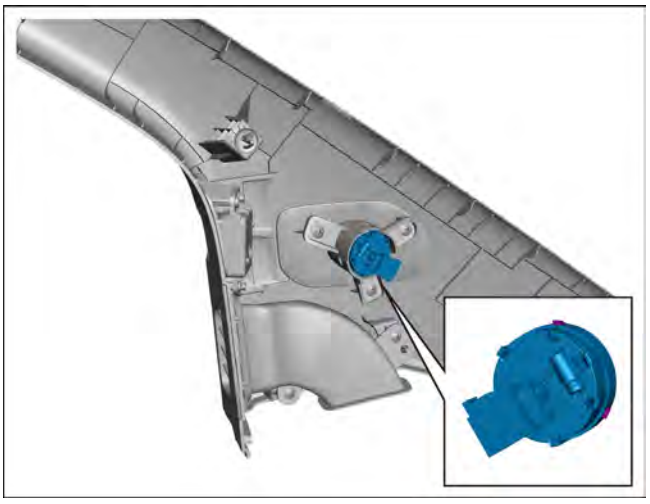
Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

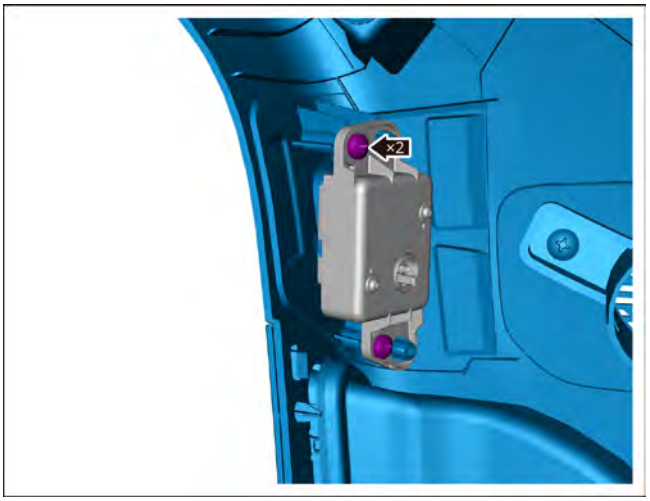
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation



3 release retaining clip, remove tweeter assembly.



4 Remove 2 retaining screw, remove left A-pillar upper Shield Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage.

Replace any damaged clips with new ones as necessary.

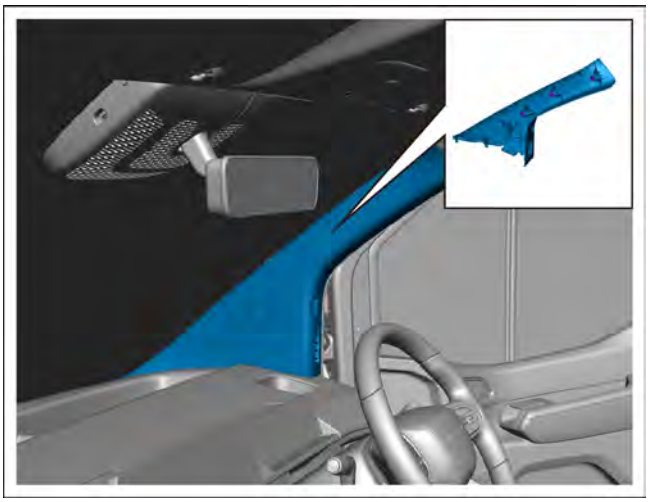
Right A Pillar Upper Shield Assembly, Removal and Installation

Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps

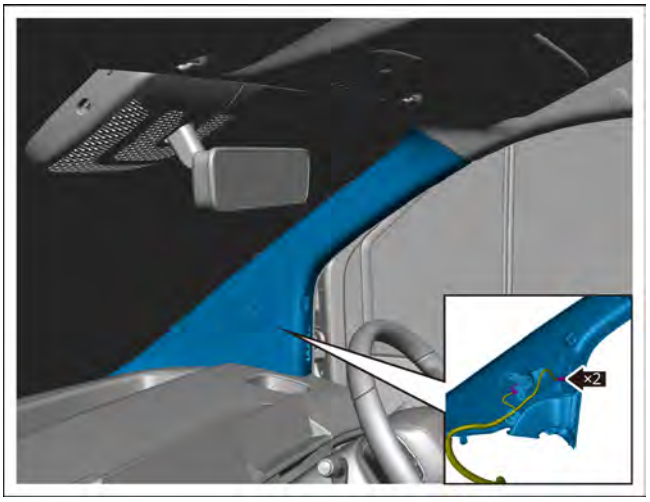
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 UsePlastic Pry ToolRemove right A pillar upper Shield Assembly retaining clip.

Caution

Remove when note protection around side trim panel, prevent wipe injury.



3 disconnect 2 wiring harness connector, remove right A pillar upper Shield Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

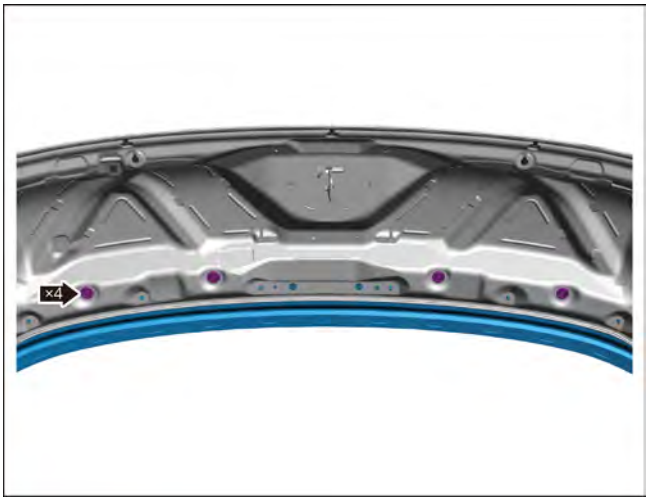
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Body Side Exterior Trim

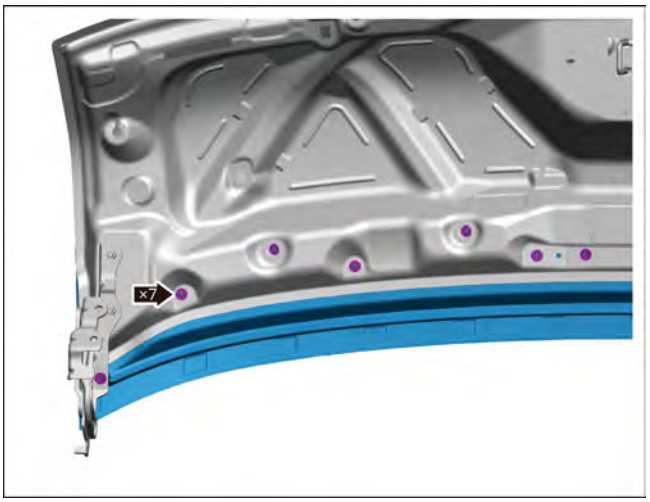
Repair Procedure

Front Full-Width Lamp Trim Panel, Repair Procedure

Removal Steps



1 Remove 4 Plug.



2 Remove Front Full-width Lamp trim panel right 7 retaining nut.



3 Remove left 7 retaining nut, remove Front Full-width Lamp trim panel.

Installation Steps

1 Install in the reverse order of removal.

Left Front Wheel Arch Trim Front Segment, Repair Procedure

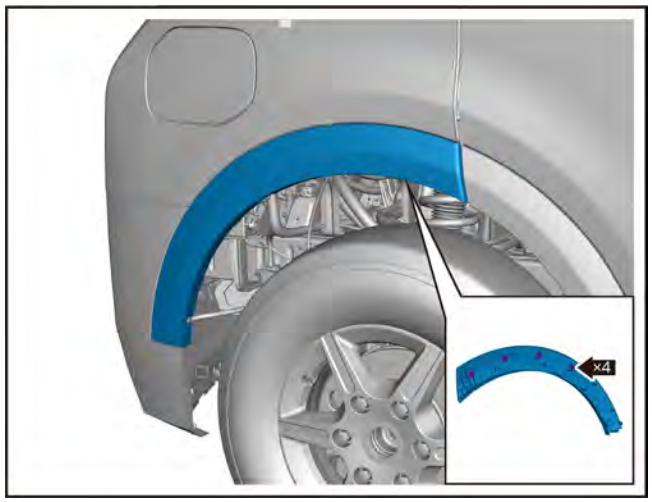
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove left front wheel arch trim front segment 3 retaining screw.



2 release 4 retaining clip, remove left front wheel arch trim front segment.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

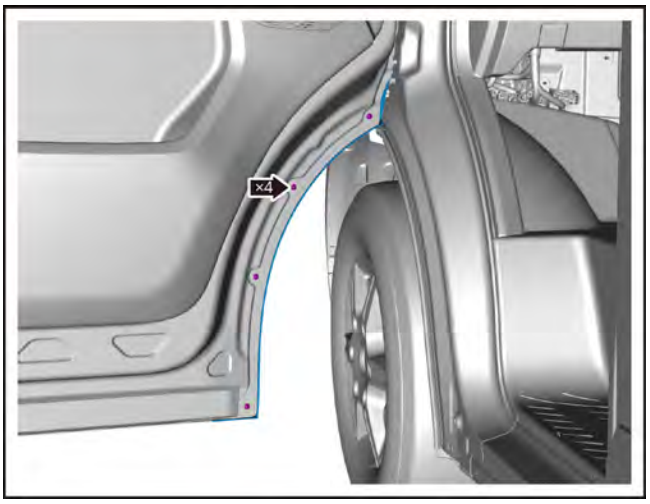
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left Front Wheel Arch Trim Rear Segment, Repair Procedure

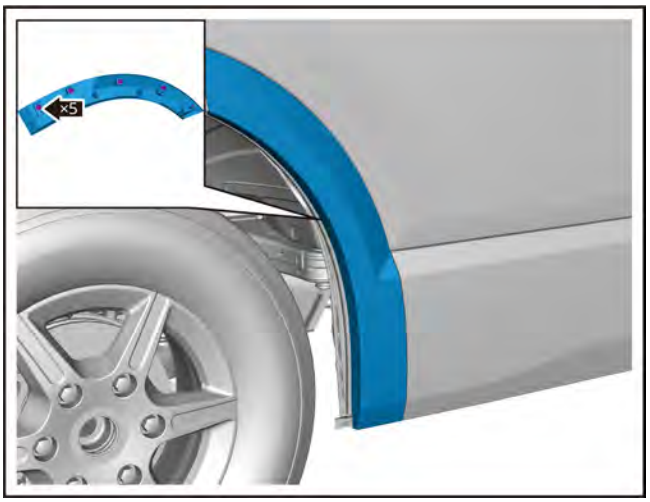
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove left front wheel arch trim rear segment 4 retaining screw.



2 release 5 retaining clip, remove left front wheel arch trim rear segment.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

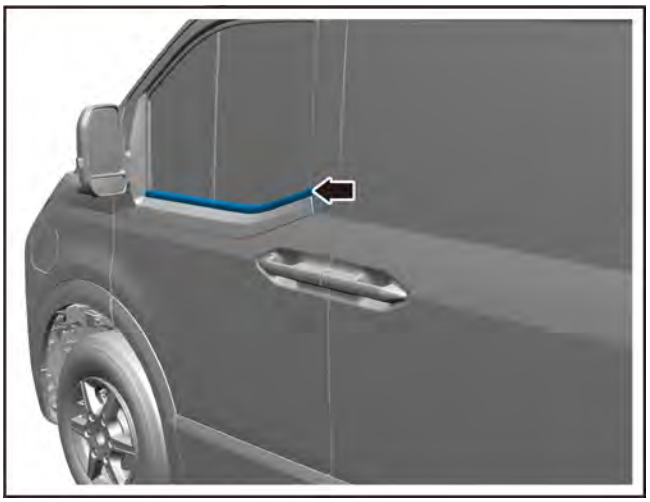
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left Front Door Window Lower Trim Panel, Repair Procedure

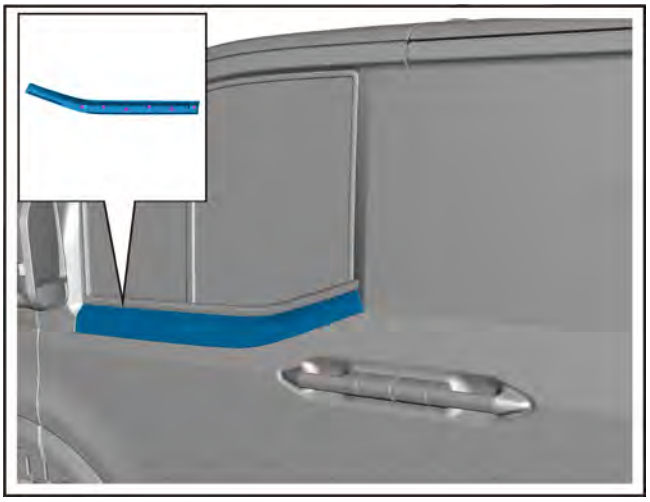
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove left front door outer belt weatherstrip.



2 release retaining clip, remove left front door window lower trim panel.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left Front Door Exterior Trim Panel Assembly, Repair Procedure

Tips

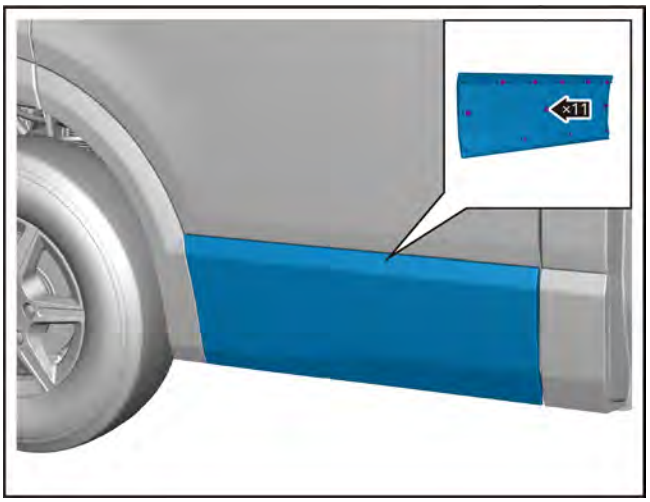
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove left front wheel arch trim rear segment. Refer to:Left Front Wheel Arch Trim Rear Segment, Repair Procedure



2 Remove left front door exterior trim panel assembly 2 retaining screw.



3 release 11 retaining clip, remove left front door exterior trim panel assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

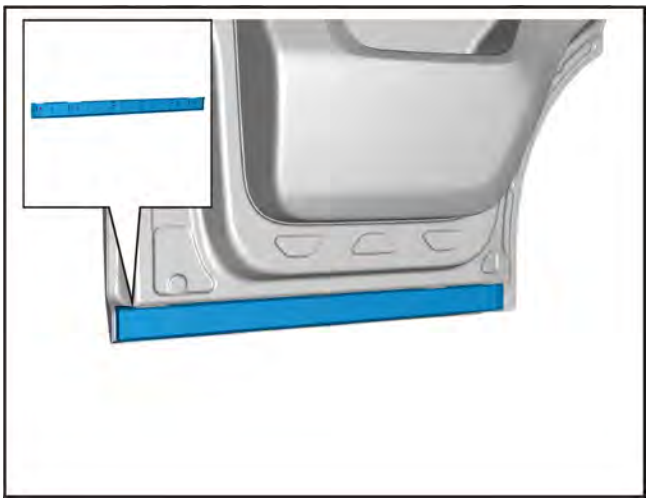
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left Front Door Inside Seal Trim Panel, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release retaining clip, remove left front door inside seal Trim Panel Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

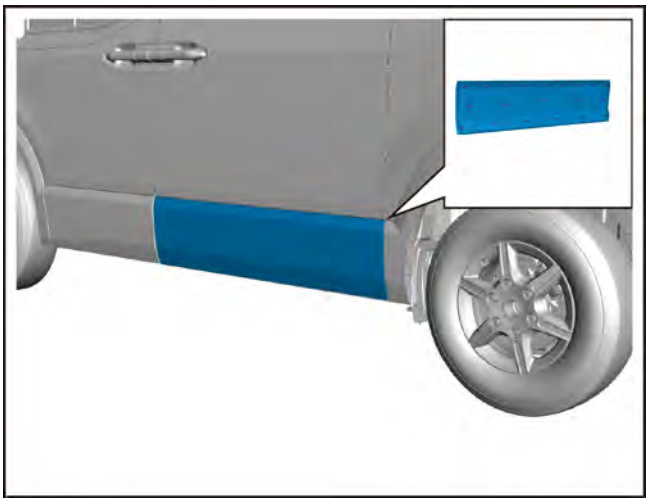
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left Center Body Side Exterior Trim Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release retaining clip, remove Left Center Body Side Exterior Trim Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

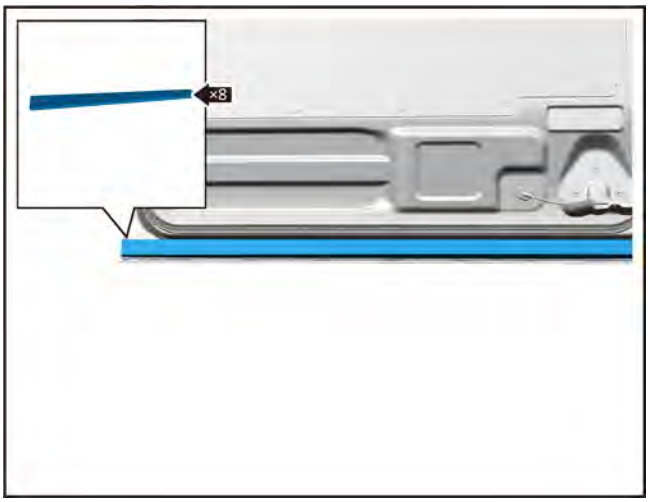
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left Sliding Door Inside Seal Trim Panel, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release 8 retaining clip, remove left Sliding Door inside seal Trim Panel Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

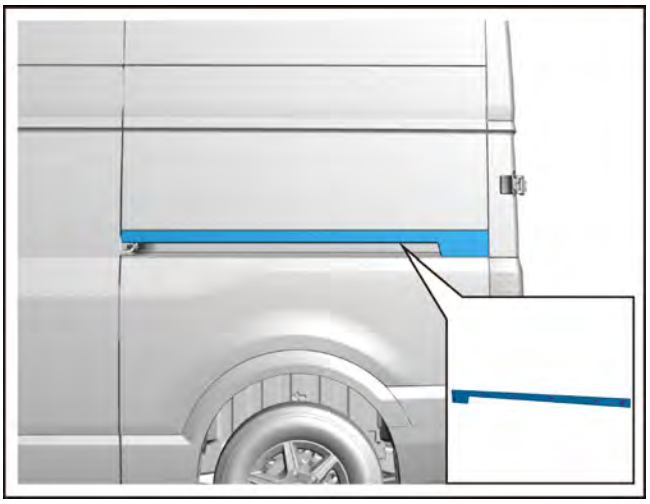
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Sliding Door Rail Channel Trim Panel, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release retaining clip, remove right Sliding Door rail channel trim panel.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

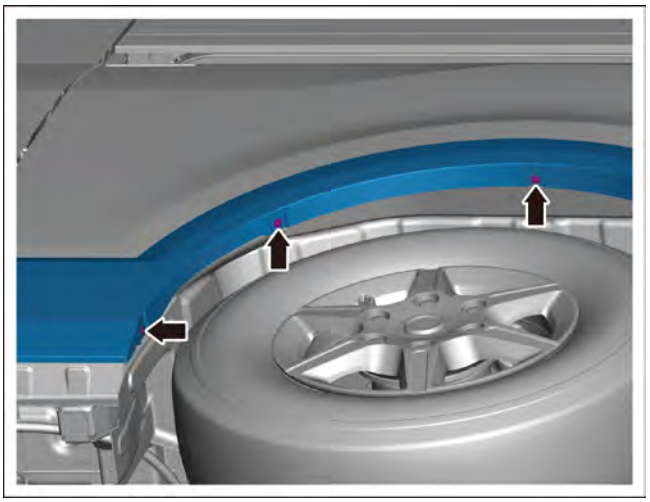
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left Rear Body Side Exterior Trim Panel Assembly, Repair Procedure

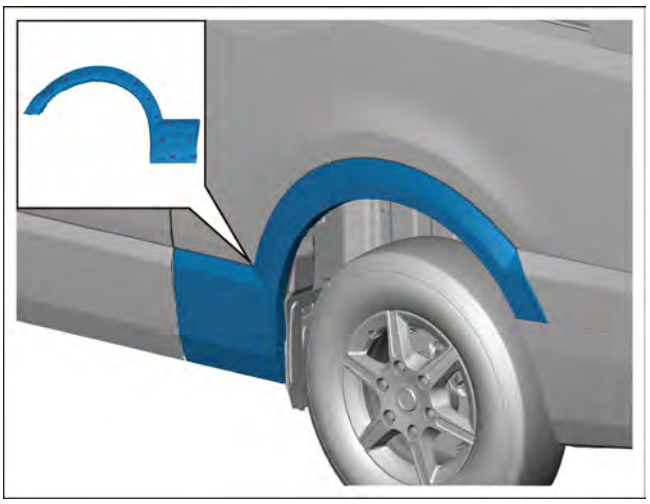
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove Left Rear Body Side Exterior Trim Panel Assembly 3 retaining screw.



2 Remove Left Rear Body Side Exterior Trim Panel Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

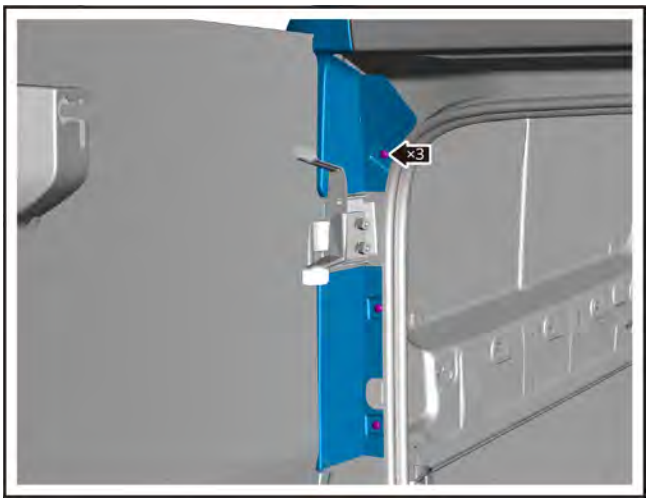
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left D Pillar Upper End Cap Panel, Repair Procedure

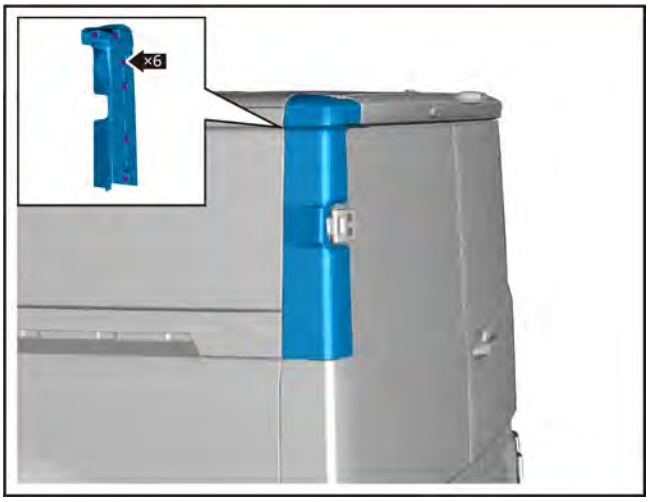
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove left D pillar upper end cap panel 3 retaining screw.



2 release 6 retaining clip, remove left D pillar upper end cap panel.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

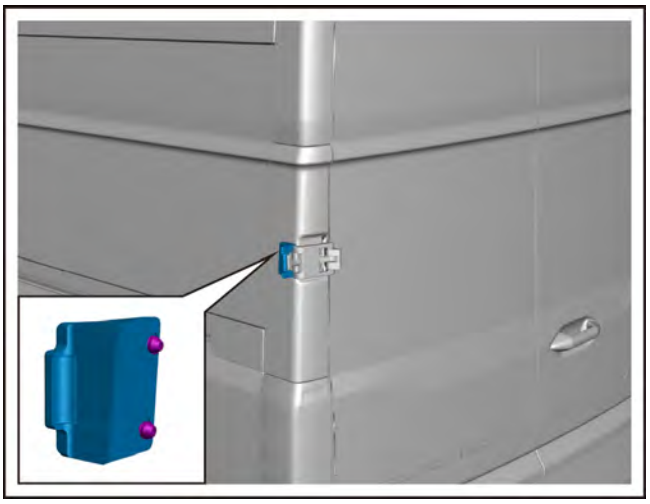
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left D Pillar Hinge Trim Panel, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release 2 retaining clip, remove left D pillar hinge trim panel.

Installation Steps

1 Install in the reverse order of removal.

Left License Plate Lamp Trim Cover Assembly, Removal and Installation

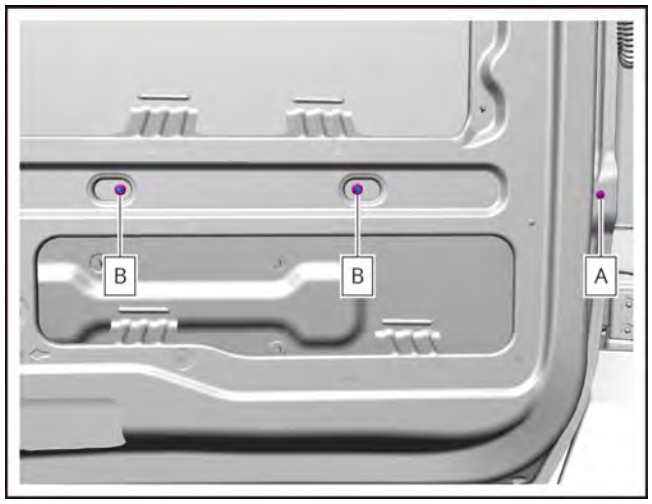
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove tailgate Shield Assembly left. Refer to:Tailgate Shield Assembly Left, Repair Procedure



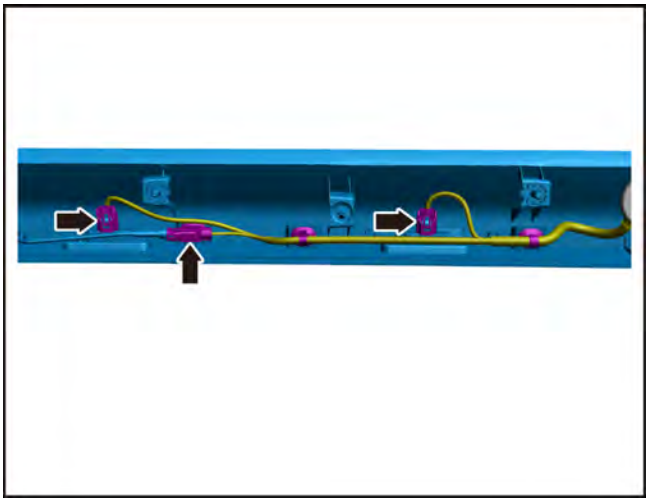
3 Remove Left License Plate Lamp Trim Cover Assembly.

a. Remove Left License Plate Lamp Trim Cover Assembly retaining screw A.

b. Remove Left License Plate Lamp Trim Cover Assembly 2 retaining nut B.



4 Remove Left License Plate Lamp Trim Cover Assembly 3 retaining clip.



5 disconnect wiring harness connector, remove Left License Plate Lamp Trim Cover Assembly.

Installation Steps

1 note below item, again according to and remove reverse order install.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

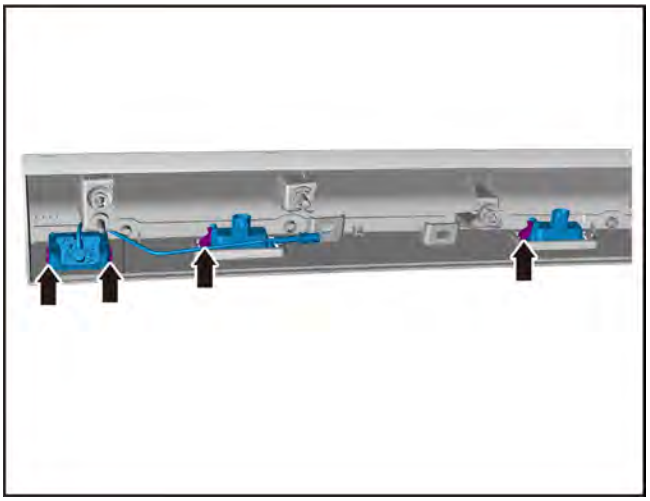
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Left License Plate Lamp Trim Cover Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left License Plate Lamp Trim Cover Assembly. Refer to:Left License Plate Lamp Trim Cover Assembly, Removal and Installation



3 Remove Left License Plate Lamp Trim Cover Assembly.

a. Release reverse Rear-view Camera retaining clip.

b. release retaining clip, remove Left License Plate Lamp Trim Cover Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

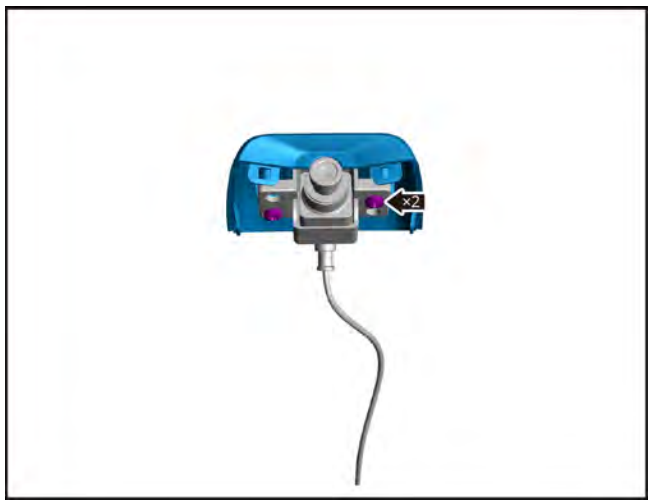
3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Rear Streaming Media Trim Panel Cover, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove rear streaming media trim panel cover with accessory.



2 Remove streaming media camera 2 retaining screw, remove rear streaming media trim panel cover.

Installation Steps

1 Install in the reverse order of removal.

Rear Streaming Media Trim Panel Seat, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove rear streaming media trim panel cover. Refer to:Rear Streaming Media Trim Panel Cover, Repair Procedure

3 Remove streaming media camera. Refer to:Streaming Media Camera, Repair Procedure



4 Remove 2 retaining screw, remove rear streaming media trim panel seat.

Installation Steps

1 Install in the reverse order of removal.

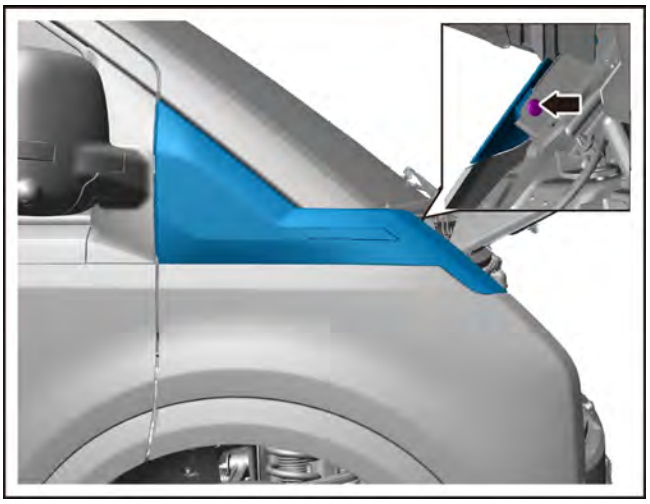
Right Marker Lamp Trim Panel Assembly, Removal and Installation

Tips

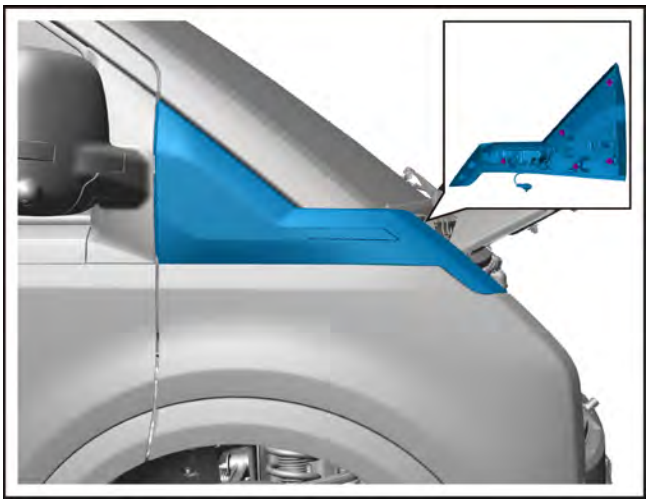
this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps

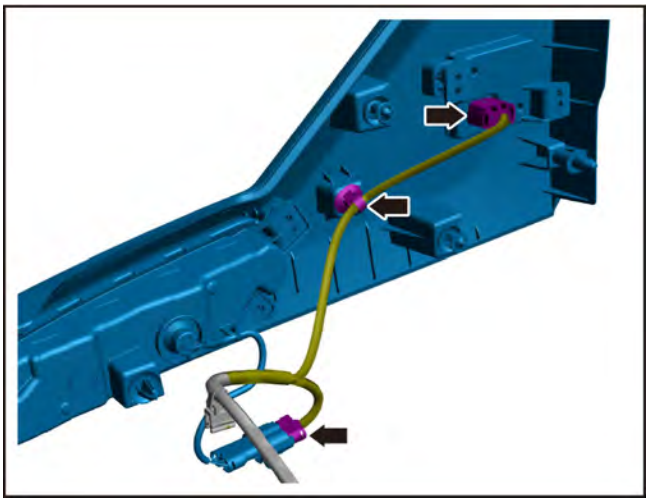
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



2 Remove right marker lamp Trim Panel Assembly retaining bolt.



3 Release right marker lamp Trim Panel Assembly retaining clip.



4 remove right marker lamp Trim Panel Assembly.

a. Disconnect 2 right mark lamp Trim Panel Assembly wiring harness connectors.

b. release retaining clip, remove right marker lamp Trim Panel Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

3 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Right Marker Lamp Trim Panel, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

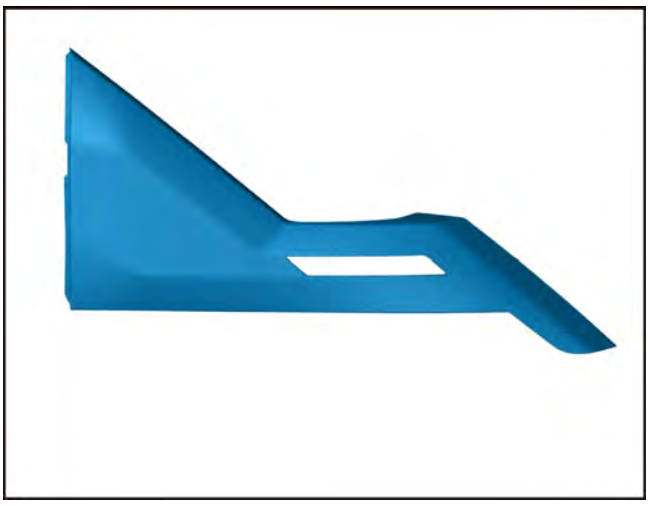
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation

3 Remove right marker lamp assembly. Refer to:Left Marker Lamp Assembly, Repair Procedure

4 Remove NFC enter start module. Refer to:NFC Enter Start Module, Repair Procedure



5 remove right marker lamp trim panel.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Clothing Cap Hook Assembly, Repair Procedure

Installation Steps



1 Remove retaining screw, remove clothing cap hook assembly.

Installation Steps

1 Install in the reverse order of removal.

door trim panel

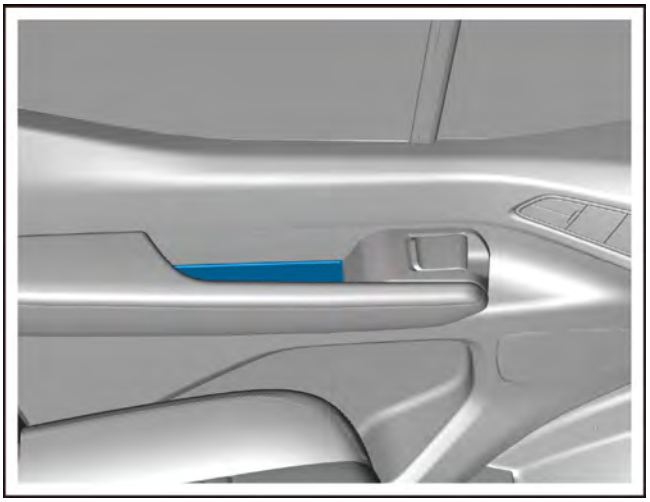
Repair Procedure

Front Door Pull Handle Pocket Adhesive Pad Left, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 remove front door Pull Handle Pocket adhesive pad left.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Trim Panel Assembly, Removal and Installation

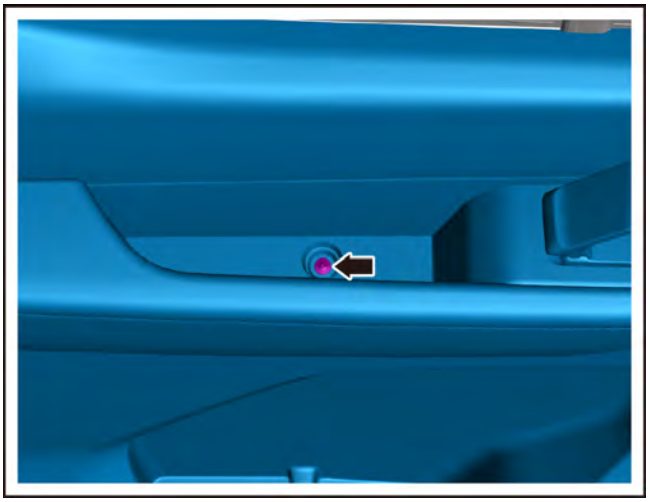
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

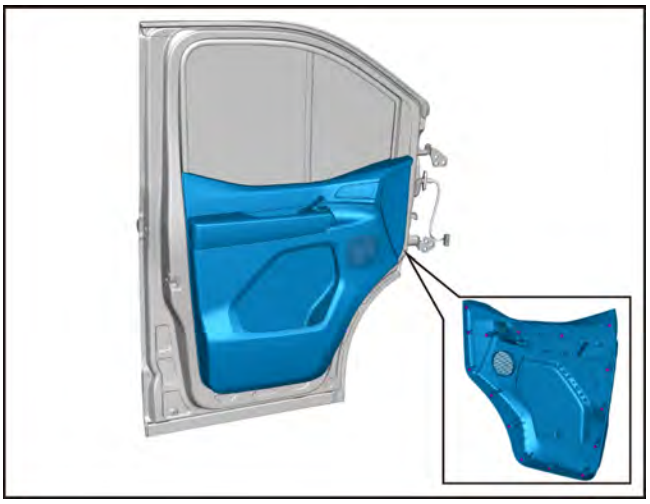
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

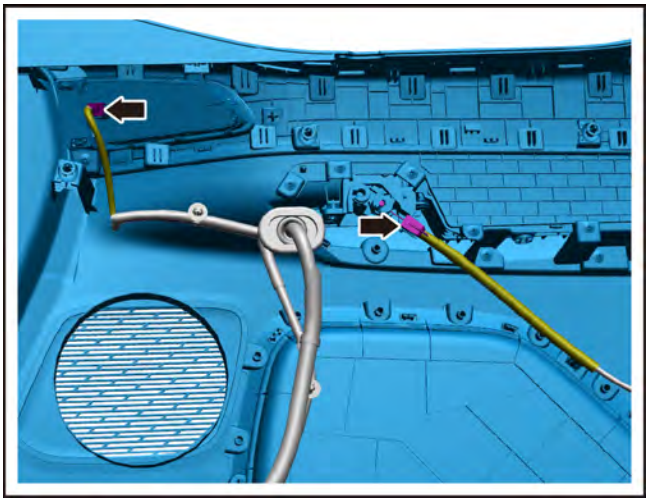
2 Remove front door Pull Handle Pocket adhesive pad left. Refer to:Front Door Pull Handle Pocket Adhesive Pad Left, Repair Procedure



3 Remove Left Front Door Trim Panel Assembly retaining screw.



4 Release Left Front Door Trim Panel Assembly retaining clip.



5 Remove the left front door Shield Assembly.
   a. release front door inner open cable.
   b. disconnect wiring harness connector, Remove the left front door Shield Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Front Door Trim Panel Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove Driver Power Window Switch. Refer to:Driver Power Window Switch, Repair Procedure

4 Remove left front door inner clip hand assembly. Refer to:Left Front Door Inner Clip Hand Assembly, Repair Procedure



5 Remove the left front door Shield Assembly.

Installation Steps

1 Install in the reverse order of removal.

Front Door Armrest Bracket - Left, Repair Procedure

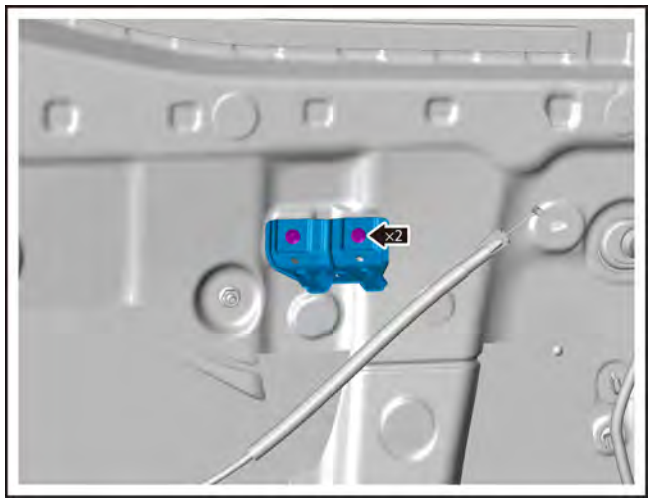
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation



3 Remove 2 retaining screw, remove front door Armrest bracket - left.

Installation Steps

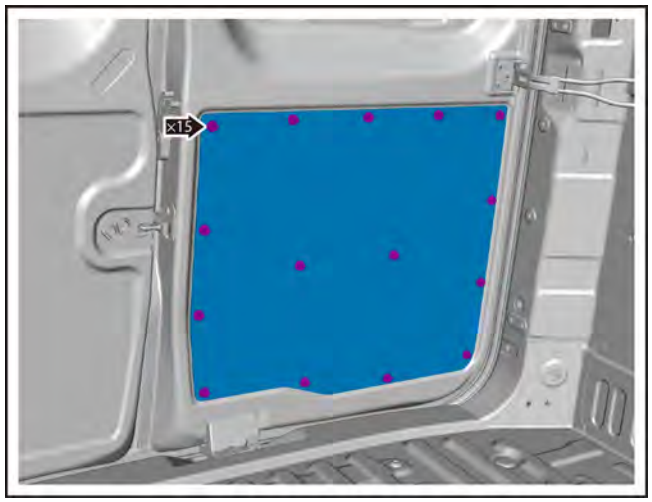
1 Install in the reverse order of removal.

Tailgate Shield Assembly Left, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 15 retaining clip, remove tailgate Shield Assembly left.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

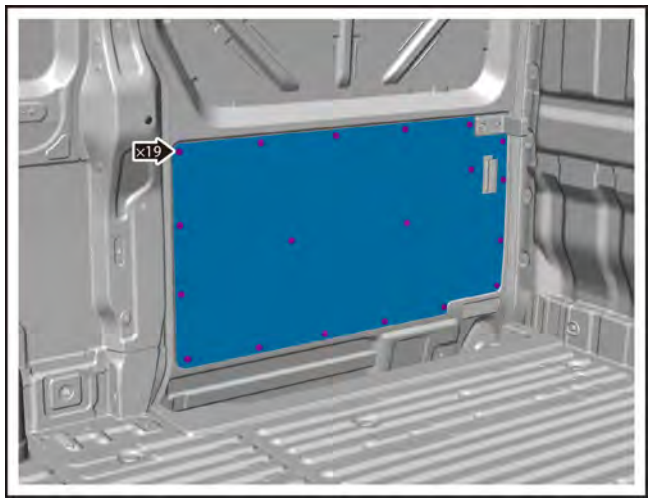
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Sliding Door Shield Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 19 retaining clip, remove left Sliding Door Shield Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

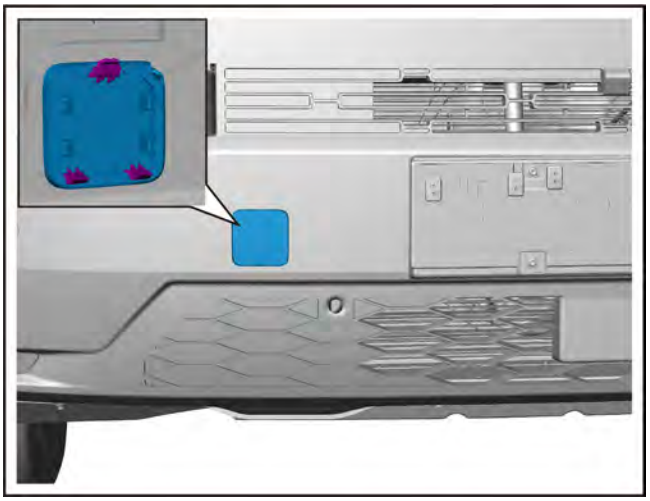
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

bumper

Repair Procedure

Tow Hook Plug, Repair Procedure

Removal Steps



1 release retaining clip, remove tow hook Plug.

Installation Steps

1 Install in the reverse order of removal.

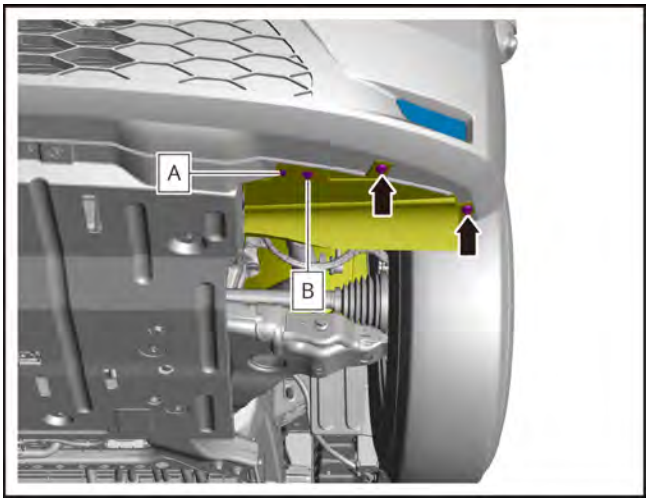
Left Fog Lamp Trim Panel, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 Remove left front wheel cover assembly fastener.

a. Remove Front Underbody Shield 2 retaining bolt A.

b. Remove left front wheel cover assembly retaining bolt B.

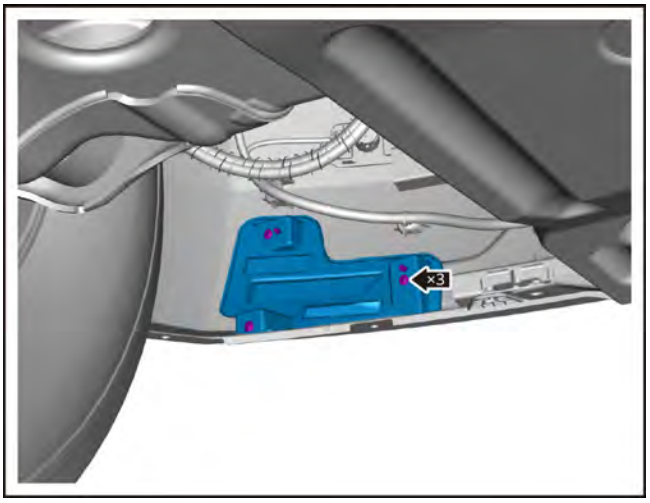
c. Remove left front wheel cover assembly 2 retaining clip.



3 offset open left front wheel cover assembly.

a. Remove left front wheel cover assembly 2 plastic nut A.

b. Remove 2 retaining clip, offset open left front wheel cover assembly.



4 Remove 3 retaining screw, remove left Fog Lamp trim panel.

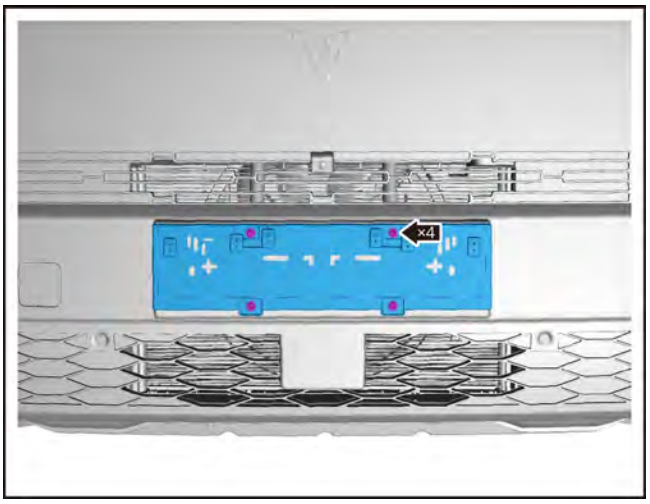
Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

License Plate Install Panel - Front, Repair Procedure

Removal Steps



1 Remove 4 retaining bolt, remove license plate install panel - front.

Installation Steps

1 Install in the reverse order of removal.

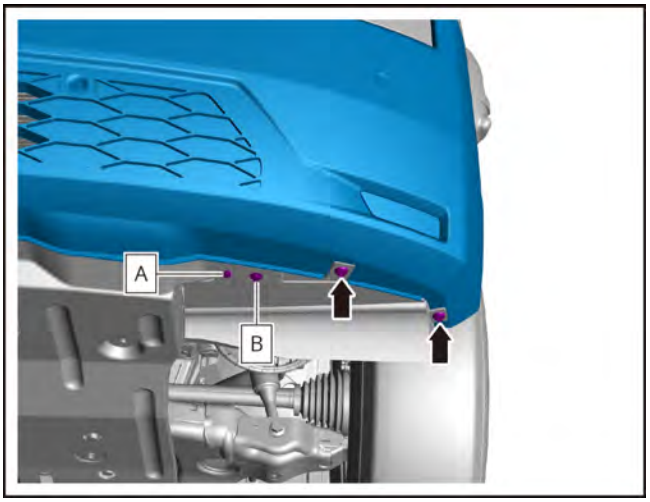
Front Bumper Assembly, Removal and Installation

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove left, right front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure



4 Remove left front wheel cover assembly fastener.

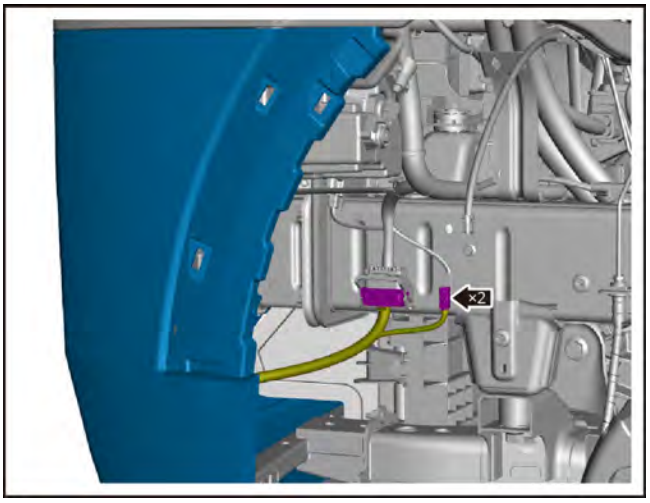
a. Remove Front Underbody Shield retaining bolt A.

b. Remove left front wheel cover assembly retaining bolt B.

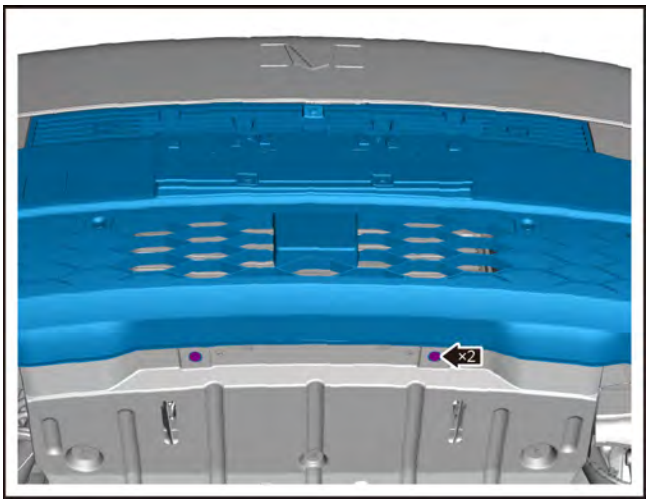
c. Remove left front wheel cover assembly 2 retaining clip.



5 Remove Front Bumper Assembly left retaining screw.



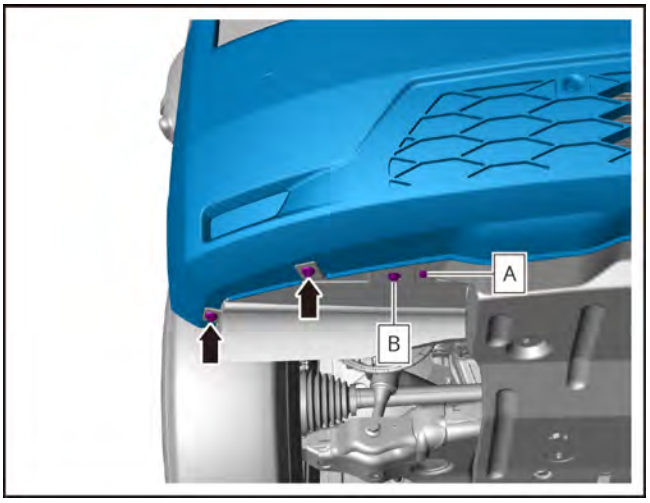
6 Disconnect 2 Front Bumper Assembly wiring harness connectors.



7 Remove Front Underbody Shield 2 retaining bolt.



8 Remove Front Bumper Assembly right retaining screw.

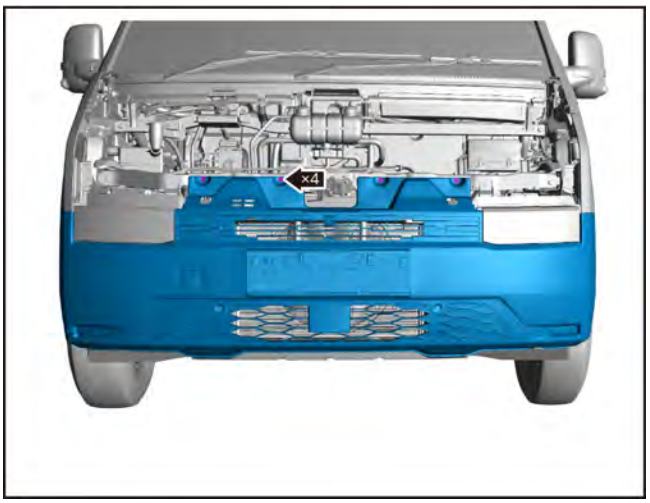


9 Remove right front wheelhouse assembly fastener.

a. Remove Front Underbody Shield retaining bolt A.

b. Remove right front wheelhouse assembly retaining bolt B.

c. Remove right front wheelhouse assembly 2 retaining clip.



10 Remove 4 retaining bolt, remove Front Bumper Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install front, item view check clip whether deformation and damage. if with necessary, replace new clip.

Front Bumper Left Mounting Bracket Assembly, Repair Procedure

Tips

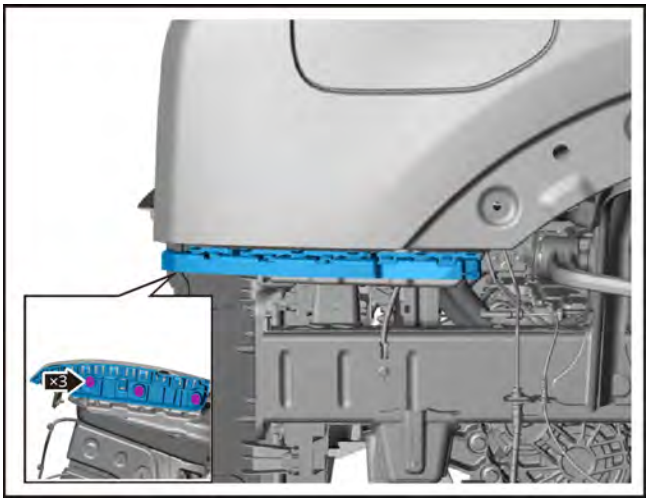
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 Remove 3 retaining bolt, remove front bumper left mounting bracket assembly.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Front Bumper Left Support Bracket, Repair Procedure

Tips

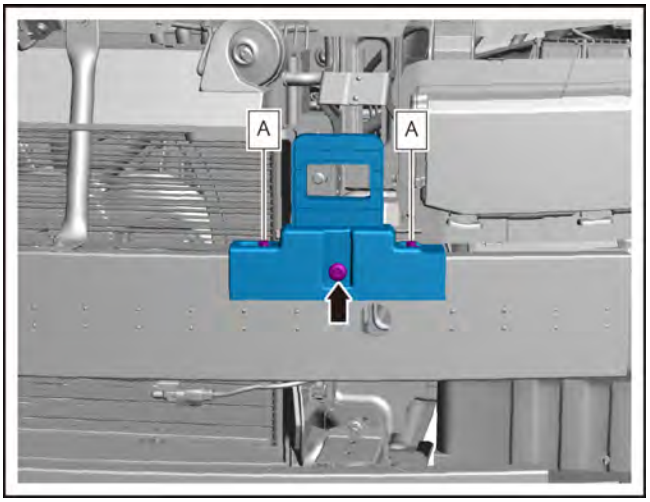
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 remove front bumper left support bracket.
   a. Remove front bumper left support bracket retaining clip.
   b. Remove 2 retaining bolt A, remove front bumper left support bracket.

Installation Steps

1 Install in the reverse order of removal.

Front Bumper Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove license plate install panel - front. Refer to:License Plate Install Panel - Front, Repair Procedure

4 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

5 Remove front bumper wiring harness. Refer to:Front Bumper Wiring Harness, Repair Procedure

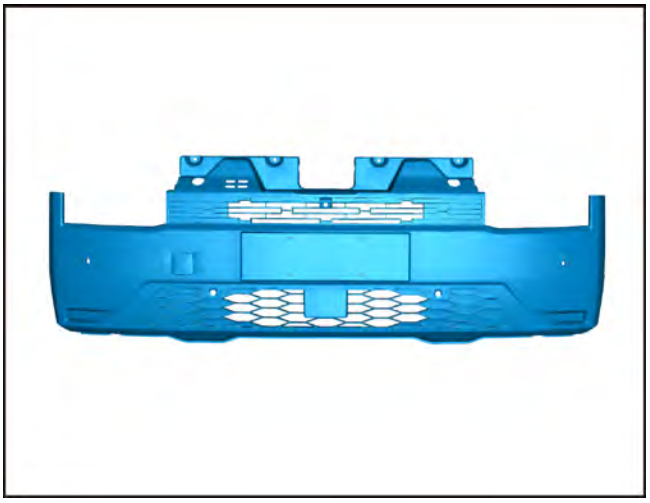
6 Remove UWB positioning unit - left front, right front. Refer to:UWB Positioning Unit - Left Front, Repair Procedure

7 Remove from radar probe head - left front, right front. Refer to: From Radar Probe Head - Left Front, Repair Procedure

8 Remove from radar probe head - left front, right front center. Refer to:From Radar Probe Head - Left Front Center, Repair Procedure

9 Remove Front-view Camera. Refer to:Front-View Camera, Repair Procedure

10 Remove Front Millimetre-wave Radar. Refer to:Front Millimetre-Wave Radar, Repair Procedure



11 Remove the Front Bumper Assembly.

Installation Steps

1 Install in the reverse order of removal.

Front Bumper Body, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

4 Remove license plate install panel - front. Refer to:License Plate Install Panel - Front, Repair Procedure

5 Remove front bumper wiring harness. Refer to:Front Bumper Wiring Harness, Repair Procedure

6 Remove UWB positioning unit - left front, right front. Refer to:UWB Positioning Unit - Left Front, Repair Procedure

7 Remove from radar probe head - left front, right front. Refer to: From Radar Probe Head - Left Front, Repair Procedure

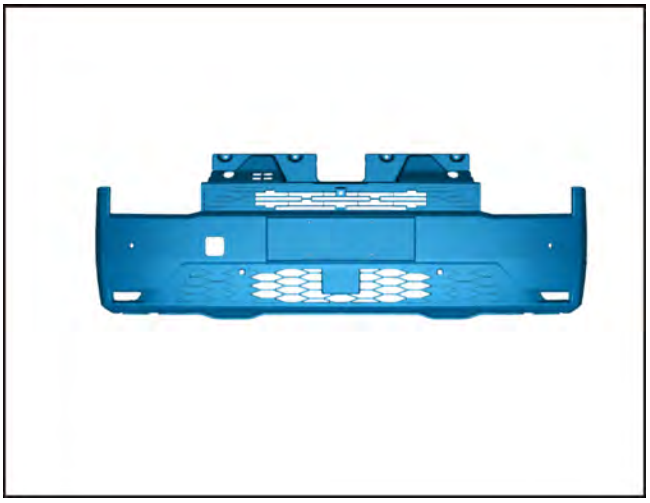
8 Remove from radar probe head - left front, right front center. Refer to:From Radar Probe Head - Left Front Center, Repair Procedure

9 Remove Front-view Camera. Refer to:Front-View Camera, Repair Procedure

10 Remove left, right Fog Lamp trim panel. Refer to:Left Fog Lamp Trim Panel, Repair Procedure

11 Remove Front Millimetre-wave Radar. Refer to:Front Millimetre-Wave Radar, Repair Procedure

12 Remove tow hook Plug. Refer to:Tow Hook Plug, Repair Procedure



13 remove front bumper body.

Installation Steps

1 Install in the reverse order of removal.

License Plate Install Panel - Rear, Repair Procedure

Removal Steps



1 Remove 4 retaining screw, remove license plate install panel - rear.

Installation Steps

1 Install in the reverse order of removal.

Rear Bumper Center Body Assembly, Removal and Installation

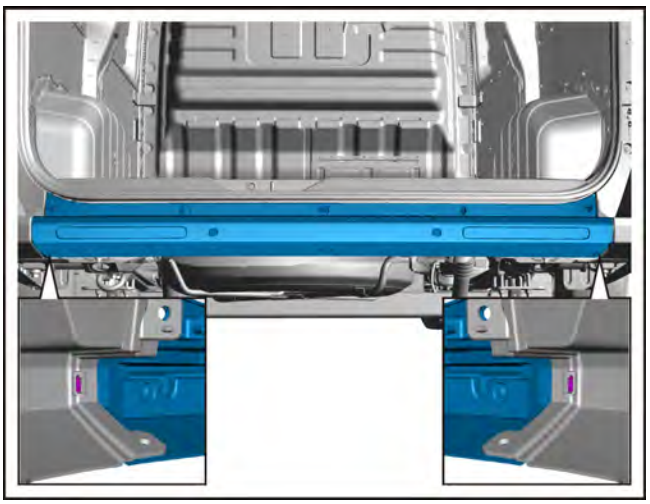
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

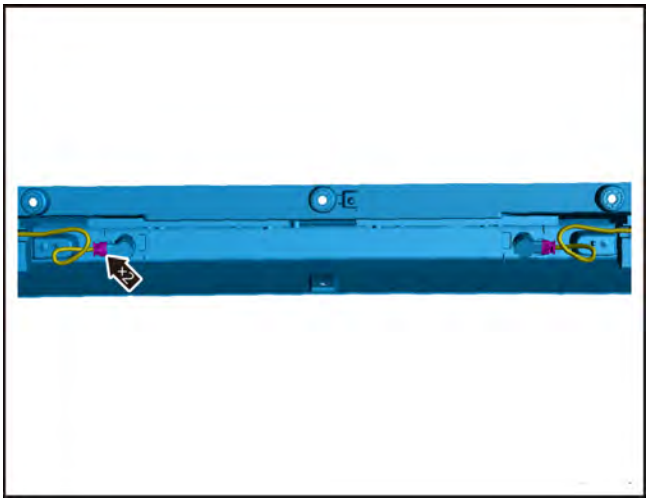
2 Raise the vehicle. Refer to:Vehicle Lifting and Support



3 Remove Rear Bumper Center Body Assembly 8 retaining bolt.



4 release Rear Bumper Center Body Assembly.



5 disconnect 2 wiring harness connector, remove Rear Bumper Center Body Assembly.

Installation Steps

1 Install in the reverse order of removal.

Rear Bumper Intake can Block, Repair Procedure

Tips

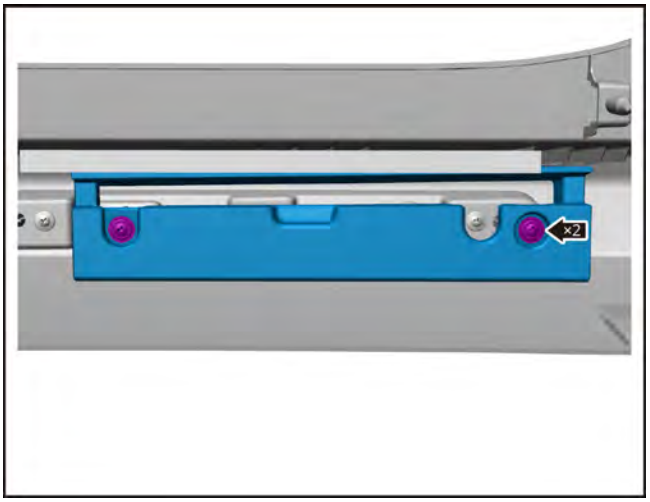
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation



4 Remove 2 retaining screw, remove rear bumper intake can block.

Installation Steps

1 Install in the reverse order of removal.

Rear Bumper Center Body, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

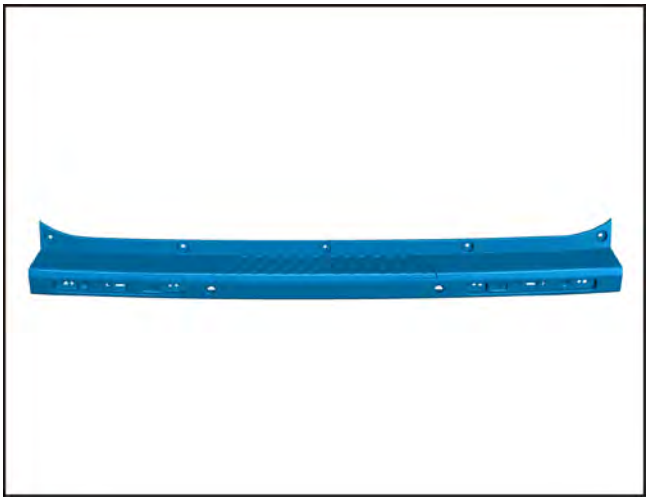
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

4 Remove rear bumper intake can block. Refer to:Rear Bumper Intake can Block, Repair Procedure

5 Remove left, right rear reflector assembly. Refer to:Left Rear Reflector Assembly, Repair Procedure

6 Remove from radar probe head - left rear, right rear center. Refer to:From Radar Probe Head - Left Rear Center, Repair Procedure



7 remove Rear Bumper Center Body.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 During installation, make sure the clip is correctly aligned with its mounting position before pressing it into place.

Rear Bumper Left Lower Body Assembly, Removal and Installation

Tips

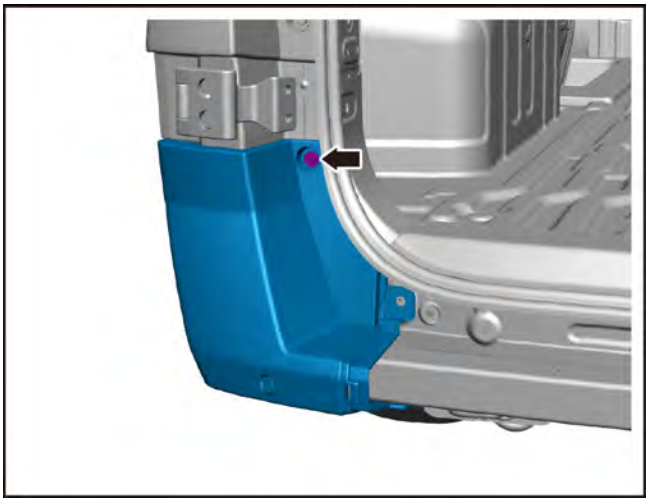
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

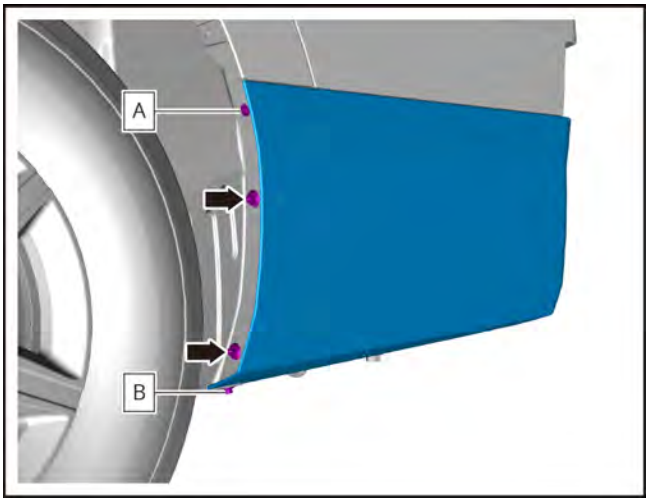
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation



4 Remove rear bumper left lower body assembly retaining bolt.

Torque:xxx±xxN·m

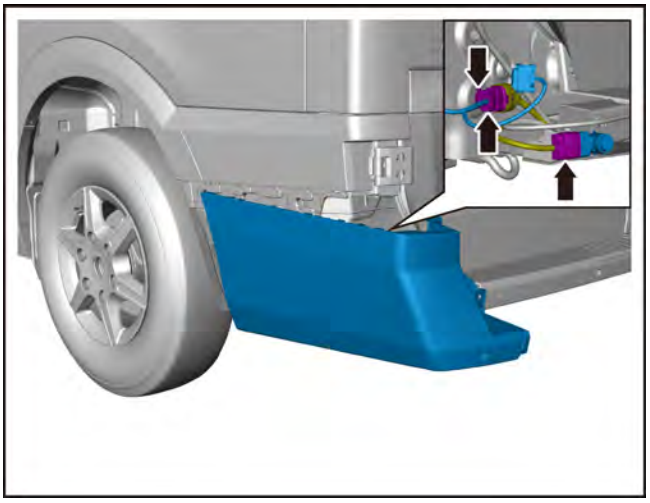


5 release rear bumper left lower body assembly.

a. Remove left rear splash shield panel retaining screw A.

b. Remove left rear splash shield panel retaining bolt B.
Torque:xxx±xxN·m

c. Remove 2 retaining clip, release rear bumper left lower body assembly.



6 remove rear bumper left lower body assembly.

a. Disconnect 2 rear bumper left lower body assembly wiring harness connectors.

b. release wiring harness retaining clip, remove rear bumper left lower body assembly.

Installation Steps

1 Install in the reverse order of removal.

Rear Bumper Left Mounting Bracket, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

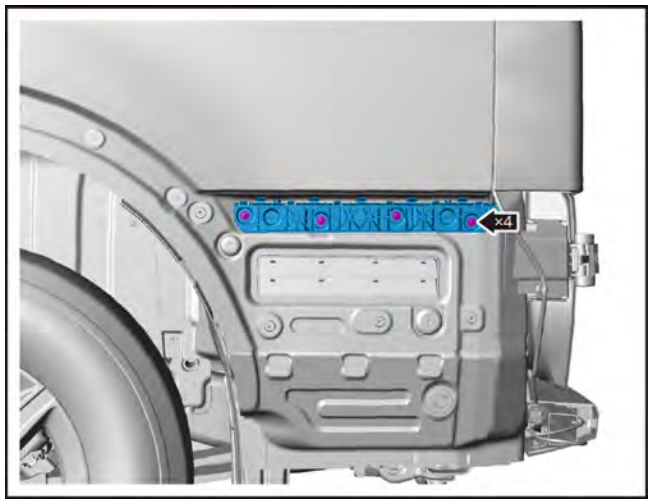
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

4 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

5 Remove Left Rear Body Side Exterior Trim Panel Assembly. Refer to:Left Rear Body Side Exterior Trim Panel Assembly, Repair Procedure

6 Remove rear bumper left upper body assembly. Refer to:Rear Bumper Left Upper Body Assembly, Repair Procedure



7 Remove 4 retaining screw, remove rear bumper left mounting bracket.

Installation Steps

1 Install in the reverse order of removal.

Rear Bumper Left Upper Body Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

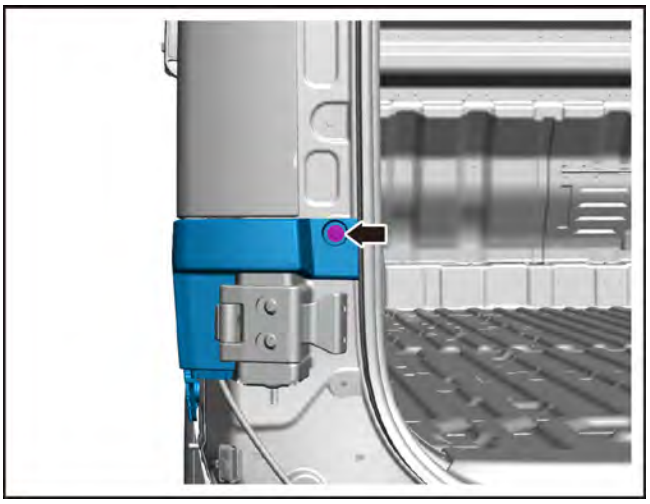
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

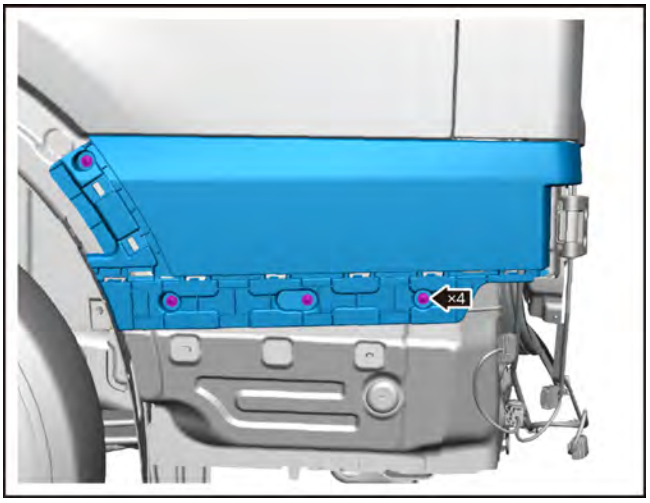
4 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

5 Remove Left Rear Body Side Exterior Trim Panel Assembly. Refer to:Left Rear Body Side Exterior Trim Panel Assembly, Repair Procedure



6 Remove rear bumper left upper body assembly retaining bolt.

Torque:xxx±xxN·m



7 Remove 4 retaining screw, remove rear bumper left upper body assembly.

Installation Steps

1 Install in the reverse order of removal.

Rear Bumper Left Lower Body Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

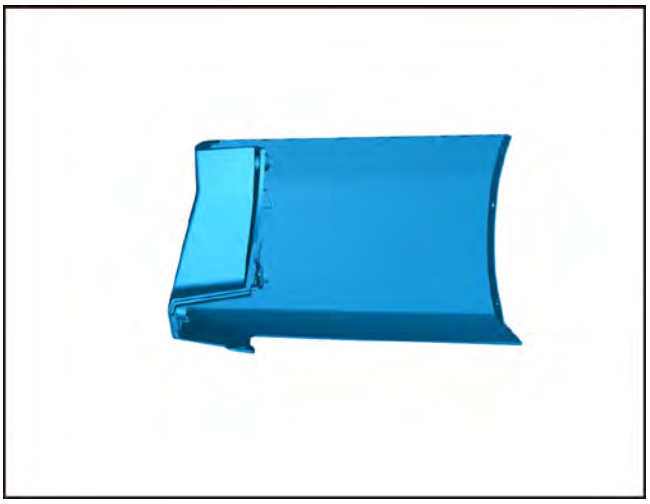
4 Remove rear bumper left lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation

5 Remove Rear Bumper Wiring Harness. Refer to:Rear Bumper Wiring Harness, Repair Procedure

6 Remove main radar probe head. Refer to:Main Radar Probe Head, Repair Procedure

7 Remove UWB positioning unit - left rear. Refer to:UWB Positioning Unit - Left Rear, Repair Procedure

8 Remove left rear angle radar. Refer to:Left Rear Angle Radar, Repair Procedure



9 remove rear bumper left lower body assembly.

Installation Steps

1 Install in the reverse order of removal.

wheelhouse

Repair Procedure

Left Front Wheel Cover Assembly, Repair Procedure

Tips

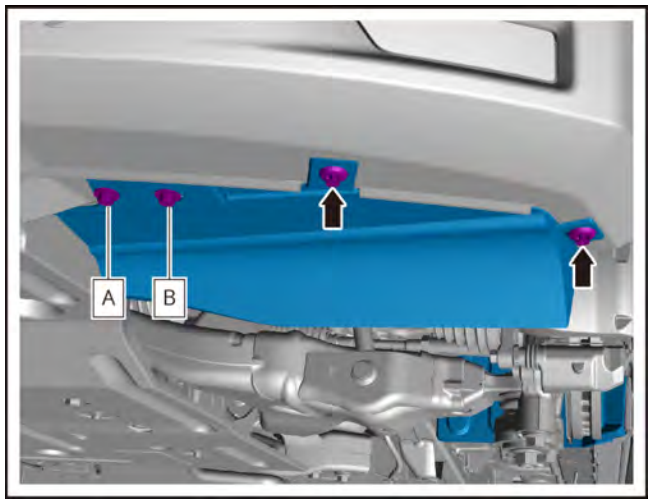
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove wheel assembly. Refer to:Wheel Assembly, Removal and Installation

3 Remove left front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

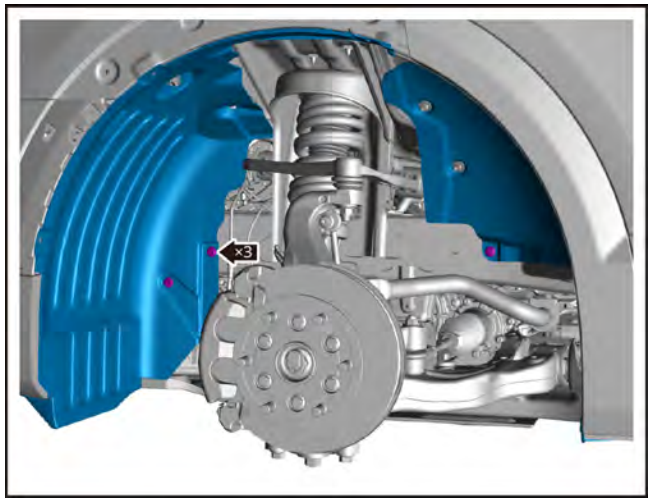


4 Remove left front wheel cover assembly fastener.

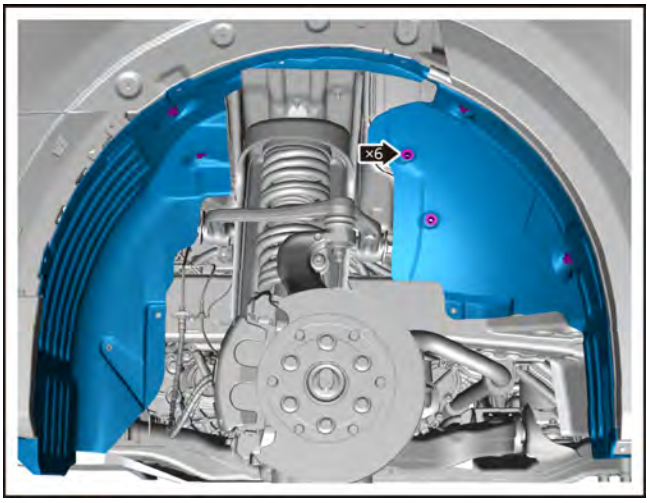
a. Remove Front Underbody Shield retaining bolt A.

b. Remove left front wheel cover assembly retaining bolt B.

c. Remove left front wheel cover assembly 2 retaining clip.



5 Remove left front wheel cover assembly 3 retaining clip.



6 Remove 6 plastic nut, remove left front wheel cover assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Rear Resistance Air Panel, Removal and Installation

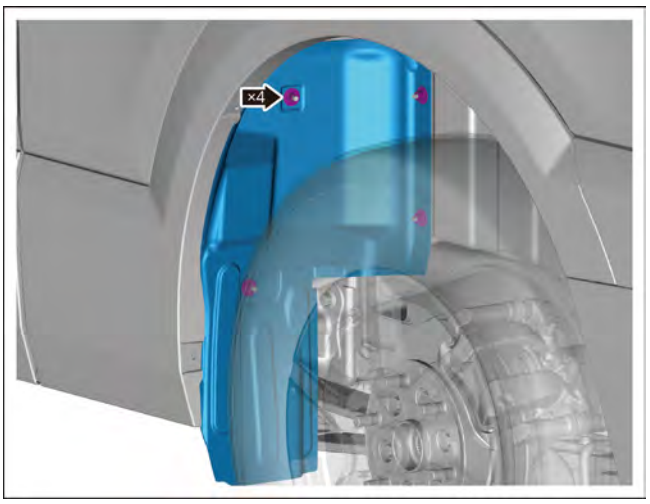
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove left rear resistance air panel 2 retaining screw.



2 Remove 4 plastic nut, remove left rear resistance air panel.

Installation Steps

1 Install in the reverse order of removal.

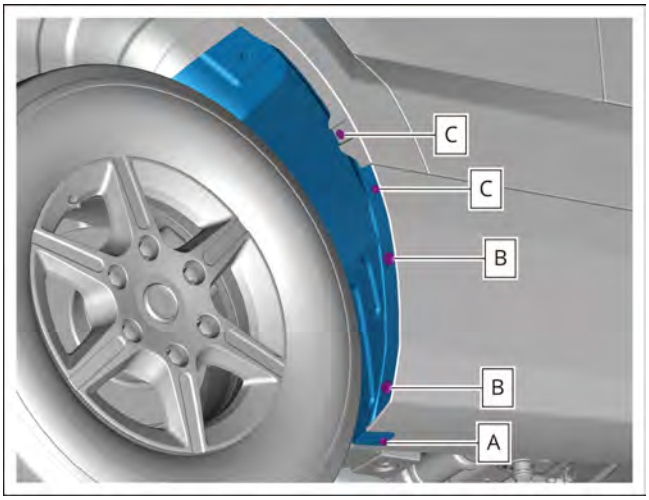
Left Rear Splash Shield Panel, Repair Procedure

Tips

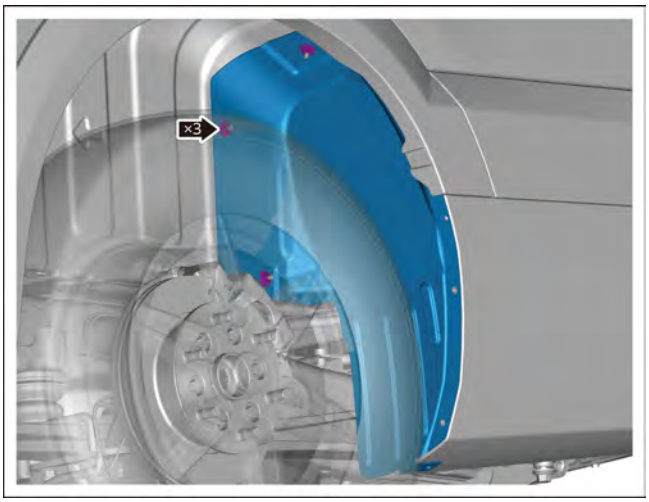
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 Remove left rear splash shield panel.
   a. Remove left rear splash shield panel retaining bolt A.
   b. Remove left rear splash shield panel retaining clip B.
   c. Remove left rear splash shield panel retaining screw C.



3 Remove 3 retaining nut, remove left rear splash shield panel.

Installation Steps

1 Install in the reverse order of removal.

vehicle outer hold hand

Repair Procedure

Right Front Door Outer Hold Hand Assembly, Repair Procedure

Tips

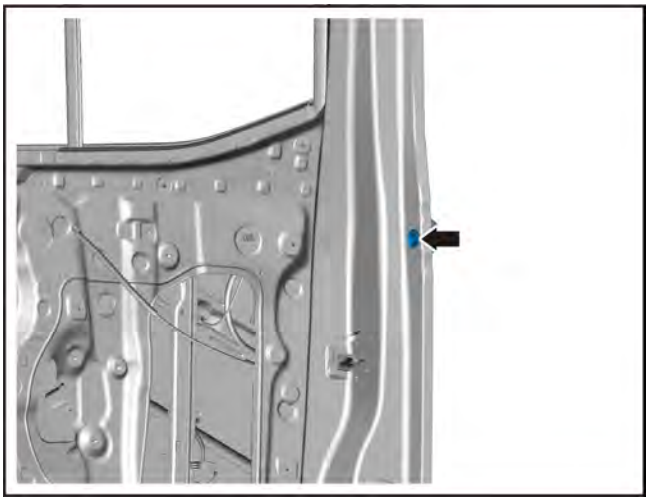
this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps

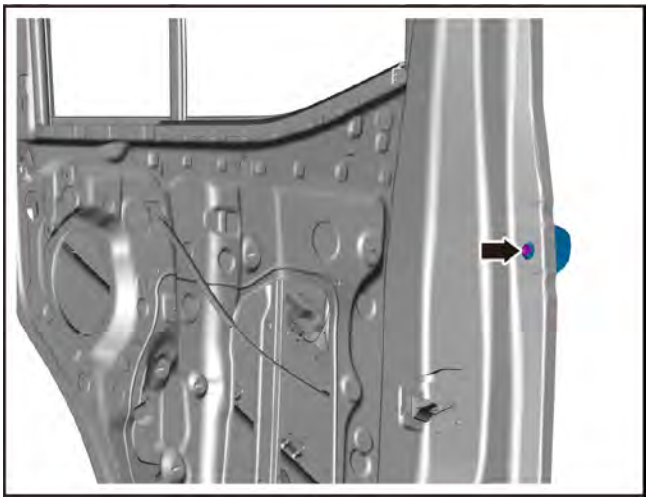
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right front door Shield Assembly. Refer to:Left Front Door Trim Panel Assembly, Repair Procedure

3 Remove right front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

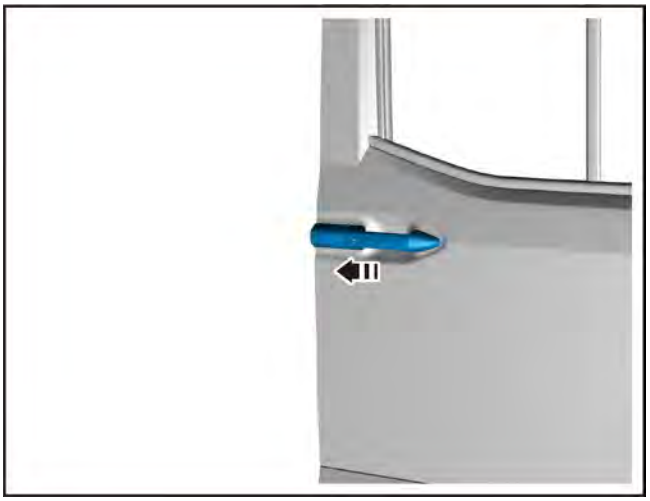


4 Remove right front door outer hold hand assembly Plug.

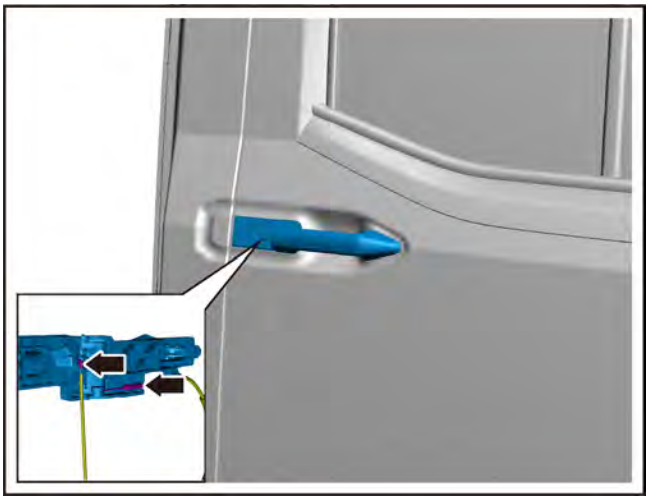


5 Remove right front door outer hold hand assembly retaining bolt.

Torque:xxx±xxxN



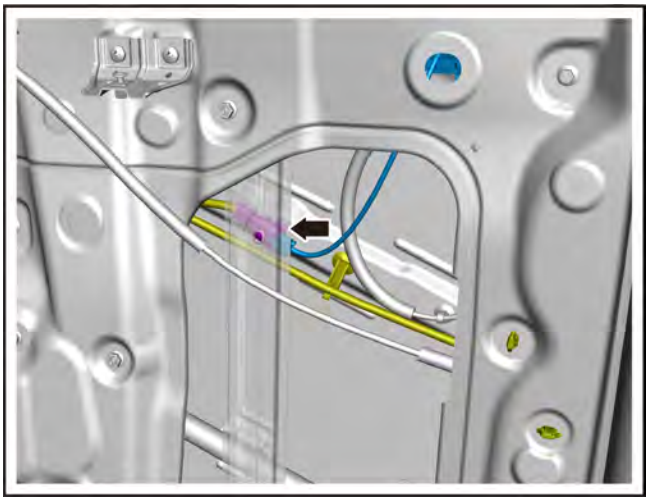
6 release right front door outer hold hand trim cover.



7 disconnect right front door outer hold hand assembly fastener.

a. release right front door outer hold hand door lock pull rod.

b. release right front door outer hold hand outer open cable.



8 Disconnect Keyless Entry switch wiring harness connector.



9 Remove retaining bolt, remove right front door outer hold hand hold hand bottom seat.

Torque:xxx±xxxN

Installation Steps

1 Install in the reverse order of removal.

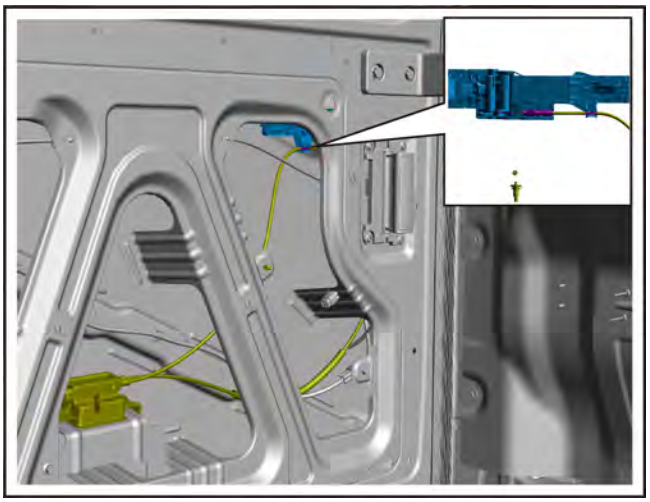
Left Sliding Door Outer Hold Hand Assembly, Repair Procedure

Tips

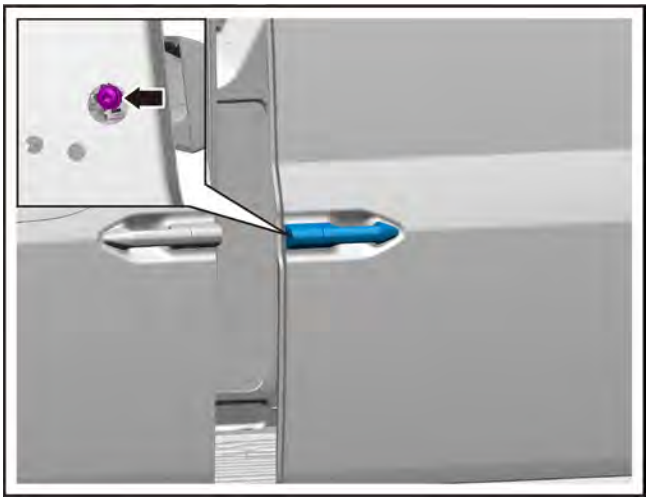
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

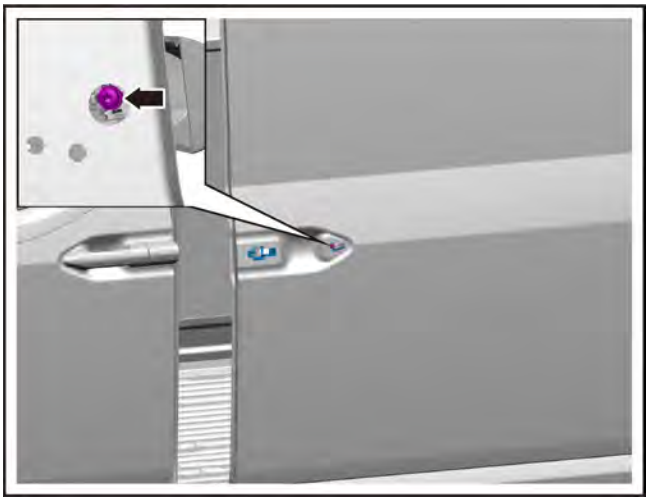
1 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure



2 release left Sliding Door outer hold hand assembly cable.



3 Remove left Sliding Door outer hold hand assembly retaining screw, remove trim cover.



4 remove retaining screw, remove left Sliding Door outer hold hand assembly

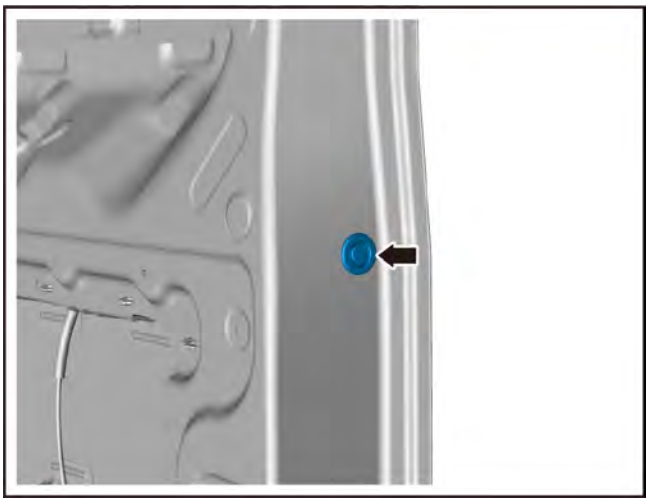
Installation Steps

1 Install in the reverse order of removal.

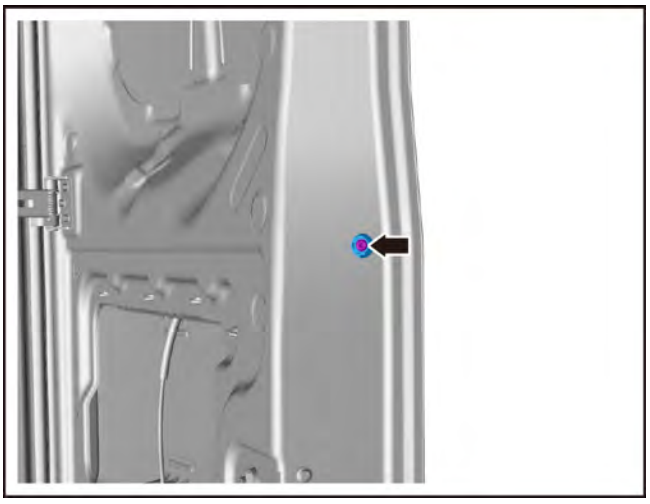
Tailgate Outer Hold Hand Assembly, Repair Procedure

Removal Steps

1 Remove tailgate Shield Assembly right. Refer to:Tailgate Shield Assembly Left, Repair Procedure



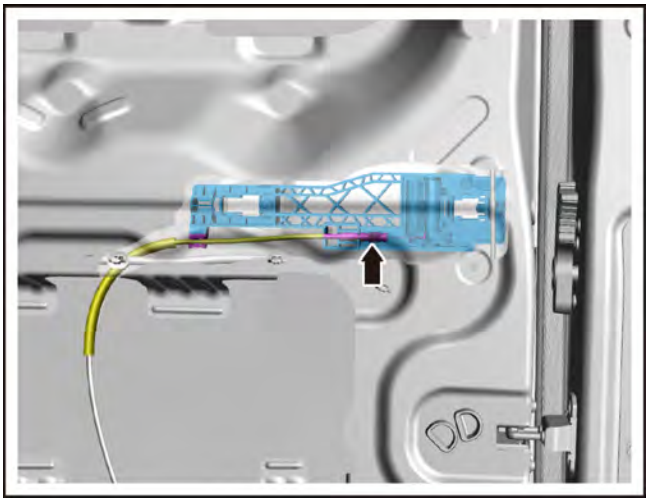
2 Remove tailgate outer hold hand assembly Plug.



3 Remove tailgate outer hold hand assembly retaining screw.



4 release tailgate outer hold hand.



5 release Split Rear Door outer open cable.



6 Remove retaining screw, remove tailgate outer hold hand bottom seat.

Installation Steps

1 Install in the reverse order of removal.

key and lock have

System Overview

Door Lock Function Overview

System Principle

center control door lock system aggregate center control Door Locks close and open, terminal large increase inlet vehicle Use convenience characteristic and safety characteristic. center control door lock system with power can drive mechanical unit, reach form door Lock and open lock Function. driver not only can with Use conventional mechanical side type unlock / Lock vehicle, also can item item intelligent termination convenience operation, if Remote Key, Bluetooth with and NFC card etc.. this type multiple item handling item combined, already ensure should emergency when can rely on characteristic, item item digital -based technical improve use user body verification and Vehicle Safety performance, enable convenience and safety dual re- improve.

Locking/Unlocking with the Central Lock Buttons

center locking control button upper lock operation: when vehicle for unlock Status, press upper lock button, vehicle complete upper lock, button Indicator Lamp illuminate.

center locking control button Unlocking Operation: when vehicle for Lock Status, press Unlock Button, vehicle complete unlock, button Indicator Lamp illuminate.

Automatic Locking While Driving

vehicle will in driving process center automatic Lock. when vehicle all door all disabled and vehicle be in unlock Status lower, vehicle driving speed exceed 15 km/h rear, vehicle automatic Lock.

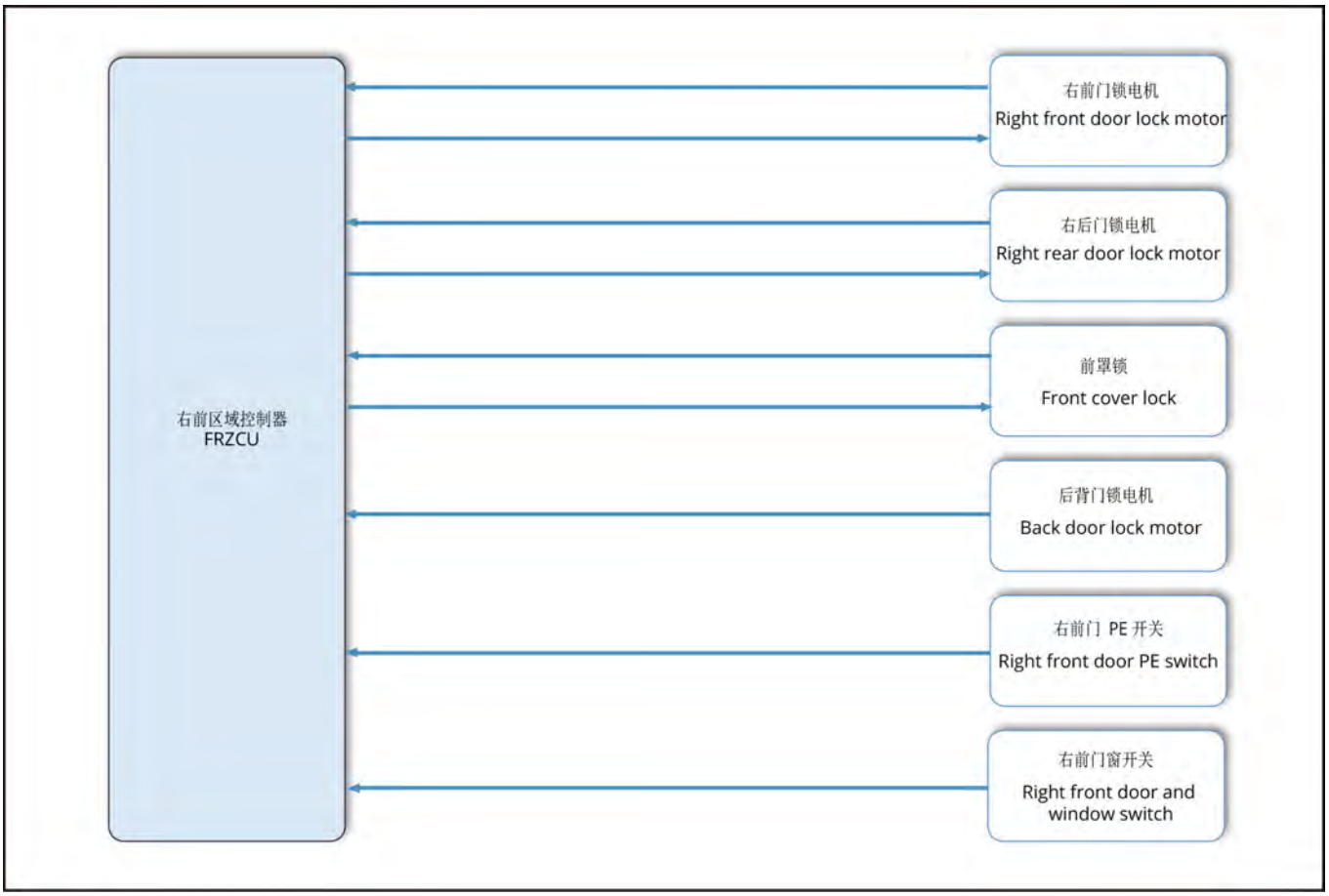
collision unlock control

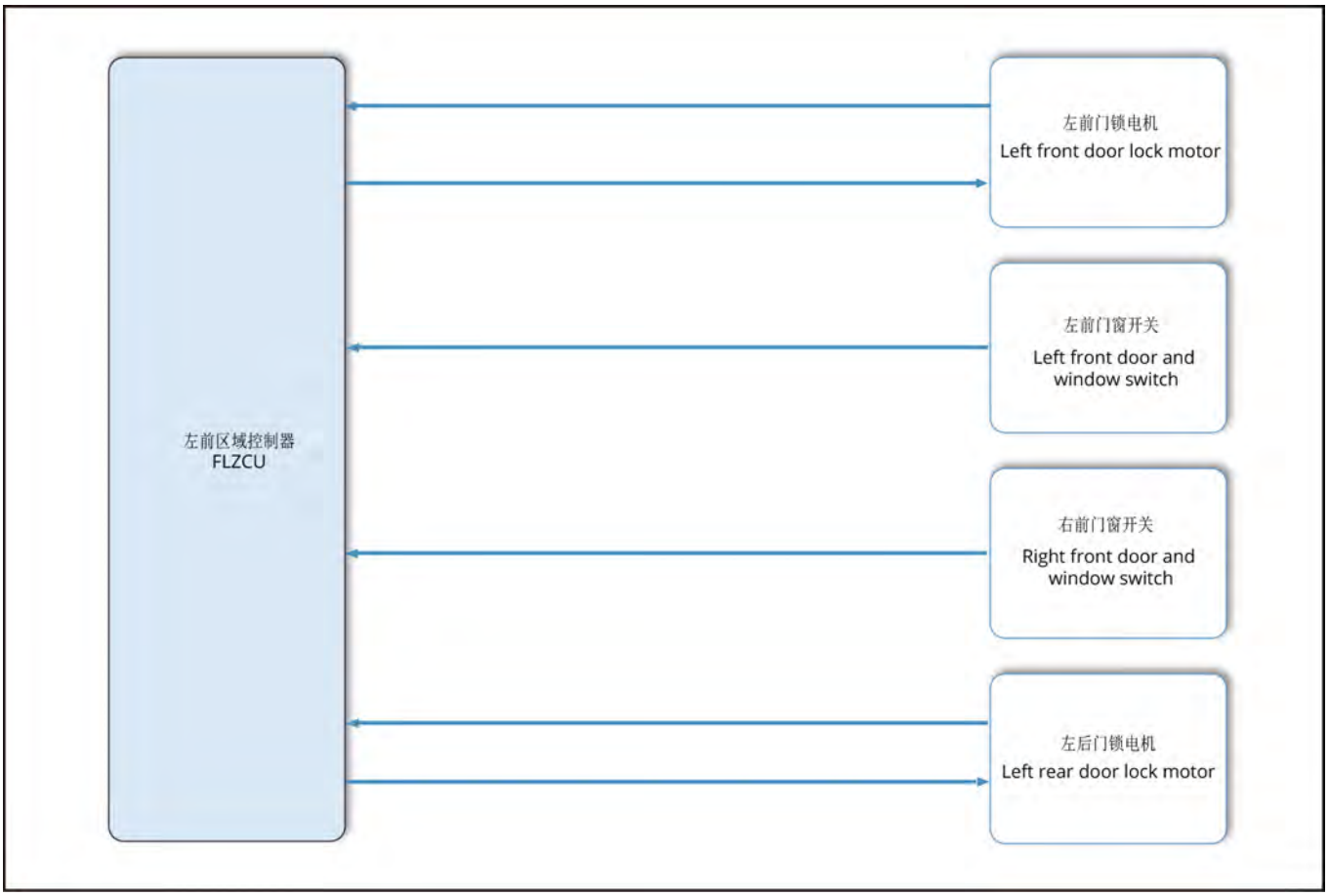
when Left Front Zone Control Unit detection to Crash Signal when, all door automatic unlock.

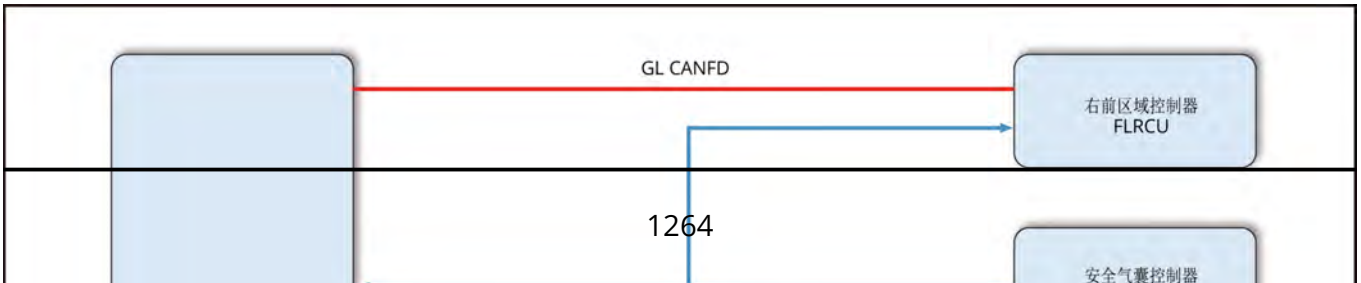
thermal loss of control unlock

thermal loss of control unlock for battery thermal loss of control warning lower safety protection Function. when Left Front Zone Control Unit (FLZCU) power mode be in Off/Comfortable/ON Status when, Left Front Zone Control Unit (FLZCU) through CAN bus receive to Battery Management System (BMS) transmit battery thermal loss of control warning signal, trigger thermal loss of control unlock logic. Left Front Zone Control Unit (FLZCU) hardware Output drive left front, Left Rear Door Lock motor same when perform 200ms±50ms unlock; same when transmit CAN signal direction Right Front Zone Control Unit (FRZCU) lower send all vehicle unlock request, by Right Front Zone Control Unit (FRZCU) drive right front, right rear, Tailgate Lock motor complete unlock, wait 400ms rear complete sleeve unlocking operation again perform I times, complete two times all vehicle Unlocking Operation; same when Left Front Zone Control Unit (FLZCU) prohibit use IV door all Lock Function, package including item bumper lock Lock, prevent door is lock close. when thermal loss of control Status unlock except rear, restore IV door Lock Function; thermal loss of control Status required clear corresponding DTC side can unlock except.

Electrical Schematic Diagram


右前区域控制器
FRZCU
右前门锁电机
Right front door lock motor
右后门锁电机
Right rear door lock motor
前罩锁
Front cover lock
后背门锁电机
Back door lock motor
右前门 PE 开关
Right front door PE switch
右前门窗开关
Right front door and window switch


左前区域控制器
FLZCU
左前门锁电机
Left front door lock motor
左前门窗开关
Left front door and window switch
右前门窗开关
Right front door and window switch
左后门锁电机
Left rear door lock motor


GL CANFD
右前区域控制器
FLRCU

Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Right Front Zone Control Unit	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Input
	Hardwired	Status Signal	right front door all open Status Signal Input
	Hardwired	Drive Signal	Right Front Door Lock motor Drive Signal Output
	Hardwired	Status Signal	right rear door all open Status Signal Input
	Hardwired	Drive Signal	right rear door lock motor Drive Signal Output
	Hardwired	Status Signal	tailgate all open Status Signal Input
	Hardwired	Drive Signal	Tailgate Lock motor Drive Signal Output
	Hardwired	Status Signal	front backup box lock Status Signal Input
	Hardwired	Status Signal	right front door PE switch status signal Input
	Hardwired	Status Signal	right front door window switch center control Lock Status Signal Input
Left Front Zone Control Unit	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	DC1 CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	CH CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
	Hardwired	Crash Signal	Airbag Control Unit Crash Signal Input
	Hardwired	Status Signal	left front door all open Status Signal Input
	Hardwired	Drive Signal	Left Front Door Lock motor Drive Signal Output
	Hardwired	Status Signal	left rear door all open Status Signal Input
	Hardwired	Drive Signal	Left Rear Door Lock motor Drive Signal Output
	Hardwired	Status Signal	right front door window switch center control Lock Status Signal Input
	Hardwired	Status Signal	Left Front Door Window Switch center control Lock Status Signal Input
Right Front Door Lock motor	Hardwired	Status Signal	Right Front Zone Control Unit Status Signal Output
	Hardwired	Drive Signal	Right Front Zone Control Unit Drive Signal Input
right rear door lock motor	Hardwired	Status Signal	Right Front Zone Control Unit all open Status Signal Output
	Hardwired	Drive Signal	Right Front Zone Control Unit Drive Signal Input
Tailgate Lock motor	Hardwired	Status Signal	Right Front Zone Control Unit all open Status Signal Output
	Hardwired	Drive Signal	Right Front Zone Control Unit Drive Signal Input
right front door PE switch	Hardwired	Status Signal	Right Front Zone Control Unit Status Signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
right front door window switch	Hardwired	Status Signal	Right Front Zone Control Unit center control Lock Status Signal Output
	Hardwired	Status Signal	Left Front Zone Control Unit center control Lock Status Signal Output
Left Front Door Lock motor	Hardwired	Status Signal	Left Front Zone Control Unit Status Signal Output
	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input
Left Rear Door Lock motor	Hardwired	Status Signal	Left Front Zone Control Unit Status Signal Output
	Hardwired	Drive Signal	Left Front Zone Control Unit Drive Signal Input
Left Front Door Window Switch	Hardwired	Status Signal	Left Front Zone Control Unit center control Lock Status Signal Output
Airbag Control Unit	Hardwired	Crash Signal	Left Front Zone Control Unit, Right Front Zone Control Unit, Telematics Communication Module, Crash Signal Output
Telematics Communication Module	DC1 CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Battery Management System	EP CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Integrated Brake Control System	CH CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis

Component Description

Door Locks actuator

layout position at vehicle inner door panel, for use user hand movement control center locking control button can Output upper lock, unlock request signal to ZCU; button self with Status Indicator Lamp, use at feedback center locking control when front work Status.

center locking control button

door lock body and Lock unit assembly install in each door inner part, Yes Door Locks determine, unlock and protection theft Function core component. door lock body and Lock unit assembly through mechanical connect rod and power Lock unit enable door physical locked and unlock, and integrated sensor with detection door Status.

front cover cover lock

Hood Lock body assembly install in front compartment front, Yes Hood Lock determine and unlock core component. Hood Lock body assembly through mechanical lock body and buckle enable bonnet physical locked, and integrated release mechanism and sensor with support Unlocking Operation and Status detection.

rear backup door lock

luggage compartment cover lock body assembly install in luggage compartment rear, Yes luggage compartment cover locked and unlock core component. luggage compartment cover lock body assembly through mechanical lock body and buckle enable luggage compartment cover physical locked, and integrated release mechanism.

Repair Procedure

Right Front Door Remote Lock Assembly, Repair Procedure

Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

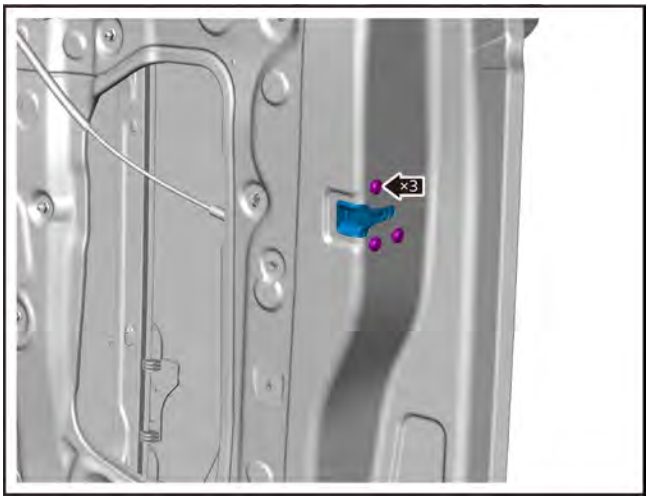
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

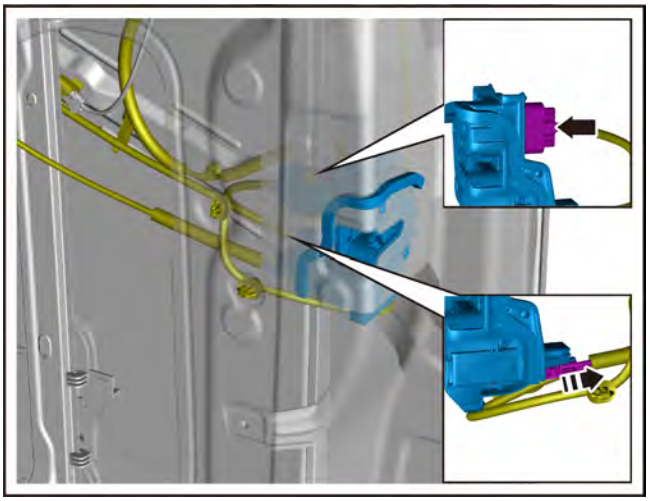
2 Remove right front door Shield Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove right front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

4 Remove right front door glass rear guide rail lower segment assembly. Refer to:Left Front Door Glass Rear Guide Rail Lower Segment Assembly, Repair Procedure



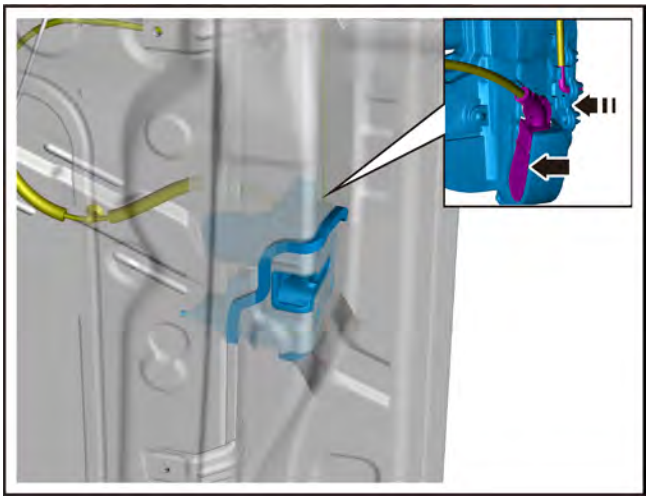
5 Remove right front door remote lock assembly 3 retaining screw.



6 release front door inner open cable.

a. Disconnect right front door remote lock assembly wiring harness connector.

b. release front door inner open cable.



7 remove right front door remote lock assembly.

a. release right front door outer open cable.

b. release lock cylinder pull rod, remove right front door remote lock assembly.

Installation Steps

1 Install in the reverse order of removal.

Right Front Door Lock Core Assembly, Repair Procedure

Tips

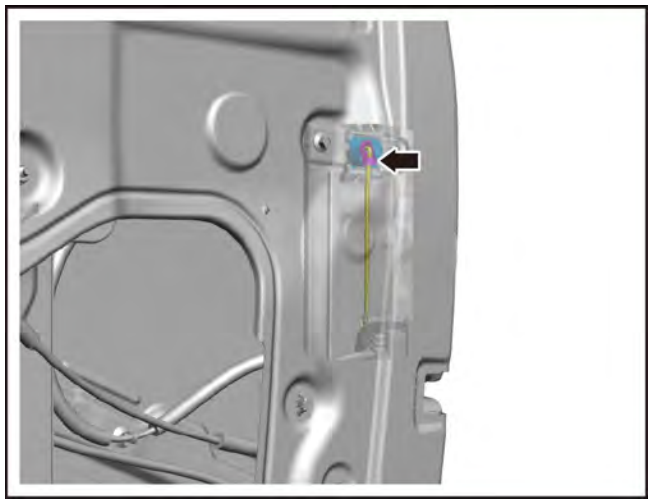
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Installation Steps

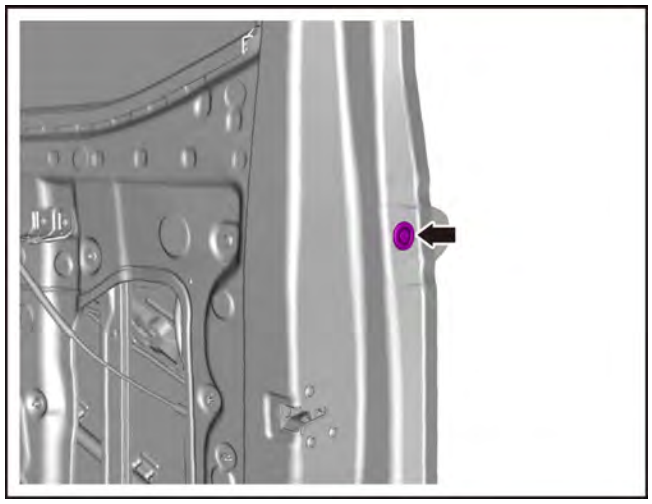
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right front door Shield Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

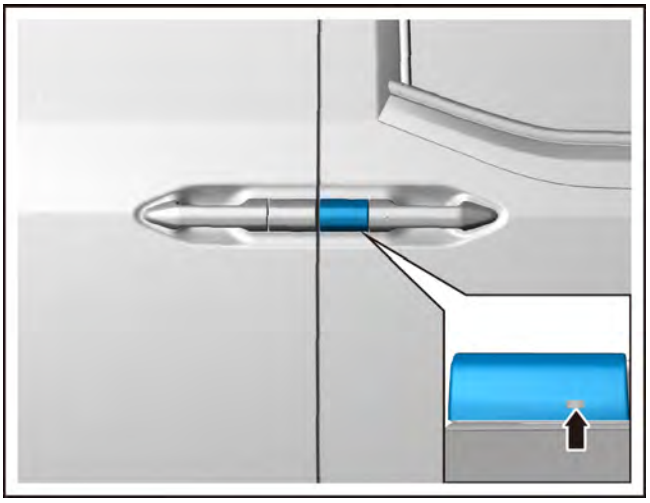
3 Remove right front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure



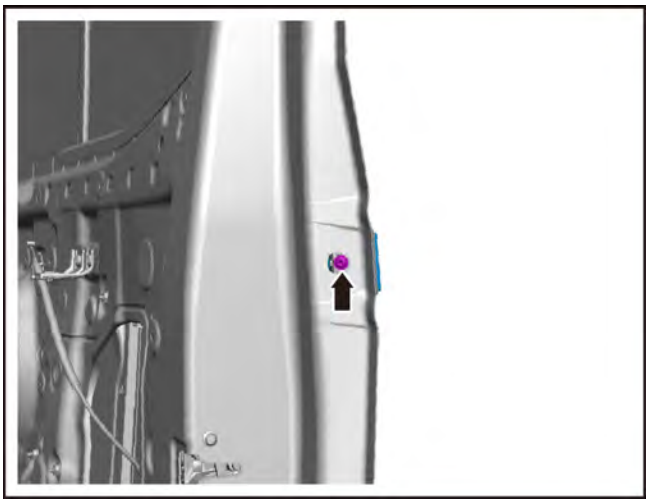
4 release retaining clip, release Right Front Door Lock core pull rod.



5 Remove Plug.

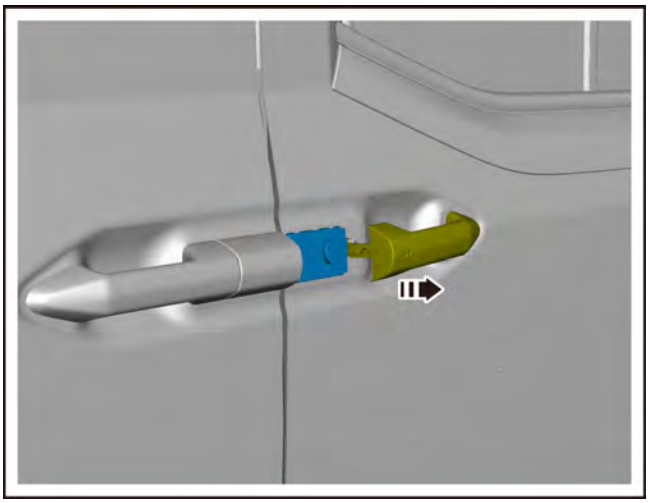


6 UseFlat-blade ScrewdriverRemove right front door outer handle end cap.



7 Remove Right Front Door Lock core assembly retaining bolt.

Torque:xxx±xxN·m



8 along direction arrow side direction release right front outer handle, remove Right Front Door Lock core assembly.

Installation Steps

1 Install in the reverse order of removal.

Right Front Door Lock Core Pull Rod, Repair Procedure

Tips

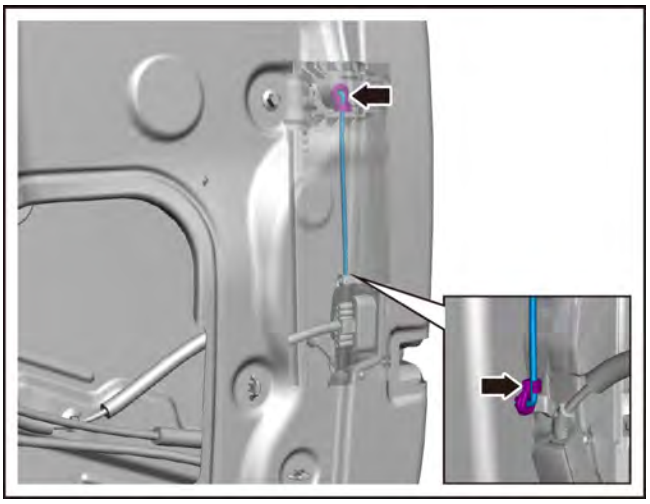
this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove right front door Shield Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove right front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure



4 release 2 retaining clip, remove Right Front Door Lock core pull rod.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Outer Open Cable, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

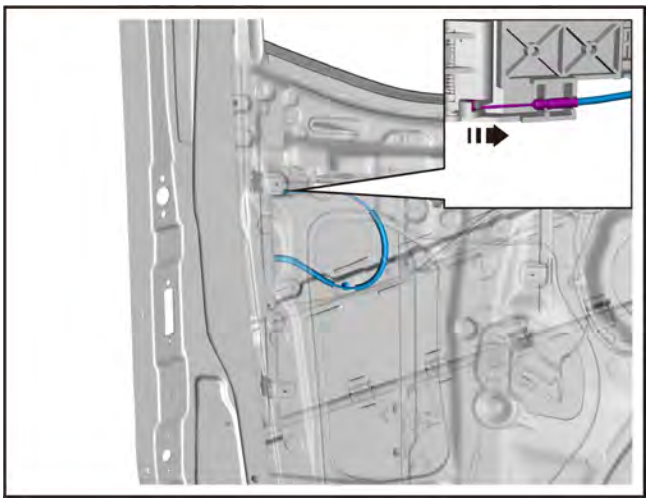
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

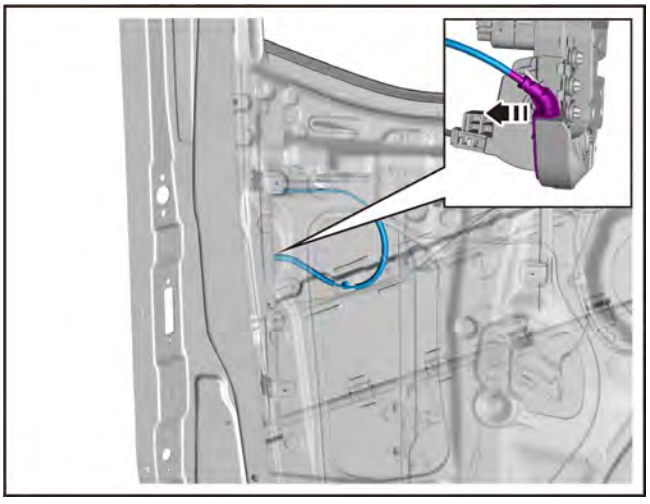
2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Repair Procedure

3 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

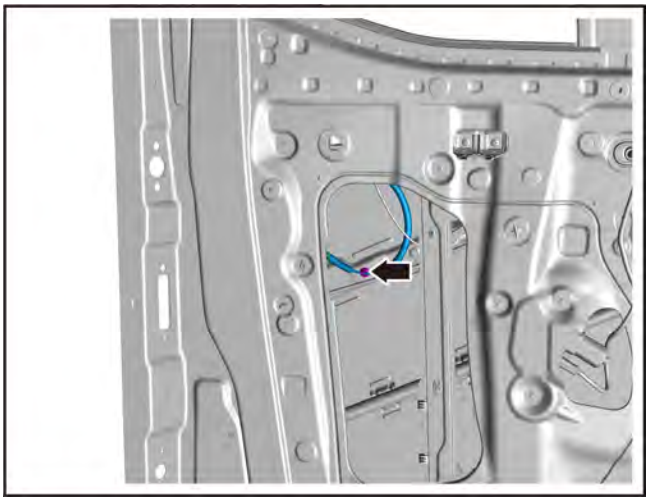
4 Remove left front door remote lock assembly. Refer to:Right Front Door Remote Lock Assembly, Repair Procedure



5 release left front door outer open cable.



6 release left front door outer open cable.



7 release retaining clip, remove left front door outer open cable assembly.

Installation Steps

1 Install in the reverse order of removal.

Front Door Inner Open Cable, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

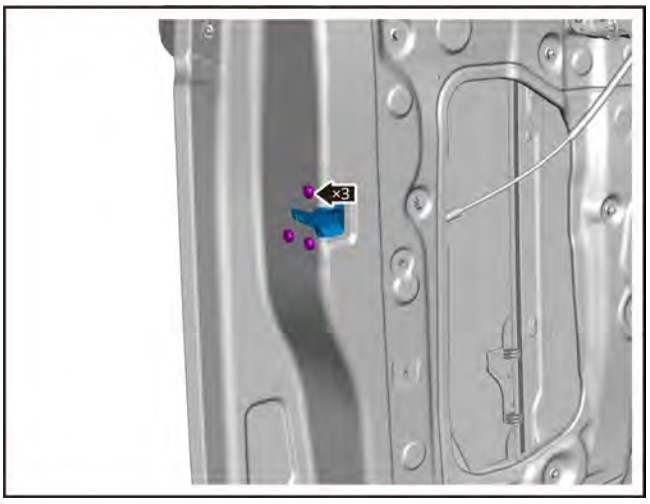
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

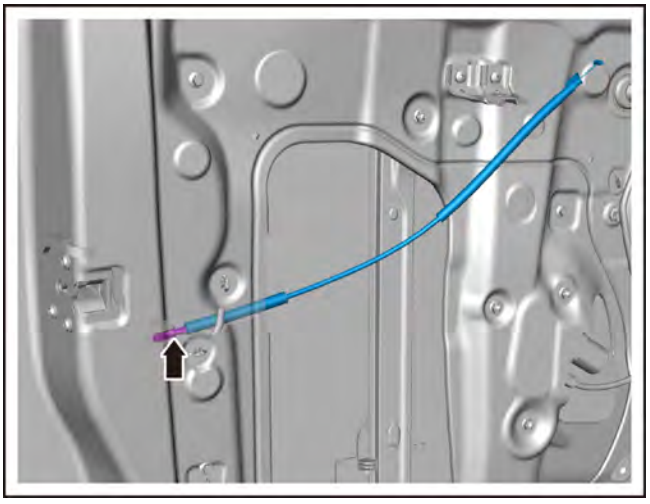
2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

4 Remove left front door glass assembly. Refer to:Left Front Door Glass Assembly, Repair Procedure



5 Remove left front door remote lock 3 retaining screw.



6 Remove retaining clip, remove left front door inner open cable.

Installation Steps

1 Install in the reverse order of removal.

Sliding Door Interior Release Cable, Repair Procedure

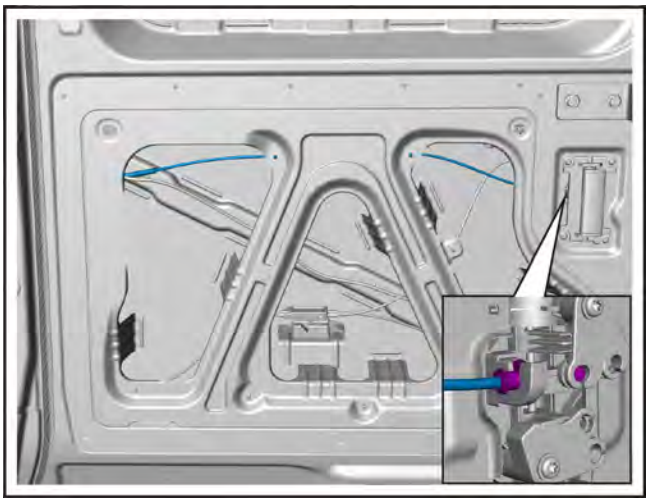
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

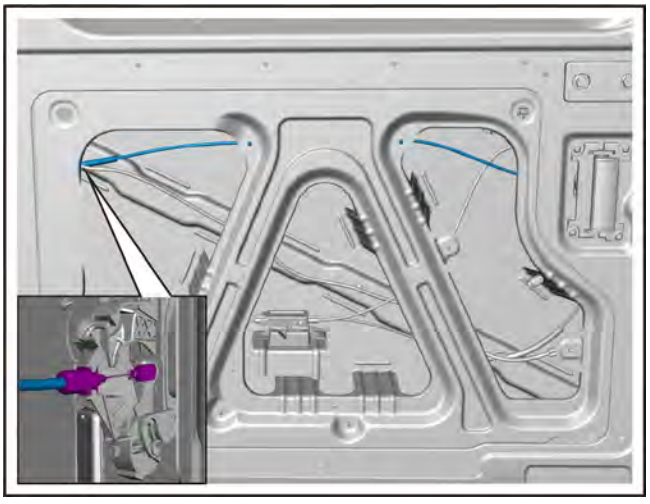
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

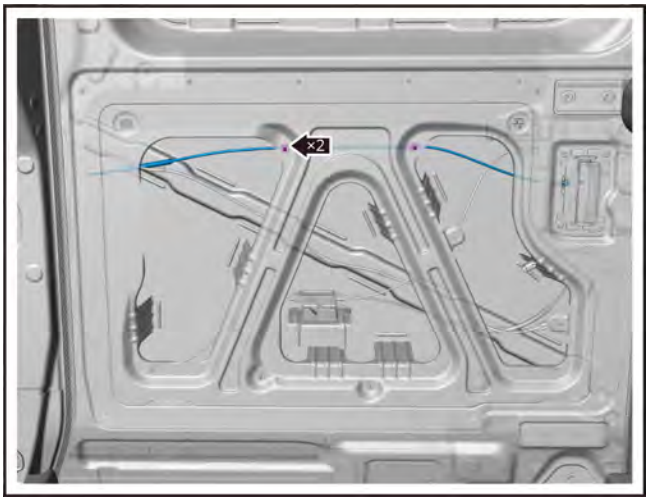
2 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure



3 release Sliding Door Interior Release Cable assembly.



4 release Sliding Door Interior Release Cable assembly.



5 Remove 2 retaining clip, remove Sliding Door Interior Release Cable assembly.

Installation Steps

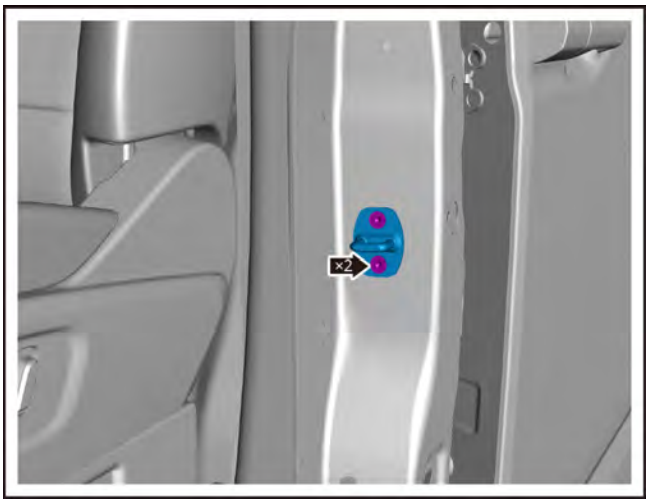
1 Install in the reverse order of removal.

Side Door Lock Clip Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Installation Steps



1 Remove 2 retaining bolt, remove side door lock clip assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Sliding Door Main Lock, Repair Procedure

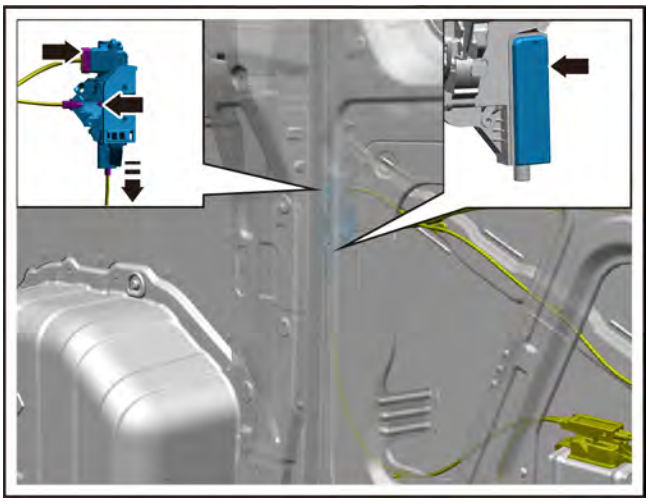
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure

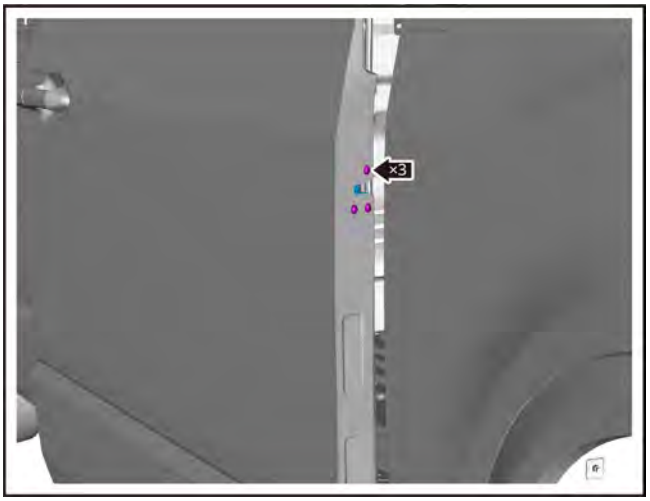


3 release Sliding Door section line box cable connect.

a. Disconnect left Sliding Door main lock assembly wiring harness connector.

b. remove end cap, release Sliding Door Interior Release Cable assembly connect.

c. release Sliding Door section line box cable connect.



4 Remove 3 retaining screw, remove left Sliding Door main lock assembly.

Installation Steps

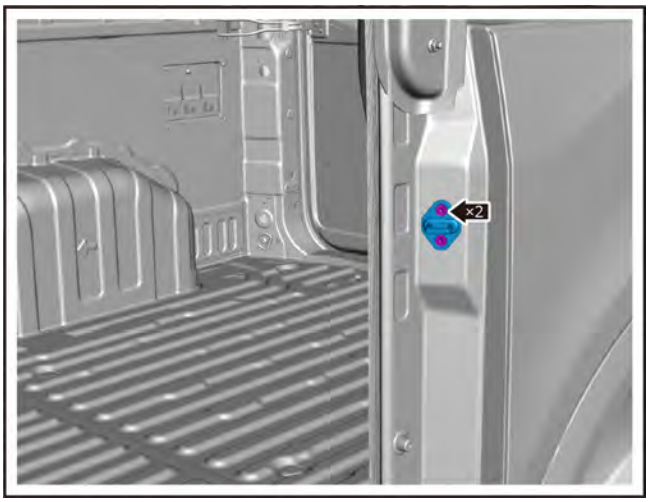
1 Install in the reverse order of removal.

Main Lock Buckle, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining bolt, remove main lock buckle assembly.

Installation Steps

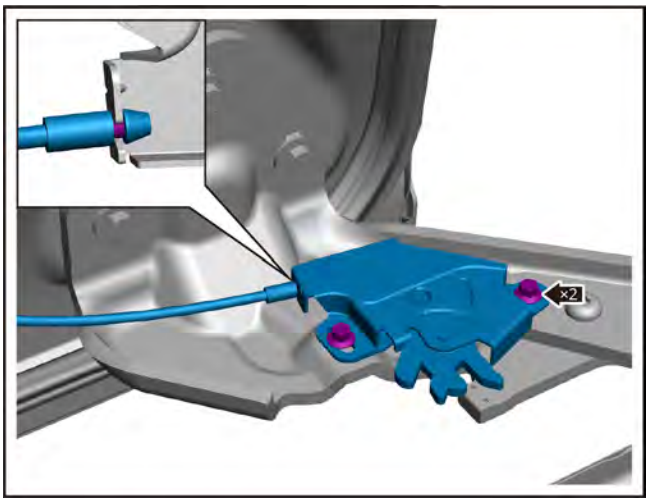
1 Install in the reverse order of removal.

Left Full-Open Limit Lock, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove Left Full-open Limit Lock assembly.
   a. Remove Left Full-open Limit Lock assembly 2 retaining bolt.
   b. release cable, remove Left Full-open Limit Lock assembly.

Installation Steps

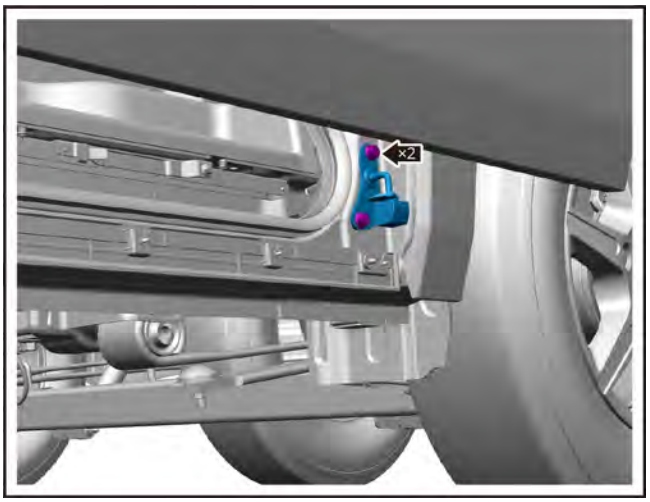
1 Install in the reverse order of removal.

Left Full-Open Limit Lock Clip, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining bolt, remove Left Full-open Limit Lock clip.

Installation Steps

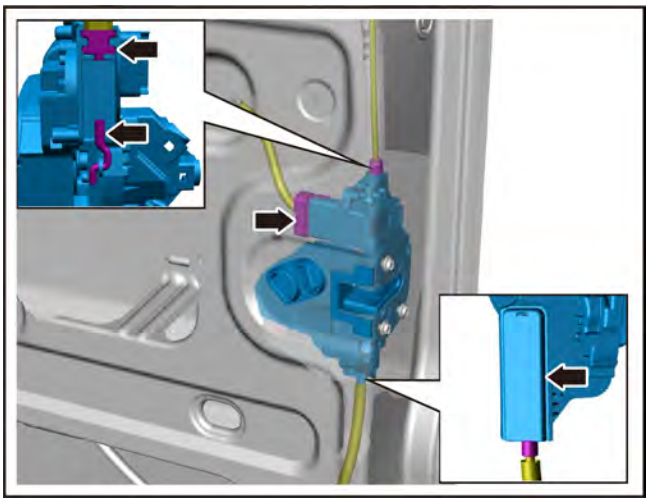
1 Install in the reverse order of removal.

Split Rear Door Center Lock Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove tailgate Shield Assembly right. Refer to:Tailgate Shield Assembly Left, Repair Procedure

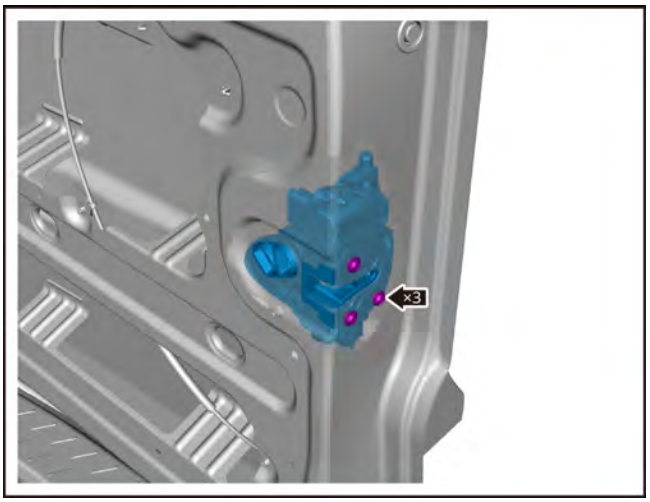


3 release Split Rear Door center lock assembly outer open cable.

a. Disconnect Split Rear Door center lock assembly wiring harness connector.

b. release Split Rear Door center lock assembly right upper lock cable.

c. release Split Rear Door center lock assembly outer open cable.



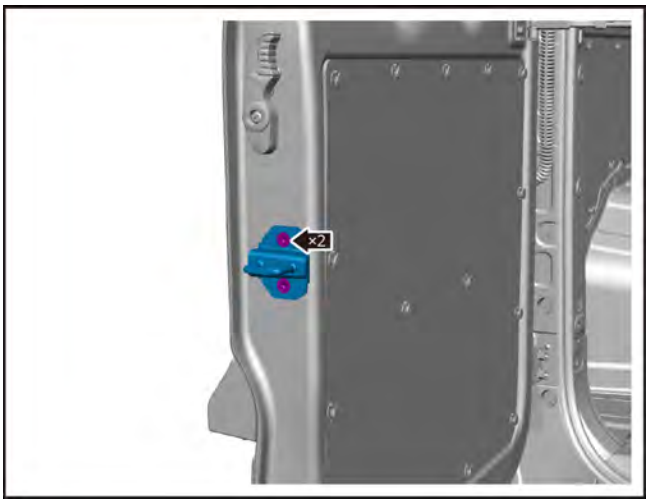
4 Remove 3 retaining screw, remove Split Rear Door center lock assembly.

Installation Steps

1 Install in the reverse order of removal.

Split Rear Door Center Lock Buckle, Repair Procedure

Removal Steps



1 Remove 2 retaining screw, remove Split Rear Door center lock buckle assembly.

Installation Steps

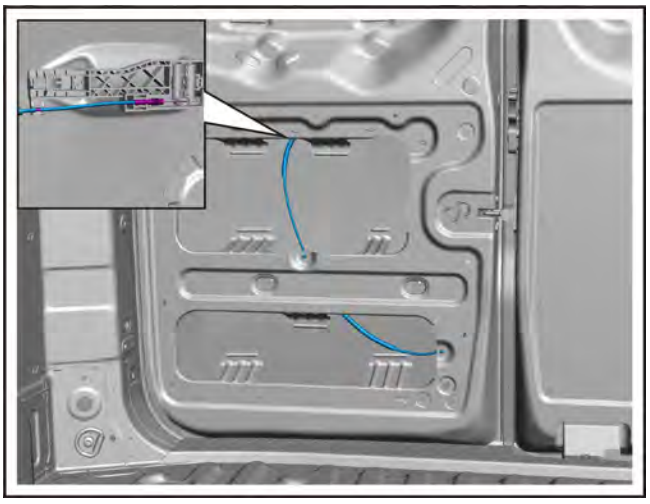
1 Install in the reverse order of removal.

Split Rear Door Outer Open Cable, Repair Procedure

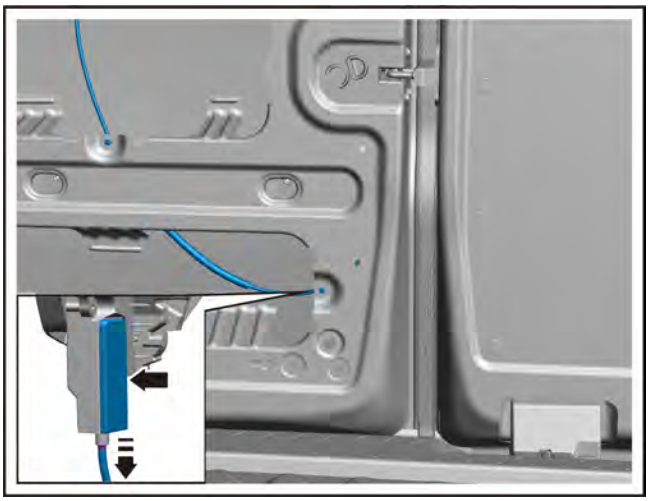
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left rear tailgate Shield Assembly. Refer to:Tailgate Shield Assembly Left, Repair Procedure



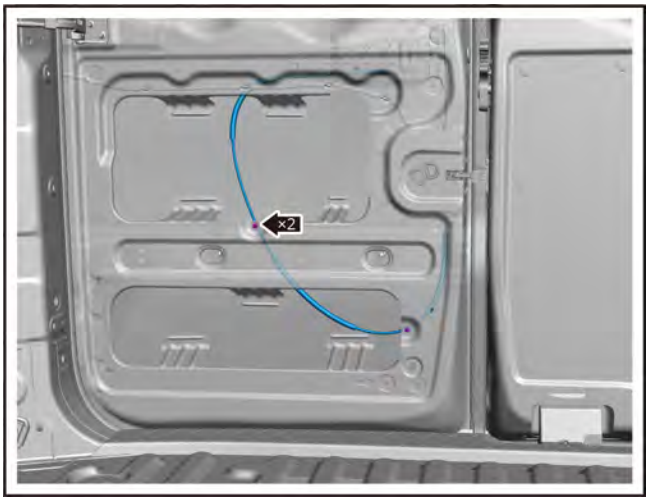
3 release Split Rear Door outer open cable assembly.



4 release Split Rear Door outer open cable assembly fastener.

a. release Split Rear Door center lock assembly end cap.

b. release Split Rear Door outer open cable.



5 release 2 retaining clip, remove Split Rear Door outer open cable assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Split Rear Door Upper Lock Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove Left Split Rear Door upper lock body cover. Refer to:Split Rear Door Upper Lock Body Cover, Repair Procedure



2 Remove Left Split Rear Door upper lock assembly 3 retaining bolt.



3 release Split Rear Door right upper lock cable retaining clip, remove Left Split Rear Door upper lock assembly.

Installation Steps

1 Install in the reverse order of removal.

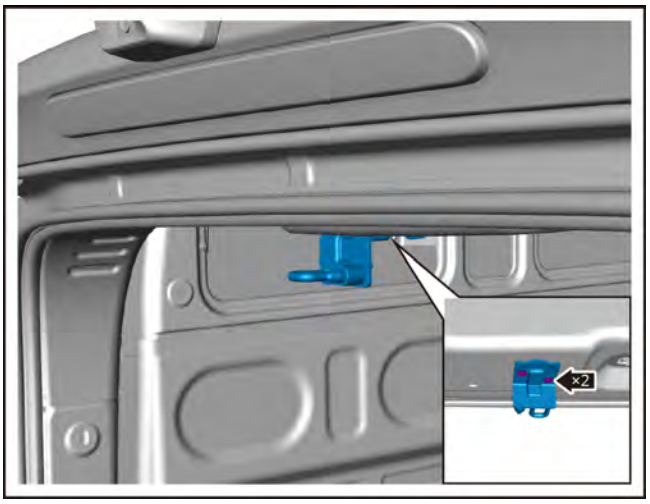
Left Split Rear Door Upper Lock Buckle Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove Split Rear Door upper buckle cover. Refer to:Split Rear Door Upper Buckle Cover, Repair Procedure



2 Remove 2 retaining screw, remove Left Split Rear Door upper lock buckle assembly.

Installation Steps

1 Install in the reverse order of removal.

Split Rear Door Upper Lock Body Cover, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Use plastic pry panelPlastic Pry ToolRemove retaining clip, remove Split Rear Door upper lock body cover.

Installation Steps

1 Install in the reverse order of removal.

Split Rear Door Upper Buckle Cover, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release Split Rear Door upper buckle cover.

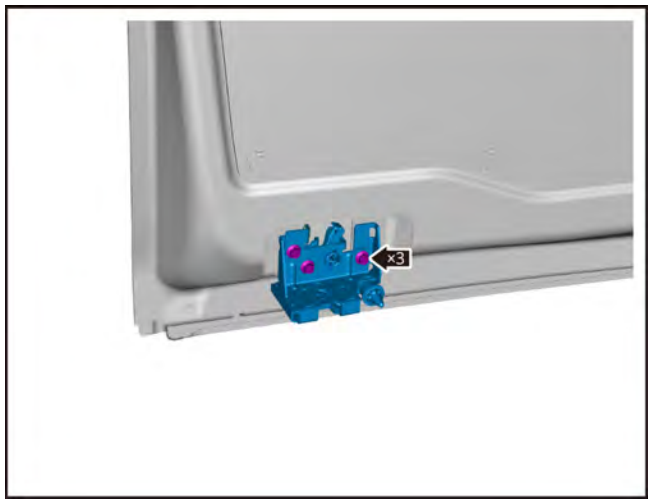
Installation Steps

1 Install in the reverse order of removal.

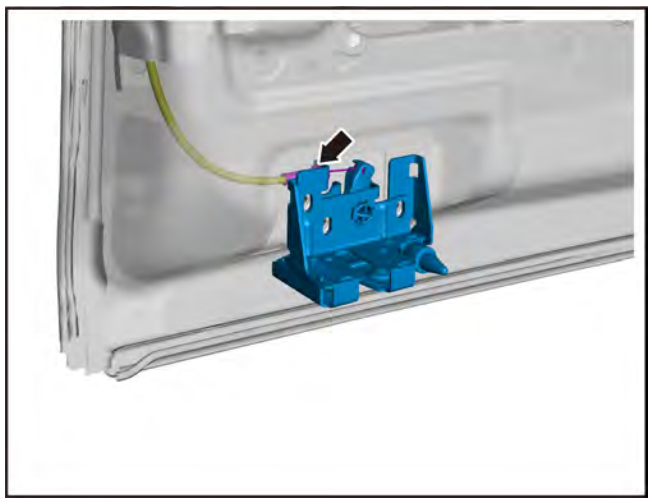
Left Split Rear Door Lower Lock Assembly, Repair Procedure

Removal Steps

1 Remove Split Rear Door lower lock cover. Refer to:Split Rear Door Lower Lock Cover, Repair Procedure



2 Remove Left Split Rear Door lower lock assembly 3 retaining bolt.



3 release Split Rear Door left lower lock cable, remove Left Split Rear Door lower lock assembly.

Installation Steps

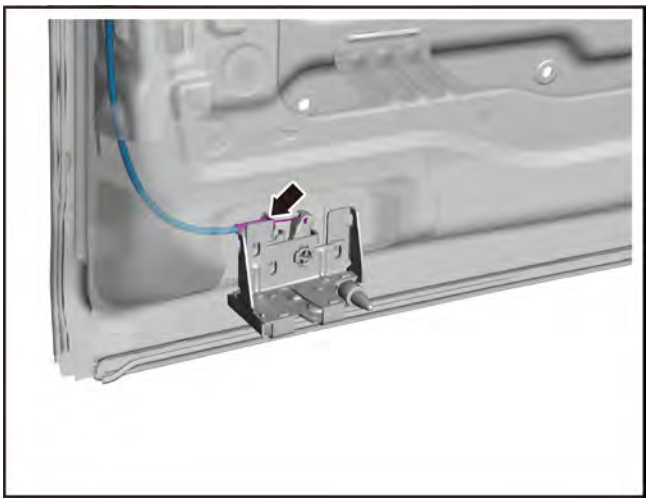
1 Install in the reverse order of removal.

Split Rear Door Left Lower Lock Cable, Repair Procedure

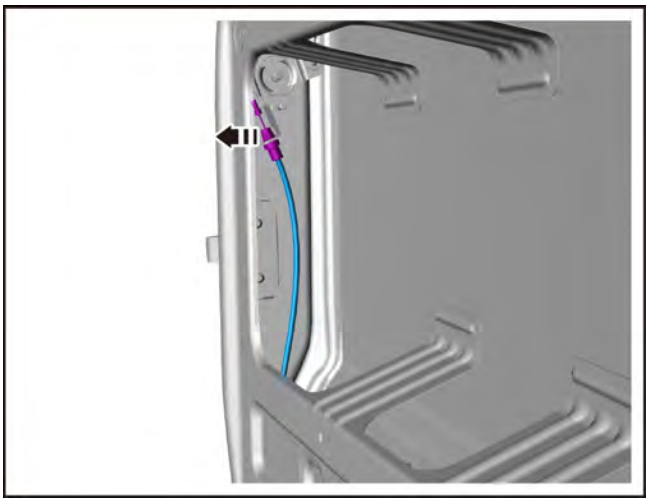
Removal Steps

1 Remove tailgate Shield Assembly left. Refer to:Tailgate Shield Assembly Left, Repair Procedure

2 Remove Split Rear Door lower lock cover. Refer to:Split Rear Door Lower Lock Cover, Repair Procedure



3 release Split Rear Door left lower lock cable assembly.



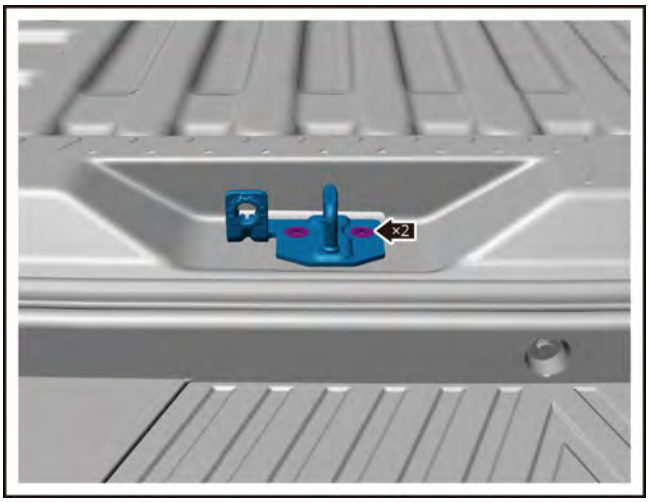
4 release Split Rear Door left lower lock cable, remove Split Rear Door left lower lock cable assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Split Rear Door Lower Lock Buckle, Repair Procedure

Removal Steps



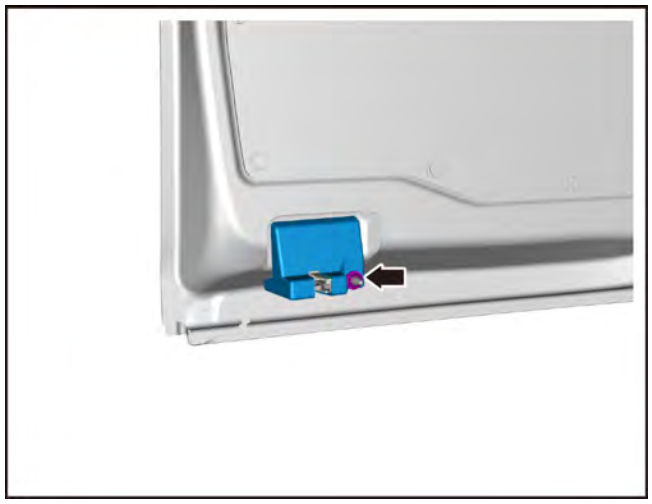
1 Remove 2 retaining screw, remove Left Split Rear Door lower lock buckle assembly.

Installation Steps

1 Install in the reverse order of removal.

Split Rear Door Lower Lock Cover, Repair Procedure

Removal Steps



1 open left rear tailgate.

2 release locating pin, remove Split Rear Door lower lock cover assembly.

Installation Steps

1 Install in the reverse order of removal.

Split Rear Door Left Upper Lock Cable, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

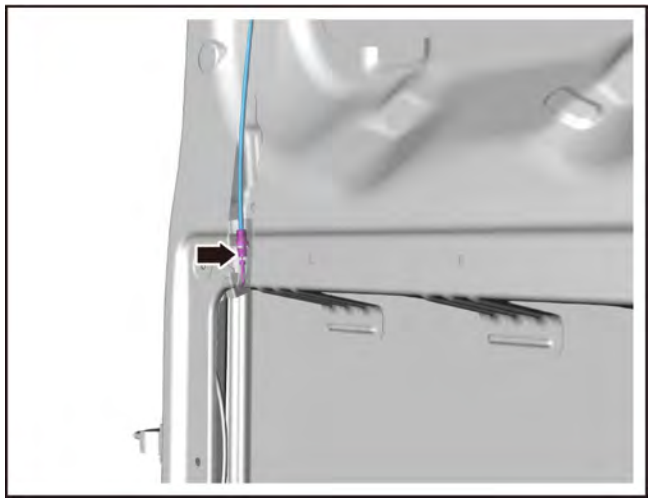
Removal Steps

1 open left rear tailgate.

2 Remove Split Rear Door upper lock body cover. Refer to:Split Rear Door Upper Lock Body Cover, Repair Procedure

3 Remove Left Split Rear Door upper lock assembly. Refer to:Left Split Rear Door Upper Lock Assembly, Repair Procedure

4 Remove tailgate Shield Assembly left. Refer to:Tailgate Shield Assembly Left, Repair Procedure



5 release cable retaining clip, remove Split Rear Door left upper lock cable assembly.

Installation Steps

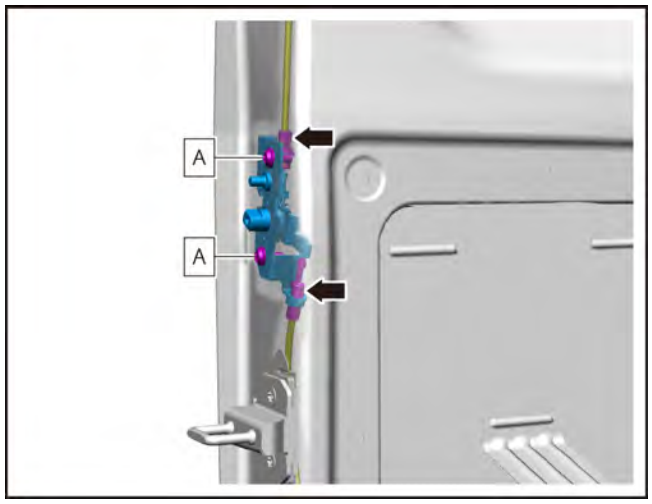
1 Install in the reverse order of removal.

Split Rear Door Conversion Mechanism, Repair Procedure

Removal Steps

1 Remove Split Rear Door left open hold hand assembly. Refer to:Split Rear Door Left Open Hold Hand, Repair Procedure

2 Remove tailgate Shield Assembly left. Refer to:Tailgate Shield Assembly Left, Repair Procedure



3 remove Split Rear Door conversion mechanism.

a. release Split Rear Door left lower lock cable.

b. release Split Rear Door left upper lock cable.

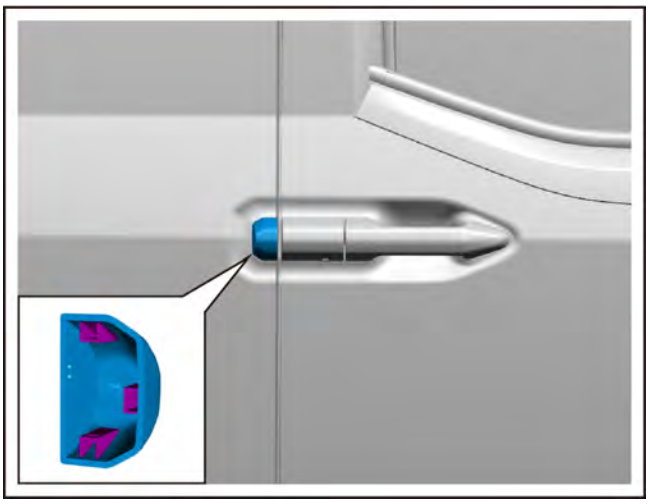
c. Remove 2 retaining screw A, remove Split Rear Door conversion mechanism.

Installation Steps

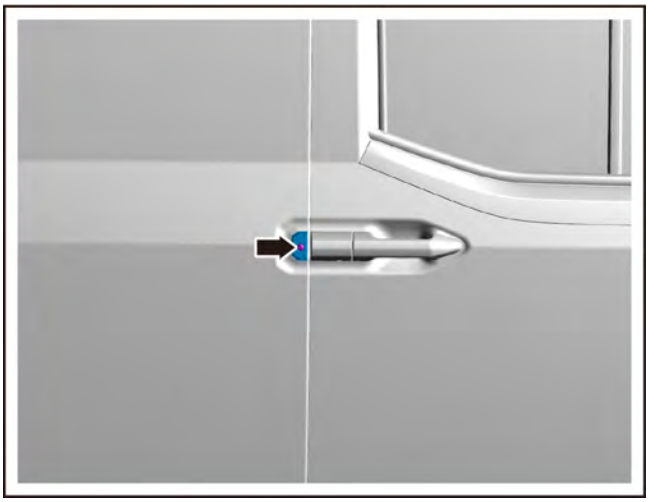
1 Install in the reverse order of removal.

Right Side End Cap - Single Sliding Door, Repair Procedure

Removal Steps



1 Remove right side end cap - single Sliding Door outer cover.



2 Remove retaining bolt, remove right side end cap - single Sliding Door.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Windscreen Lower Trim

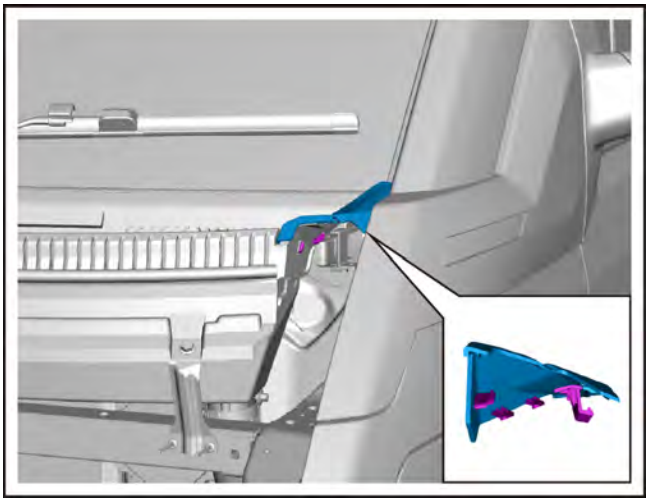
Repair Procedure

Left Angle Trim Panel, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 tow open retaining clip, remove left angle trim panel.

Installation Steps

1 Install in the reverse order of removal.

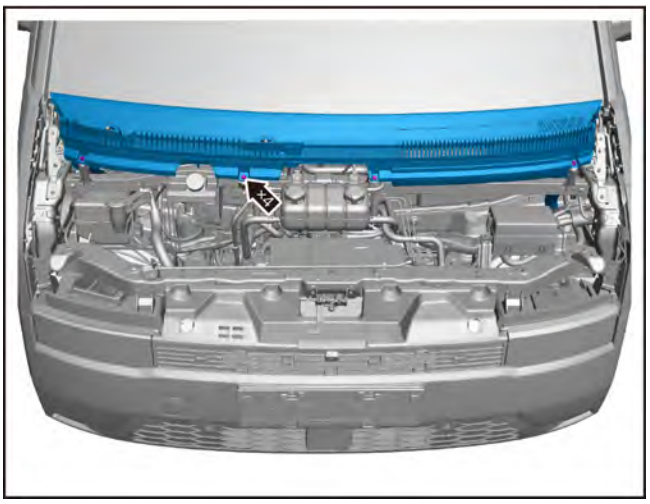
Windscreen Lower Trim Panel Body Assembly, Repair Procedure

Removal Steps

1 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

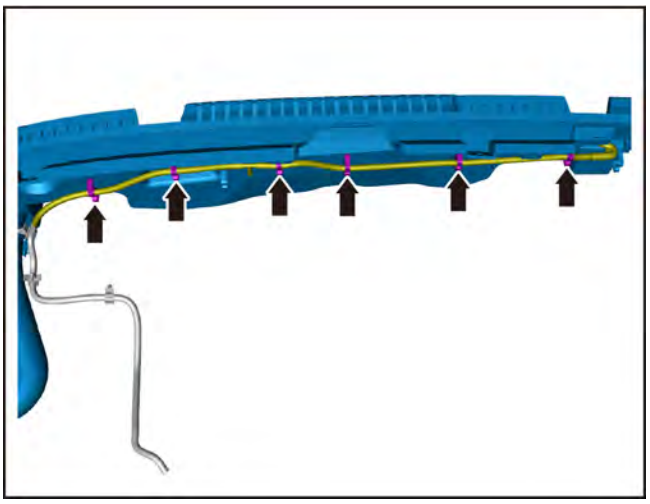
2 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

3 Remove bonnet rear weatherstrip. Refer to:Bonnet Rear Weatherstrip, Repair Procedure



4 Remove 4 retaining bolt, release Windscreen Lower Trim panel body assembly.

5 Remove left, right coolant hose connector. Refer to:Coolant Hose Connector, Repair Procedure



6 release front washer line assembly 6 retaining card clamp, remove Windscreen Lower Trim panel body assembly.

Installation Steps

1 Install in the reverse order of removal.

RHD Left Coolant Hose, Repair Procedure

Tips

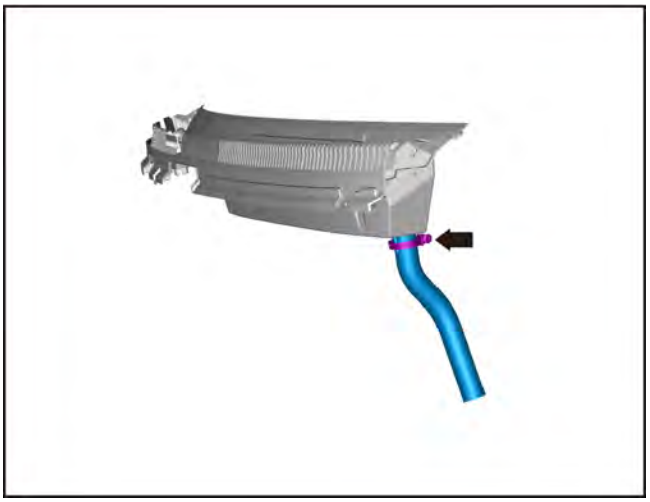
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

2 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

3 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure



4 Remove retaining clamp, remove RHD left coolant hose.

Installation Steps

1 Install in the reverse order of removal.

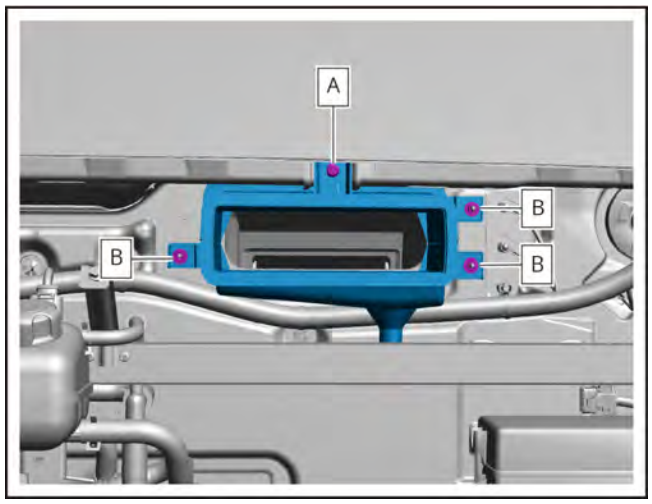
Left Outer Cycle Air Pipe Assembly, Repair Procedure

Removal Steps

1 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

2 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

3 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure



4 remove left outer cycle air pipe assembly.

a. Remove left outer cycle air pipe assembly retaining bolt A.

b. Remove 3 retaining nut B, remove left outer cycle air pipe assembly.

Installation Steps

1 Install in the reverse order of removal.

Windscreen Lower Trim Panel Body, Repair Procedure

Removal Steps

1 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

2 Remove bonnet rear weatherstrip. Refer to:Bonnet Rear Weatherstrip, Repair Procedure

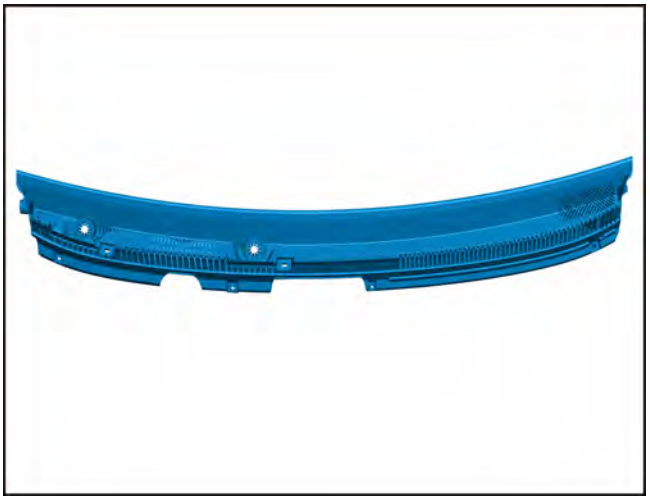
3 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

4 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure

5 Remove front gear at weatherstrip. Refer to:Front Gear at Weatherstrip, Repair Procedure

6 Remove RHD left, right coolant hose. Refer to:RHD Left Coolant Hose, Repair Procedure

7 Remove coolant hose connector. Refer to:Coolant Hose Connector, Repair Procedure



8 remove Windscreen Lower Trim panel body.

Installation Steps

1 Install in the reverse order of removal.

damping pad

Repair Procedure

Dash Panel Inner Sound Insulation Pad, Repair Procedure

Warning

- *For risk-of-death precautions, refer to:* Risk of Death Precautions
- *For cooling system safety precautions, refer to:* Cooling System Safety Precautions
- *For air conditioning system health and safety precautions, refer to:* Air Conditioning System Health and Safety Precautions
- *For health and safety information, refer to:* Health and Safety

Warning

- *with related Brake System Maintenance and Safety Precautions. refer to:* Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:* Health and Safety

Removal Steps

1 Raise the vehicle. Refer to: Vehicle Lifting and Support

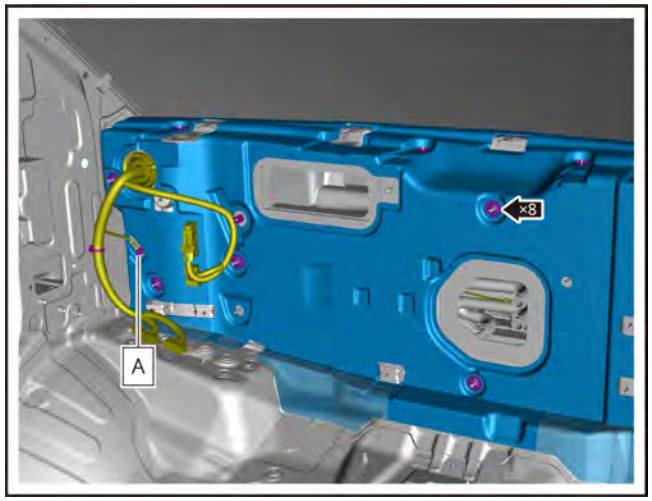
2 Recover the refrigerant. Refer to: Refrigerant Recovery and Charging

3 Drain the coolant. Refer to: Coolant Draining and Filling

4 Power down the vehicle low-voltage system. Refer to: Low-voltage Power-up/Power-down Procedure

5 Remove instrument panel crossmember assembly -RHD. Refer to: Instrument Panel Crossmember Assembly -RHD, Removal and Installation

6 Remove Front HVAC Assembly. Refer to: Front HVAC Assembly, Repair Procedure

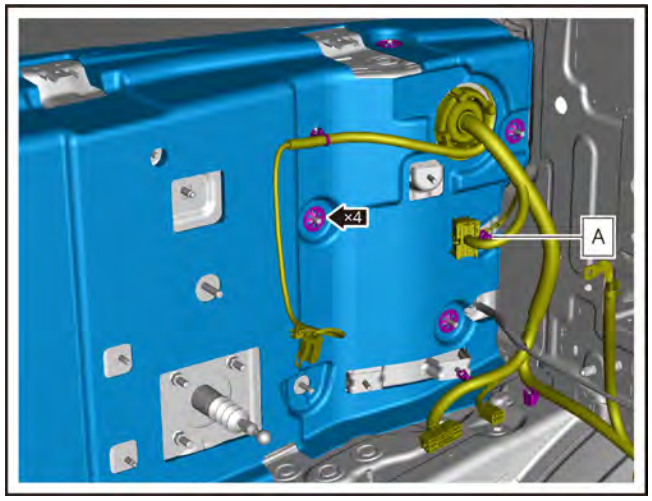


7 Remove front surrounding inner sound insulation pad assembly fastener.

a. Remove front surrounding inner sound insulation pad assembly 8 clamp pad piece.

b. Remove front compartment wiring harness ground cable retaining nut A.

c. Release front compartment wiring harness retaining clip.

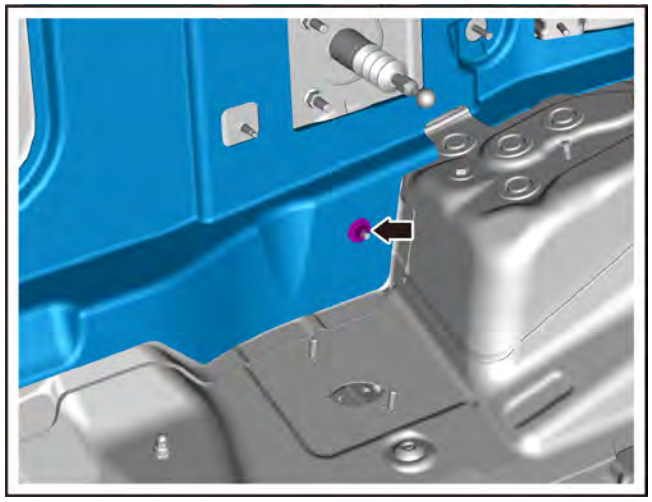


8 remove front surrounding inner sound insulation pad assembly fastener.

a. Remove front surrounding inner sound insulation pad assembly 4 clamp pad piece.

b. Remove front compartment wiring harness assembly ground cable retaining nut A.

c. Release front compartment wiring harness assembly retaining clip.



9 Remove plastic nut, remove front surrounding inner sound insulation pad assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Dash Panel Outer Insulator, Repair Procedure

Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *with related Brake System Maintenance and Safety Precautions. refer to:*Brake System Maintenance and Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

1 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

2 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

3 Raise the vehicle. Refer to:Vehicle Lifting and Support

4 Drain the coolant. Refer to:Coolant Draining and Filling

5 Drain the brake fluid. Refer to:Brake Fluid Recovery and Filling

6 Remove left, right marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation

7 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

8 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

9 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure

10 Remove front washer line assembly. Refer to:Front Washer Line Assembly, Repair Procedure

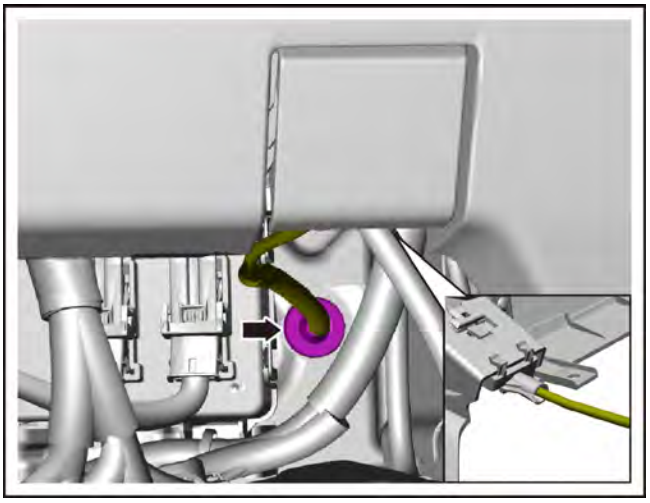
11 Remove integrated brake Controller Assembly. Refer to:Integrated Brake Controller Assembly, Repair Procedure

12 Remove luggage compartment lamp. Refer to:Luggage Compartment Lamp, Repair Procedure

13 Remove left front scuff plate assembly. Refer to:Left Front Scuff Plate Assembly, Repair Procedure

14 Remove right front Seat Assembly. Refer to:Right Front Seat Assembly, Repair Procedure

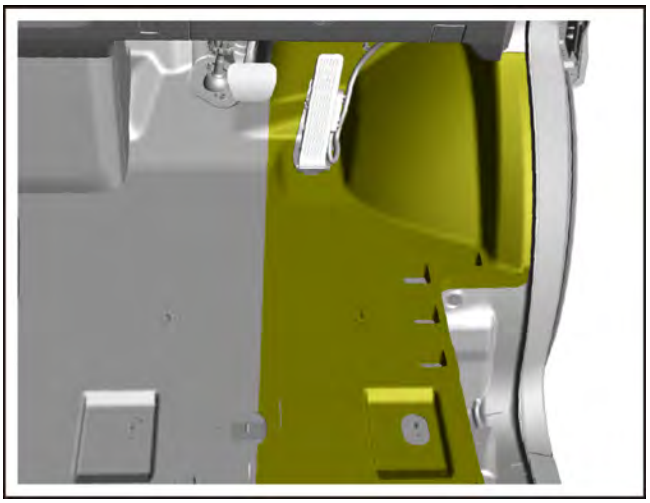
15 Remove right front seat bracket assembly. Refer to:Right Front Seat Bracket Assembly, Repair Procedure



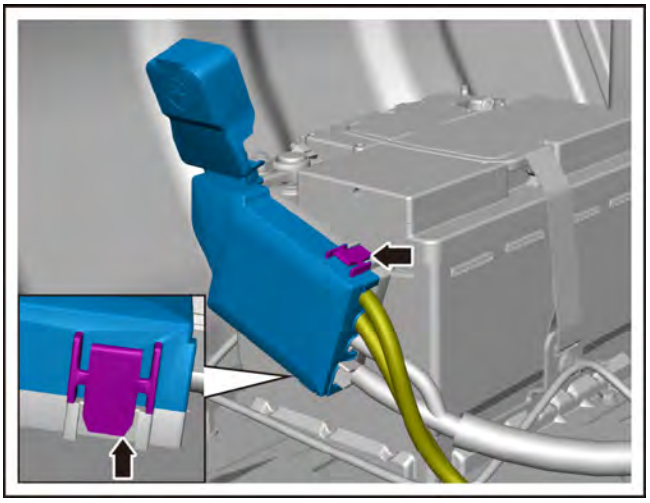
16 release hood cable assembly.

a. release hood cable assembly.

b. release hood cable assembly retaining adhesive sleeve.



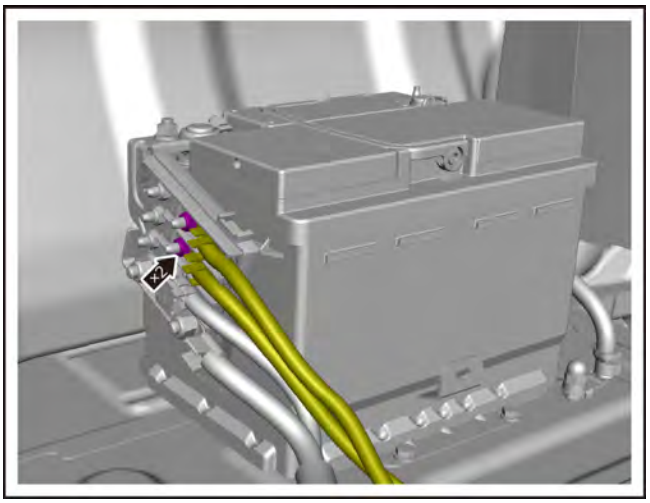
17 release driving compartment carpet.



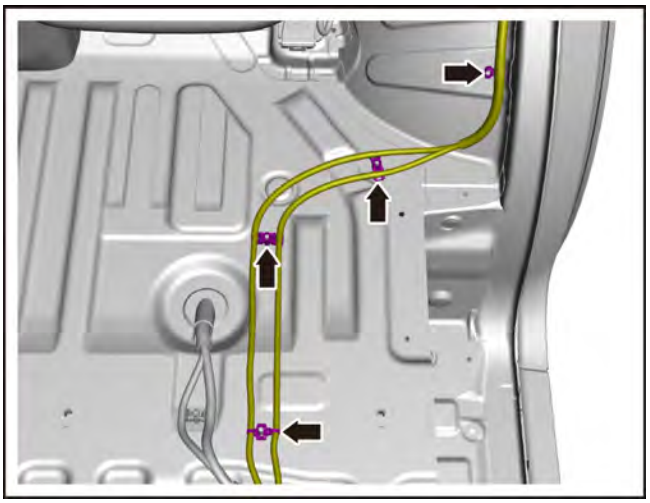
18 remove positive terminal power distribution box upper cover.

a. open battery positive terminal protection cover.

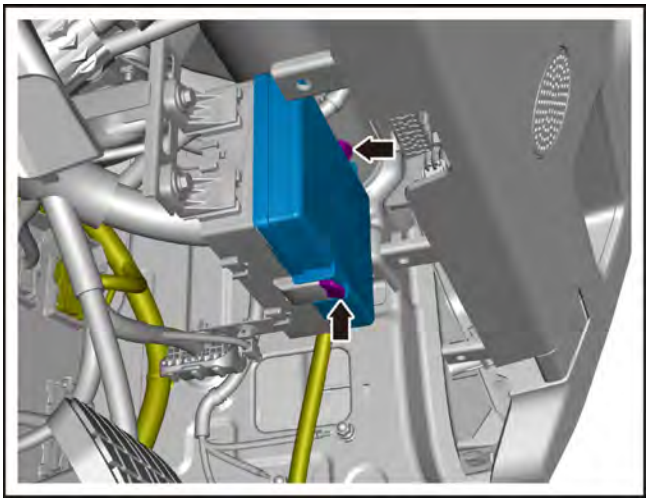
b. press retaining clip, remove positive terminal power distribution box upper cover.



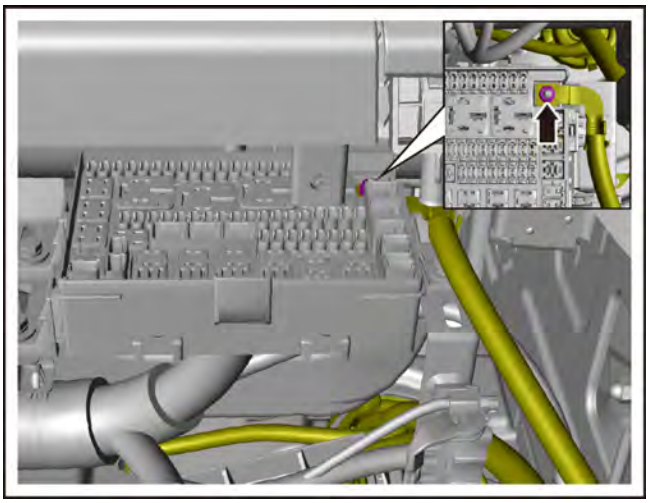
19 Remove battery positive cable 2 retaining nut.



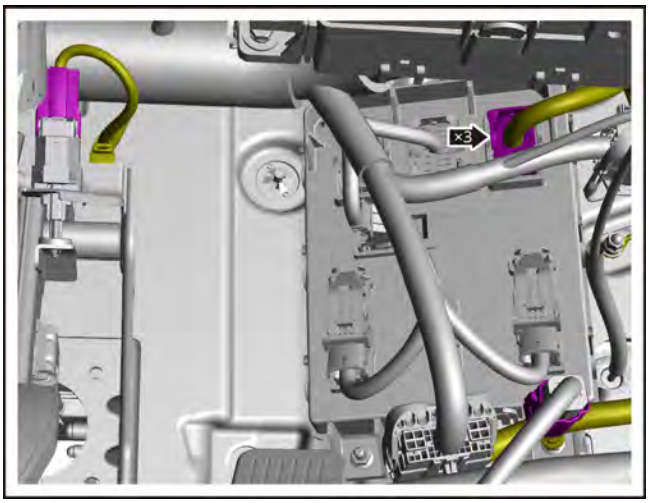
20 Release 4 front compartment wiring harness assembly retaining clips.



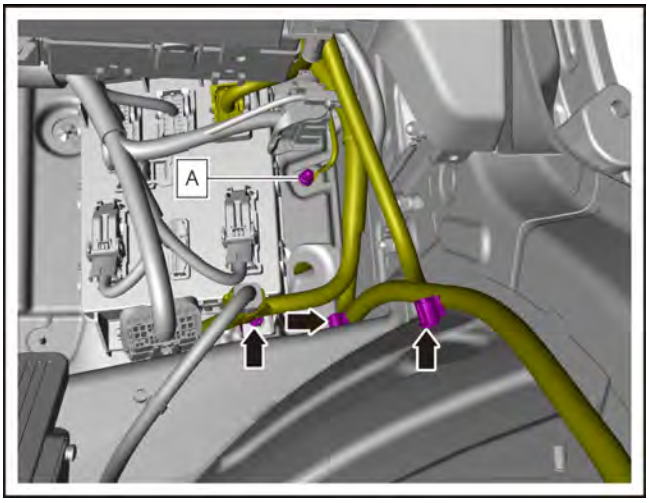
21 press retaining clip, remove instrument panel wiring harness fuse box cover.



22 Remove instrument panel wiring harness retaining nut.



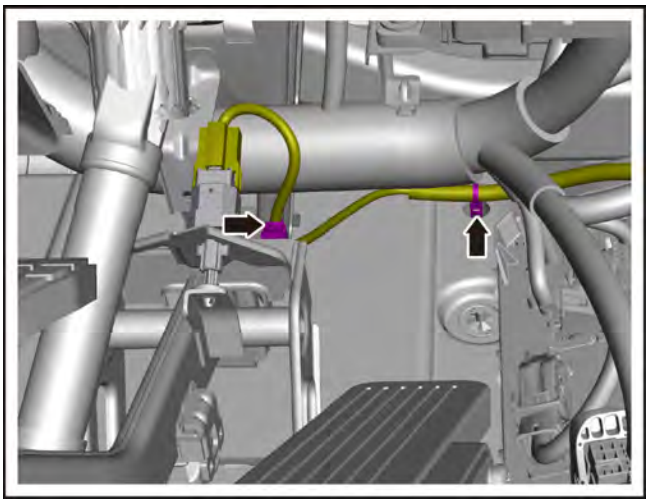
23 Disconnect 3 front compartment wiring harness assembly wiring harness connectors.



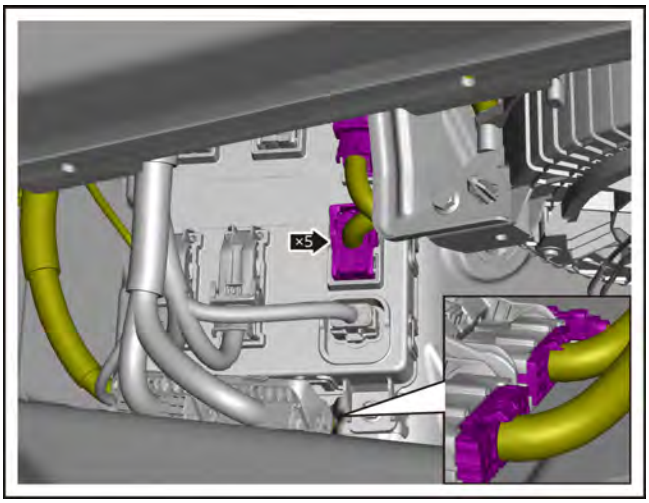
24 Remove front compartment wiring harness assembly fastener.

a. Release 3 front compartment wiring harness assembly retaining clips.

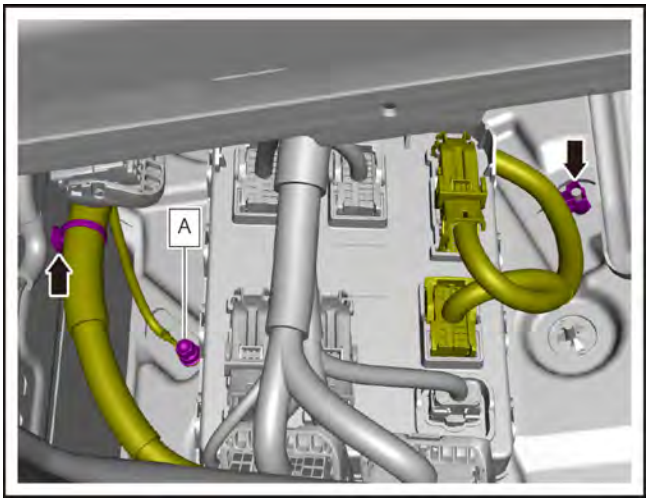
b. Remove front compartment wiring harness assembly ground cable retaining nut A.



25 Release 2 front compartment wiring harness assembly retaining clips.



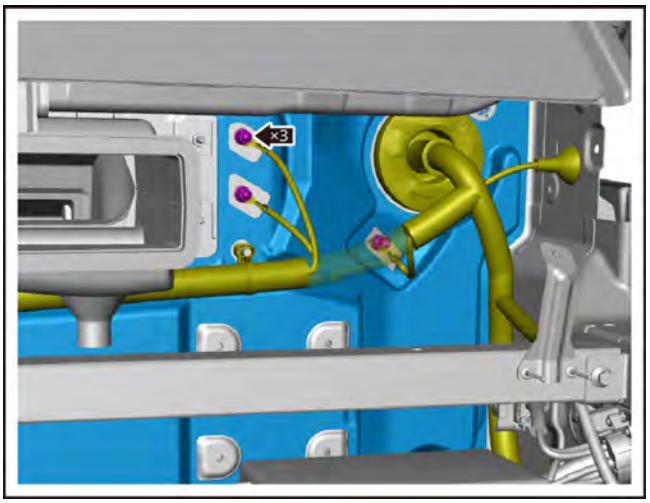
26 Disconnect 5 front compartment wiring harness assembly wiring harness connectors.



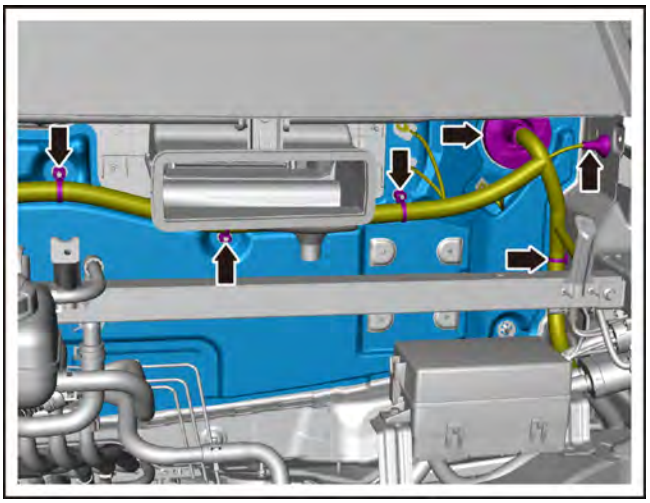
27 Remove front compartment wiring harness assembly fastener.

a. Release 2 front compartment wiring harness assembly retaining clips.

b. Remove front compartment wiring harness assembly ground cable retaining nut A.



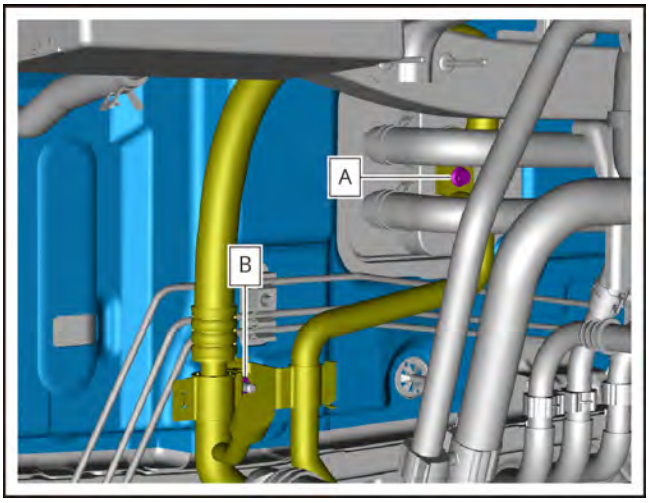
28 Remove front compartment wiring harness assembly ground cable 3 retaining nut.



29 release front compartment wiring harness assembly retaining part.

a. release front compartment wiring harness assembly 2 retaining adhesive sleeve.

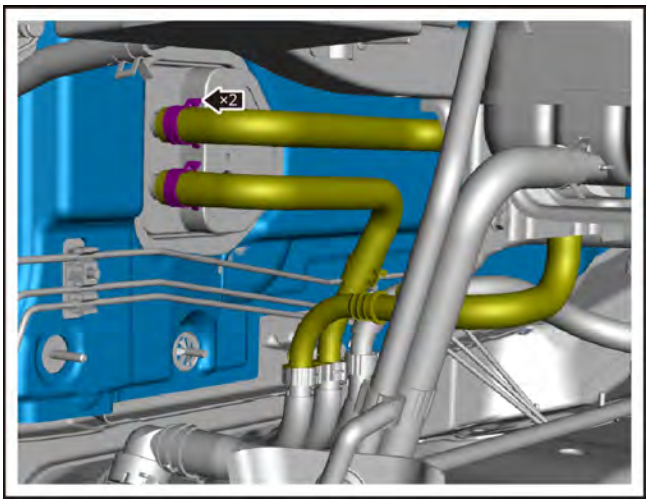
b. Release 4 front compartment wiring harness assembly retaining clips.



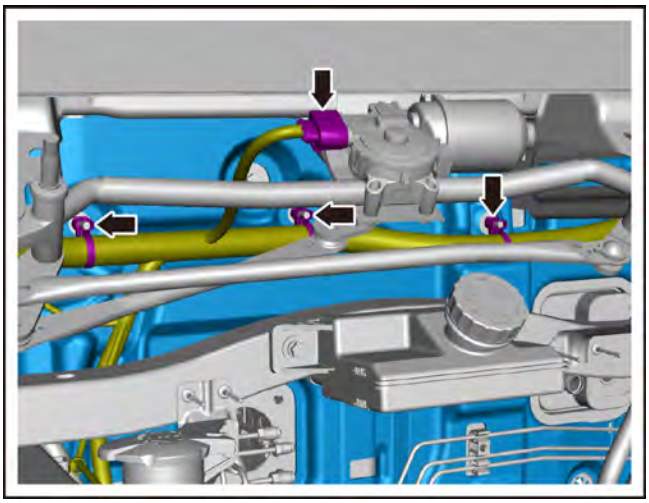
30 release Front A/C Inlet/Outlet Pipe Assembly.

a. Remove Front A/C Inlet/Outlet Pipe Assembly retaining bolt A.

b. Remove retaining nut B, release Front A/C Inlet/Outlet Pipe Assembly.



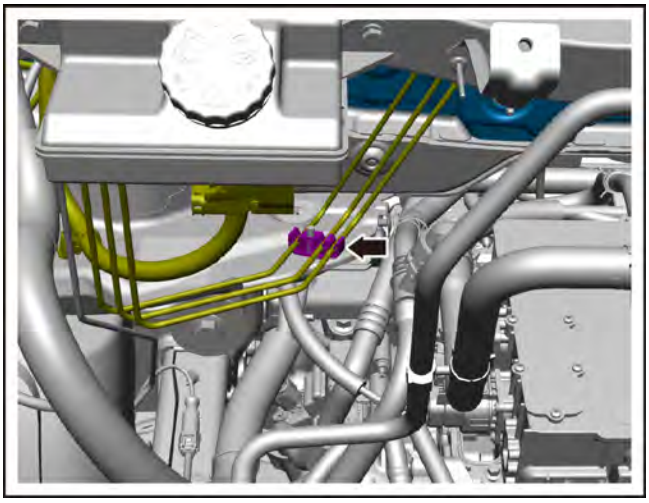
31 Remove 2 retaining clamp, release front HVAC connect coolant hose.



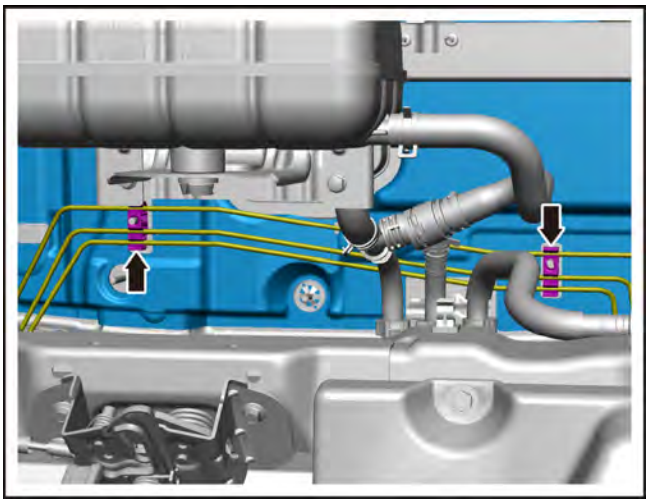
32 Release front compartment wiring harness assembly retaining clip.

a. Disconnect front compartment wiring harness assembly wiring harness connector.

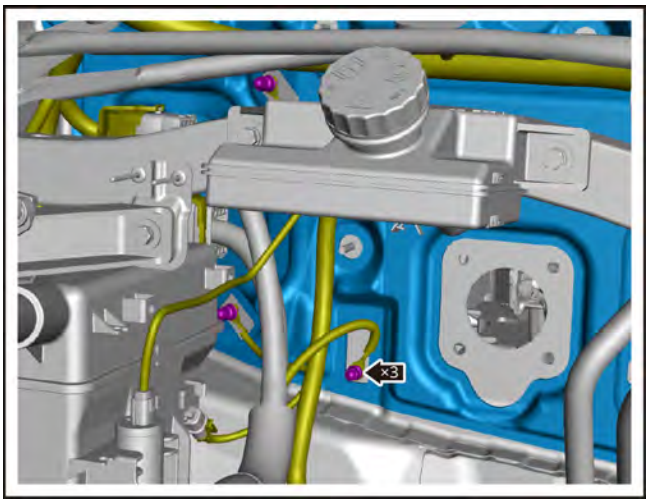
b. Release 3 front compartment wiring harness assembly retaining clips.



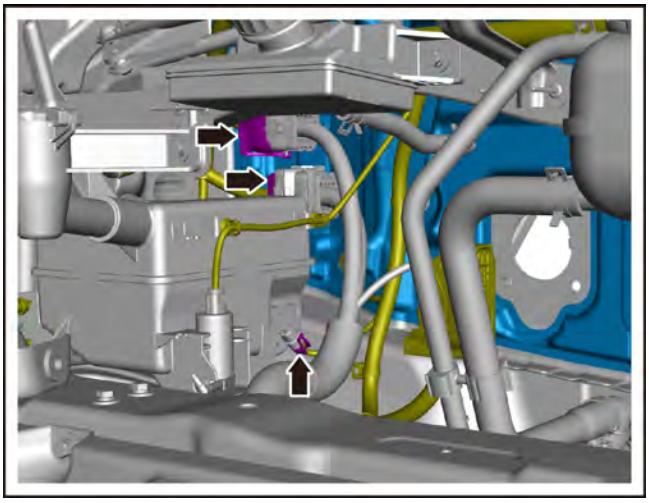
33 release brake hose circuit retaining card clamp.



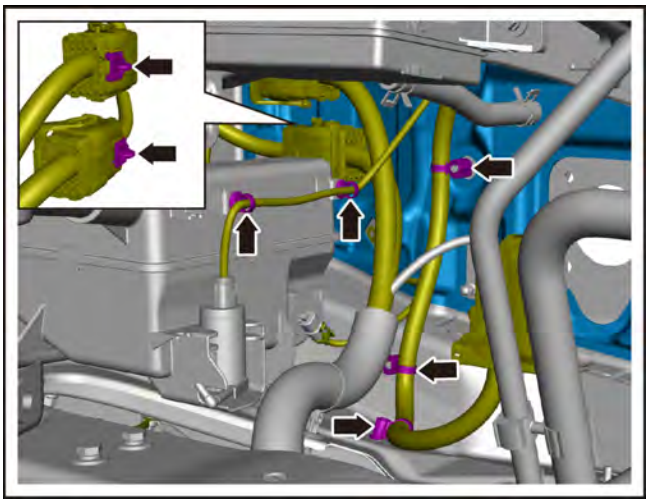
34 release brake hose circuit retaining card clamp.



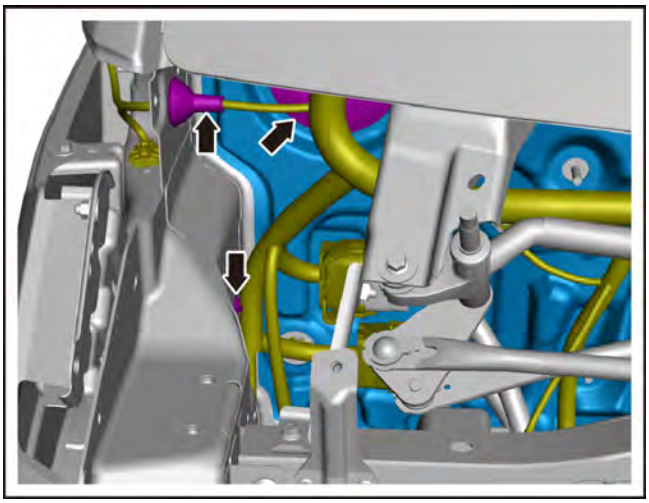
35 Remove front compartment wiring harness assembly ground cable 2 retaining nut.



36 Disconnect 3 front compartment wiring harness assembly wiring harness connectors.



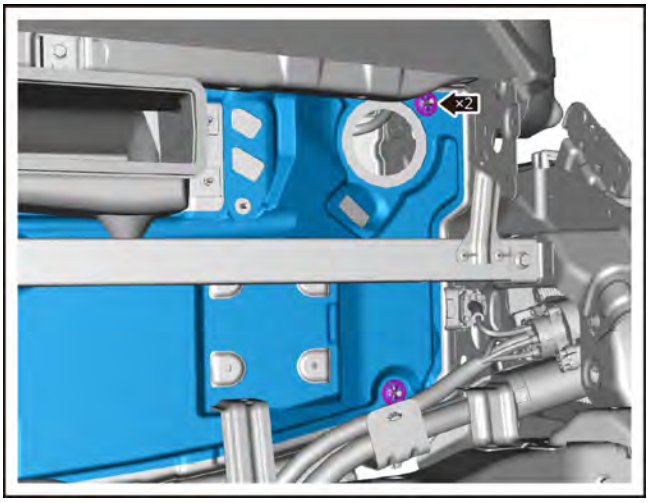
37 Release 7 front compartment wiring harness assembly retaining clips.



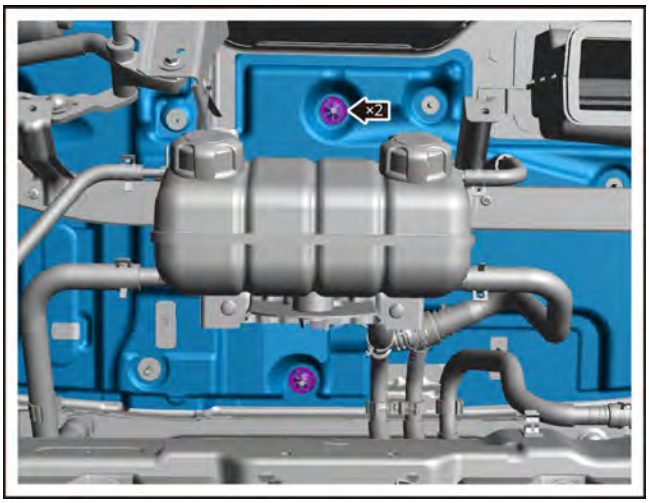
38 release front compartment wiring harness assembly.

a. release front compartment wiring harness assembly 2 retaining adhesive sleeve.

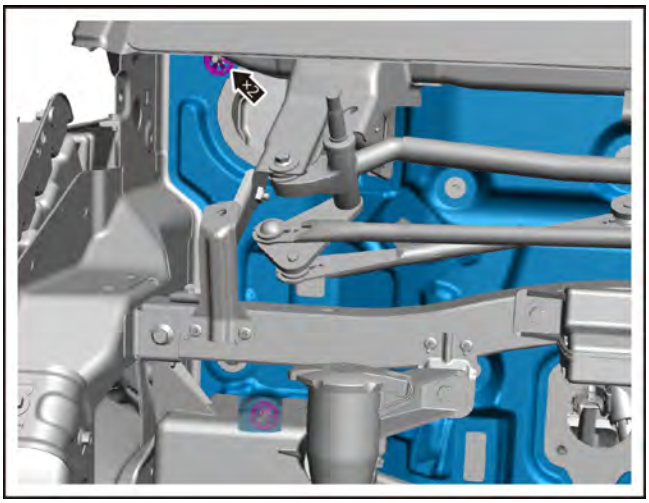
b. Release front compartment wiring harness assembly retaining clip.



39 Remove Dash Panel Outer Insulator left 2 clamp pad piece.



40 Remove Dash Panel Outer Insulator center 2 clamp pad piece.



41 Remove right 2 clamp pad piece, remove Dash Panel Outer Insulator.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage.

Replace any damaged clips with new ones as necessary.

3 When connecting the connector, make sure it is clean, dry and free of foreign matter.

4 ensure all wiring harness connect secure, retaining position correct. avoid wiring harness or line cable interaction fork, damage and short circuit.

5 Fill the brake fluid and bleed the brake system. Refer to: Brake Fluid Recovery and Filling

6 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

7 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Floor Lower Isolate Thermal Pad, Repair Procedure

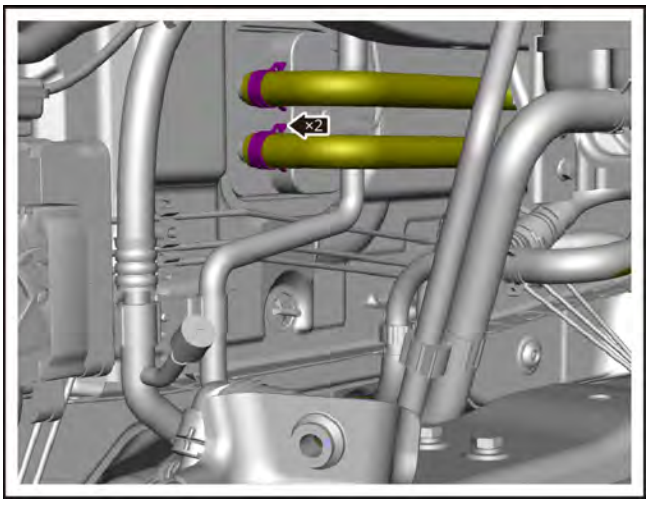
Warning

- *For air conditioning system health and safety precautions, refer to:*Air Conditioning System Health and Safety Precautions
- *For cooling system safety precautions, refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Caution

After disconnecting a line, seal the open line and component to prevent dust or foreign matter from entering.

Removal Steps

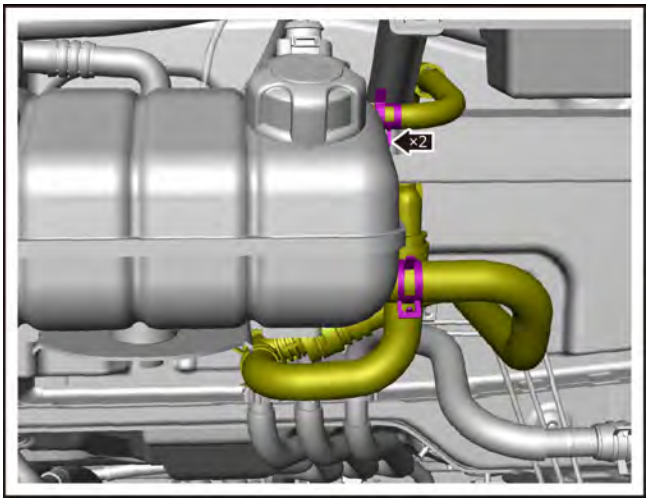


1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

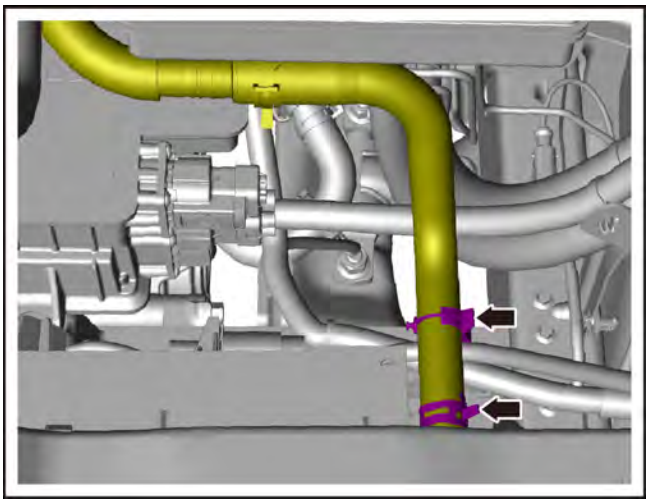
2 Recover the refrigerant. Refer to:Refrigerant Recovery and Charging

3 Drain the coolant. Refer to:Coolant Draining and Filling

4 Remove 2 retaining clamp, release front HVAC connect coolant hose.



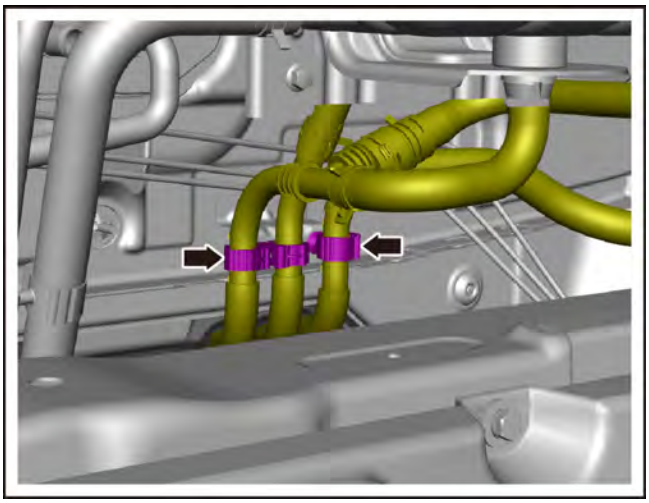
5 Remove 2 retaining clamp, release coolant expansion tank assembly left connect coolant hose.



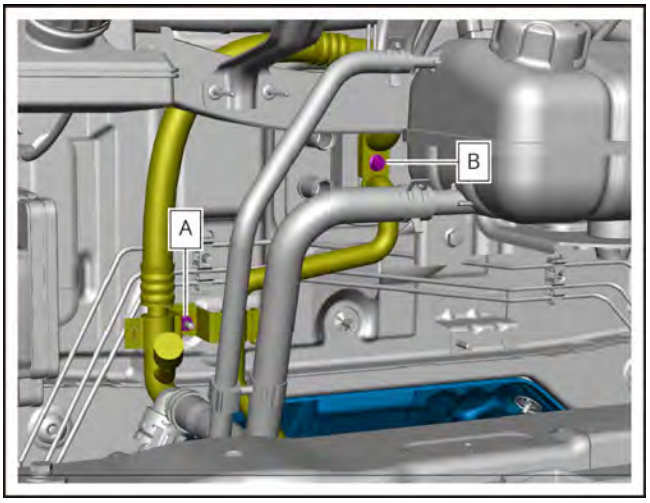
6 release Low-temperature Radiator Inlet Hose Assembly.

a. release Low-temperature Radiator inlet pipe retaining hose clamp.

b. release retaining clamp, release Low-temperature Radiator Inlet Hose Assembly.



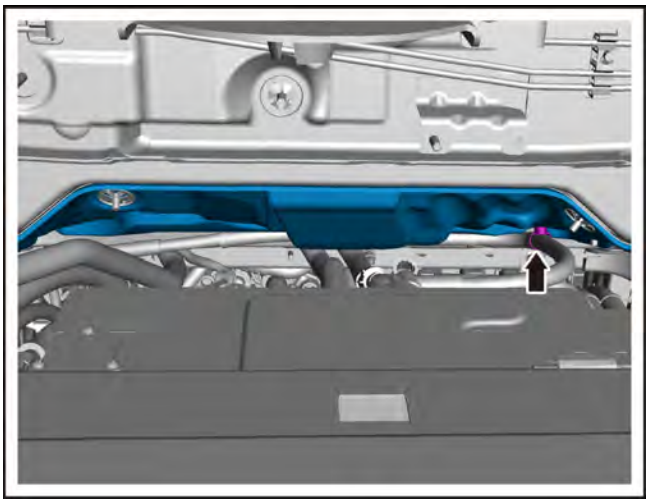
7 release 2 retaining hose clamp, release front compartment connect coolant hose.



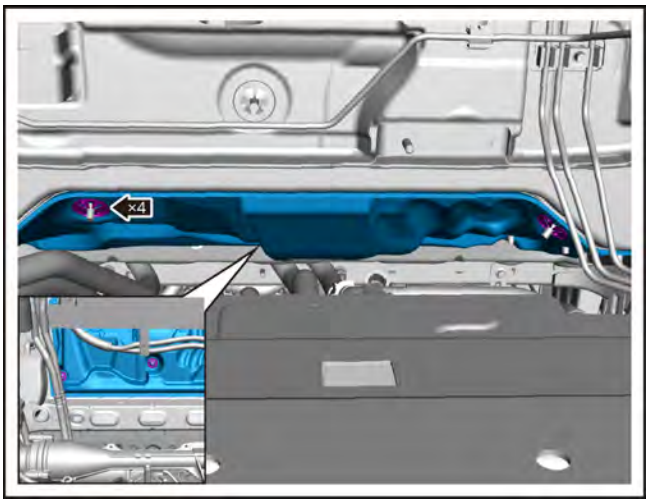
8 release Front A/C Inlet/Outlet Pipe Assembly.

a. Remove Front A/C Inlet/Outlet Pipe Assembly retaining nut A.

b. Remove retaining bolt B, release Front A/C Inlet/Outlet Pipe Assembly.



9 Release battery positive cable retaining clip.



10 Remove 4 clamp pad piece, remove Floor lower isolate thermal pad.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Fill the coolant and bleed the air. Refer to:Coolant Draining and Filling

3 Charge the refrigerant. Refer to:Refrigerant Recovery and Charging

Left Fender Insulator, Repair Procedure

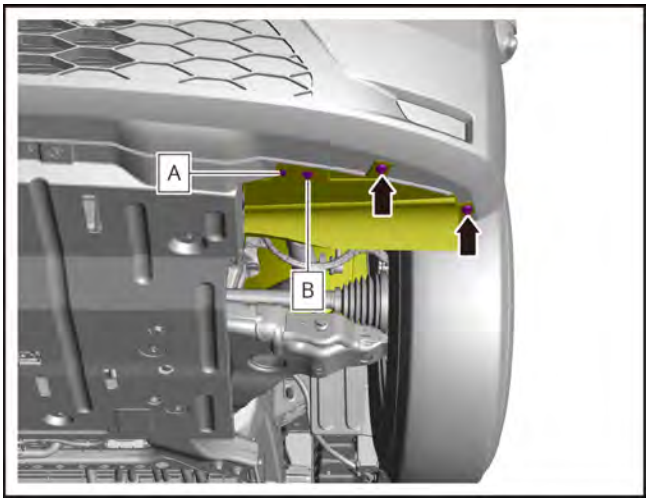
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support

2 Remove left front wheel arch trim front segment. Refer to:Left Front Wheel Arch Trim Front Segment, Repair Procedure

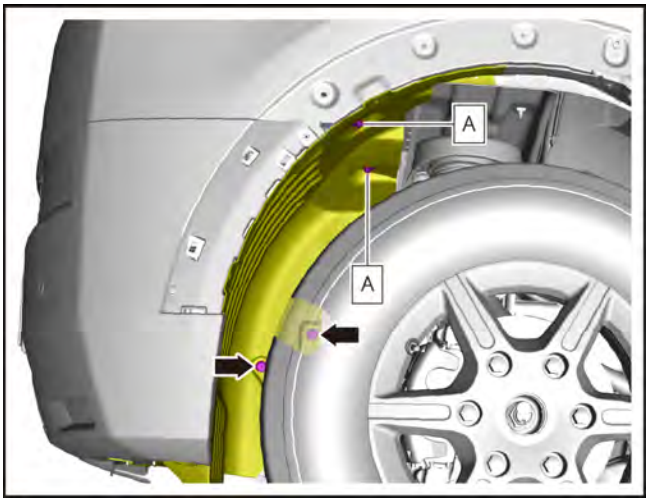


3 Remove left front wheel cover assembly fastener.

a. Remove Front Underbody Shield retaining bolt A.

b. Remove left front wheel cover assembly retaining bolt B.

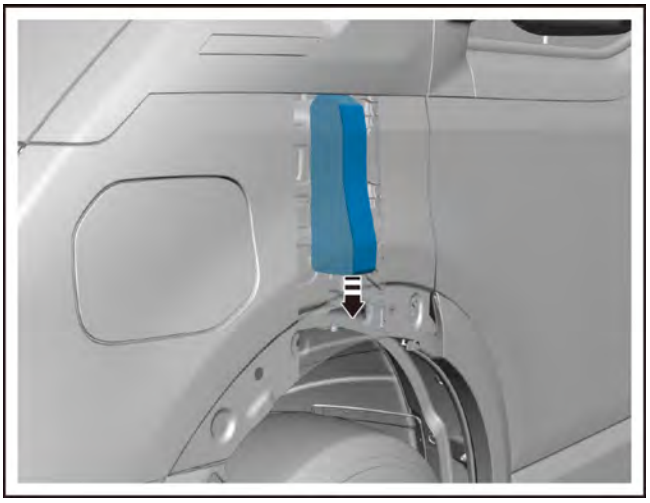
c. Remove left front wheel cover assembly 2 retaining clip.



4 offset open left front wheel cover assembly.

a. Remove left front wheel cover assembly 2 plastic nut A.

b. Remove 2 retaining clip, offset open left front wheel cover assembly.



5 according to direction arrow side direction remove Left Fender Insulator.

Installation Steps

1 Install in the reverse order of removal.

inner exterior rearview mirror

System Overview

Rearview Mirror Function Overview

System Principle

interior rearview mirror use at observe vehicle rear condition, matching backup streaming media Function, through camera sensor detection rear actual when circuit item. exterior rearview mirror position at door both sides, support power adjustment, heat, folding and Function.

switch trigger folding / deploy open

Left Front Zone Control Unit detection to Folding the Exterior Rearview Mirrors deploy open Hardwired switch already trigger, when front rearview mirror for folding Status: drive left right rear view goggles**deploy open**Output 10s. when front rearview mirror for deploy open Status: drive left right rear view goggles drive left right rear view goggles**folding**Output 10s.

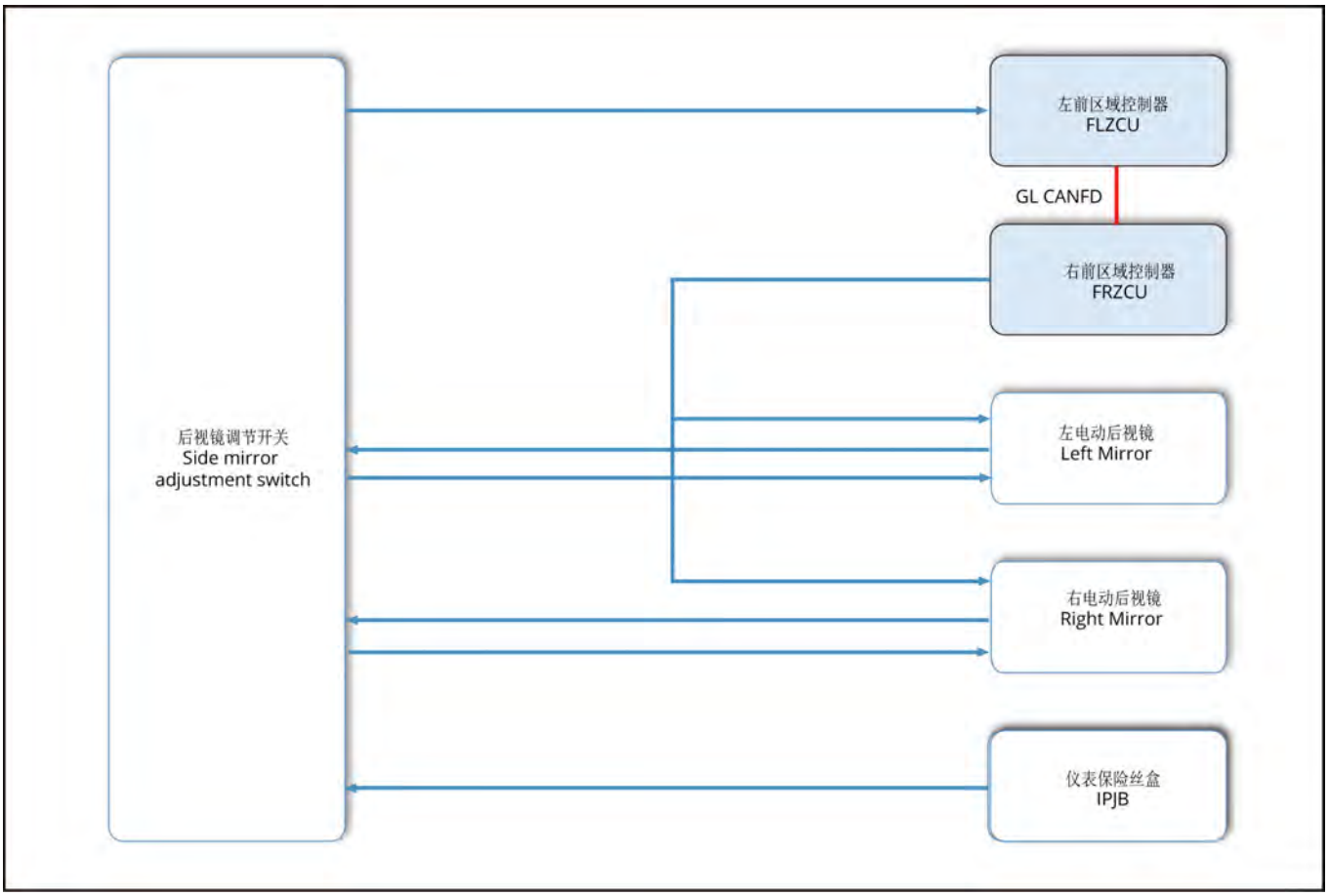
lock vehicle exterior rearview mirror automatic folding

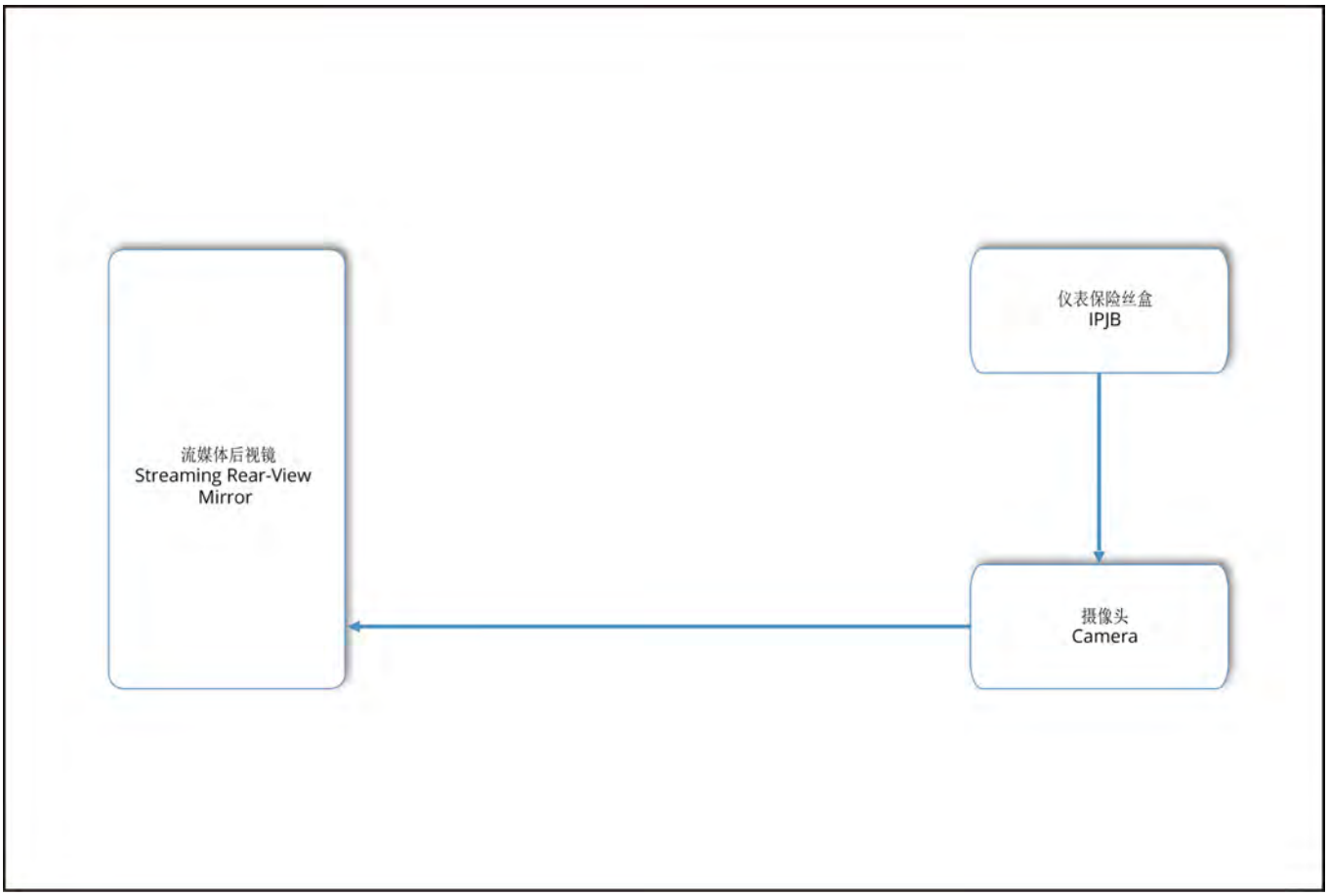
vehicle power supply Status for OFF / Comfortable / ON, and automatic folding Function open, Vehicle Speed valid and ≤10km/h, rearview mirror physical Status for deploy open. meet sufficient any intent I Setting Conditions: vehicle setting protection successful or receive item item remote away request, control left right rear view goggles folding Output 10s.

exterior rearview mirror mirror glass rain day automatic heat

power mode for ON, rain day automatic heat setting item open, Vehicle Speed large at 4Km/h, Left Front Zone Control Unit in 30S inner detection wiper Status Signal jump 2 times or Left Front Zone Control Unit detection to 500ms inner wiper connect continue low speed or high speed signal. Left Front Zone Control Unit transmit left Right Outside Rearview Mirror mirror glass heat request to Right Front Zone Control Unit, Right Front Zone Control Unit open heat count when, count when Time 20 min.

Electrical Schematic Diagram





Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
rearview mirror adjustment switch	Hardwired	Control Signal	Left Front Zone Control Unit rearview mirror folding switch Control Signal Output
	Hardwired	Control Signal	left power rearview mirror vertical adjustment Control Signal Output
	Hardwired	Control Signal	left power rearview mirror horizontal adjustment Control Signal Output
	Hardwired	Control Signal	right power rearview mirror vertical adjustment Control Signal Output
	Hardwired	Control Signal	right power rearview mirror horizontal adjustment Control Signal Output
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
Left Front Zone Control Unit	Hardwired	Control Signal	rearview mirror adjustment switch folding switch Control Signal Input
	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
Right Front Zone Control Unit	GL CANFD	Communication Signal	Data Transmission and Status Communication, Command Control and Fault Diagnosis
left power rearview mirror	Hardwired	Control Signal	rearview mirror adjustment switch vertical adjustment Control Signal Input
	Hardwired	Control Signal	rearview mirror adjustment switch horizontal adjustment Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit outside mirror heating Control Signal Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror folding Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror deploy open Control Signal Input
right power rearview mirror	Hardwired	Control Signal	rearview mirror adjustment switch vertical adjustment Control Signal Input
	Hardwired	Control Signal	rearview mirror adjustment switch horizontal adjustment Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit outside mirror heating Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror folding Control Signal Input
	Hardwired	Control Signal	Right Front Zone Control Unit rearview mirror deploy open Control Signal Input
Instrument Panel Fuse Box	Hardwired	Power Supply	rearview mirror adjustment switch Power Supply Output
	Hardwired	Power Supply	camera Power Supply Output
streaming media rearview mirror	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
	Hardwired	display signal	video signal, high speed Data Transmission, Control Signal, power supply
camera	Hardwired	display signal	video signal, high speed Data Transmission, Control Signal, power supply

Component Description

exterior rearview mirror assembly

exterior rearview mirror assembly install in vehicle both sides A pillar outside, Yes vehicle driver assist system important consists of part section. exterior rearview mirror assembly can through adjustment angle, facilitate driver observe vehicle rear and side side condition, same when have backup heat defrost, automatic folding etc. Function, improve driving safety characteristic and convenience characteristic.

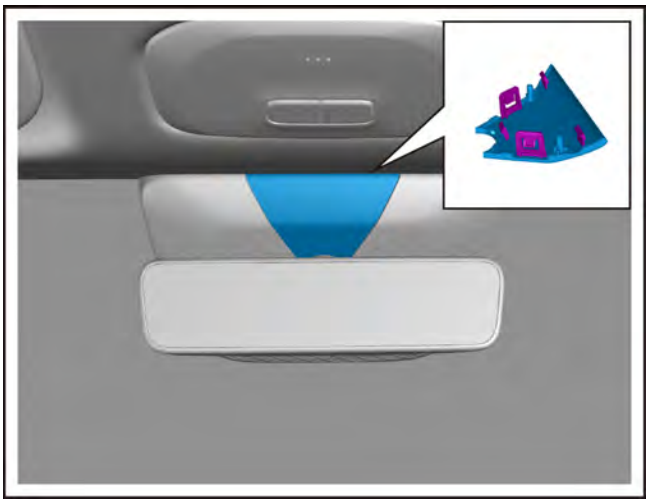
inner rearview mirror assembly

inner rearview mirror assembly suspend in roof front, matching backup streaming media interior rearview mirror, can with through vehicle rear camera item remove vehicle rear side image, and driver can with according to itself condition adjustment map like illuminate degree, vertical view item angle and map like large small, facilitate check view vehicle rear side environment.

Repair Procedure

Interior Rearview Mirror Small Cover, Repair Procedure

Removal Steps



1 UsePlastic Pry ToolRemove interior rearview mirror small cover.

Caution

Remove when note protection around side trim panel, prevent wipe injury.

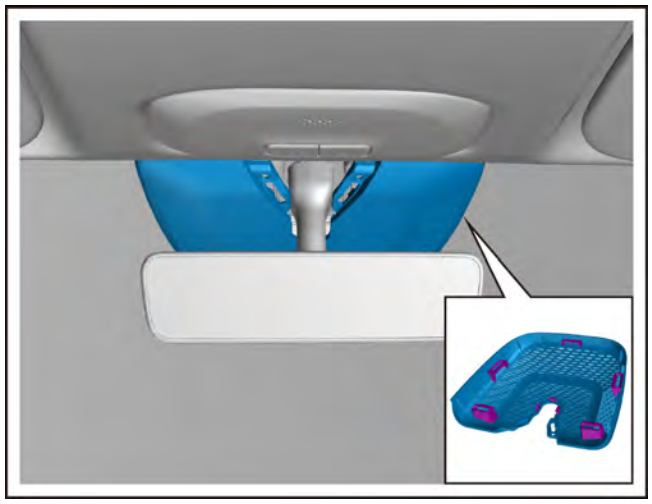
Installation Steps

1 Install in the reverse order of removal.

Interior Rearview Mirror Large Cover, Repair Procedure

Removal Steps

1 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure



2 UsePlastic Pry ToolRemove interior rearview mirror large cover.

Caution

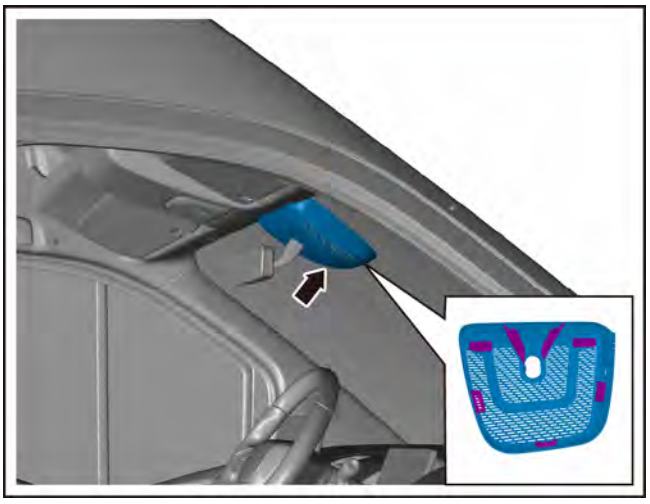
Remove when note protection around side trim panel, prevent wipe injury.

Installation Steps

1 Install in the reverse order of removal.

Interior Rearview Mirror Cover Assembly, Repair Procedure

Removal Steps



1 UsePlastic Pry Toolremove interior rearview mirror cover assembly

Installation Steps

1 Install in the reverse order of removal.

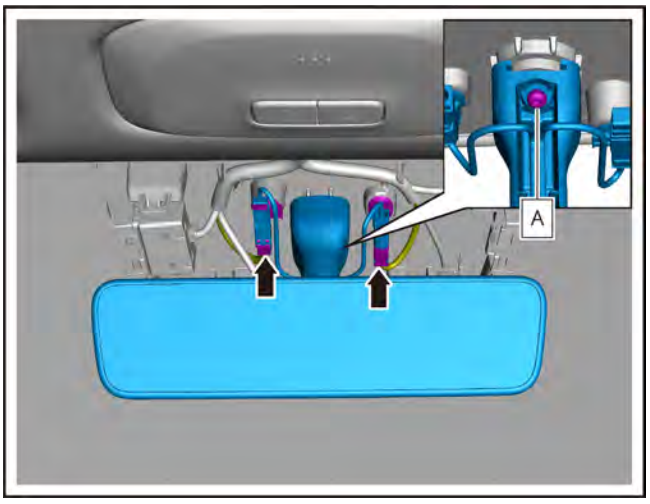
Inner Rearview Mirror Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

3 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure



4 remove inner rearview mirror assembly.

a. Disconnect 2 inner rearview mirror assembly wiring harness connectors.

b. Release interior rearview mirror retaining clip.

c. Remove retaining screw A, remove inner rearview mirror assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Outside Rearview Mirror Assembly, Repair Procedure

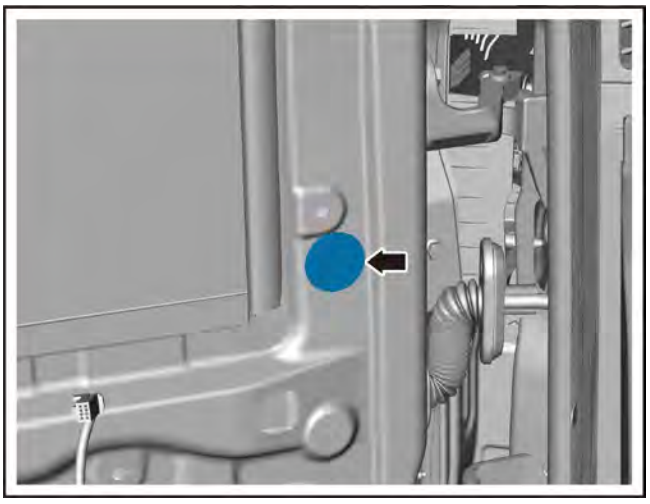
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

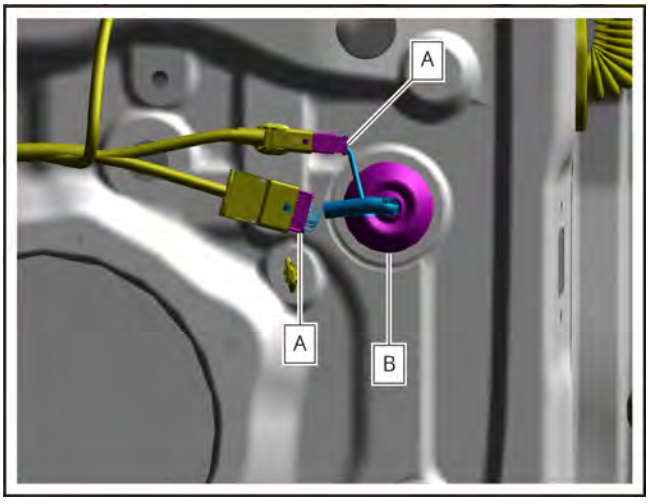
Removal Steps

1 Power down the vehicle low-voltage system.Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation



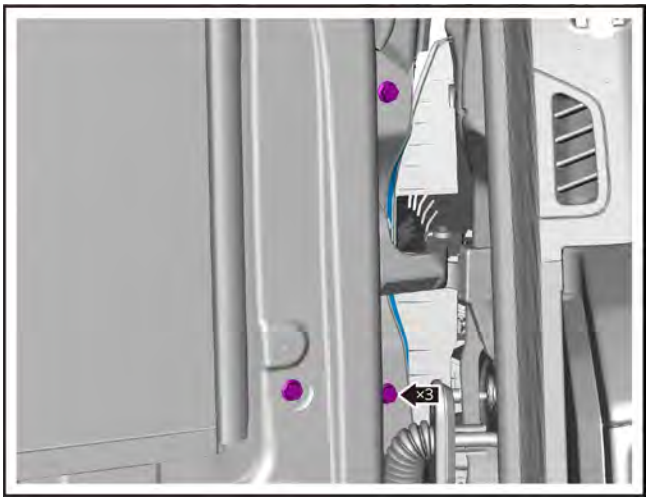
3 Remove protection film.



4 release Left Outside Rearview Mirror assembly retaining adhesive sleeve.

a. disconnect Left Outside Rearview Mirror assembly 2 wiring harness connector A.

b. release Left Outside Rearview Mirror assembly retaining adhesive sleeve B.



5 Remove 3 retaining bolt, remove Left Outside Rearview Mirror assembly.

Installation Steps

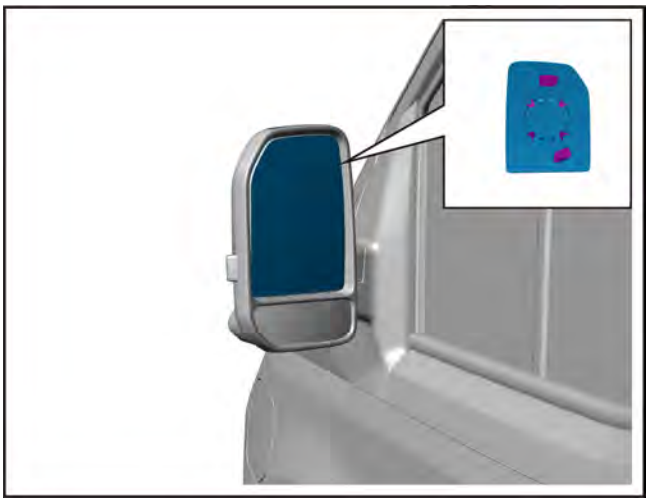
1 Install in the reverse order of removal.

Left Mirror Glass Section Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Use plastic pry panelPlastic Pry Toolrelease retaining clip, remove left mirror glass section assembly.

Caution

mirror glass terminal easy damage, remove when careful operation

Installation Steps

1 Install in the reverse order of removal.

Left Mirror Glass Small Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 UsePlastic Pry Toolrelease left mirror glass small assembly.

Caution

mirror glass terminal easy damage, remove when careful operation

Installation Steps

1 Install in the reverse order of removal.

Left Mirror Adjuster, Repair Procedure

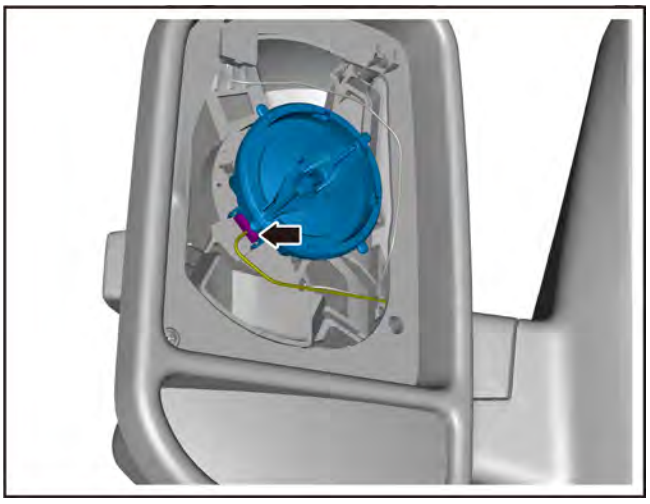
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

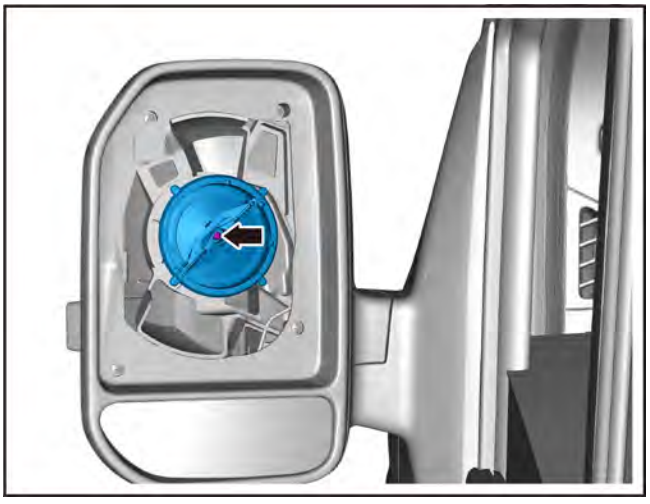
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

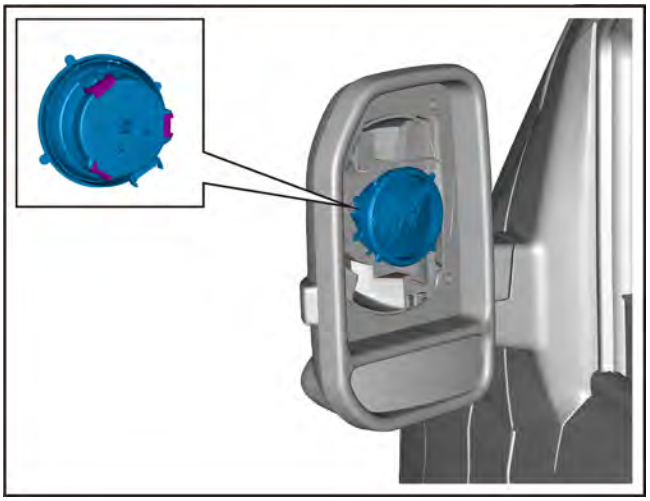
2 Remove left mirror glass section assembly. Refer to:Left Mirror Glass Section Assembly, Repair Procedure



3 Disconnect left mirror adjuster assembly wiring harness connector.



4 Remove left mirror adjuster assembly retaining screw.



5 release retaining clip, remove left mirror adjuster assembly.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

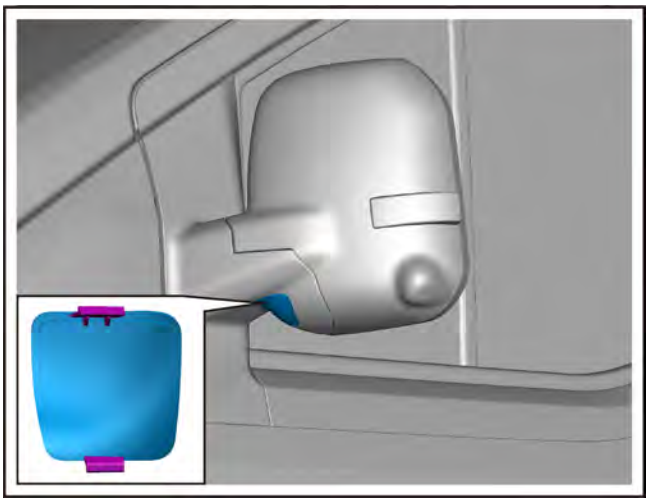
Install complete rear, Use Power Exterior Mirror Switch, ensure left mirror adjuster alive movement normal, no delay card item.

Service Port Cover, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release retaining clip, remove service port cover.

Installation Steps

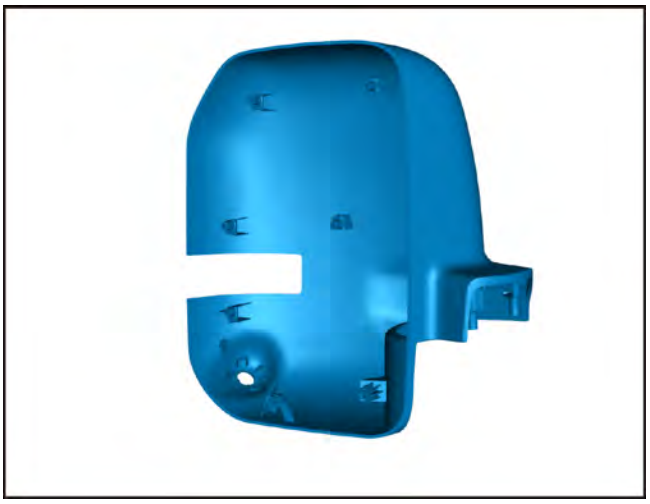
1 Install in the reverse order of removal.

Left Outside Rearview Mirror Goggles Housing, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Outside Rearview Mirror assembly. Refer to:Left Outside Rearview Mirror Assembly, Repair Procedure

3 Remove left mirror glass section assembly. Refer to:Left Mirror Glass Section Assembly, Repair Procedure

4 Remove left mirror adjuster. Refer to:Left Mirror Adjuster, Repair Procedure

5 Remove left service port cover. Refer to:Service Port Cover, Repair Procedure

6 Remove left mirror glass small assembly. Refer to:Left Mirror Glass Small Assembly, Repair Procedure

7 Remove Left Outside Rearview Mirror goggles turn. Refer to:Left Outside Rearview Mirror Goggles Turn, Repair Procedure

8 Remove left view camera. Refer to:Left View Camera, Repair Procedure

9 remove Left Outside Rearview Mirror goggles housing.

Installation Steps

1 Install in the reverse order of removal.

Left Outside Rearview Mirror Goggles Turn, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove left mirror glass section assembly. Refer to:Left Mirror Glass Section Assembly, Repair Procedure

2 Remove left mirror glass small assembly. Refer to:Left Mirror Glass Small Assembly, Repair Procedure

3 Remove 6 retaining screw, remove Left Outside Rearview Mirror goggles turn.

Installation Steps

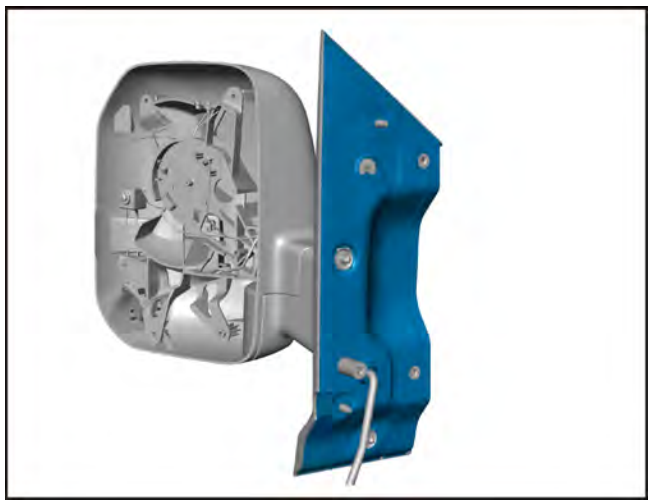
1 Install in the reverse order of removal.

Turn Signal Lamp, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Outside Rearview Mirror assembly. Refer to:Left Outside Rearview Mirror Assembly, Repair Procedure

3 Remove left mirror glass section assembly. Refer to:Left Mirror Glass Section Assembly, Repair Procedure

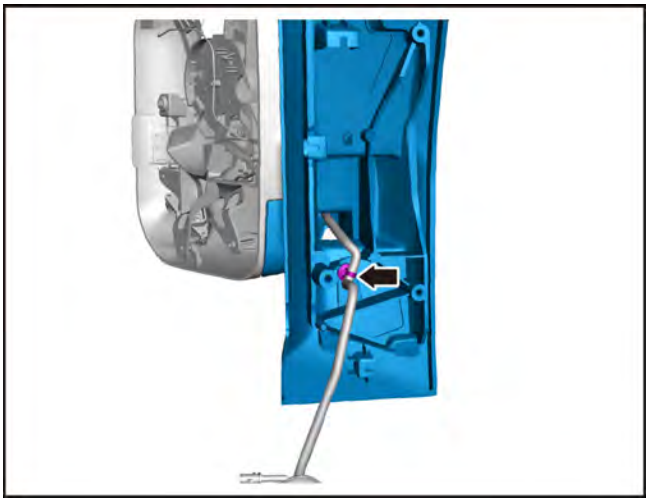
4 Remove left mirror adjuster. Refer to:Left Mirror Adjuster, Repair Procedure

5 Remove service port cover. Refer to:Service Port Cover, Repair Procedure

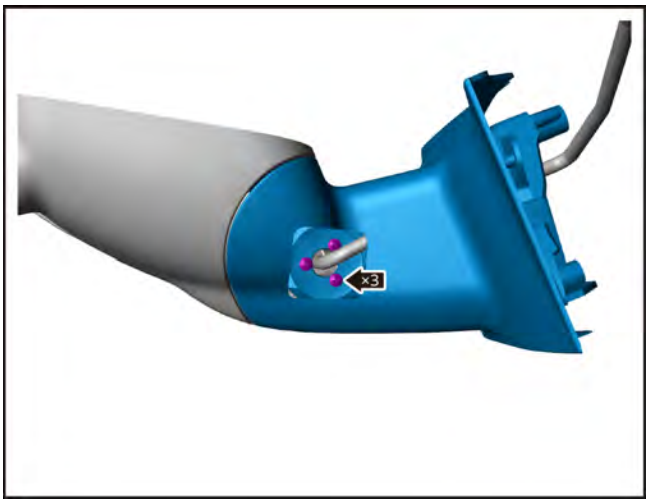
6 Remove left mirror glass small assembly. Refer to:Left Mirror Glass Small Assembly, Repair Procedure

7 Remove Left Outside Rearview Mirror goggles turn. Refer to:Left Outside Rearview Mirror Goggles Turn, Repair Procedure

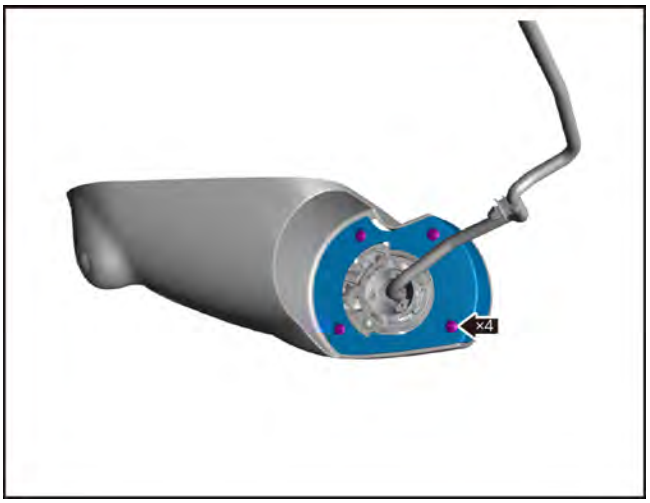
8 Remove Left Outside Rearview Mirror isolate away block.



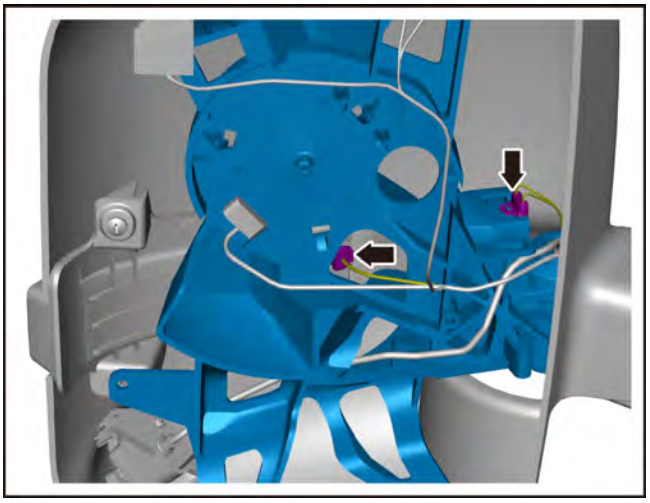
9 Release Left Outside Rearview Mirror assembly wiring harness retaining clip.



10 Remove 3 retaining screw, remove Left Outside Rearview Mirror assembly outer housing.



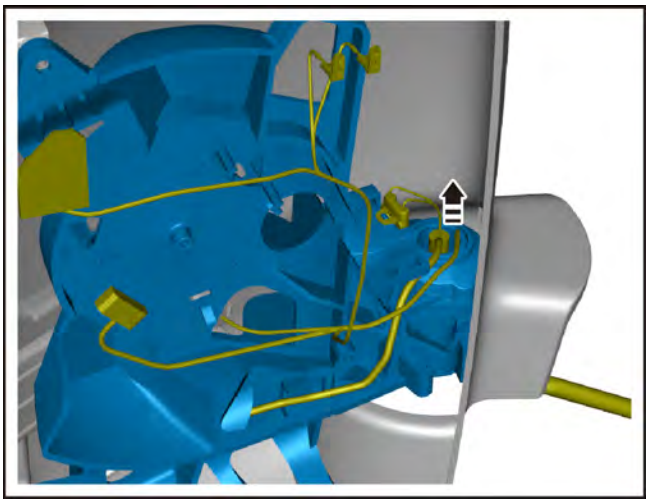
11 Remove 4 retaining screw, remove Left Outside Rearview Mirror connect trim cover.



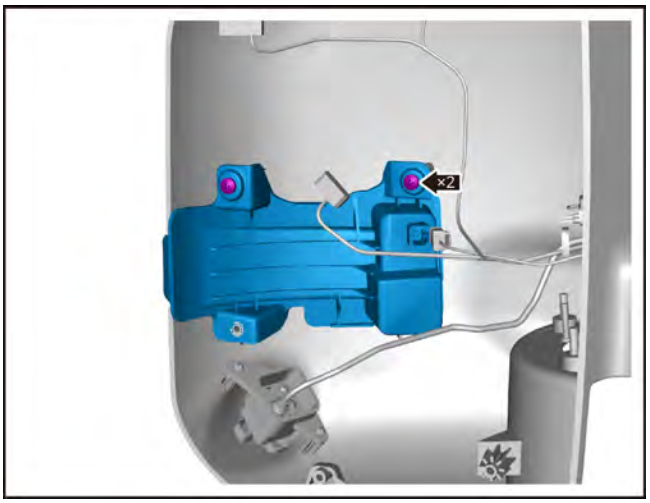
12 Disconnect Left Outside Rearview Mirror motor assembly wiring harness connector.

a. Disconnect Turn Signal Lamp wiring harness connector.

b. release retaining clip, disconnect Left Outside Rearview Mirror motor assembly wiring harness connector.



13 along direction arrow side direction evacuate output Left Outside Rearview Mirror assembly wiring harness, remove Left Outside Rearview Mirror assembly frame energized unit.



14 Remove 2 retaining screw, remove Turn Signal Lamp.

Installation Steps

1 Install in the reverse order of removal.

Inspection and Verification:

Install complete rear, open rotate bend lamp, confirm lamp light normal flash and lamp light clear clear illuminate no dimming.

vehicle inner hold hand

Repair Procedure

Left Front Door Inner Clip Hand Assembly, Repair Procedure

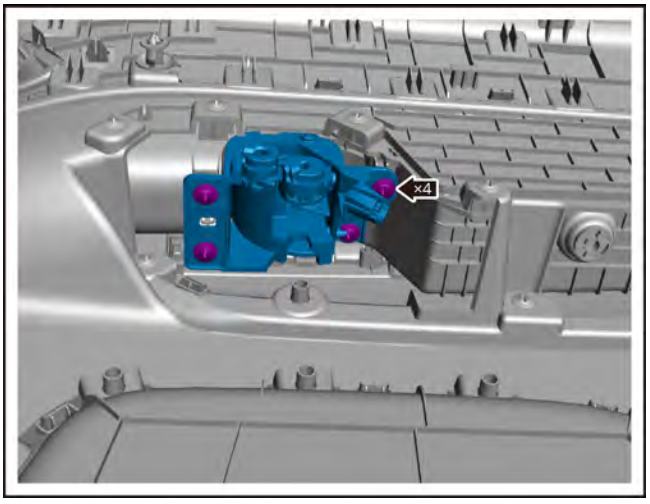
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

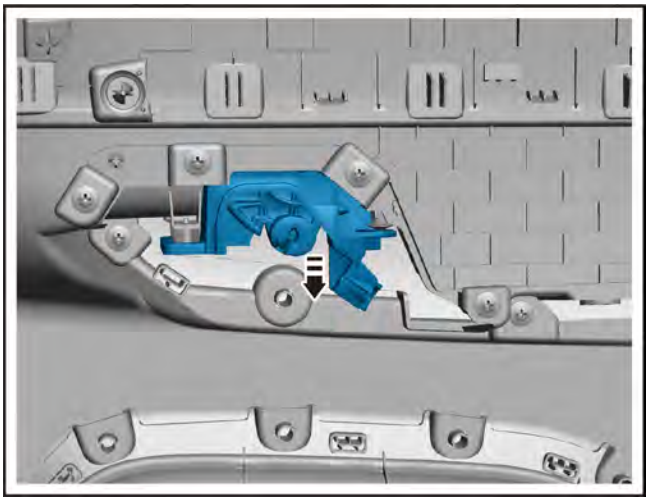
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation



3 Remove left front door inner clip hand assembly 4 retaining screw.



4 along direction arrow side direction release left front door inner clip hand assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Sliding Door Inner Open Hold Hand, Repair Procedure

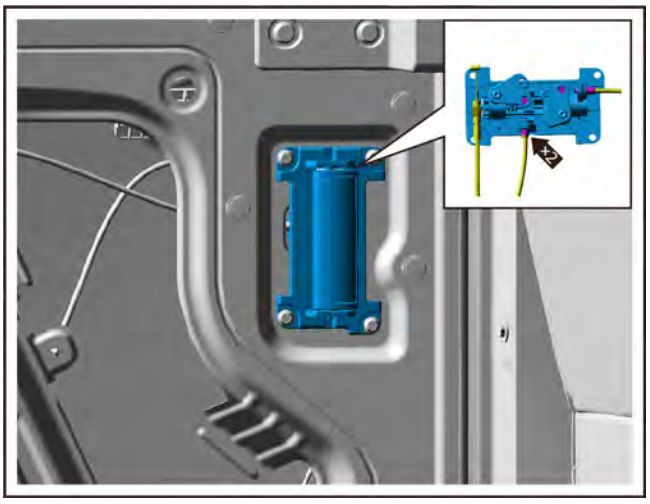
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

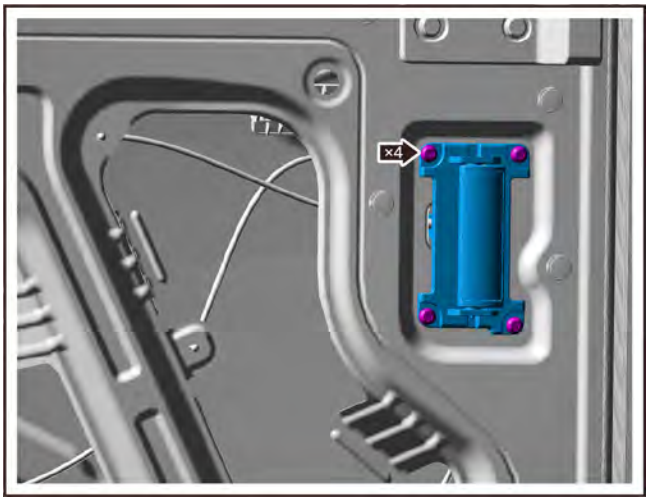
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure



3 release left Sliding Door inner open hold hand 2 cable clip.



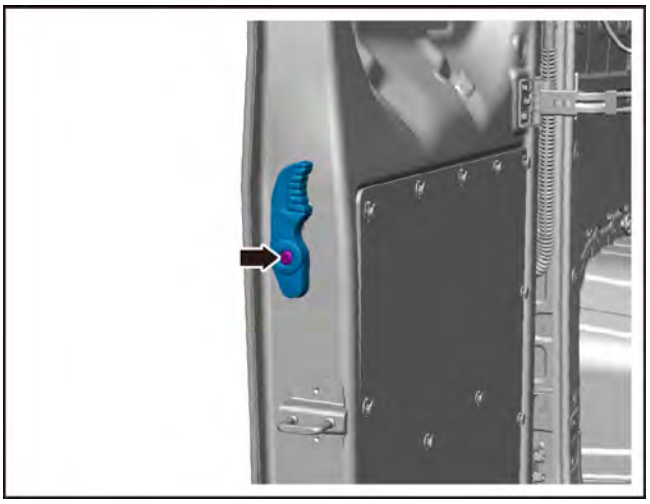
4 Remove 4 retaining screw, remove left Sliding Door inner open hold hand assembly.

Installation Steps

1 Install in the reverse order of removal.

Split Rear Door Left Open Hold Hand, Repair Procedure

Removal Steps



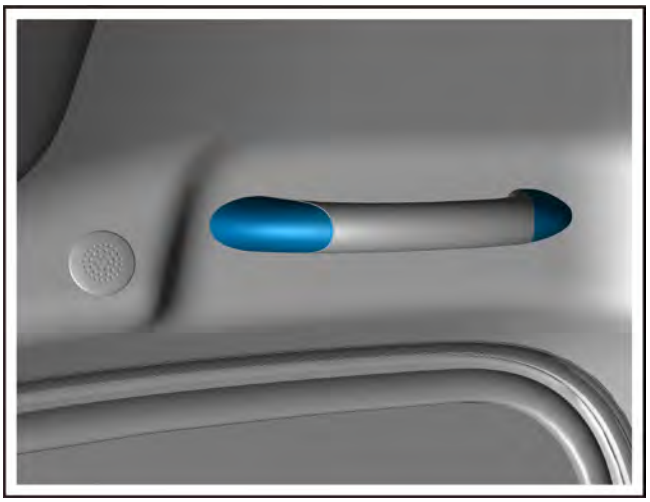
1 Remove retaining screw, remove Split Rear Door left open hold hand.

Installation Steps

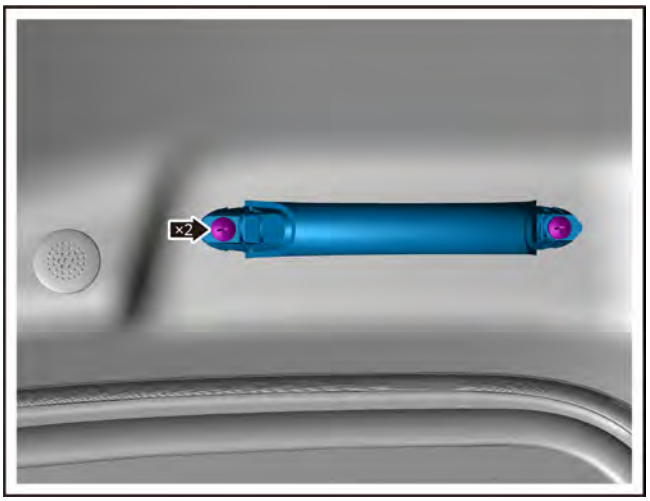
1 Install in the reverse order of removal.

Top Armrest Assembly, Repair Procedure

Removal Steps



1 release top Armrest assembly 2 Plug.



2 Remove 2 retaining bolt, remove top Armrest assembly.

Installation Steps

1 Install in the reverse order of removal.

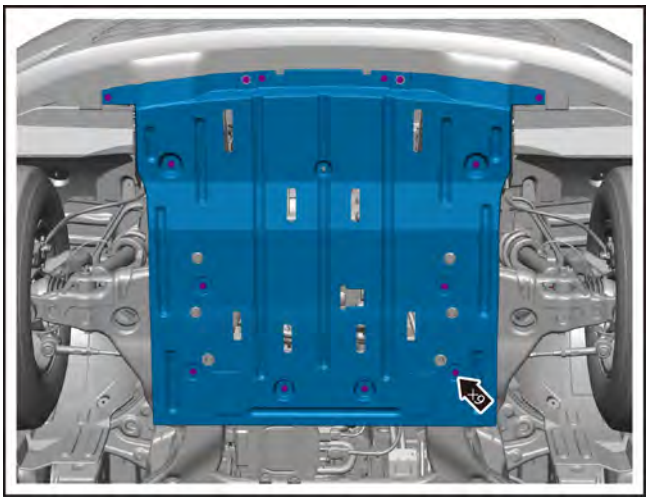
underbody shield

Repair Procedure

Front Underbody Shield, Repair Procedure

Removal Steps

1 Raise the vehicle. Refer to:Vehicle Lifting and Support



2 Remove 14 retaining bolt, remove Front Underbody Shield.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

mark sign, mark affix

Repair Procedure

Rear Character Bus Mark, Repair Procedure

Caution

Remove when please do not damage vehicle paint or other component.
remove component rear, need clean component between adhesive (adhesive)

Removal Steps



1 Remove rear character bus mark.

Installation Steps

1 clean clean rear character bus mark install surface stain, re- new affix dual surface adhesive.



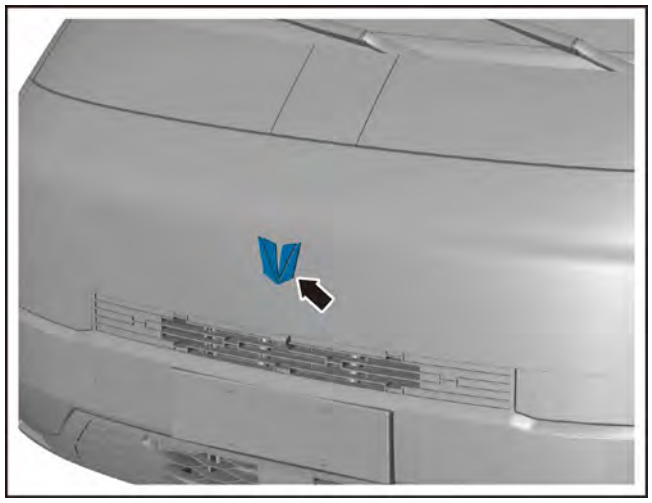
2 alignment installation position, install and use force press product sign mark sign, operate use force large at etc. at 60N, maintain 3–5s.

Product Sign Character Mark, Repair Procedure

Caution

Remove when please do not damage vehicle paint or other component.
remove component rear, need clean component between adhesive (adhesive)

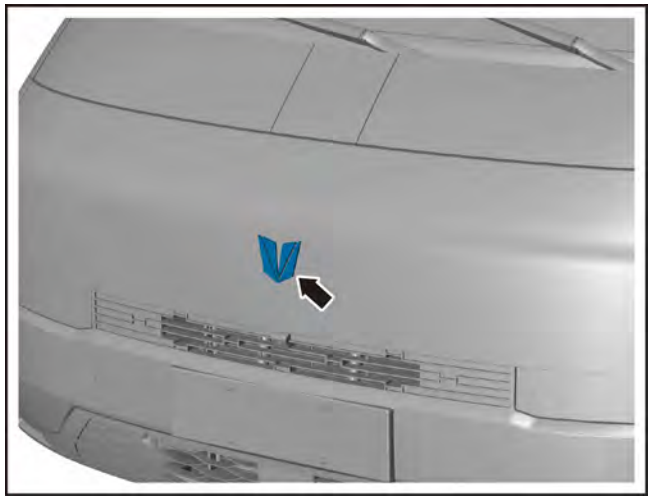
Removal Steps



1 Remove product sign character mark.

Installation Steps

1 clean clean product sign mark sign install surface stain, re- new affix dual surface adhesive.



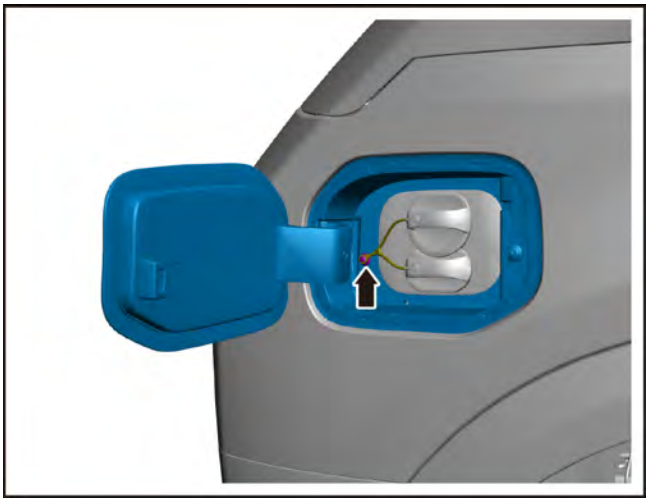
2 alignment installation position, install and use force press product sign mark sign, operate use force large at etc. at 60 N, maintain 3–5 s.

Charging Port Cover

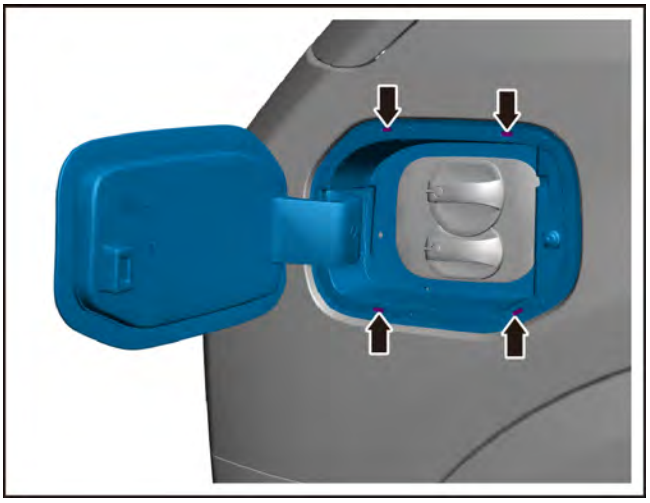
Repair Procedure

Charging Port Cover Assembly, Repair Procedure

Removal Steps



1 Release Charging Port Cover Assembly retaining clip.



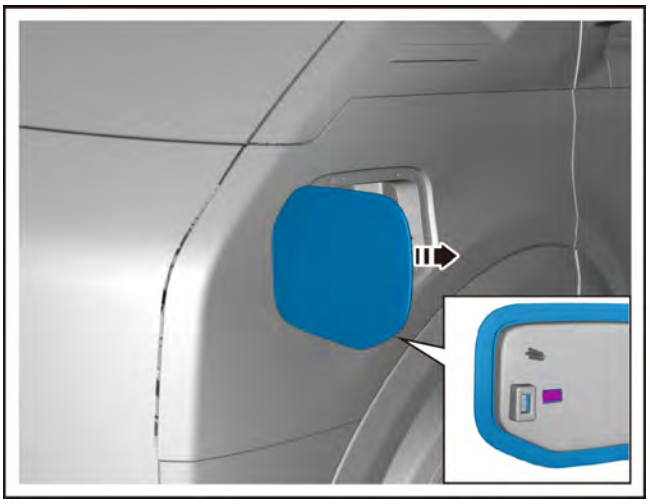
2 UseFlat-blade Screwdriverfrom opening port at release retaining clip, remove Charging Port Cover Assembly.

Installation Steps

1 Install in the reverse order of removal.

Charging Port Cover Outer Panel, Repair Procedure

Removal Steps



1 press retaining clip, along direction arrow side direction remove Charging Port Cover outer panel.

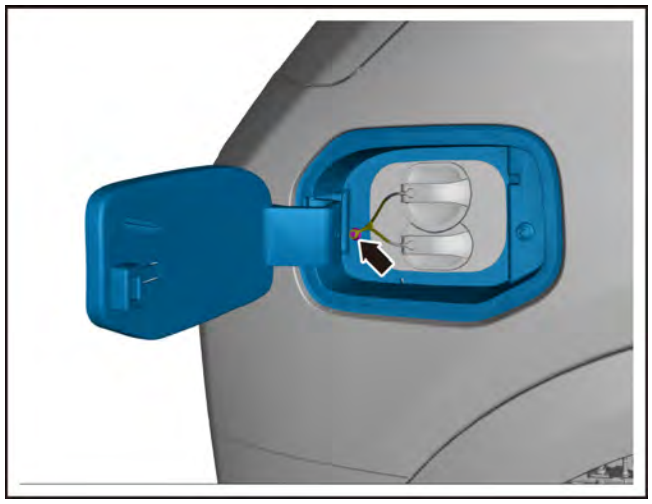
Installation Steps

1 Install in the reverse order of removal.

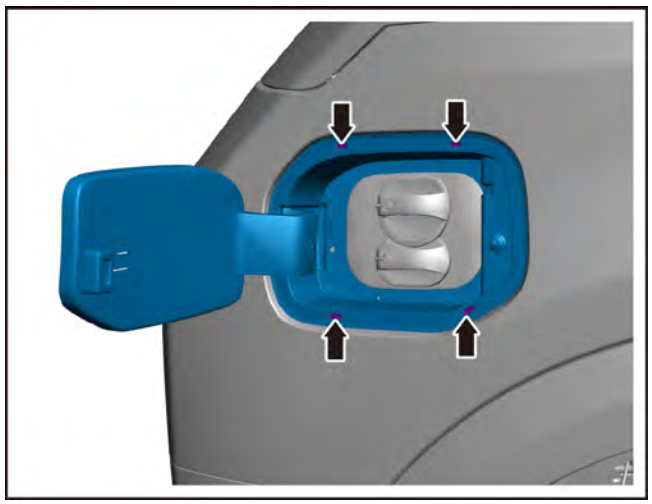
Charging Port Cover Bottom Seat Assembly, Repair Procedure

Removal Steps

1 Remove Charging Port Cover outer panel. Refer to:Charging Port Cover Outer Panel, Repair Procedure



2 release retaining clip, remove Charging Port Cover bottom seat assembly.



3 UseFlat-blade Screwdriverfrom opening port at release retaining clip, remove Charging Port Cover Assembly.

Installation Steps

1 Install in the reverse order of removal.

07 body

white body / driving compartment.....1360

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white body / driving compartment

Repair Procedure

fender

Repair Procedure

Left Front Fender, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

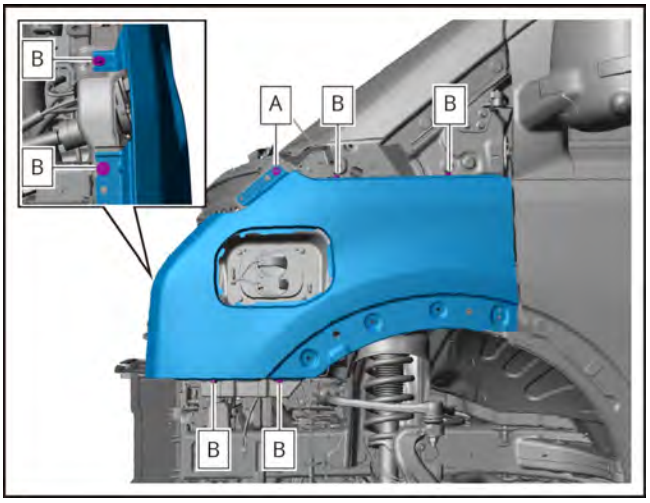
3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

4 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

5 Remove left marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation

6 Remove Charging Port Cover Assembly. Refer to:Charging Port Cover Assembly, Repair Procedure

7 Remove front bumper left mounting bracket assembly. Refer to:Front Bumper Left Mounting Bracket Assembly, Repair Procedure



8 remove left front fender.

a. Remove left front fender retaining nut A.
Torque:xxx±xxN·m

b. Remove 6 retaining bolt B, remove left front fender.

Installation Steps

1 Install in the reverse order of removal.

Left Fender Mounting Bracket Assembly, Repair Procedure

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

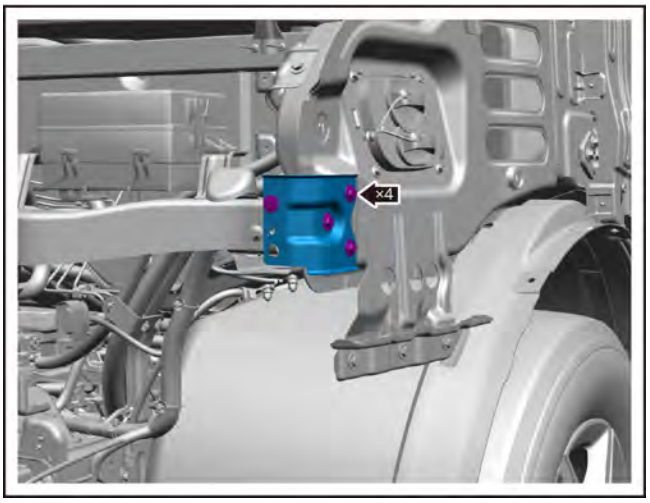
4 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

5 Remove left marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation

6 Remove Charging Port Cover Assembly. Refer to:Charging Port Cover Assembly, Repair Procedure

7 Remove front bumper left mounting bracket assembly. Refer to:Front Bumper Left Mounting Bracket Assembly, Repair Procedure

8 Remove left front fender. Refer to:Left Front Fender, Repair Procedure



9 Remove 4 retaining bolt, remove left fender mounting bracket assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Front Fender Bracket Assembly, Repair Procedure

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

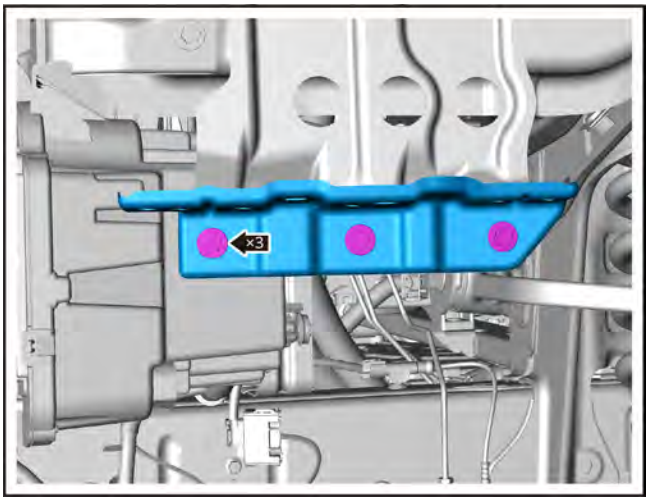
3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

4 Remove left marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation

5 Remove Charging Port Cover Assembly. Refer to:Charging Port Cover Assembly, Repair Procedure

6 Remove front bumper left mounting bracket assembly. Refer to:Front Bumper Left Mounting Bracket Assembly, Repair Procedure

7 Remove left front fender. Refer to:Left Front Fender, Repair Procedure



8 Remove 3 retaining bolt, remove left fender bracket assembly.

Installation Steps

1 Install in the reverse order of removal.

Combination Lamp Mounting Bracket Assembly Left, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove left marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation

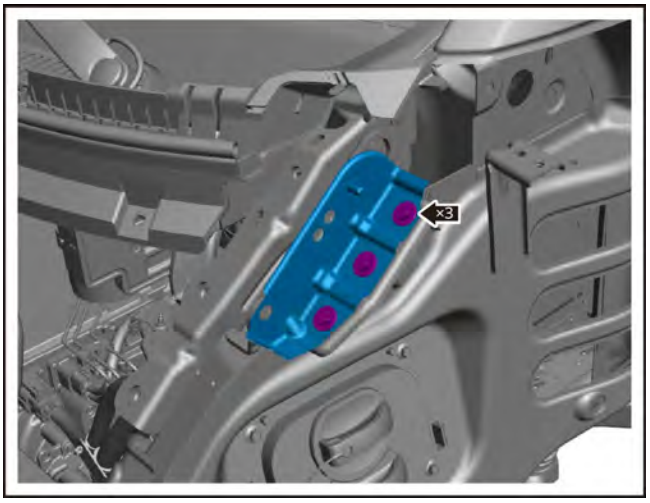
4 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

5 Remove front bumper left mounting bracket assembly. Refer to:Front Bumper Left Mounting Bracket Assembly, Repair Procedure

6 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

7 Remove Charging Port Cover Assembly. Refer to:Charging Port Cover Assembly, Repair Procedure

8 Remove left front fender. Refer to:Left Front Fender, Repair Procedure



9 Remove 3 retaining bolt, remove combination lamp mounting bracket assembly left.

Installation Steps

1 Install in the reverse order of removal.

isolate disconnect

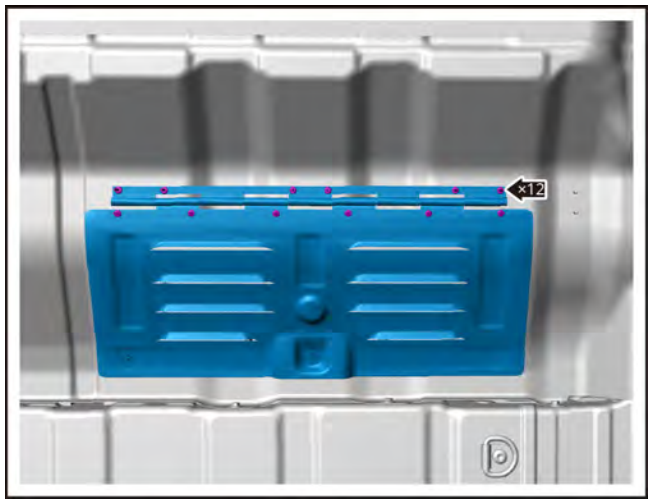
Repair Procedure

Isolate Panel Cover Assembly, Repair Procedure

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Removal Steps



1 Remove 12 retaining item item, remove isolate panel cover assembly.

Installation Steps

1 Install in the reverse order of removal.

Isolate Panel Section Assembly, Repair Procedure

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

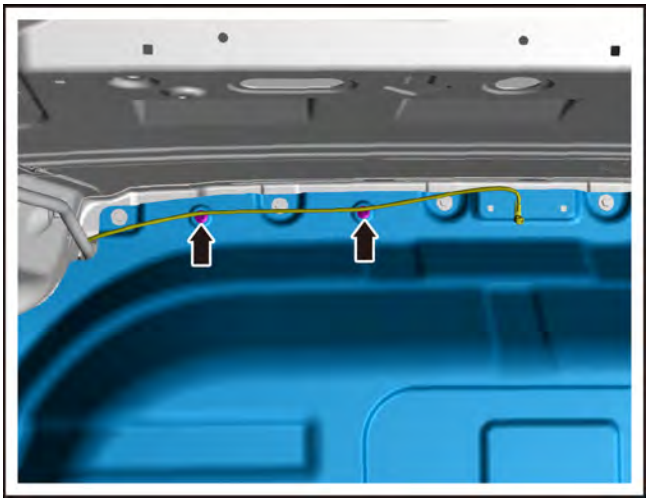
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

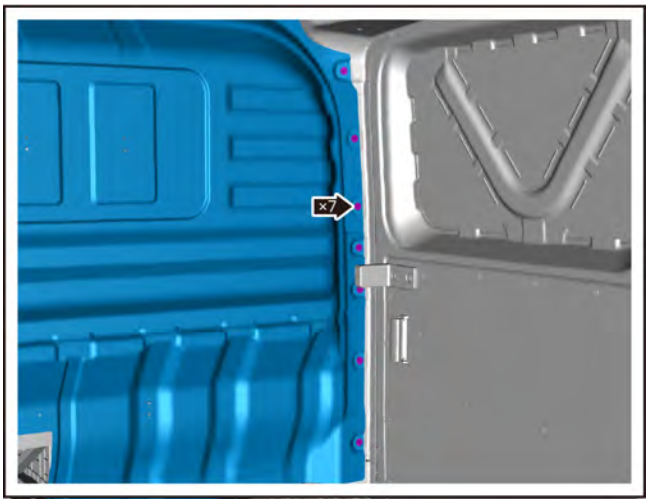
2 Remove clothing cap hook assembly. Refer to:Clothing Cap Hook Assembly, Repair Procedure

3 Remove Monitoring Camera. Refer to:Monitoring Camera, Repair Procedure

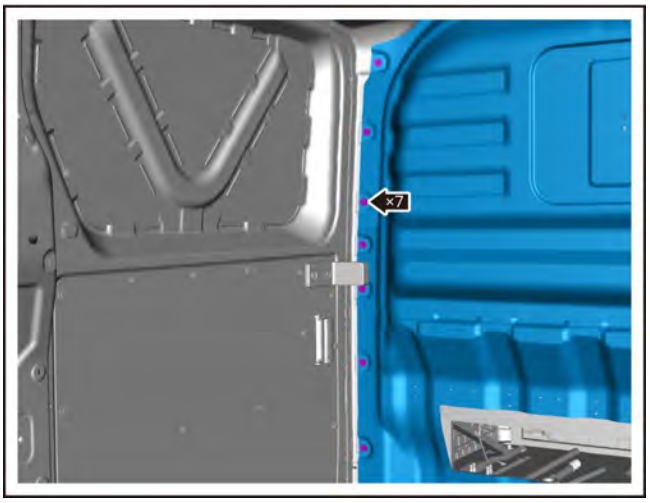
4 Remove isolate panel cover assembly. Refer to:Isolate Panel Cover Assembly, Repair Procedure



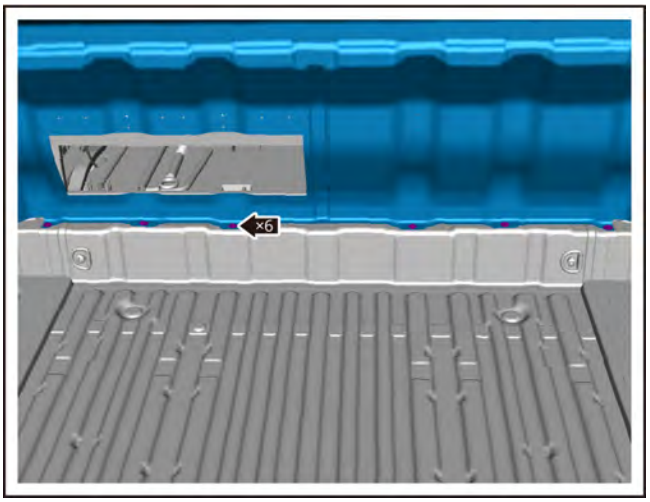
5 Release 2 headlining wiring harness retaining clips.



6 Remove isolate panel section assembly right 7 retaining bolt.



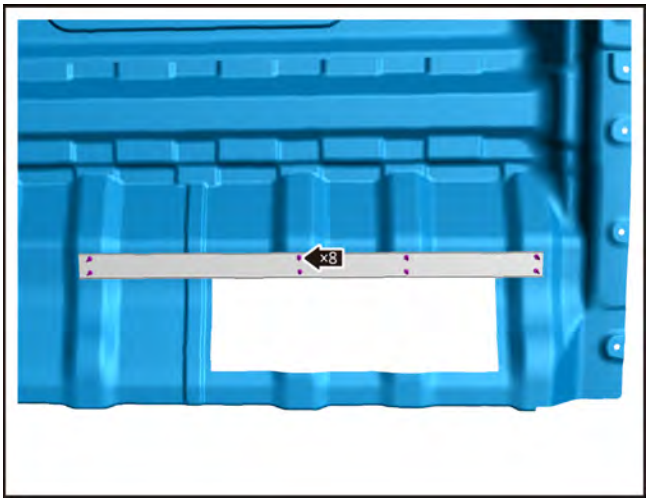
7 Remove isolate panel section assembly left 7 retaining bolt.



8 Remove isolate panel section assembly lower side 6 retaining bolt.



9 Remove upper side 7 retaining bolt, remove isolate panel section assembly with accessory.



10 Remove 8 retaining item item, remove isolate panel section assembly.

Installation Steps

1 Install in the reverse order of removal.

impact beam

Repair Procedure

Front Anti-Collision Beam Assembly, Repair Procedure

Removal Steps

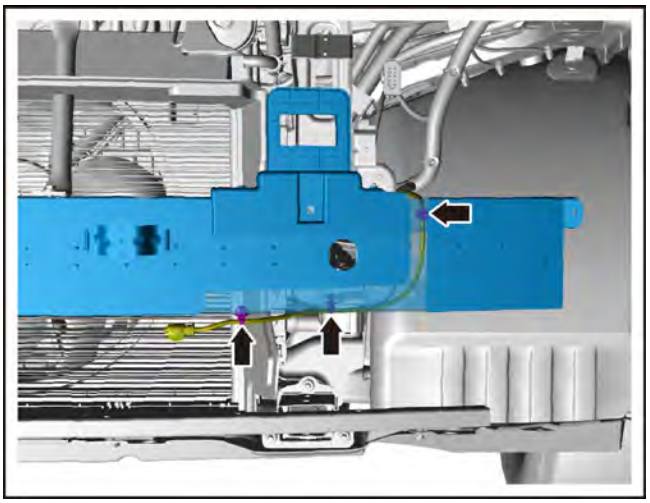
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

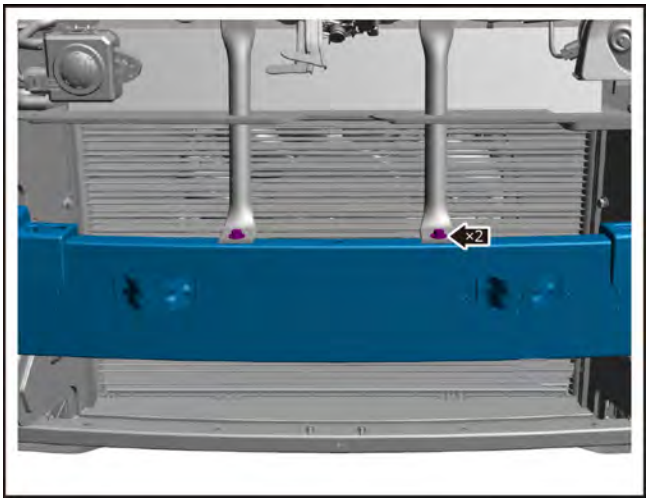
3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

4 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

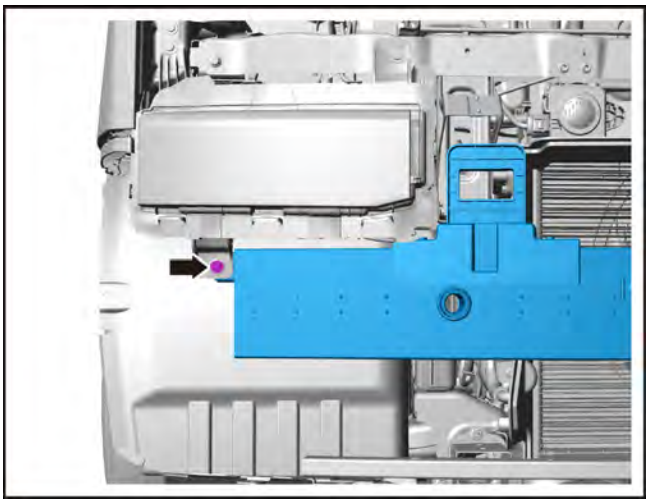
5 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure



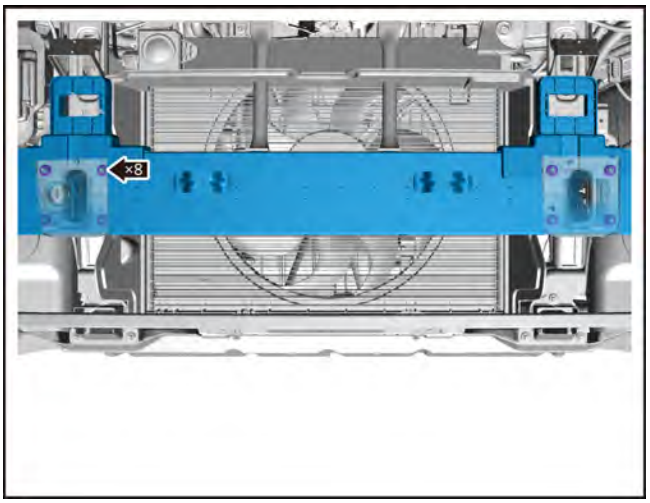
6 Release 3 front compartment wiring harness retaining clips.



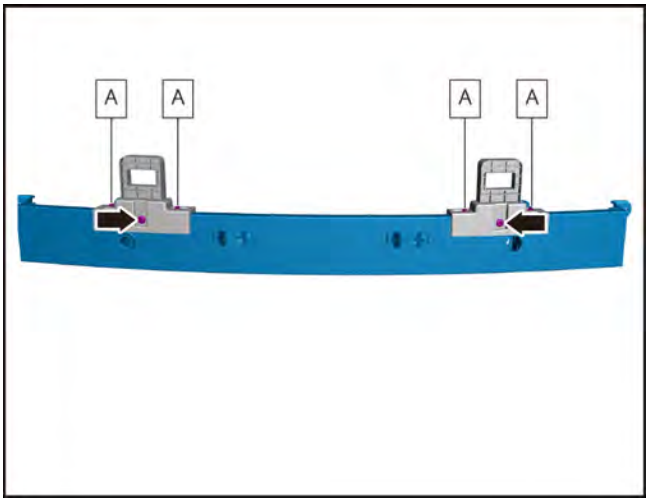
7 Remove front frame bracket support 2 retaining bolt.



8 Remove Right Front Combination Lamp assembly retaining bolt.



9 Remove 8 retaining nut, remove front impact beam with accessory.



10 remove front anti-collision beam assembly.

a. Remove front anti-collision beam assembly 2 retaining clip.

b. Remove 4 retaining bolt A, remove front anti-collision beam assembly.

Installation Steps

1 Install in the reverse order of removal.

Subframe Collision Avoidance Assembly, Repair Procedure

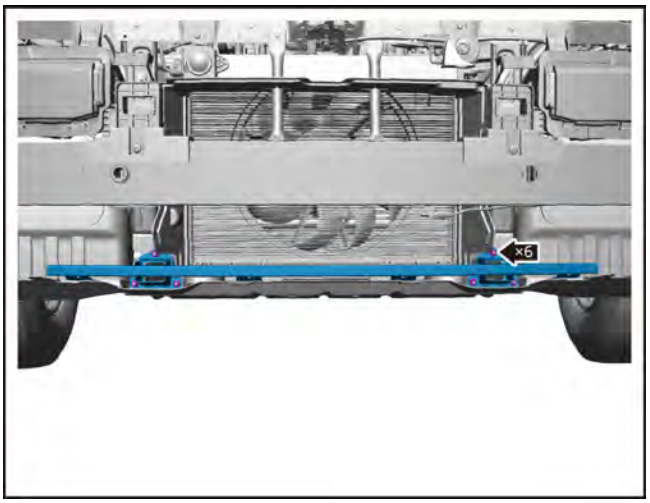
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Underbody Shield. Refer to:Front Underbody Shield, Repair Procedure

4 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



5 Remove 6 retaining nut, remove subframe collision avoidance assembly.

Installation Steps

1 Install in the reverse order of removal.

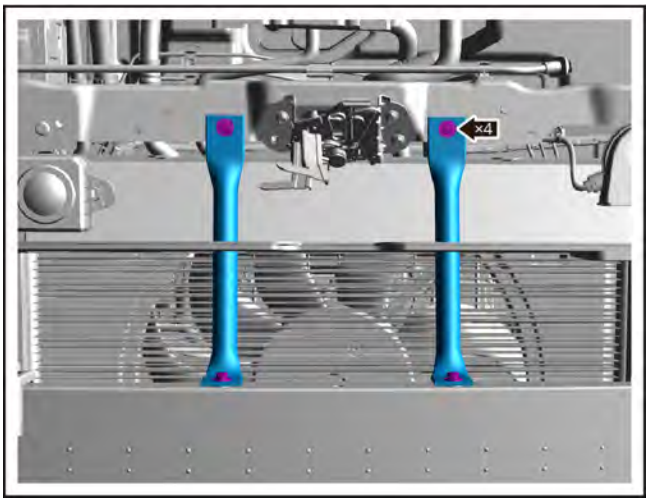
Front Frame Bracket Support, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 Remove 4 retaining bolt, remove front frame bracket support.

Installation Steps

1 Install in the reverse order of removal.

Upper Radiator Support Crossmember Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

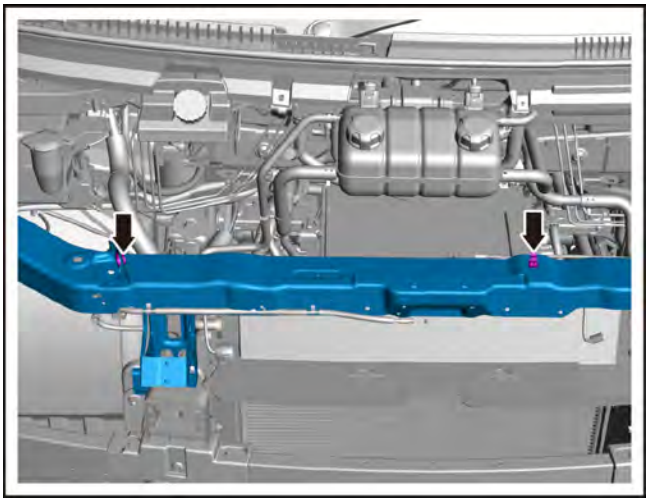
3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

4 Remove Ambient Temperature Sensor. Refer to:Ambient Temperature Sensor, Repair Procedure

5 Remove compartment cover strut assembly. Refer to:Compartment Cover Strut Assembly, Repair Procedure

6 Remove left, Right Front Combination Lamp assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

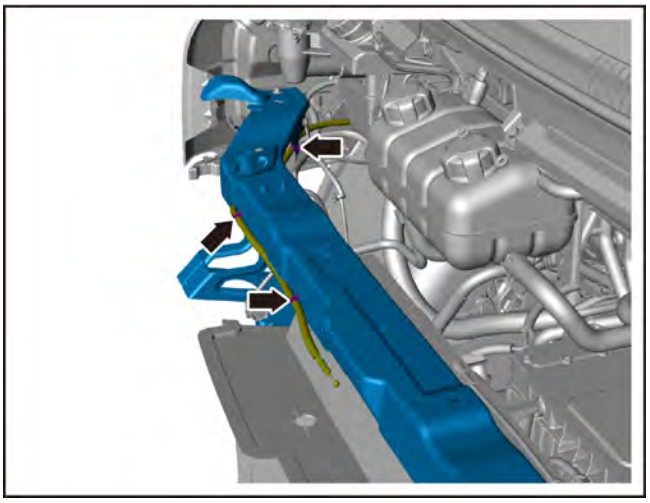
7 Remove front frame bracket support. Refer to:Front Frame Bracket Support, Repair Procedure



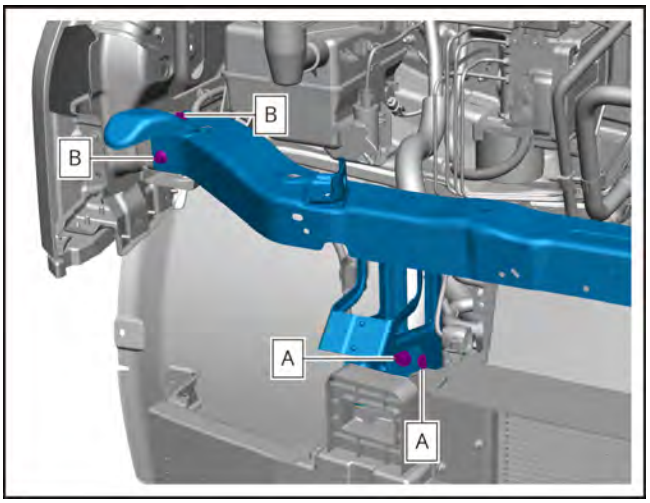
8 Remove compartment cover support rod retaining part.

a. Remove compartment cover support rod retaining adhesive sleeve.

b. Remove compartment cover support rod retaining card clamp.



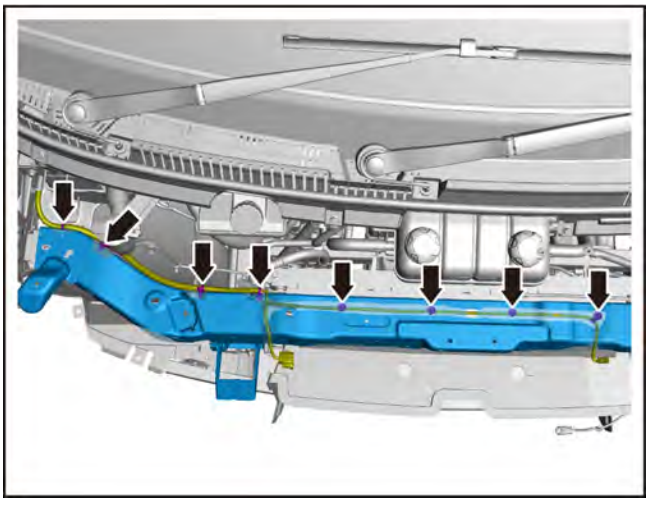
9 Release 3 hood cable assembly retaining clips.



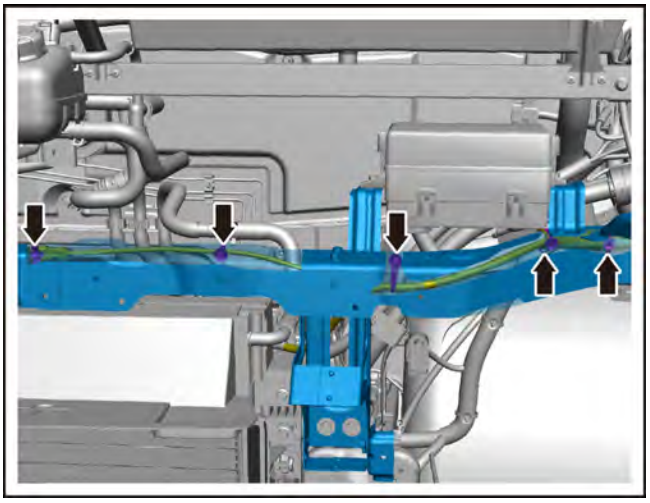
10 Remove Upper Radiator Support Crossmember Assembly right fastener.

a. Remove Upper Radiator Support Crossmember Assembly 2 retaining bolt A. **Torque:**xxx±xxN·m

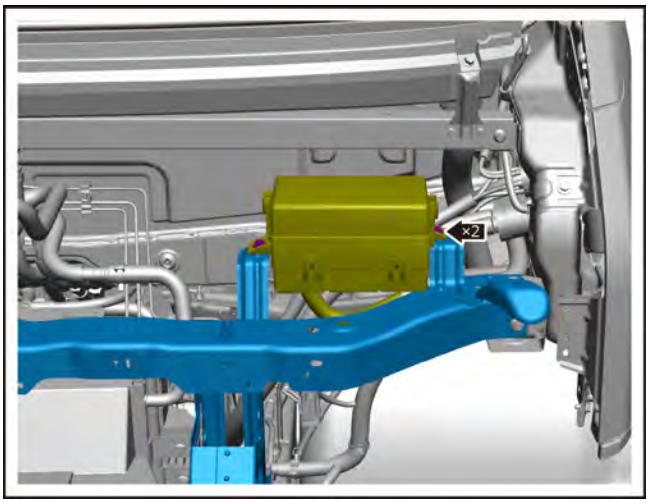
b. Remove Upper Radiator Support Crossmember Assembly 2 retaining bolt B.



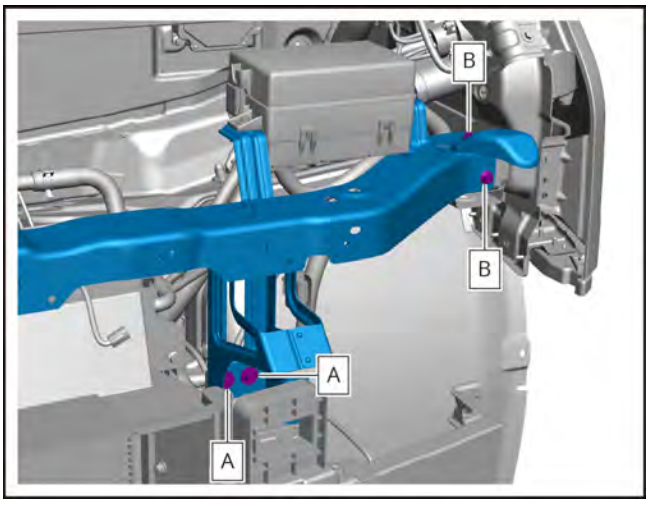
11 Release 8 front compartment wiring harness assembly right retaining clips.



12 Release 5 front compartment wiring harness assembly left retaining clips.



13 Remove 2 retaining bolt, release front compartment wiring harness assembly fuse box.



14 remove Upper Radiator Support Crossmember Assembly.

a. Remove Upper Radiator Support Crossmember Assembly 2 retaining bolt A. **Torque:**xxx±xxN·m

b. Remove 2 retaining bolt B, remove Upper Radiator Support Crossmember Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install process center, item view Inspect the wiring harness clip whether deformation or damage, if with necessary then replace new clip. same when, ensure wiring harness

connect secure, Location correct, and no interaction fork, surround, No then may will cause vehicle fault or electrical safety hazard.

Front Impact Beam Left Connect Bracket Assembly, Repair Procedure

Tips

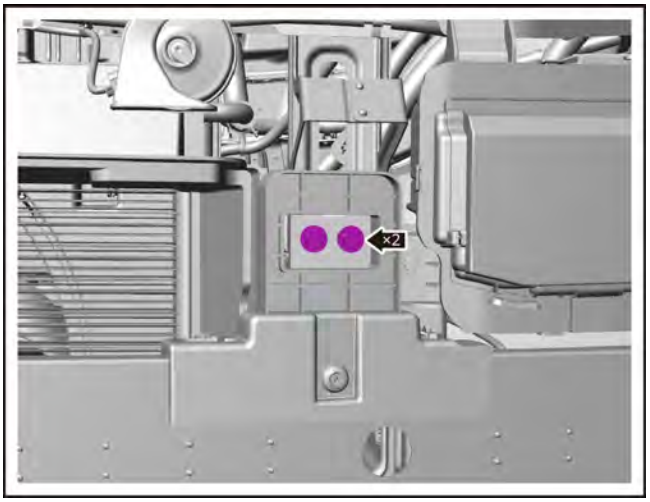
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

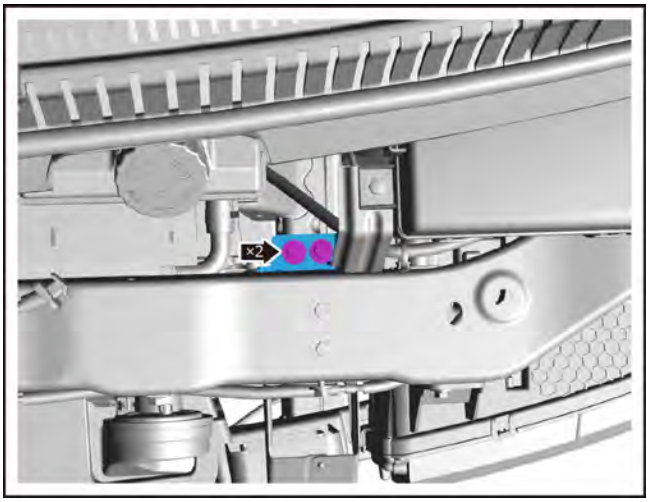
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation



4 Remove front impact beam left connect bracket assembly 2 retaining bolt.

Torque:xxx±xxN·m



5 Remove 2 retaining bolt, remove front impact beam left connect bracket assembly.

Installation Steps

1 Install in the reverse order of removal.

Engine Compartment Crossmember Assembly, Repair Procedure

Warning

- *related Cooling System Safety Precautions. refer to:*Cooling System Safety Precautions
- *For health and safety information, refer to:*Health and Safety

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

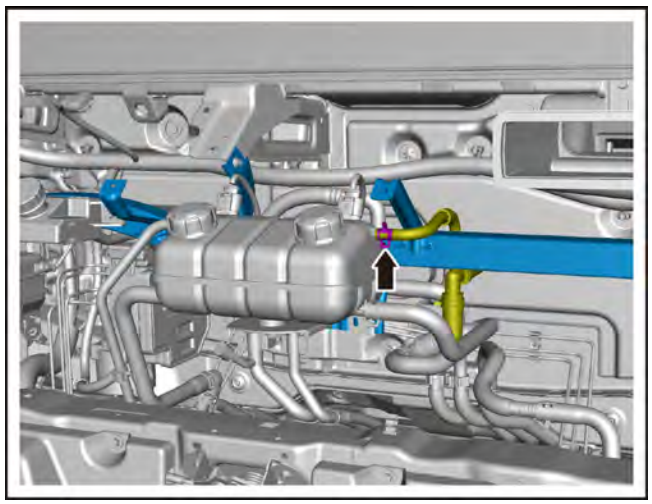
3 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

4 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure

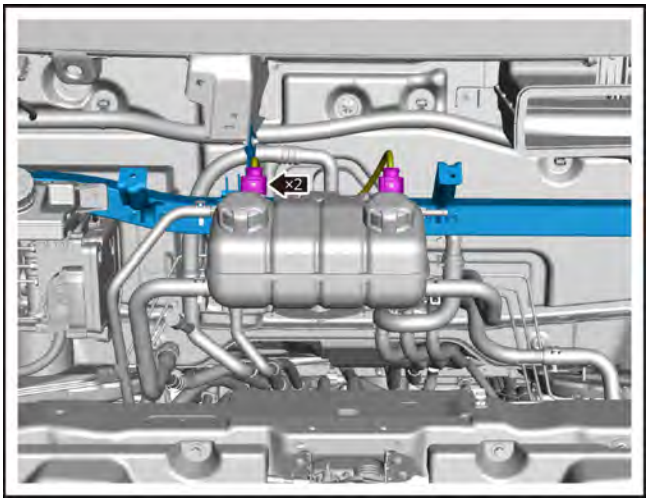
5 Remove front washer line assembly. Refer to:Front Washer Line Assembly, Repair Procedure

6 Remove air guide pipe assembly. Refer to:Air Guide Pipe Assembly, Repair Procedure

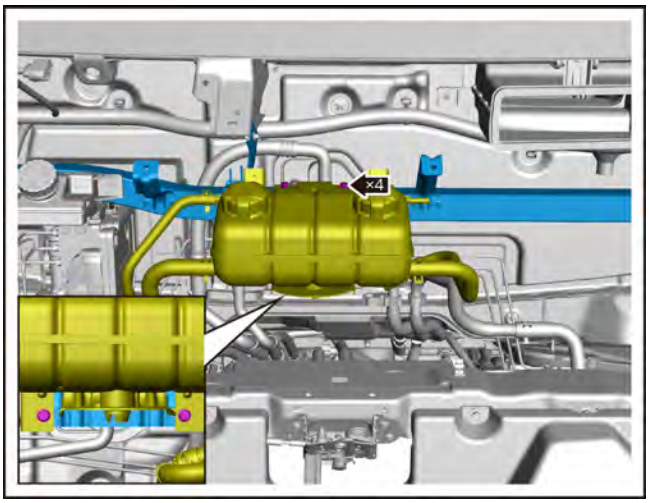
7 Remove motor and connect movement rod assembly. Refer to:Motor and Connect Movement Rod Assembly, Repair Procedure



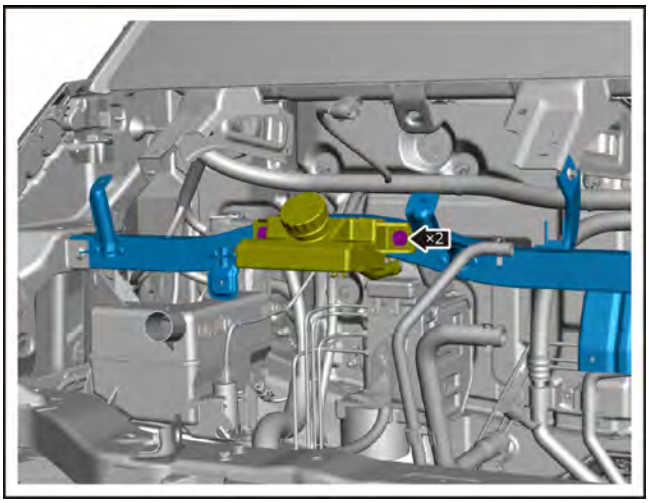
8 Remove retaining clamp, release Heater Outlet Hose Assembly.



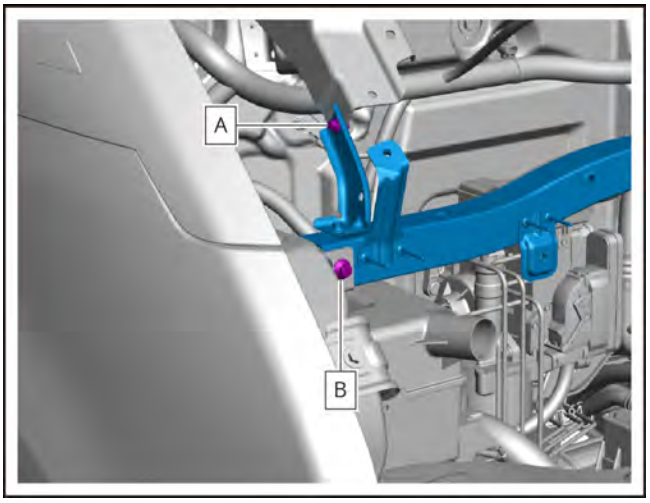
9 Disconnect 2 coolant expansion tank assembly wiring harness connectors.



10 Remove 4 retaining bolt, release coolant expansion tank assembly with line.



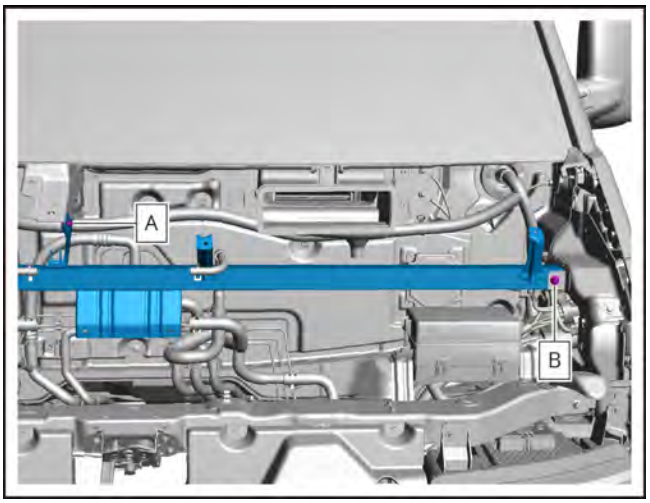
11 Remove 2 retaining bolt, release brake fluid reservoir with line.



12 Remove engine compartment crossmember assembly left fastener.

a. Remove engine compartment crossmember assembly left retaining bolt A.

b. Remove engine compartment crossmember assembly left retaining bolt B.



13 remove engine compartment crossmember assembly.

a. Remove engine compartment crossmember right retaining bolt A.

b. Remove right retaining bolt B, remove engine compartment crossmember assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 fill coolant. refer to:Coolant Draining and Filling

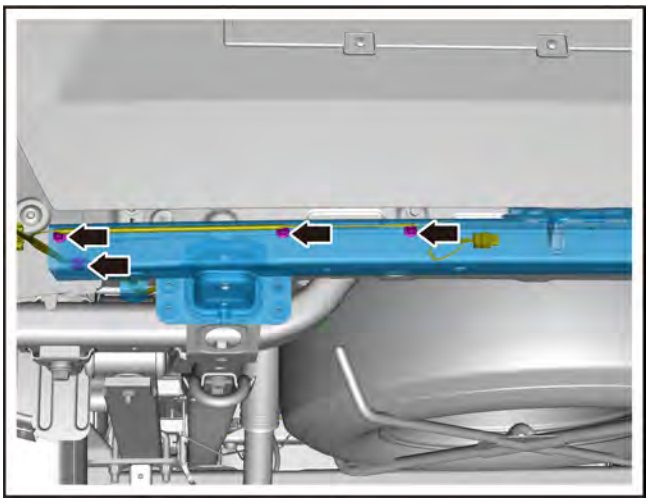
Rear Anti-Collision Beam Assembly, Repair Procedure

Removal Steps

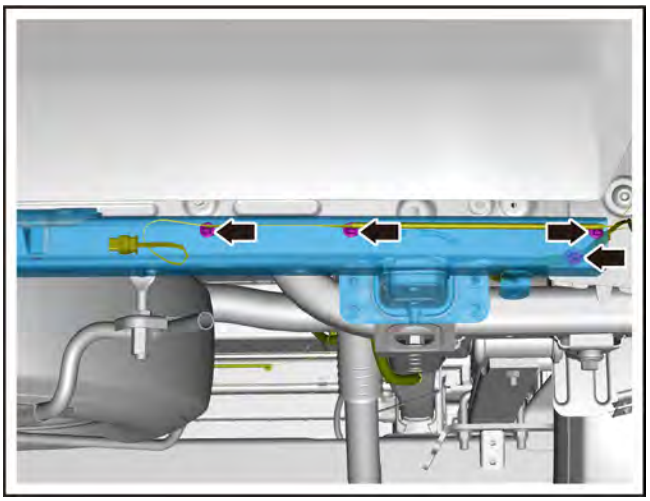
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Rear Bumper Center Body Assembly. Refer to:Rear Bumper Center Body Assembly, Removal and Installation

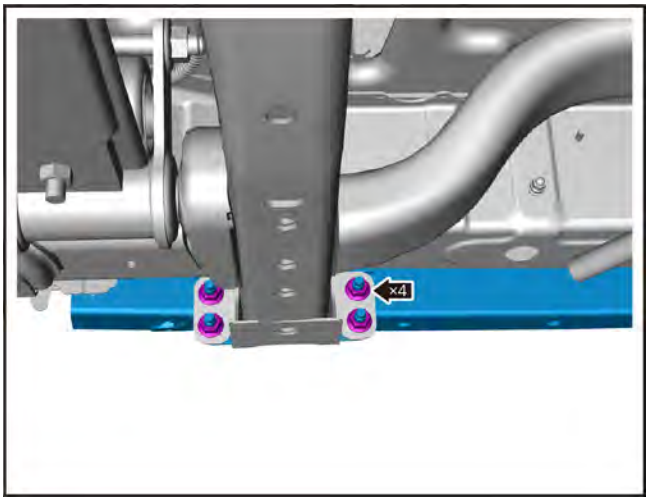
3 Remove rear bumper left, right lower body assembly. Refer to:Rear Bumper Left Lower Body Assembly, Removal and Installation



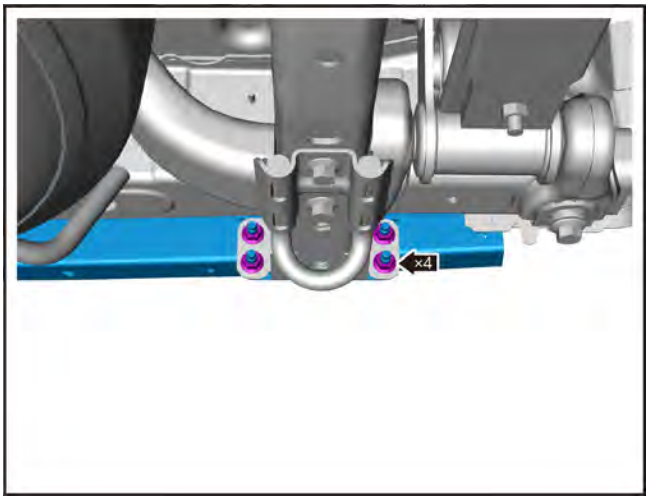
4 Release 4 chassis wiring harness left retaining clips.



5 Release 4 chassis wiring harness right retaining clips.



6 Remove rear anti-collision beam assembly right 4 retaining nut.



7 Remove left 4 retaining nut, remove rear anti-collision beam assembly.

Installation Steps

1 Install in the reverse order of removal.

door sheet metal assembly

Repair Procedure

Left Front Door Welding Assembly, Removal and Installation

Caution

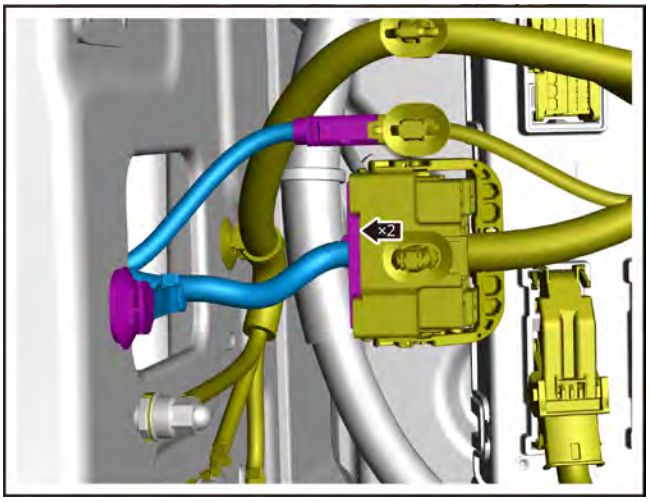
in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

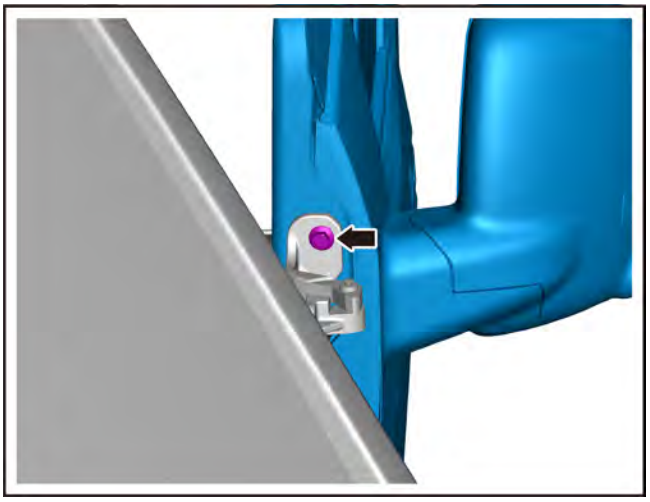
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



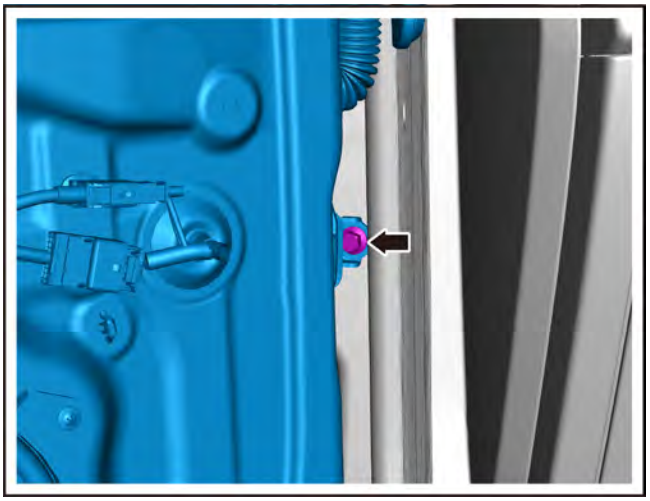
2 Release instrument panel wiring harness retaining clip.

a. Disconnect 2 Left Front Door Wiring Harness wiring harness connectors.

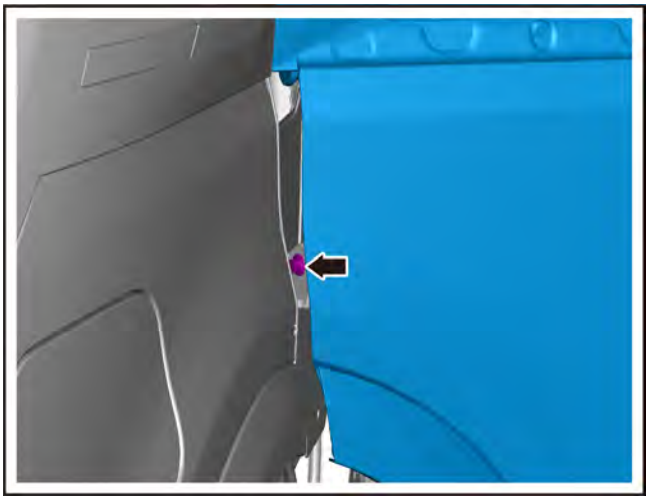
b. Release instrument panel wiring harness retaining clip.



3 Remove left front door welding assembly retaining bolt.



4 Remove left front door welding assembly retaining bolt.



5 Remove retaining bolt, remove left front door welding assembly.

> ⚠ *Caution*
>
> *Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.*

Installation Steps

1 according to and remove reverse order perform install.

Left Front Door Welding Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove left front door water shield assembly. Refer to:Left Front Door Water Shield, Repair Procedure

4 Remove left front door glass rear guide rail lower segment assembly. Refer to:Left Front Door Glass Rear Guide Rail Lower Segment Assembly, Repair Procedure

5 Remove left front door outer belt weatherstrip. Refer to:Left Front Door Outer Belt Weatherstrip, Repair Procedure

6 Remove left front door inner belt weatherstrip. Refer to:Left Front Door Inner Belt Weatherstrip, Repair Procedure

7 Remove woofer. Refer to:Woofer, Repair Procedure

8 Remove left front door glass center guide rail assembly. Refer to:Left Front Door Glass Center Guide Rail Assembly, Repair Procedure

9 Remove left front III quarter window Glass Assembly. Refer to:Left Front III Quarter Window Glass Assembly, Repair Procedure

10 Remove left front door glass assembly. Refer to:Left Front Door Glass Assembly, Repair Procedure

11 Remove Left Outside Rearview Mirror assembly. Refer to:Left Outside Rearview Mirror Assembly, Repair Procedure

12 Remove left front door glass glass run channel assembly. Refer to:Left Front Door Glass Glass Run Channel Assembly, Repair Procedure

13 Remove left front door limit position unit assembly. Refer to:Left Front Door Limit Position Unit Assembly, Repair Procedure

14 Remove left front door power glass regulator assembly. Refer to:Left Front Door Power Glass Regulator Assembly, Repair Procedure

15 Remove left front door Wiring Harness Assembly. Refer to:Left Front Door Wiring Harness Assembly, Repair Procedure

16 Remove left front door outer hold hand assembly. Refer to:Right Front Door Outer Hold Hand Assembly, Repair Procedure

17 Remove left front door remote lock assembly. Refer to:Right Front Door Remote Lock Assembly, Repair Procedure

18 Remove left front door exterior trim panel assembly. Refer to:Left Front Door Exterior Trim Panel Assembly, Repair Procedure

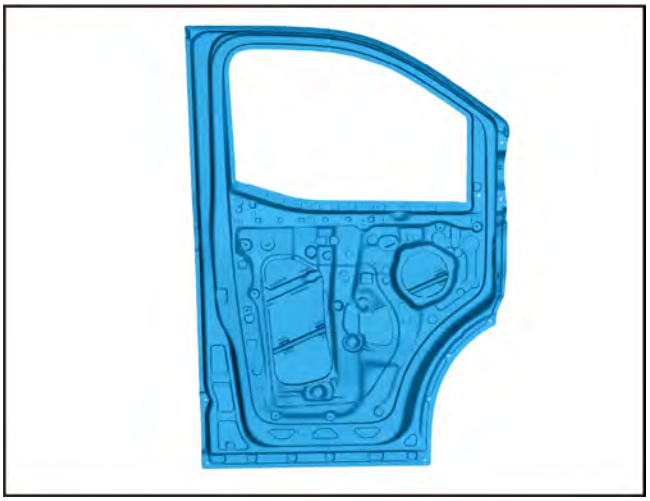
19 Remove left front door inside seal Trim Panel Assembly. Refer to:Left Front Door Inside Seal Trim Panel, Repair Procedure

20 Remove left front wheel arch trim rear segment. Refer to:Left Front Wheel Arch Trim Rear Segment, Repair Procedure

21 Remove front door Armrest bracket - left. Refer to:Front Door Armrest Bracket - Left, Repair Procedure

22 Remove left front door upper hinge assembly. Refer to:Left Front Door Upper Hinge Assembly, Repair Procedure

23 Remove left front door lower hinge assembly.
Refer to:Left Front Door Lower Hinge Assembly, Repair Procedure



24 remove left front door welding assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Left Sliding Door Assembly, Removal and Installation

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Tips

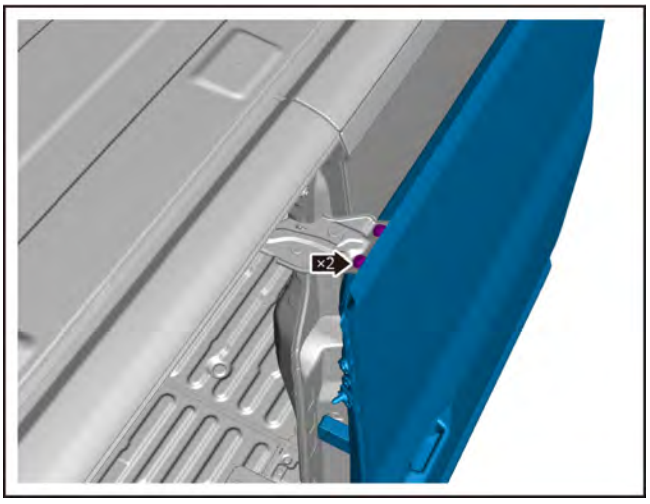
this Removal and Installation, required two person matching combined operation.

Tips

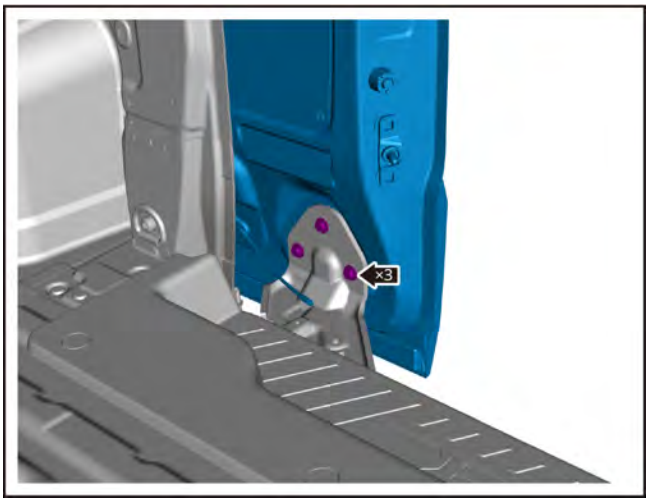
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

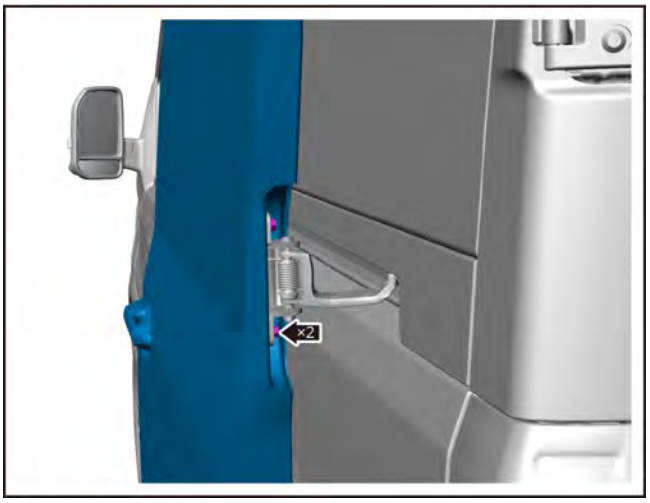
1 Remove Left Full-open Limit Lock. Refer to:Left Full-Open Limit Lock, Repair Procedure



2 Remove left Sliding Door assembly 2 retaining bolt.



3 Remove left Sliding Door assembly 3 retaining bolt.



4 Remove 2 retaining bolt, remove left Sliding Door assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Left Sliding Door Sheet Metal Welding Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left Sliding Door assembly. Refer to:Left Sliding Door Assembly, Removal and Installation

3 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure

4 Remove left Sliding Door inner open hold hand assembly. Refer to:Left Sliding Door Inner Open Hold Hand, Repair Procedure

5 Remove left Sliding Door wiring harness assembly. Refer to:Left Sliding Door Wiring Harness Assembly, Repair Procedure

6 Remove Power Sliding Door connector. Refer to:Power Sliding Door Connector, Repair Procedure

7 Remove Sliding Door Interior Release Cable assembly. Refer to:Sliding Door Interior Release Cable, Repair Procedure

8 Remove left Sliding Door main lock assembly. Refer to:Left Sliding Door Main Lock, Repair Procedure

9 Remove Sliding Door anti-release hook. Refer to:Sliding Door Anti-Release Hook, Repair Procedure

10 Remove Left Full-open Limit Lock assembly. Refer to:Left Full-Open Limit Lock, Repair Procedure

11 Remove right side end cap - single Sliding Door. Refer to:Right Side End Cap - Single Sliding Door, Repair Procedure

12 Remove left Sliding Door outer hold hand assembly. Refer to:Left Sliding Door Outer Hold Hand Assembly, Repair Procedure

13 Remove Sliding Door section line box - left. Refer to:Sliding Door Section Line Box - Left, Repair Procedure

14 Remove Sliding Door Center Buffer Block. Refer to:Sliding Door Center Buffer Block, Repair Procedure

15 Remove left lower Sliding Door guide block. Refer to:Left Lower Sliding Door Guide Block, Repair Procedure

16 Remove left lower Sliding Door guide seat. Refer to:Left Lower Sliding Door Guide Seat, Repair Procedure

17 Remove Left Center Body Side Exterior Trim Assembly. Refer to:Left Center Body Side Exterior Trim Assembly, Repair Procedure



18 remove left Sliding Door sheet metal welding assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Left Rear Tailgate Sheet Metal Welding Assembly, Removal and Installation

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

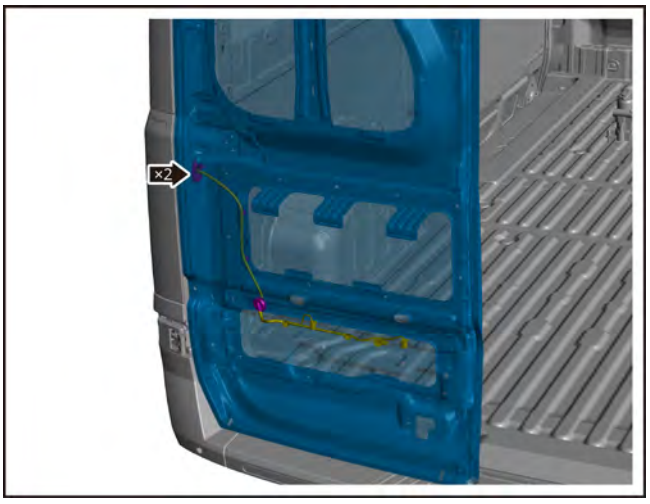
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

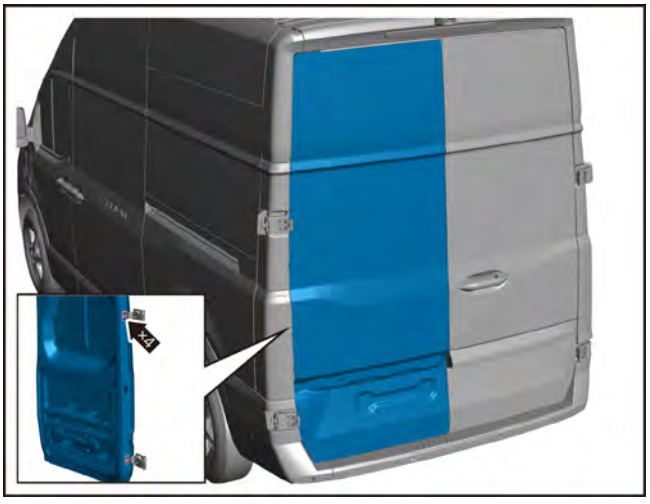
2 Remove tailgate center seam weatherstrip. Refer to:Tailgate Center Seam Weatherstrip, Repair Procedure

3 Remove door upper tailgate limit position unit. Refer to:Door Upper Tailgate Limit Position Unit, Repair Procedure

4 Remove tailgate Shield Assembly left. Refer to:Tailgate Shield Assembly Left, Repair Procedure



5 release 2 retaining adhesive sleeve, remove left rear tailgate wiring harness.



6 Remove 4 retaining bolt, remove left rear tailgate sheet metal welding assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Left Rear Tailgate Sheet Metal Welding Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove tailgate center seam weatherstrip. Refer to:Tailgate Center Seam Weatherstrip, Repair Procedure

3 Remove tailgate Shield Assembly left. Refer to:Tailgate Shield Assembly Left, Repair Procedure

4 Remove Split Rear Door upper lock body cover. Refer to:Split Rear Door Upper Lock Body Cover, Repair Procedure

5 Remove Left Split Rear Door upper lock assembly. Refer to:Left Split Rear Door Upper Lock Assembly, Repair Procedure

6 Remove Split Rear Door left open hold hand. Refer to:Split Rear Door Left Open Hold Hand, Repair Procedure

7 Remove Split Rear Door center lock buckle. Refer to:Split Rear Door Center Lock Buckle, Repair Procedure

8 Remove Split Rear Door left upper lock cable. Refer to:Split Rear Door Left Upper Lock Cable, Repair Procedure

9 Remove Split Rear Door conversion mechanism. Refer to:Split Rear Door Conversion Mechanism, Repair Procedure

10 Remove Split Rear Door left lower lock cable. Refer to:Split Rear Door Left Lower Lock Cable, Repair Procedure

11 Remove Split Rear Door lower lock cover. Refer to:Split Rear Door Lower Lock Cover, Repair Procedure

12 Remove Left Split Rear Door lower lock assembly. Refer to:Left Split Rear Door Lower Lock Assembly, Repair Procedure

13 Remove Left License Plate Lamp Trim Cover Assembly. Refer to:Left License Plate Lamp Trim Cover Assembly, Repair Procedure



14 remove left rear tailgate sheet metal welding assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Right Rear Tailgate Sheet Metal Welding Assembly, Removal and Installation

Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

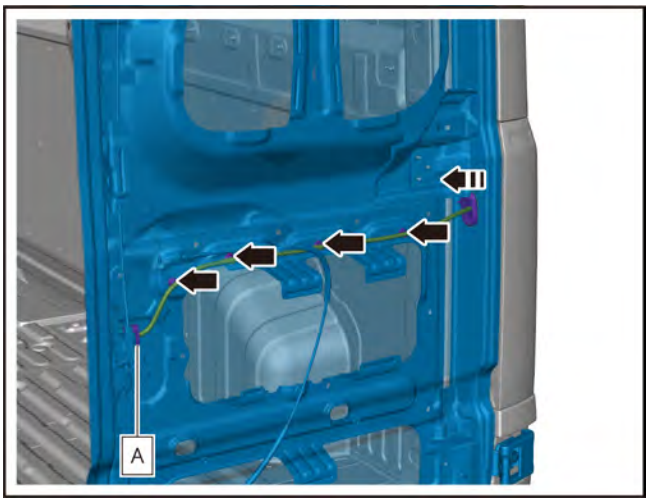
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove tailgate center seam weatherstrip. Refer to:Tailgate Center Seam Weatherstrip, Repair Procedure

3 Remove tailgate Shield Assembly right. Refer to:Tailgate Shield Assembly Left, Repair Procedure

4 Remove door upper tailgate limit position unit. Refer to:Door Upper Tailgate Limit Position Unit, Repair Procedure



5 Remove right rear tailgate sheet metal welding assembly.

a. disconnect right rear tailgate wiring harness connector A.

b. Release right rear tailgate wiring harness retaining clip.

c. release right rear tailgate wiring harness retaining adhesive sleeve.



6 Remove right rear tailgate sheet metal welding assembly 2 screw.



7 remove 2 retaining screw, remove right rear tailgate sheet metal welding assembly

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Right Rear Tailgate Sheet Metal Welding Assembly, Repair Procedure

Tips

this Removal and Installation with right for example, related at left Removal and Installation, please refer to right perform.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove tailgate center seam weatherstrip. Refer to:Tailgate Center Seam Weatherstrip, Repair Procedure

3 Remove tailgate Shield Assembly right. Refer to:Tailgate Shield Assembly Left, Repair Procedure

4 Remove Split Rear Door upper lock body cover. Refer to:Split Rear Door Upper Lock Body Cover, Repair Procedure

5 Remove Split Rear Door right upper lock cable. Refer to:Split Rear Door Left Upper Lock Cable, Repair Procedure

6 Remove Right Split Rear Door upper lock assembly. Refer to:Left Split Rear Door Upper Lock Assembly, Repair Procedure

7 Remove Split Rear Door outer open cable. Refer to:Split Rear Door Outer Open Cable, Repair Procedure

8 Remove Split Rear Door center lock assembly. Refer to:Split Rear Door Center Lock Assembly, Repair Procedure

9 Remove tailgate outer hold hand assembly. Refer to:Tailgate Outer Hold Hand Assembly, Repair Procedure

10 Remove right license plate lamp install trim Cover Assembly. Refer to:Left License Plate Lamp Trim Cover Assembly, Repair Procedure

11 Remove right rear tailgate sheet metal welding assembly. Refer to:Right Rear Tailgate Sheet Metal Welding Assembly, Removal and Installation



12 remove right rear tailgate sheet metal welding assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

door hinge and limit position unit

Repair Procedure

Left Front Door Upper Hinge Assembly, Repair Procedure

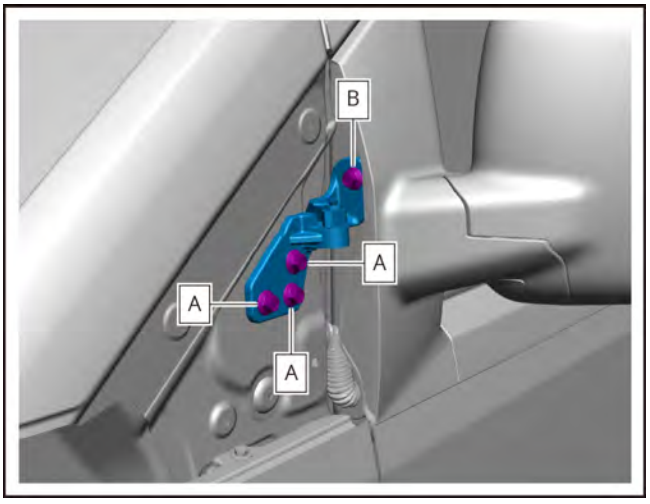
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left marker lamp Trim Panel Assembly. Refer to:Right Marker Lamp Trim Panel Assembly, Removal and Installation



3 remove left front door upper hinge assembly.

a. Remove left front door upper connect assembly 3 retaining bolt A.

b. Remove retaining bolt B, remove left front door upper hinge assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Lower Hinge Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

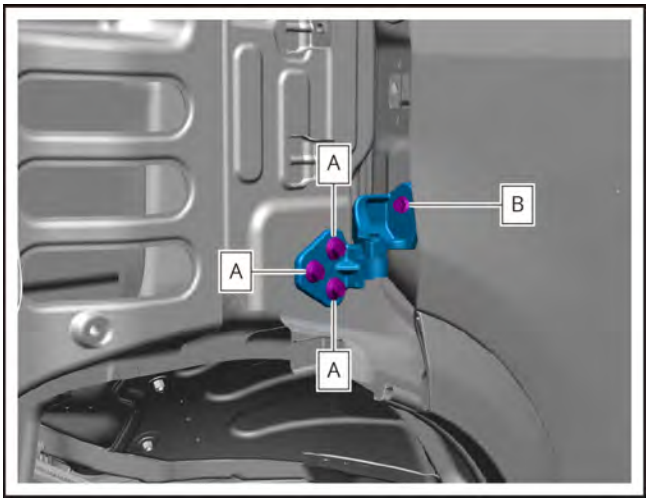
4 Remove front bumper left mounting bracket assembly. Refer to:Front Bumper Left Mounting Bracket Assembly, Repair Procedure

5 Remove left front Combination Lamp Assembly. Refer to:Left Front Combination Lamp Assembly, Repair Procedure

6 Remove Charging Port Cover Assembly. Refer to:Charging Port Cover Assembly, Repair Procedure

7 Remove left marker lamp assembly. Refer to:Left Marker Lamp Assembly, Repair Procedure

8 Remove left front fender. Refer to:Left Front Fender, Repair Procedure



9 remove left front door lower hinge assembly.

a. Remove left front door lower hinge assembly 3 retaining bolt A.

b. Remove retaining bolt B, remove left front door lower hinge assembly.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Limit Position Unit Assembly, Repair Procedure

Tips

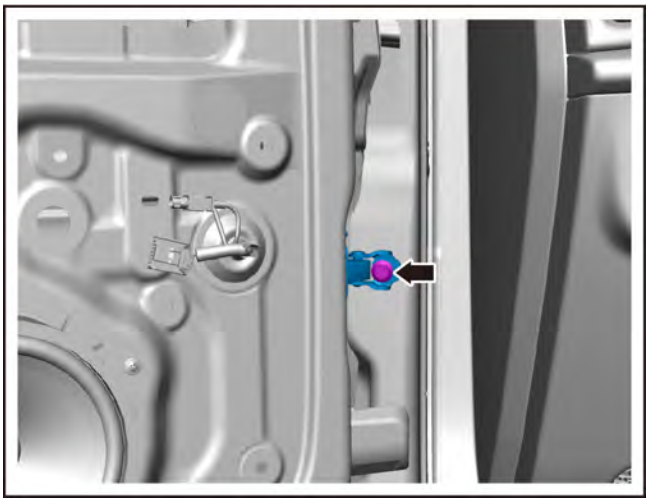
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

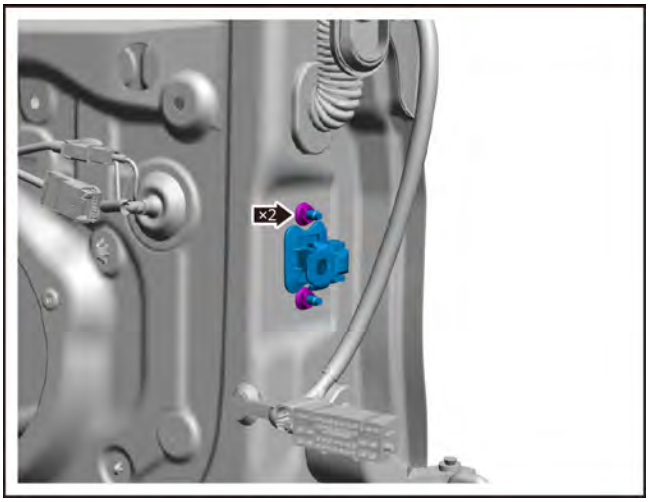
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove woofer. Refer to:Woofer, Repair Procedure



4 Remove left front door limit position unit assembly retaining bolt.



5 Remove 2 retaining nut, remove left front door limit position unit assembly.

Installation Steps

1 Install in the reverse order of removal.

Tailgate Hinge Assembly (270°), Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove tailgate hinge stop block. Refer to:Tailgate Hinge Stop Block, Repair Procedure

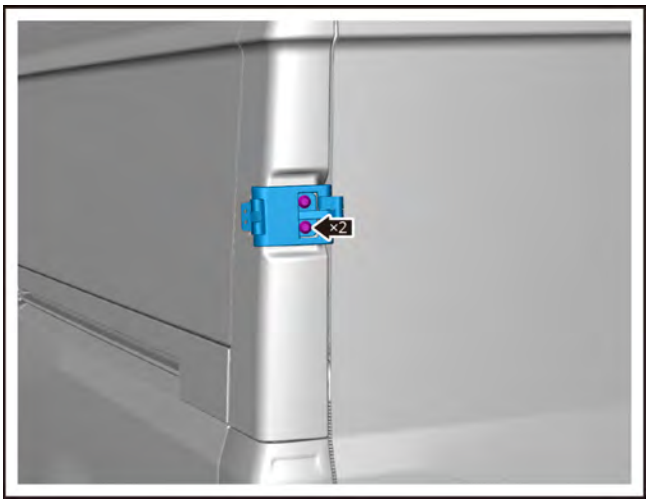
2 Remove left D pillar hinge trim panel. Refer to:Left D Pillar Hinge Trim Panel, Repair Procedure



3 Remove left rear tailgate sheet metal welding assembly 2 retaining screw.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.



4 Remove 2 retaining screw, remove tailgate hinge assembly (270°).

Installation Steps

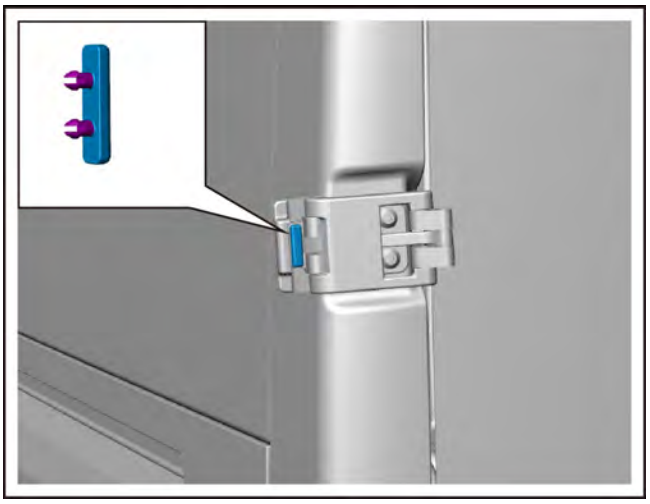
1 Install in the reverse order of removal.

Tailgate Hinge Stop Block, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release retaining clip, remove tailgate hinge stop block.

Installation Steps

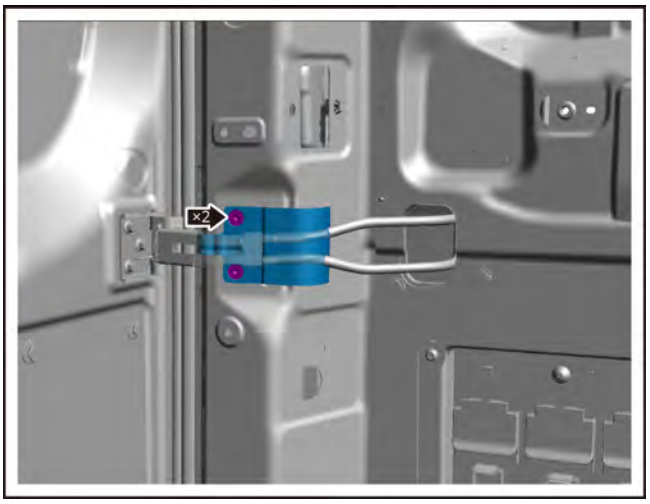
1 Install in the reverse order of removal.

Vehicle Body Upper Tailgate Limit Position Unit, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining screw, remove vehicle body upper tailgate limit position unit.

Installation Steps

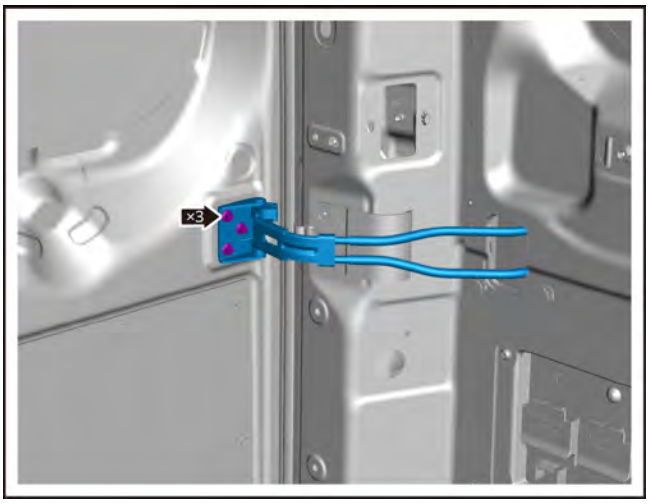
1 Install in the reverse order of removal.

Door Upper Tailgate Limit Position Unit, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 3 retaining bolt, remove door upper tailgate limit position unit.

Installation Steps

1 Install in the reverse order of removal.

Sliding Door accessory

Repair Procedure

Sliding Door Section Line Box - Left, Repair Procedure

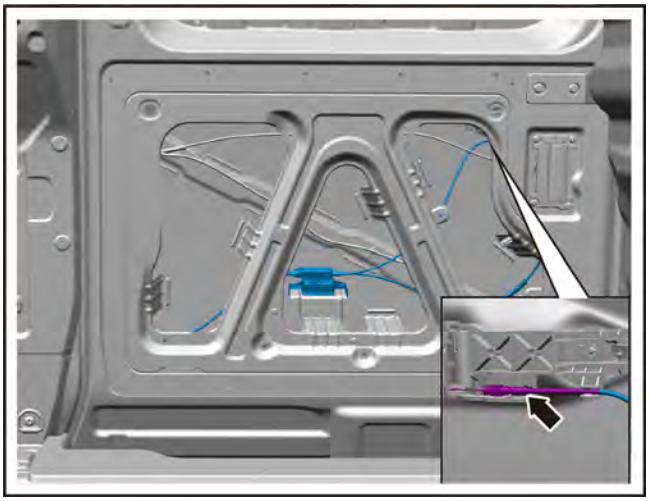
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

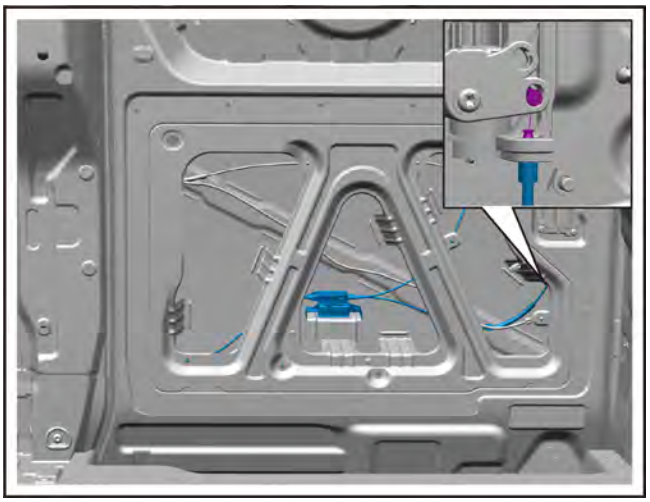
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

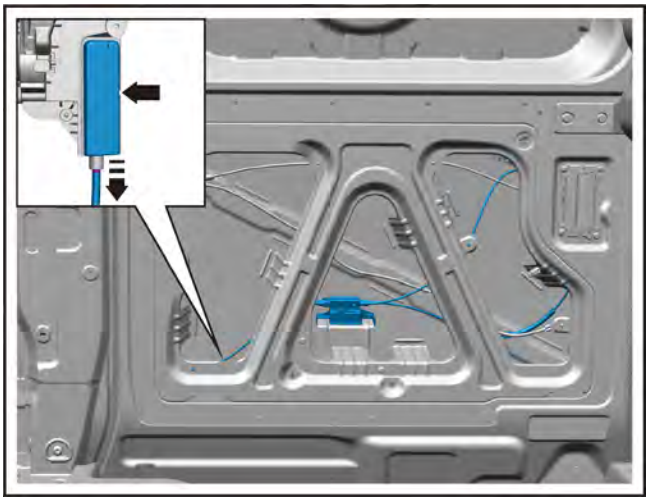
2 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure



3 release Sliding Door section line box - left cable.



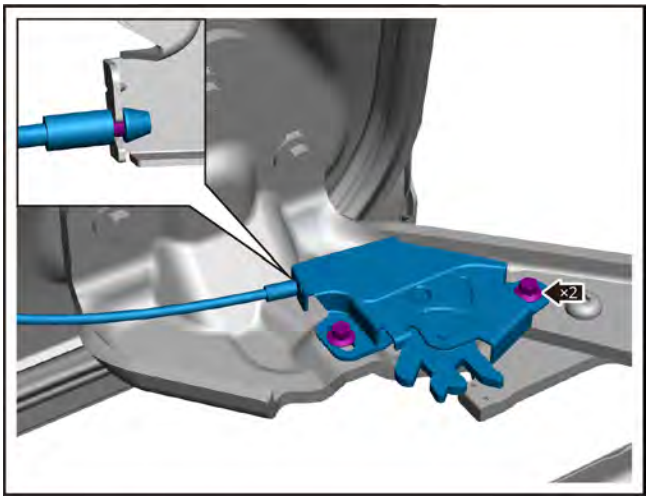
4 release Sliding Door section line box - left cable.



5 release Sliding Door section line box - left fastener.

a. release left Sliding Door main lock end cap.

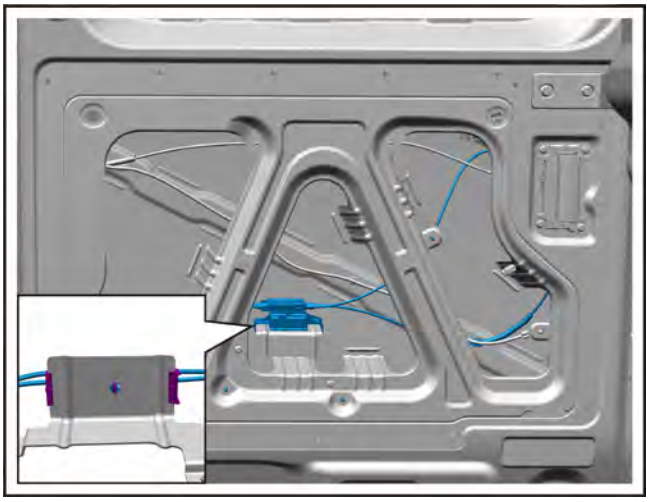
b. release left Sliding Door main lock cable.



6 Remove Sliding Door section line box - left.

a. Remove Left Full-open Limit Lock 2 retaining bolt.

b. release Sliding Door section line box - left cable clip.



7 release retaining clip, remove Sliding Door section line box - left.

Installation Steps

1 Install in the reverse order of removal.

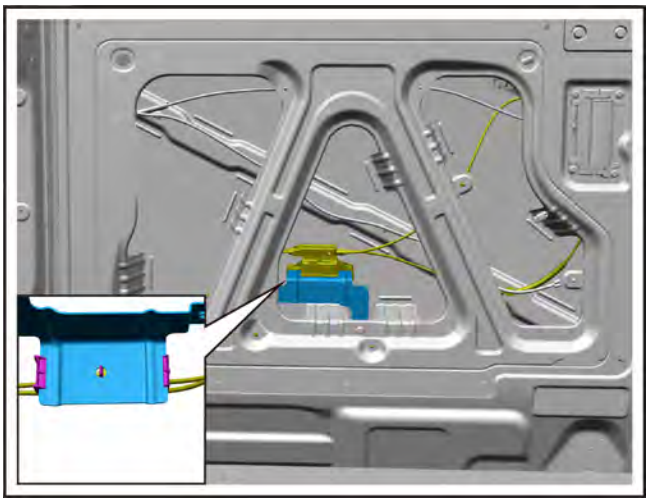
Left Sliding Door Section Line Box Mounting Bracket, Repair Procedure

Tips

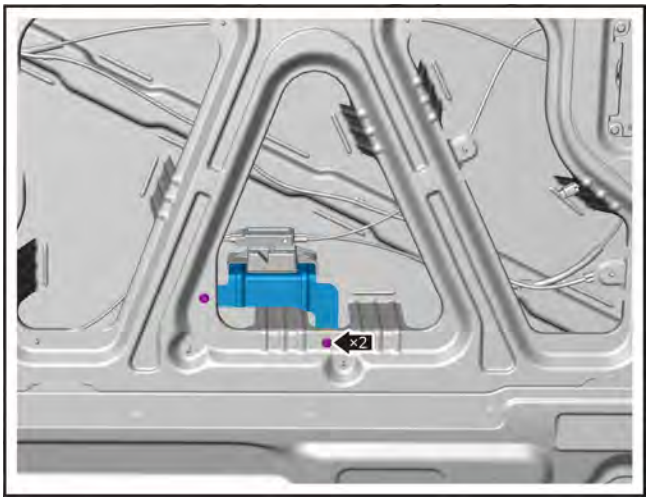
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure



2 release left Sliding Door section line box mounting bracket retaining clip, offset open section line box.



3 Remove 2 retaining bolt, remove left Sliding Door section line box mounting bracket.

Installation Steps

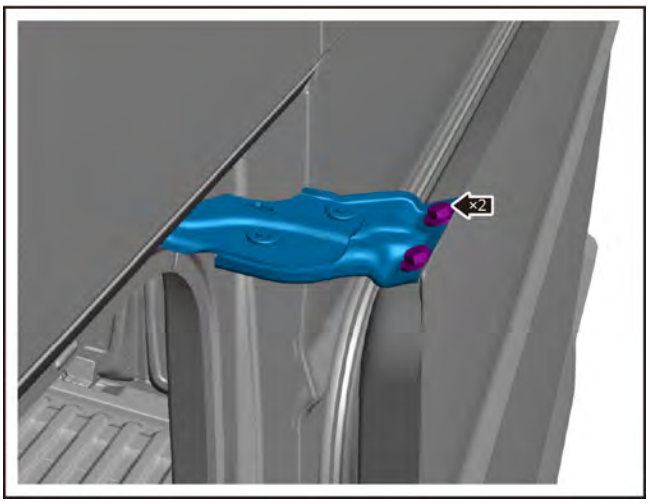
1 Install in the reverse order of removal.

Left Sliding Door Upper Hinge Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

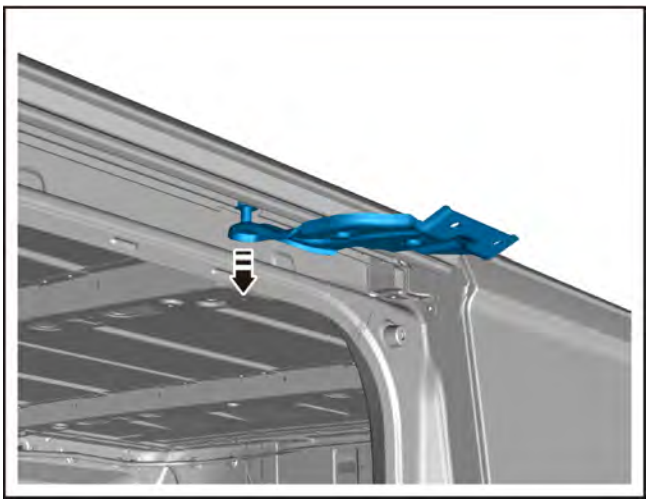
Removal Steps



1 Remove left Sliding Door upper hinge assembly 2 retaining bolt.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.



2 left Sliding Door upper hinge assembly move to guide rail missing port at, along direction arrow side direction remove.

Installation Steps

1 Install in the reverse order of removal.

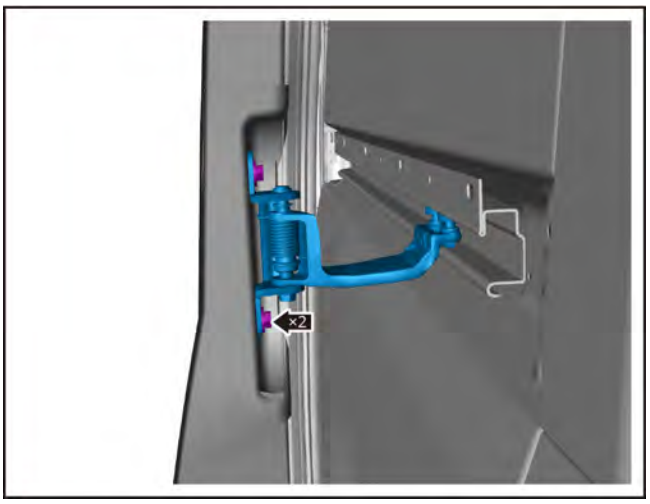
Left Sliding Door Center Hinge Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

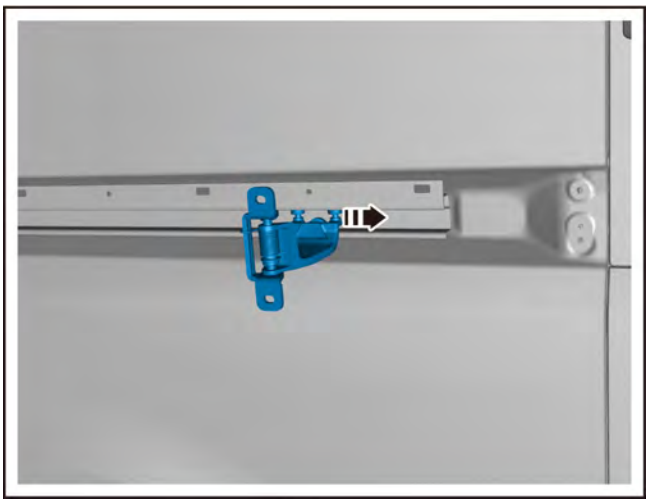
1 Remove left Sliding Door rail channel trim panel. Refer to:Left Sliding Door Rail Channel Trim Panel, Repair Procedure



2 Remove left Sliding Door center hinge assembly 2 retaining bolt.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.



3 along direction arrow side direction remove left Sliding Door center hinge assembly.

Installation Steps

1 Install in the reverse order of removal.

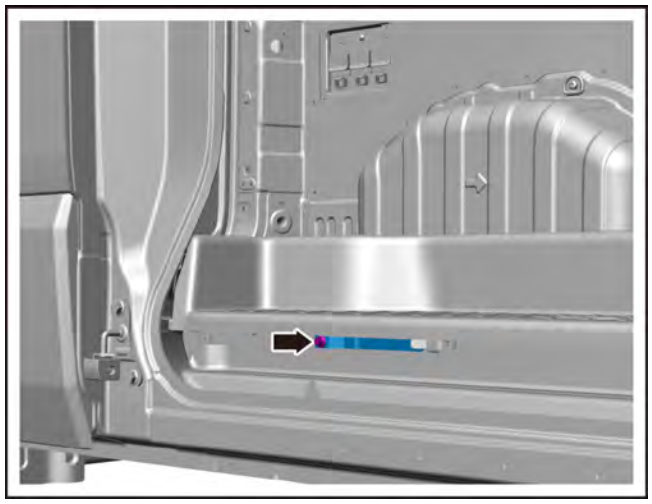
Left Sliding Door Lower Hinge Assembly, Repair Procedure

Tips

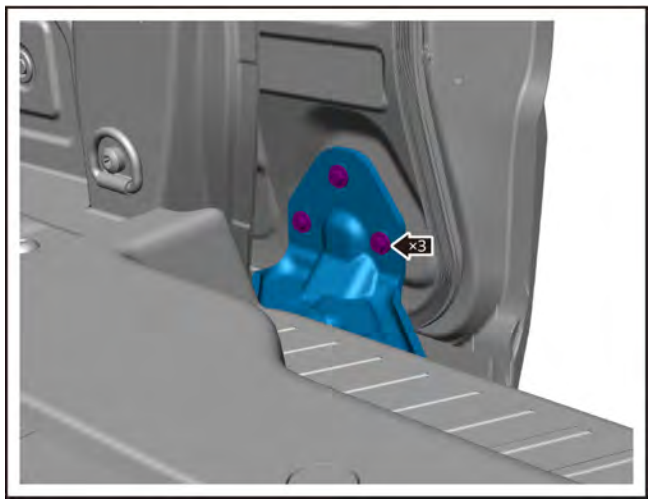
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove Left Full-open Limit Lock. Refer to:Left Full-Open Limit Lock, Repair Procedure



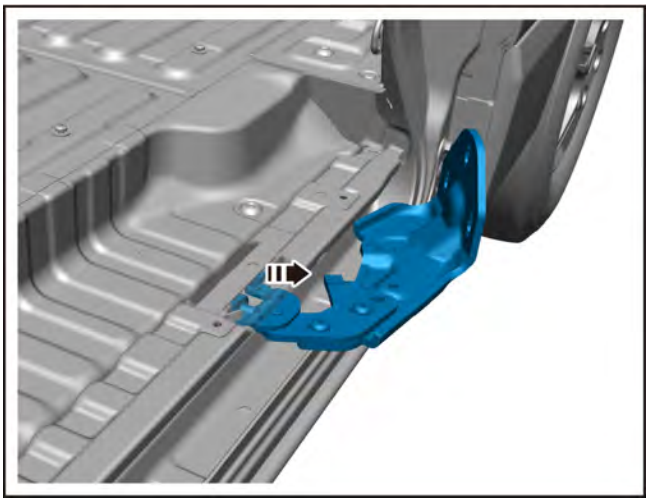
2 Remove retaining bolt, remove left lower guide rail item port bracket.



3 Remove left Sliding Door lower hinge assembly 3 retaining bolt.

Caution

Remove when, need by another I technician coordinate assist item item component, with protection component falling or loss balance.



4 left Sliding Door lower hinge assembly move to guide rail missing port at, along direction arrow side direction remove.

Installation Steps

1 Install in the reverse order of removal.

Left Sliding Door Center Guide Rail Assembly, Repair Procedure

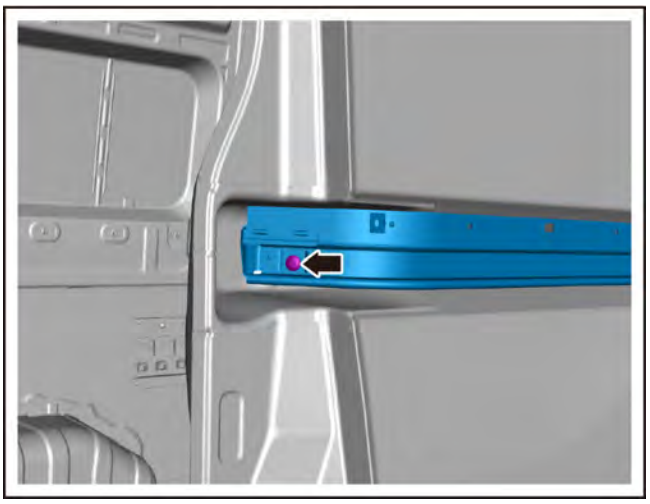
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove left Sliding Door rail channel trim panel. Refer to:Left Sliding Door Rail Channel Trim Panel, Repair Procedure

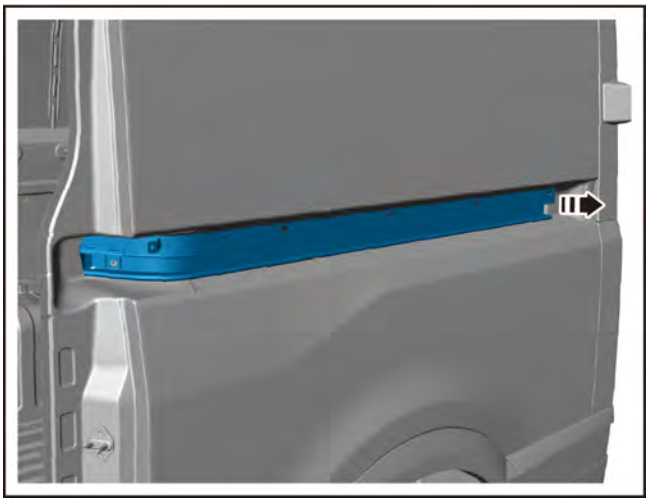
2 Remove left Sliding Door center hinge assembly. Refer to:Left Sliding Door Center Hinge Assembly, Repair Procedure



3 Remove left Sliding Door center guide rail assembly retaining screw.



4 Remove left Sliding Door center guide rail assembly 5 retaining nut.



5 along direction arrow side direction remove left Sliding Door center guide rail assembly.

Installation Steps

1 Install in the reverse order of removal.

Determine Sliding Door Connector, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left B pillar lower Shield Assembly. Refer to:Left B Pillar Lower Shield Assembly, Repair Procedure



3 Disconnect determine Sliding Door connector wiring harness connector.



4 Remove 2 retaining screw, remove determine Sliding Door connector.

install procedure

1 Install in the reverse order of removal.

Power Sliding Door Connector, Repair Procedure

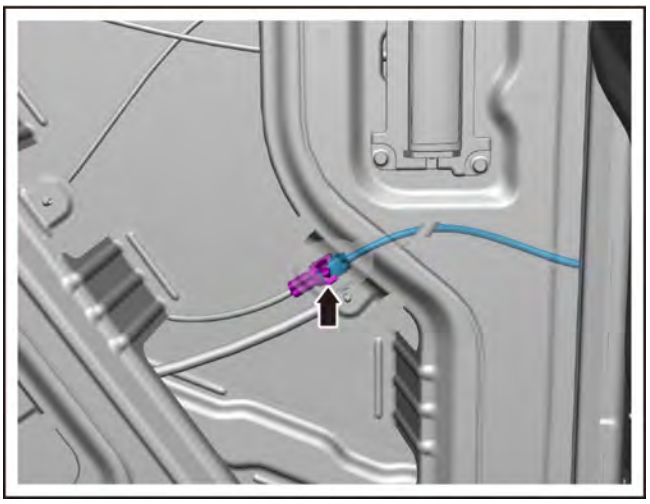
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left Sliding Door Shield Assembly. Refer to:Left Sliding Door Shield Assembly, Repair Procedure



3 Disconnect Power Sliding Door connector wiring harness connector.



4 Remove 2 retaining screw, remove Power Sliding Door connector.

Installation Steps

1 Install in the reverse order of removal.

Sliding Door Center Buffer Block, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining bolt, remove Sliding Door Center Buffer Block.

Torque:xxx±xxN·m

Installation Steps

1 Install in the reverse order of removal.

Sliding Door Anti-Release Hook, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 4 retaining screw, remove Sliding Door anti-release hook.

Installation Steps

1 Install in the reverse order of removal.

Sliding Door Anti-Release Hook Bottom Seat, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining bolt, remove Sliding Door anti-release hook bottom seat.

Installation Steps

1 Install in the reverse order of removal.

Left Lower Sliding Door Guide Seat, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining bolt, remove left lower Sliding Door guide seat.

Installation Steps

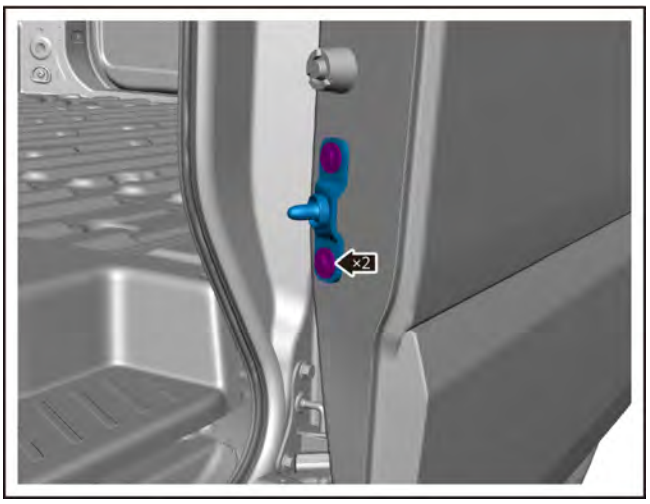
1 Install in the reverse order of removal.

Left Lower Sliding Door Guide Block, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 2 retaining bolt, remove left lower Sliding Door guide block.

Installation Steps

1 Install in the reverse order of removal.

Seat Track Install Panel Add Strength Bracket, Repair Procedure

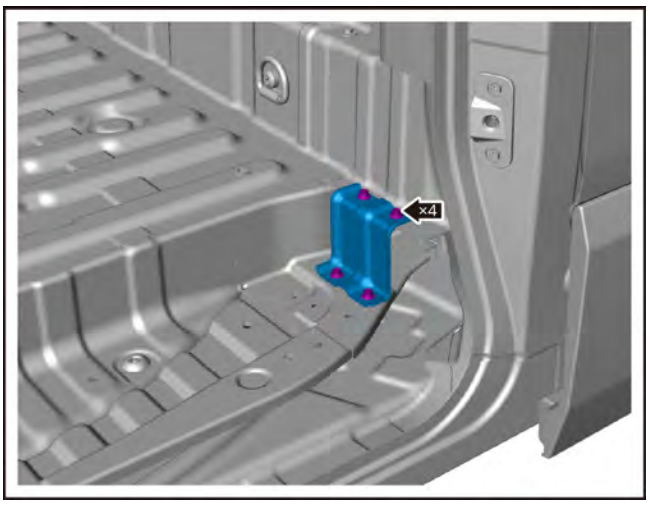
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Remove anchor point (pedal at). Refer to:Anchor Point (Pedal at), Repair Procedure

2 Remove Left Sliding Door Scuff Plate Assembly. Refer to:Left Sliding Door Scuff Plate Assembly, Repair Procedure



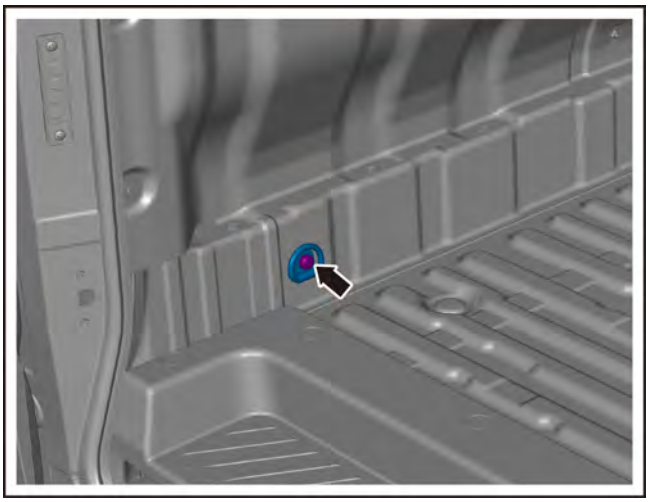
3 Remove 4 retaining bolt, remove seat track install add strength panel bracket.

Installation Steps

1 Install in the reverse order of removal.

Anchor Point, Repair Procedure

Removal Steps



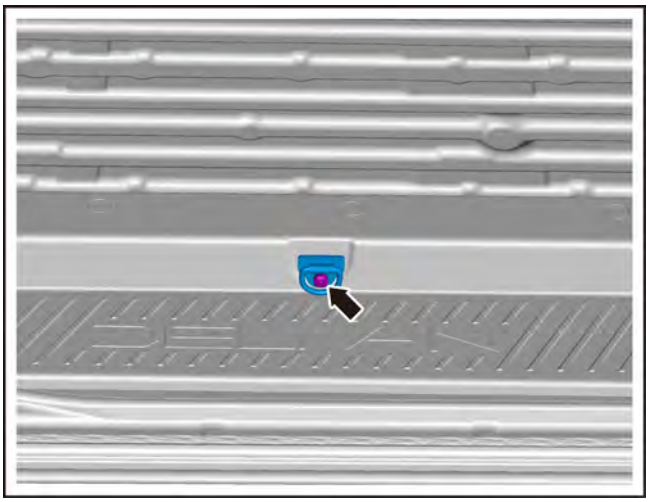
1 Remove retaining bolt, remove anchor point.

Installation Steps

1 Install in the reverse order of removal.

Anchor Point (Pedal at), Repair Procedure

Removal Steps



1 Remove retaining bolt, remove anchor point (pedal at).

Installation Steps

1 Install in the reverse order of removal.

hood

System Overview

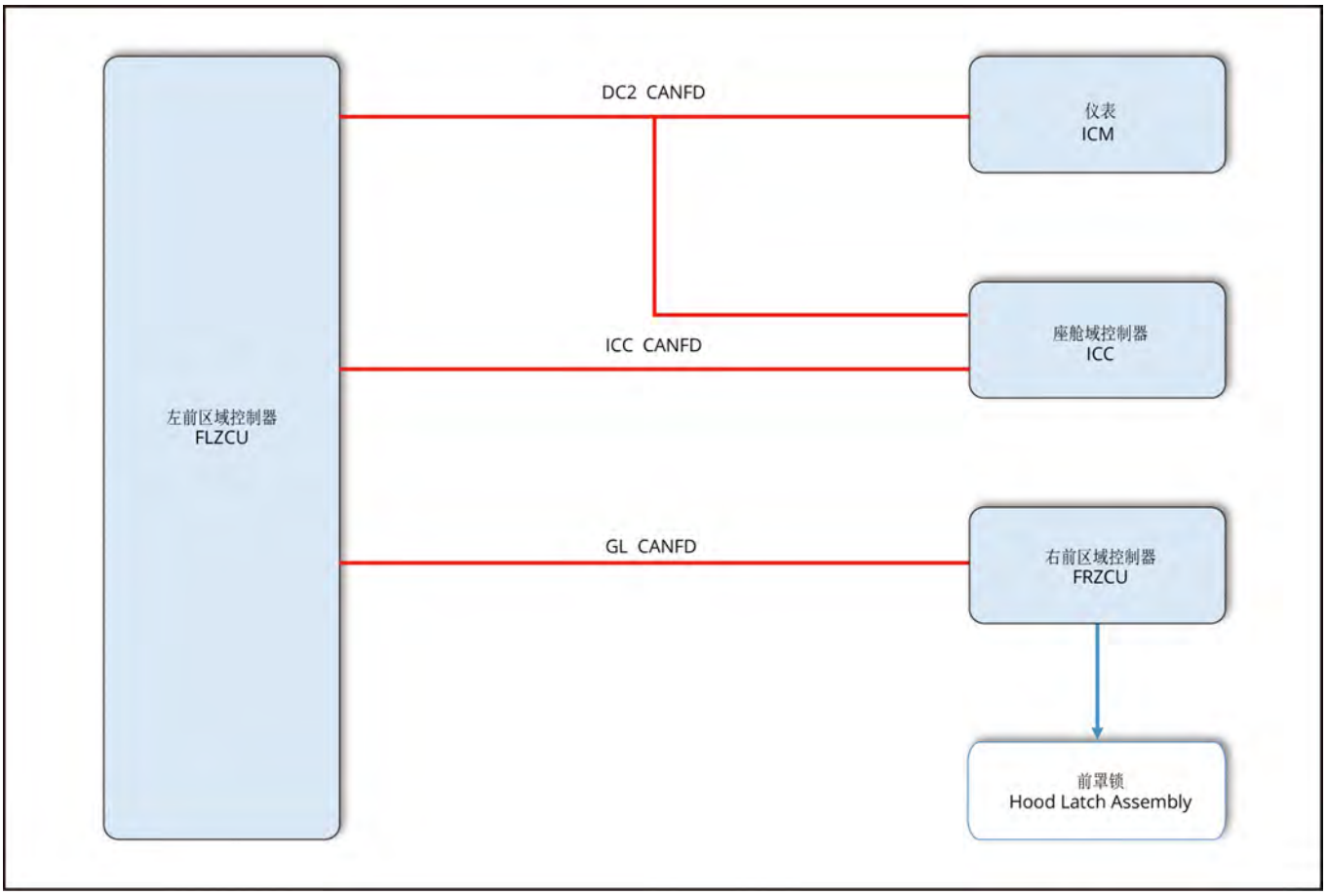
Bonnet Lock Function Overview

System Principle

front cover lock Yes mechanical type lock mechanism, from vehicle inner part pull movement Bonnet Release Handle enable unlock, lock when bonnet lower to away it lock Location large approximately 20-30 centimetre m at when, apply I determine direction lower force, make it have with I determine speed from and Closing the Bonnet. front cover lock cover lock switch direction Right Front Zone Control Unit feedback front cover lock Status Signal.

Hood Lock Status display Function work condition for vehicle power supply be in Comfortable/ON gear position. Left Front Zone Control Unit (FLZCU) acquire Hood Lock Status Signal, through CAN bus transmit to Cockpit Domain Controller (ICC), again rotate send to Instrument Pack (ICM); Instrument Pack (ICM) receive lock Status Signal rear perform logic treatment: bonnet not be in disabled Status when, Instrument Pack illuminate red Indicator Lamp; Hood Lock disabled then turn off Indicator Lamp. same when according to Vehicle Speed perform elastic window card display logic, Vehicle Speed > 4km/h, door open elastic window card maintain continue display; Vehicle Speed ≤2km/h when, elastic window card display 5s rear automatic exit; Hood Lock disabled when direct connect remove eliminate alarm card. in card maintain continue display mode lower, Instrument Pack synchronization Output “ Hood Lock not related ” sound alarm; bonnet disabled or elastic window enter 5s exit mode when, stop sound alarm.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	DC2 CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	ICC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	GL CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Cockpit Domain Controller	ICC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	DC2 CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Instrument Pack	DC2 CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Right Front Zone Control Unit	GL CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Status Signal	front cover lock Status Signal Input
front cover lock	Hardwired	Status Signal	Right Front Zone Control Unit Status Signal Output

Component Description

front cover cover lock

mechanical type front cover lock assembly Yes enable front cover closed lock, unlock open item mechanical component, layout position at body front end, and front cover upper buckle pairing work. assembly inner position stage 1 main lock mechanism, stage 2 safety fuse hook, spring reset assembly, can select integrated Status detection switch; matching combined release cable and vehicle inner open hand handle complete Unlocking Operation. use two stage lock safety item item, stage 1 lock by vehicle inner release handle unlock, stage 2 fuse hook provide failure protection, avoid operate vehicle center front cover intent outer open; lock Status switch Output fully locked / half lock signal, support vehicle front cover not related remind Function.

Repair Procedure

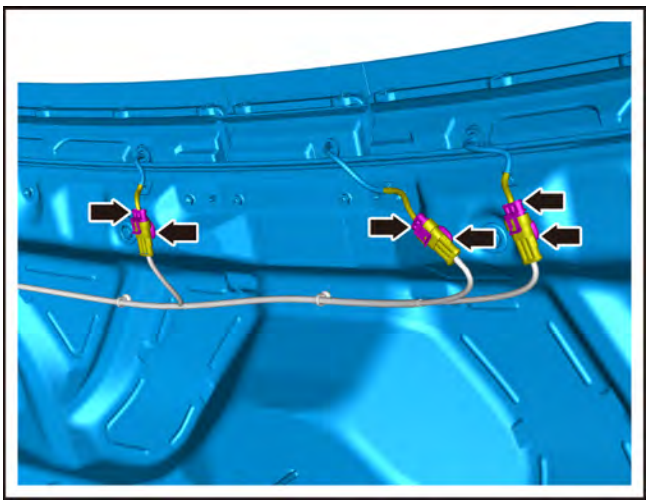
Bonnet Welding Assembly, Removal and Installation

Tips

this Removal and Installation, required two person matching combined operation.

Removal Steps

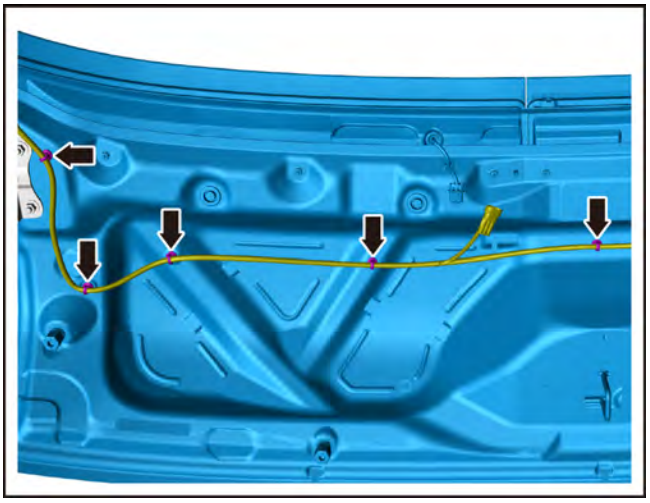
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure



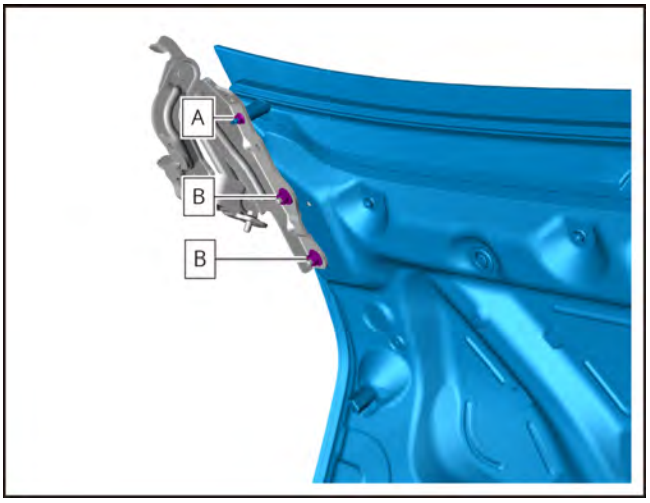
2 Release front compartment wiring harness retaining clip.

a. Disconnect 3 bonnet welding assembly wiring harness connectors.

b. Release 3 front compartment wiring harness retaining clips.



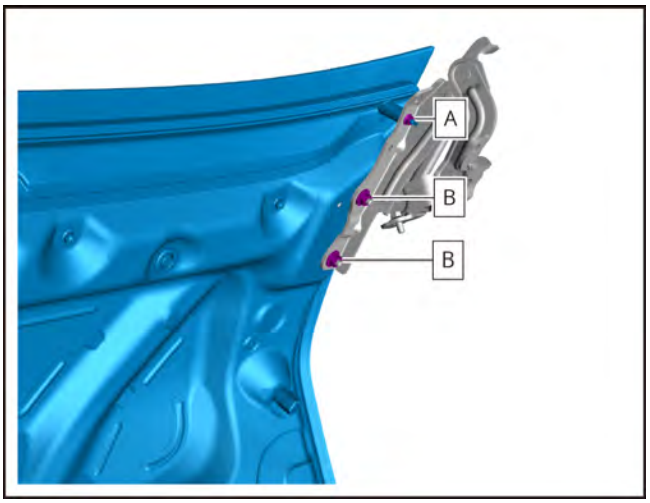
3 Release 5 front compartment wiring harness retaining clips.



4 Remove bonnet welding assembly left fastener.

a. Remove Left Front Position Lamp Assembly retaining nut A.

b. Remove bonnet welding assembly 2 retaining nut B.



5 Remove right fastener, remove bonnet welding assembly.

a. Remove right front Position Lamps assembly retaining nut A.

b. Remove 2 retaining nut B, remove bonnet welding assembly.

Installation Steps

1 Install in the reverse order of removal.

Hood Left Hinge Assembly, Repair Procedure

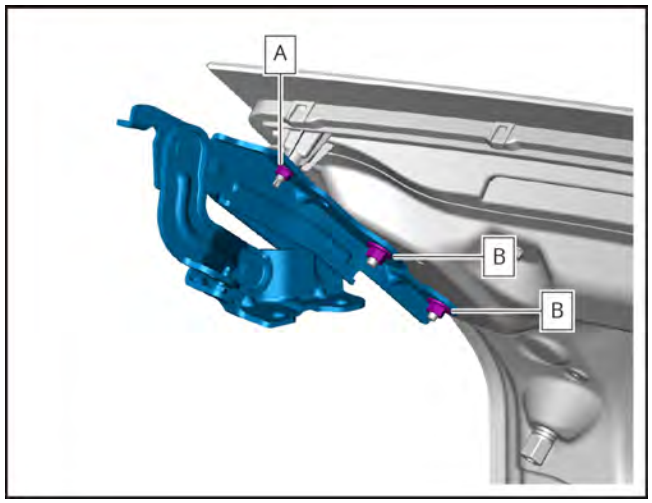
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

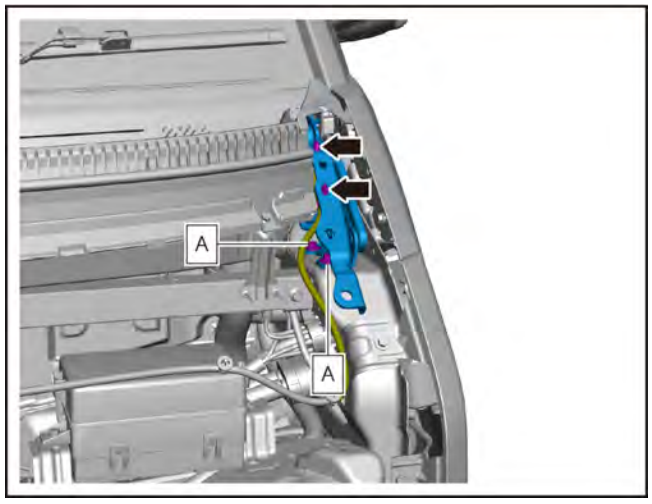
Tips

this Removal and Installation, required two person matching combined operation.

Removal Steps



1 Remove bonnet welding assembly fastener.
   a. Remove Left Front Position Lamp Assembly retaining nut A.
   b. Remove bonnet welding assembly 2 retaining nut B.



2 remove hood left hinge assembly.
   a. Release 2 front compartment wiring harness assembly retaining clips.
   b. Remove 2 retaining bolt A, remove hood left hinge assembly.

Installation Steps

1 Install in the reverse order of removal.

Bonnet Welding Assembly, Repair Procedure

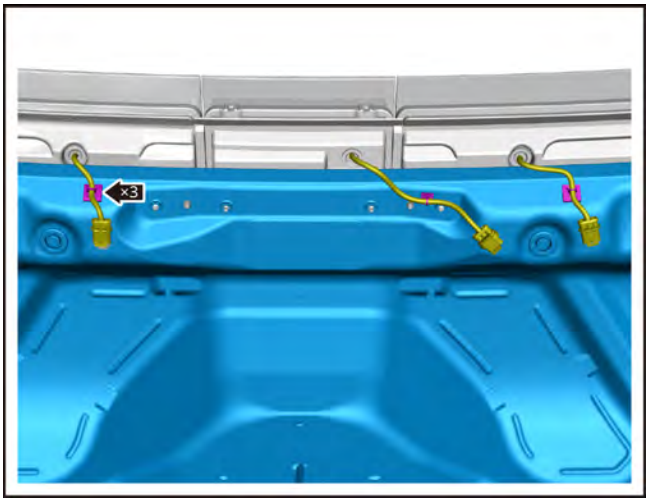
Tips

this Removal and Installation, required two person matching combined operation.

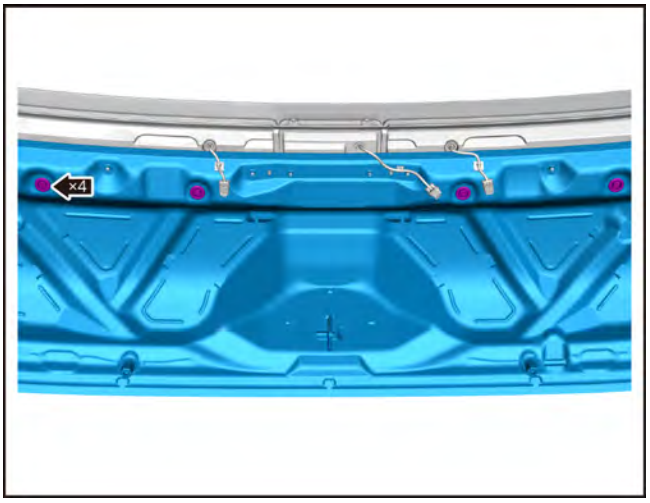
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove bonnet welding assembly. Refer to:Bonnet Welding Assembly, Removal and Installation



3 Release 3 front compartment wiring harness retaining clips.



4 Remove 4 blocked part.



5 Remove 12 retaining nut, remove bonnet welding assembly.

Installation Steps

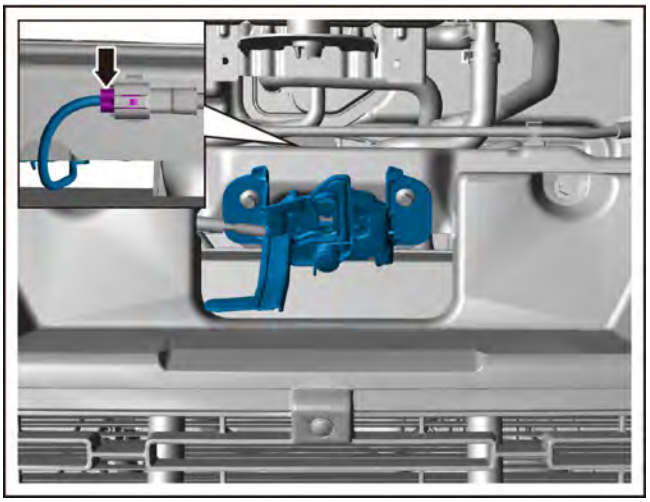
1 Install in the reverse order of removal.

Engine Cover Lock Assembly, Repair Procedure

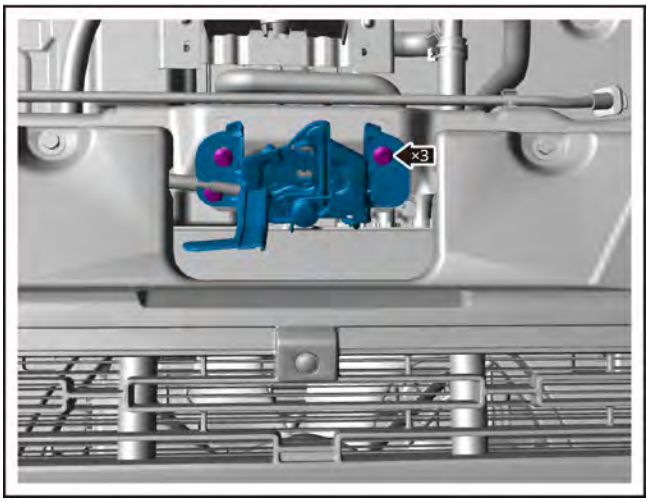
Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

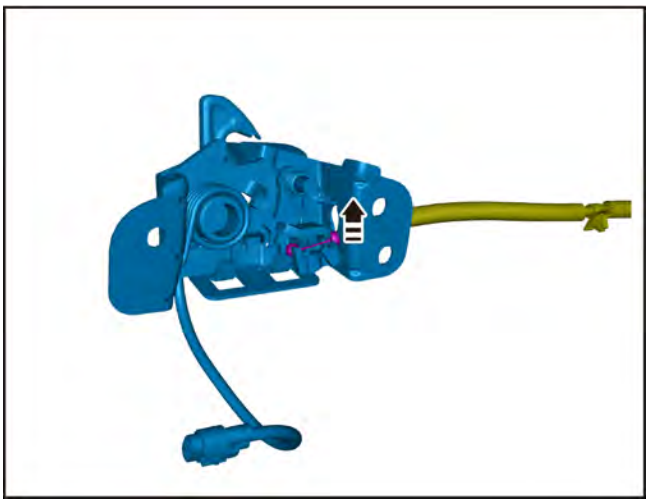
2 Raise the vehicle. Refer to:Vehicle Lifting and Support



3 Disconnect engine cover lock assembly wiring harness connector.



4 Remove engine cover lock assembly 3 retaining bolt.



5 along direction arrow side direction release hood cable assembly, remove engine cover lock assembly.

Installation Steps

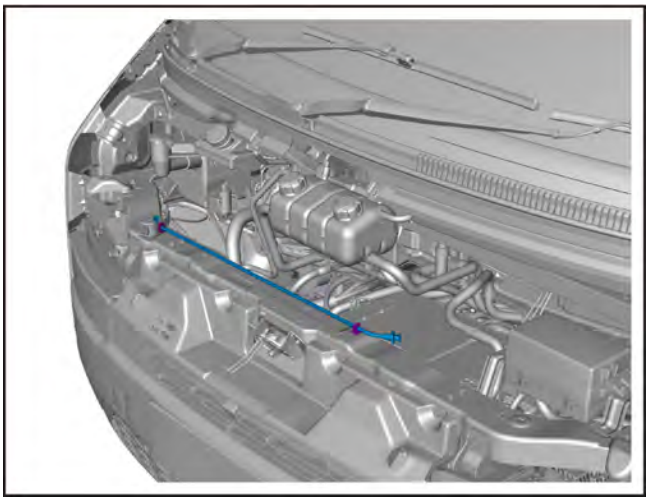
1 Install in the reverse order of removal.

Compartment Cover Strut Assembly, Repair Procedure

Tips

this Removal and Installation, required two person matching combined operation.

Removal Steps



1 release retaining clip, remove compartment cover strut assembly.

Installation Steps

1 Install in the reverse order of removal.

Hood Cable Assembly, Repair Procedure

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

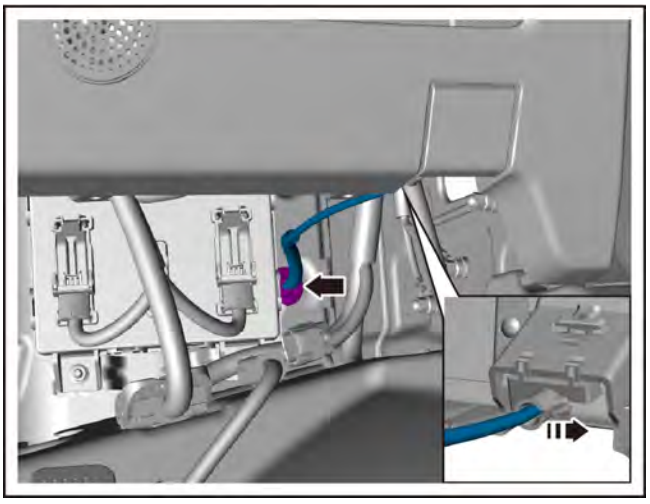
2 Raise the vehicle. Refer to:Vehicle Lifting and Support

3 Remove Front Bumper Assembly. Refer to:Front Bumper Assembly, Removal and Installation

4 Remove engine cover lock assembly. Refer to:Engine Cover Lock Assembly, Repair Procedure

5 Remove Acoustic Vehicle Alerting System assembly. Refer to:Acoustic Vehicle Alerting System Assembly, Repair Procedure

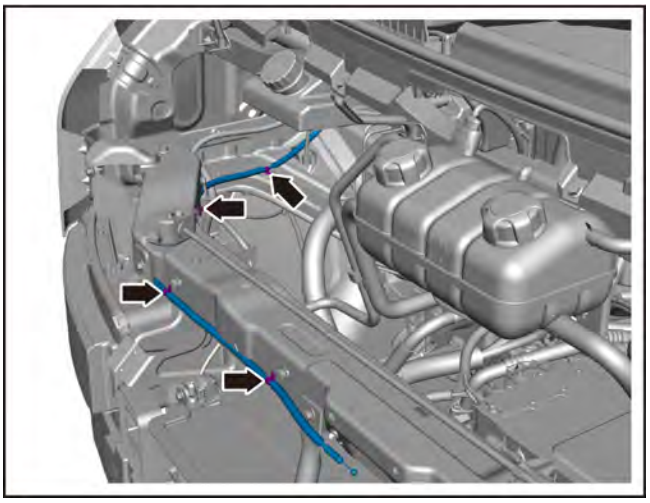
6 Remove cleaning fluid tank assembly. Refer to:Cleaning Fluid Tank Assembly, Repair Procedure



7 release hood cable assembly retaining adhesive sleeve.

a. along direction arrow side direction release hood cable assembly.

b. release hood cable assembly retaining adhesive sleeve.



8 remove hood cable assembly.
   a. Release 4 hood cable assembly retaining clips.
   b. remove hood cable assembly.

Installation Steps

1 Install in the reverse order of removal.

door cover buffer part

Repair Procedure

Glass Assembly

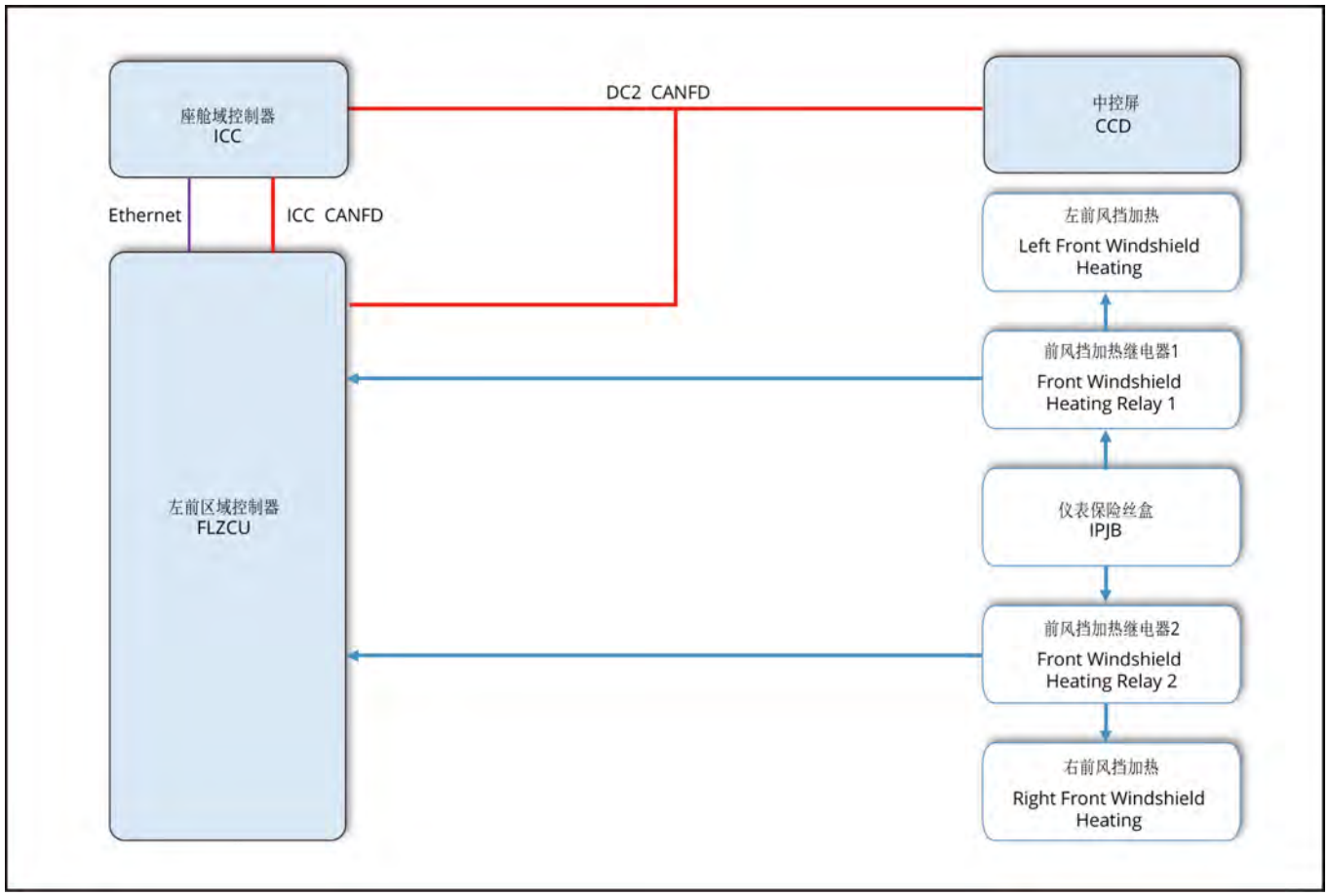
System Overview

Glass Heat Operating Principle

System Principle

Front Windshield Heater by Left Front Zone Control Unit (FLZCU) enable hardware Output control, support Infotainment Display trigger and Front Windshield Heater switch two strip control circuit radial, 20 min retaining heat count when, affected power mode, high-voltage Status, configuration, accessory item consumption level perform item limit approximately harness, use at front air gear except ice or defrost.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	DC2 CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	ICC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Ethernet	Data Transmission	High-speed Communication, Data Sharing, and Control Signals
	Hardwired	Control Signal	Front Windshield Heater relay 1 Control Signal Input
	Hardwired	Control Signal	Front Windshield Heater relay 2 Control Signal Input
Infotainment Display	DC2 CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
Cockpit Domain Controller	ICC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Ethernet	Data Transmission	High-speed Communication, Data Sharing, and Control Signals
Front Windshield Heater relay 1	Hardwired	Control Signal	Left Front Zone Control Unit Control Signal Output
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
	Hardwired	Power Supply	left front air gear heat Power Supply Output
Front Windshield Heater relay 2	Hardwired	Control Signal	Left Front Zone Control Unit Control Signal Output
	Hardwired	Power Supply	Instrument Panel Fuse Box Power Supply Input
	Hardwired	Power Supply	right front air gear heat Power Supply Output
left front air gear heat	Hardwired	Power Supply	Front Windshield Heater relay 1 Power Supply Input
right front air gear heat	Hardwired	Power Supply	Front Windshield Heater relay 2 Power Supply Input

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Instrument Panel Fuse Box	Hardwired	Power Supply	Front Windshield Heater relay 1 Power Supply Output
	Hardwired	Power Supply	Front Windshield Heater relay 2 Power Supply Output

Component Description

windshield assembly (RHD with heat)

windshield heat component for integrated guide power heat film front gear air Glass Assembly, mainly consists of front air gear steel -based glass, inner part item clear guide power heat film, positive negative power terminal connector item form, matching combined Front Windshield Heater relay enable high-voltage power drive. the component by Left Front Zone Control Unit through control Front Windshield Heater relay 1 and 2 Output Power Supply, communication power rear guide power film generate thermal amount, use at rapid speed item -based front air gear surface ice defrost, fog air, enable defrost except ice Function. component affected vehicle Power Management item consumption level protection approximately harness, have backup maximum long 20 min determine when work limit; work Status can through bus feedback to cockpit, support this ground large display, actual body switch two type activation side type.

Repair Procedure

Left Front Door Glass Assembly, Repair Procedure

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Caution

if result Windows glass output occur cracks but maintain complete complete, should Use shutter with interaction fork item affix to Windows glass upper, with lower low damage or cause personal injury air hazard.

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

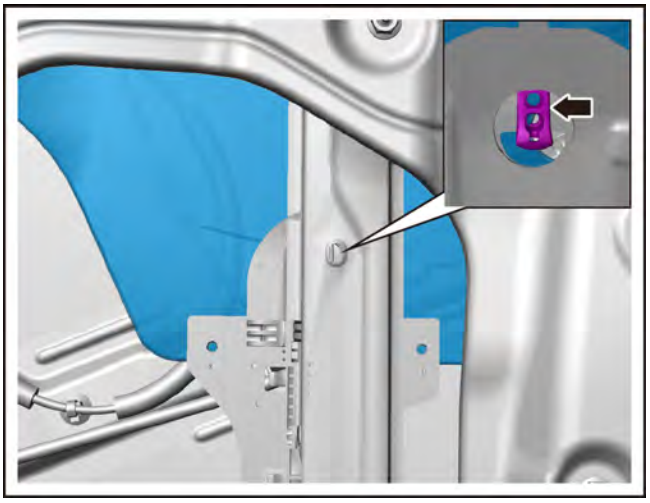
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

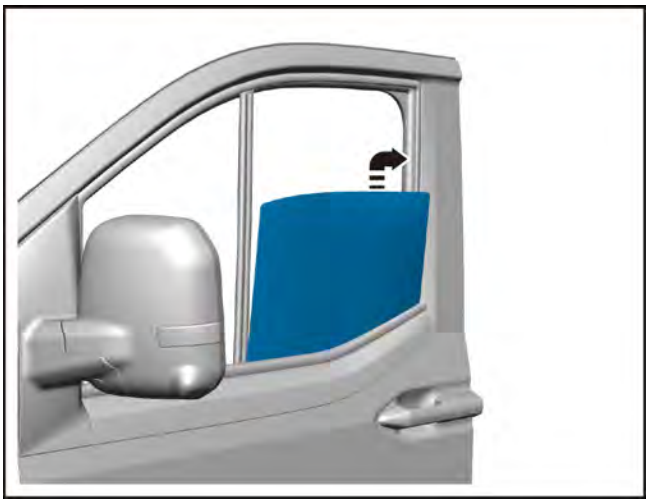
3 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

4 Remove left front door inner belt weatherstrip. Refer to:Left Front Door Inner Belt Weatherstrip, Repair Procedure

5 Remove left front door glass center guide rail assembly. Refer to:Left Front Door Glass Center Guide Rail Assembly, Repair Procedure



6 Release left front door glass assembly retaining clip.



7 along direction arrow side direction remove left front door glass assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Front III Quarter Window Glass Assembly, Repair Procedure

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Caution

if result Windows glass output occur cracks but maintain complete complete, should Use shutter with interaction fork item affix to Windows glass upper, with lower low damage or cause personal injury air hazard.

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

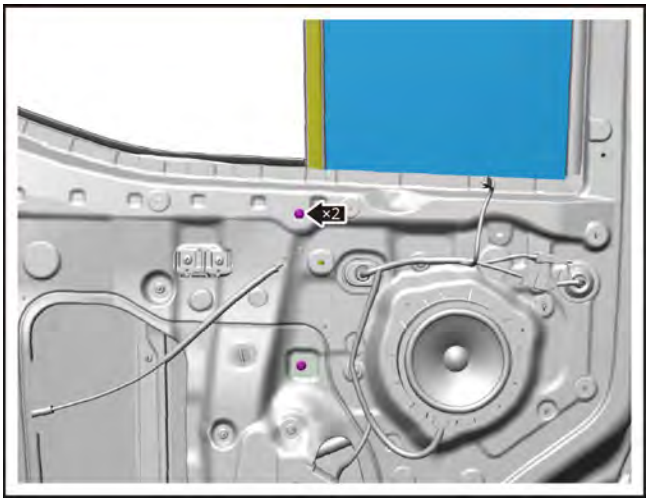
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

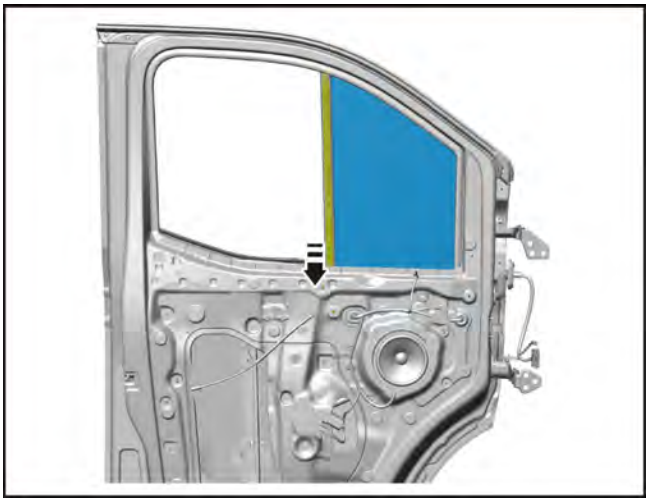
3 Remove left front door outer belt weatherstrip. Refer to:Left Front Door Outer Belt Weatherstrip, Repair Procedure

4 Remove left front door inner belt weatherstrip. Refer to:Left Front Door Inner Belt Weatherstrip, Repair Procedure

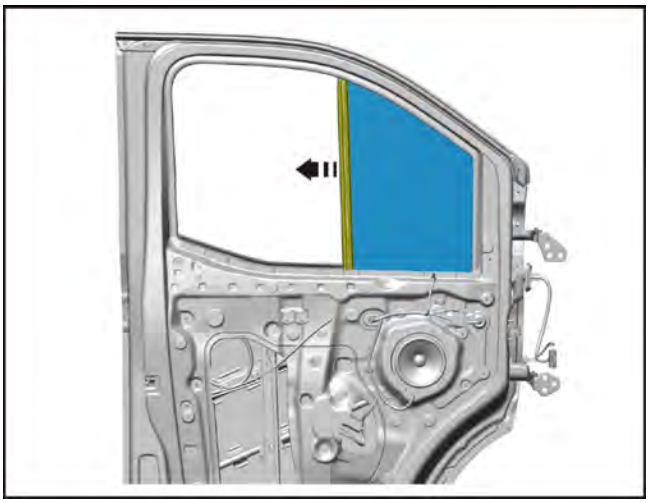
5 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure



6 Remove left front door glass center guide rail assembly 2 retaining bolt.



7 along direction arrow side direction offset open left front door glass center guide rail assembly.



8 along direction arrow side direction release part section left front door glass glass run channel, remove left front III quarter window Glass Assembly.

Installation Steps

1 Install in the reverse order of removal.

Windshield Assembly (RHD with Heat), Repair Procedure

Caution

in Removal and Installation any with with item item or item side glass, sheet metal part when, should wear safety glasses and hand sleeve, with lower low personal injury air hazard.

Caution

if result Windows glass output occur cracks but maintain complete complete, should Use shutter with interaction fork item affix to Windows glass upper, with lower low damage or cause personal injury air hazard.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove left, right A pillar upper Shield Assembly. Refer to:Right A Pillar Upper Shield Assembly, Removal and Installation

3 Remove mounting base B- left, right. Refer to:Mounting Base B- Left, Repair Procedure

4 Remove left, right sun visor assembly. Refer to:Sun Visor Assembly, Repair Procedure

5 Remove interior rearview mirror small cover. Refer to:Interior Rearview Mirror Small Cover, Repair Procedure

6 Remove interior rearview mirror large cover. Refer to:Interior Rearview Mirror Large Cover, Repair Procedure

7 Remove inner rearview mirror assembly. Refer to:Inner Rearview Mirror Assembly, Repair Procedure

8 Remove Single USB-C Charging Module - interior rearview mirror. Refer to:Single USB-C Charging Module - Interior Rearview Mirror, Repair Procedure

9 Remove light rain wet degree sensor. Refer to:Light Rain Wet Degree Sensor, Repair Procedure

10 Remove front interior lamp assembly. Refer to:Front Interior Lamp Assembly, Repair Procedure

11 Remove front top position object box assembly. Refer to:Front Top Position Object Box Assembly, Repair Procedure

12 Remove bonnet welding assembly. Refer to:Bonnet Welding Assembly, Repair Procedure

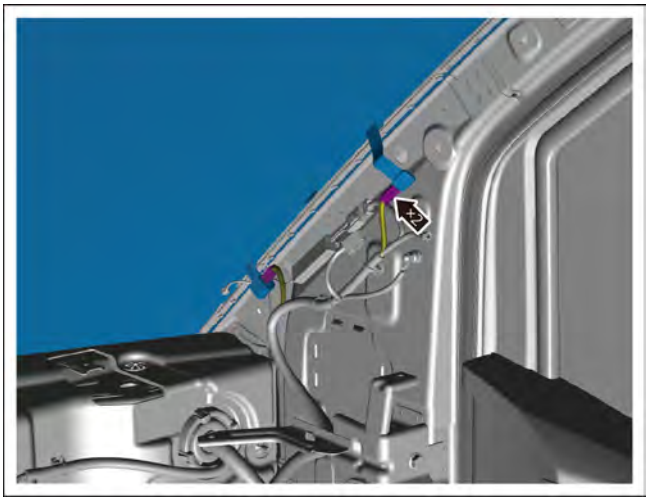
13 Remove left, right angle trim panel. Refer to:Left Angle Trim Panel, Repair Procedure

14 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

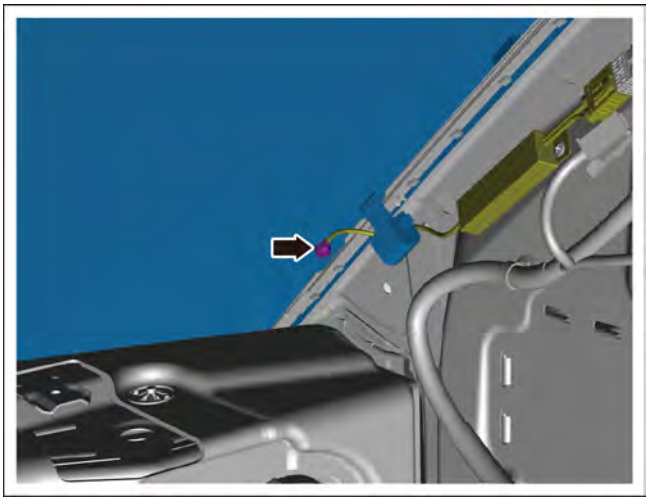
15 Remove bonnet rear weatherstrip. Refer to:Bonnet Rear Weatherstrip, Repair Procedure

16 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure

17 Remove instrument panel subassembly -RHD. Refer to:Instrument Panel Subassembly -RHD, Removal and Installation



18 Disconnect 2 windshield assembly (RHD with heat) wiring harness connectors.



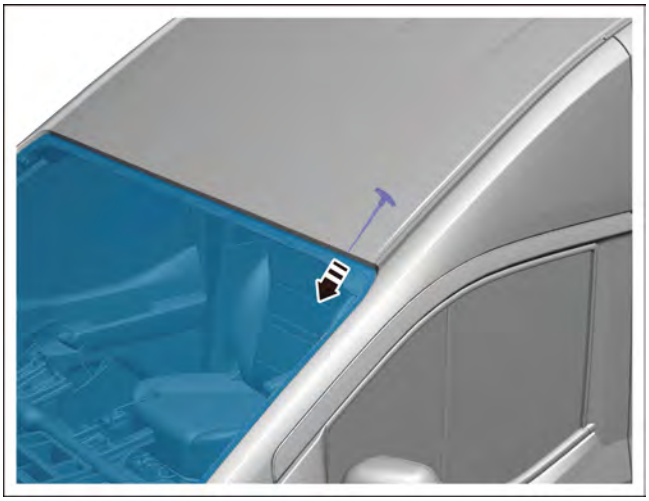
19 release antenna amplifier.



20 Remove Headliner Assembly left 2 retaining clip.



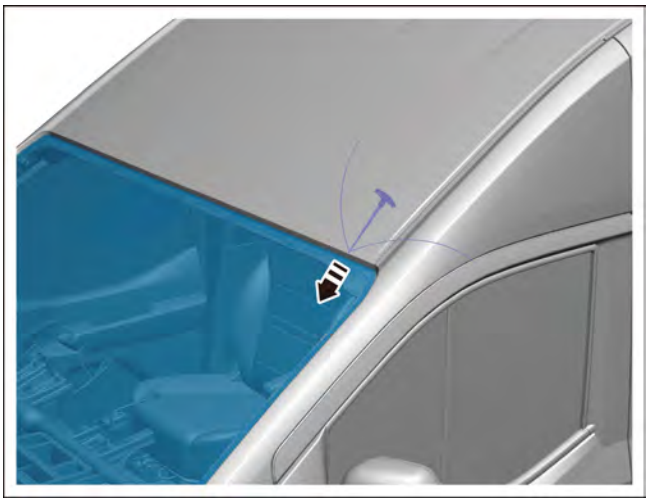
21 Remove Headliner Assembly right 2 retaining clip.



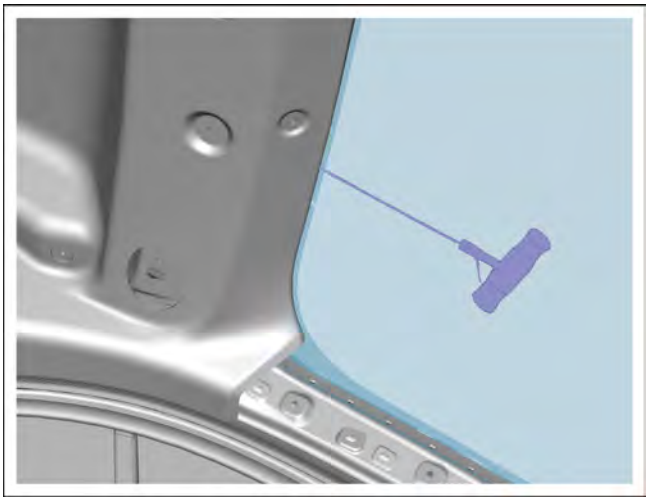
22 plug line tool pass through glass adhesive.

Caution

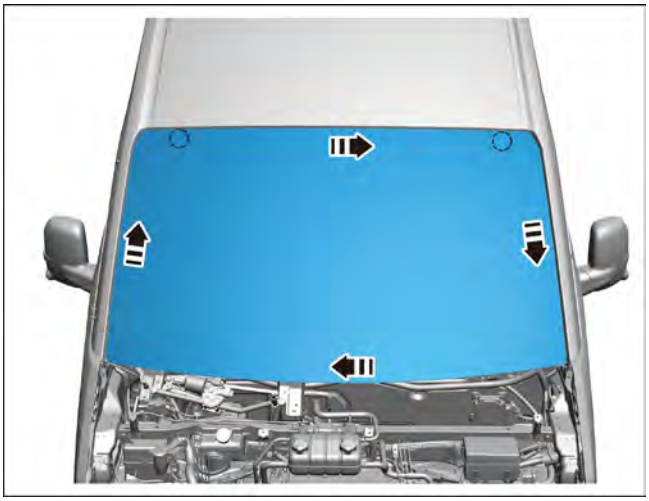
wear plug when, should left right shake slow insert, avoid damage vehicle paint.



23 Use plug line tool Cutting line I end trigger enter vehicle inner.

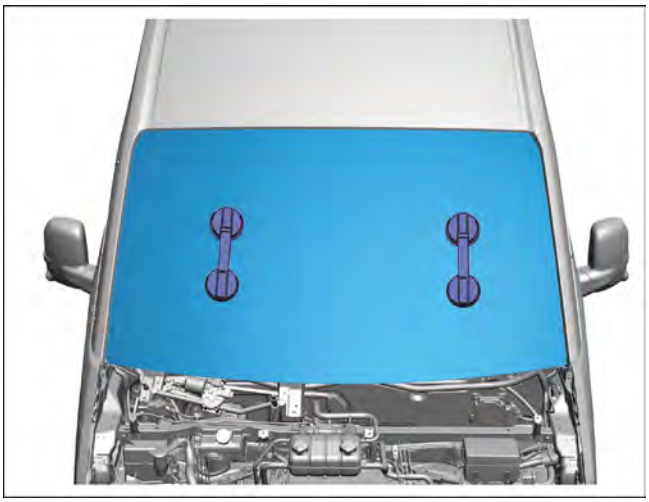


24 pass through glass adhesive Cutting line retaining in Cutting hold hand upper.



25 along direction arrow side direction Cutting glass adhesive and locating pin.

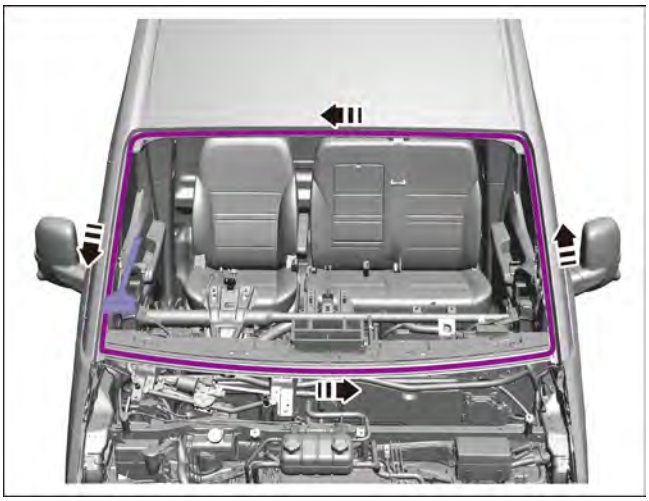
> ⚠ *Caution*
>
> *Cutting line pull pull process center, speed not item over rapid, should by two person matching combined, uniformly perform force, section times gradually step pull item.*



26 in another I technician coordinate assist lower, Use glass intake disc remove front gear air Glass Assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.



2 Use item item along direction arrow side direction clean glass frame upper residual remaining glass adhesive, ensure bond connect surface level complete, clean, no oil grease.

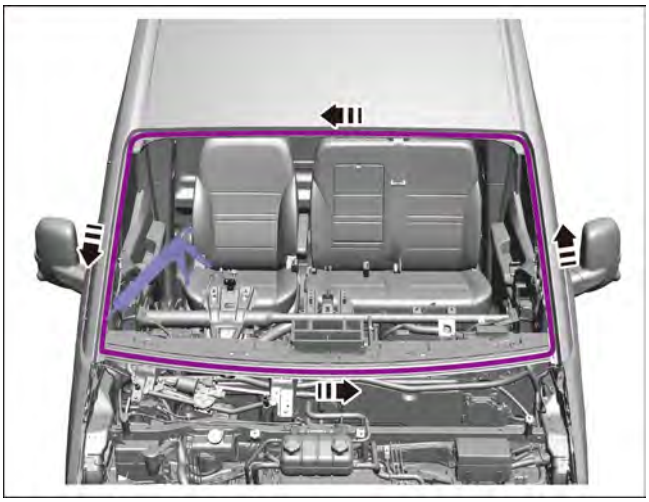


3 windshield affix area treatment.

a. Use clean item layout clean coat adhesive area dust and foreign matter.

b. Use glass cleaning agent wipe coat adhesive area, ensure no oil contamination residual.

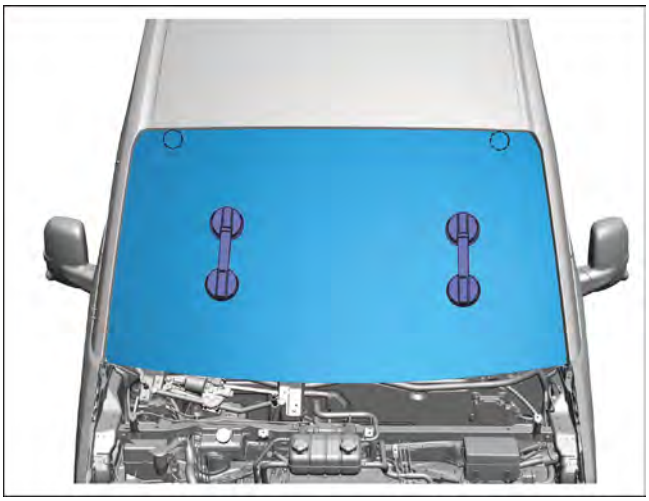
c. in glass bond combined surface upper uniformly apply I layer glass bottom coat.



4 Use glass adhesive gun along direction arrow side direction in glass frame upper uniformly no between disconnect apply upper glass adhesive.

Caution

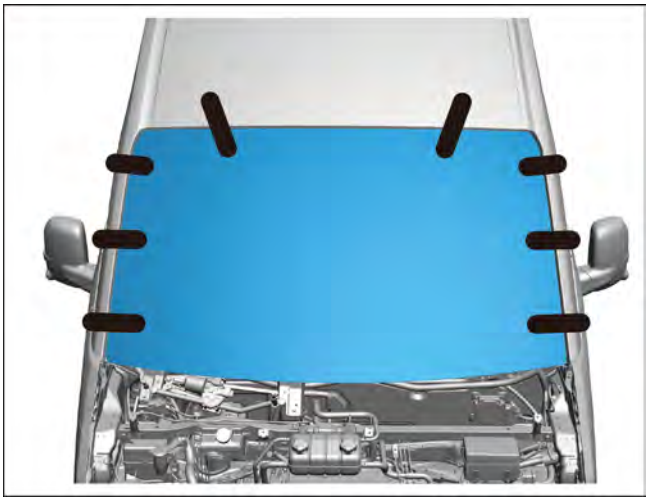
if result coat adhesive process center with disconnect crack, ensure continue continue apply glass adhesive and disconnect crack front segment with re- item.



5 in another I technician coordinate assist lower, windshield assembly front insert installation position, make both sides locating pin for standard locating hole. confirm for center rear glass rear slow lower, wait completely drop position rear along around side uniformly press, make glass affix combined to position.

Warning

in glass adhesive cure seal front, please do not driving vehicle. follow glass adhesive manufacturer Instructions for Use. glass adhesive cure not sufficient or not correct, all will for glass maintain with to negative surface effect. No then may will cause vehicle Use person person severe affected injury.



6 Use tape front gear air Glass Assembly Secure it.

Warning

in glass adhesive cure seal front, please do not driving vehicle. follow glass adhesive manufacturer Instructions for Use. glass adhesive cure not sufficient or not correct, all will for glass maintain with to negative surface effect. No then may will cause vehicle Use person person severe affected injury.

Caution

in bond combined cure Time center, door glass must must maintain open.

Window Regulator

System Overview

Power Window System Operating Principle

System Principle

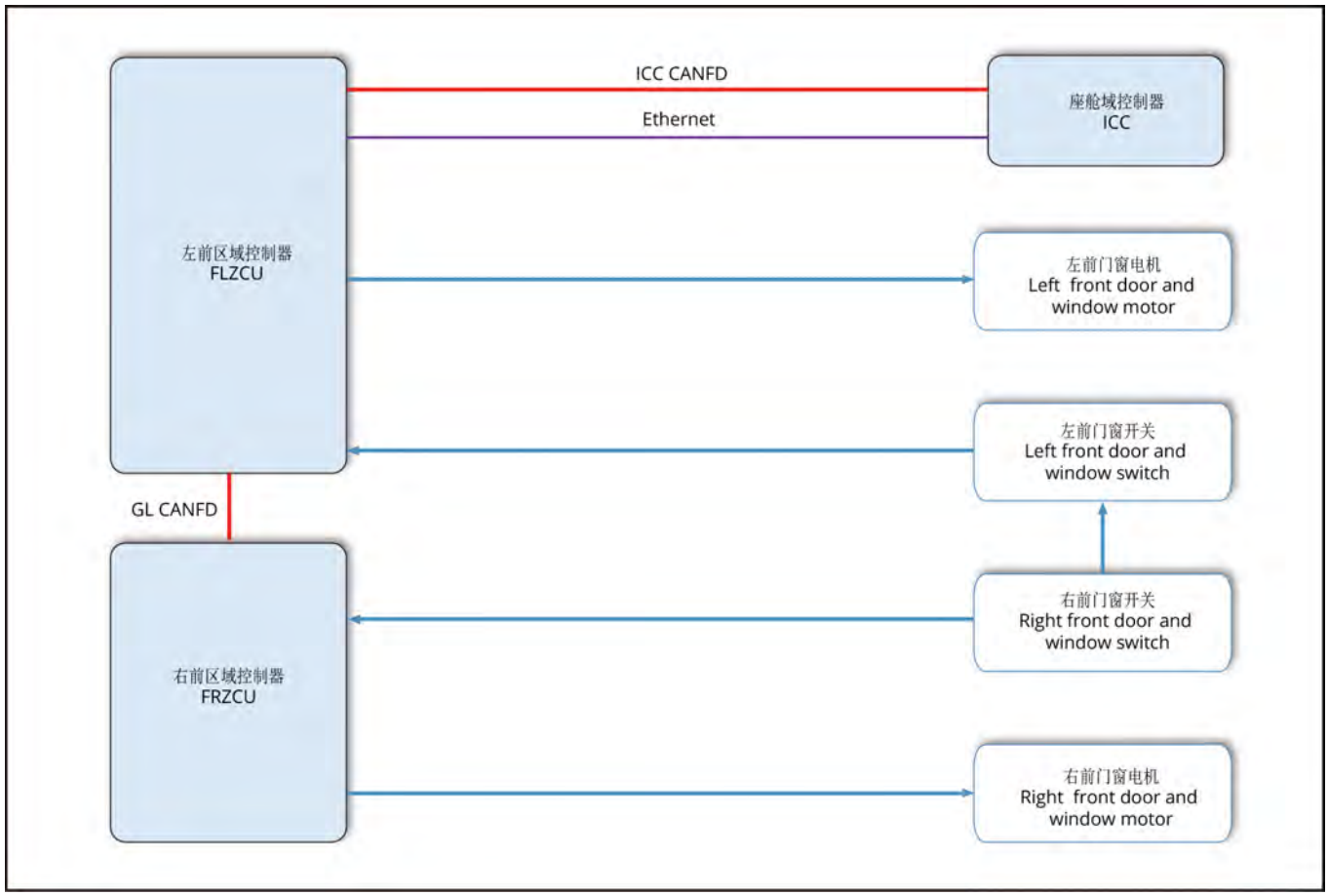
Windows automatic upper raise / lower lower

Windows automatic control Function by Left Front Zone Control Unit enable, through Hardwired Window Switch short press trigger I button automatic upper raise, automatic lower lower Function; system depend on Windows self-learning Location data, integrated motor thermal protection, anti-pinch protection, travel limit position, Function priority stage arbitration mechanism, enable Windows automatic lifting safety control. driver switch can control driver, front passenger Windows perform automatic lifting action.

large display and Voice-controlled Windows

large display and voice Windows control Function, by Cockpit Domain Controller through bus lower send Windows control command to Left Front Zone Control Unit, enable single Windows control, all vehicle I button raise window, I button lower window, I button item air; Windows percentage Location control only large display support. Left Front Zone Control Unit responsible for control left front Windows, same when transmit bus request Right Front Zone Control Unit drive right front Windows perform corresponding action, front rear coordination complete Windows control. Function generate valid depend on Windows self-learning calibration, affected motor thermal protection, anti-pinch, travel limit position, priority stage arbitration safety approximately harness.

Electrical Schematic Diagram



Signal Input/Output List

Unit	Signal Type	Signal Name	Signal Name / Signal Description
Left Front Zone Control Unit	ICC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	GL CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Ethernet	Data Transmission	High-speed Communication, Data Sharing, and Control Signals
	Hardwired	Switch Signal	Left Front Door Window Switch control left front Power Window Motor signal Input
	Hardwired	Switch Signal	right front door window switch control left front Power Window Motor signal Input
	Hardwired	Drive Signal	left front Power Window Motor lower window drive PWM signal Output
Cockpit Domain Controller	ICC CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Ethernet	Data Transmission	High-speed Communication, Data Sharing, and Control Signals
Left Front Door Window Switch	Hardwired	Switch Signal	Left Front Zone Control Unit switch control left front Power Window Motor signal Output
	Hardwired	Switch Signal	right front door window switch control left front Power Window Motor signal transfer person
right front door window switch	Hardwired	Switch Signal	Left Front Door Window Switch control left front Power Window Motor signal Output

Unit	Signal Type	Signal Name	Signal Name / Signal Description
	Hardwired	Switch Signal	Right Front Zone Control Unit switch control right front Power Window Motor signal Output
left front Power Window Motor	Hardwired	Drive Signal	Left Front Zone Control Unit raise window drive PWM signal Input
Right Front Zone Control Unit	GL CANFD	Communication Signal	Data Transmission, Status Communication, Command Control, and Fault Diagnosis
	Hardwired	Switch Signal	right front door window switch control right front Power Window Motor signal Input
	Hardwired	Drive Signal	right front Power Window Motor lower window drive PWM signal Output
right front Power Window Motor	Hardwired	Drive Signal	Right Front Zone Control Unit raise window drive PWM signal Input

Component Description

power glass regulator

glass regulator install in each door inner part, Yes use at control Windows glass lifting actuator mechanism. glass regulator through motor drive and mechanical driveline enable Windows precisely lifting Function.

Repair Procedure

Left Front Door Power Glass Regulator Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

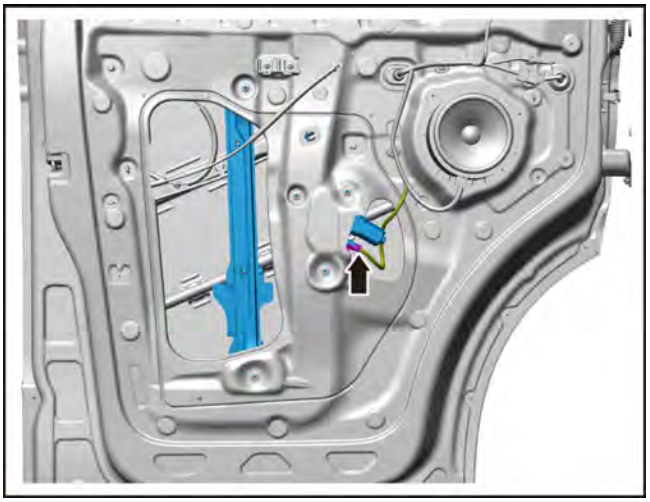
2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

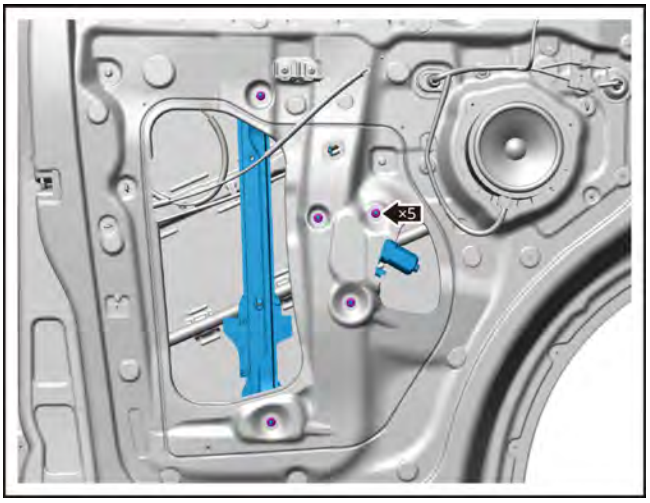
4 Remove left front door inner belt weatherstrip. Refer to:Left Front Door Inner Belt Weatherstrip, Repair Procedure

5 Remove left front door glass center guide rail assembly. Refer to:Left Front Door Glass Center Guide Rail Assembly, Repair Procedure

6 Remove left front door glass assembly. Refer to:Left Front Door Glass Assembly, Repair Procedure



7 Disconnect left front door power glass regulator assembly wiring harness connector.



8 Remove 5 retaining nut, remove left front door power glass regulator assembly.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Install front, check door glass regulator lubrication slip condition. necessary when, apply lubrication slip grease.

Left Front Door Glass Rear Guide Rail Lower Segment Assembly, Repair Procedure

Tips

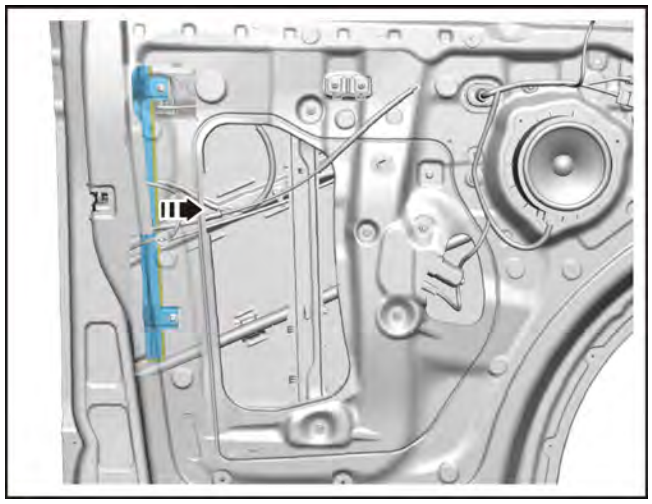
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

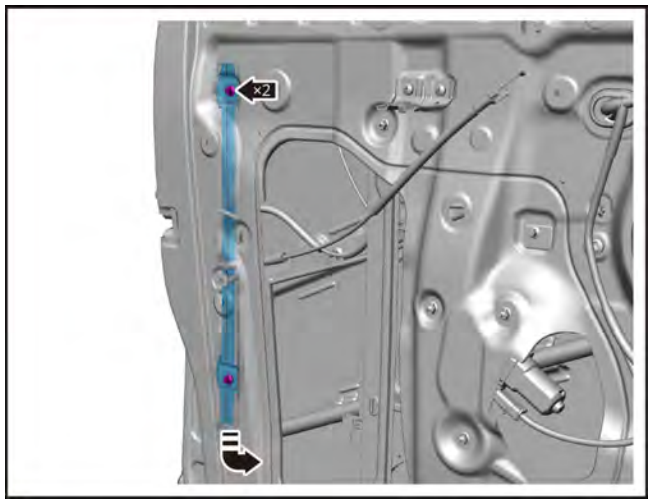
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure



4 along direction arrow side direction release left front door glass mud slot.



5 remove left front door glass rear guide rail lower segment assembly.

a. Remove left front door glass rear guide rail lower segment assembly 2 retaining bolt.

b. along direction arrow side direction remove left front door glass rear guide rail lower segment assembly.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Glass Center Guide Rail Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

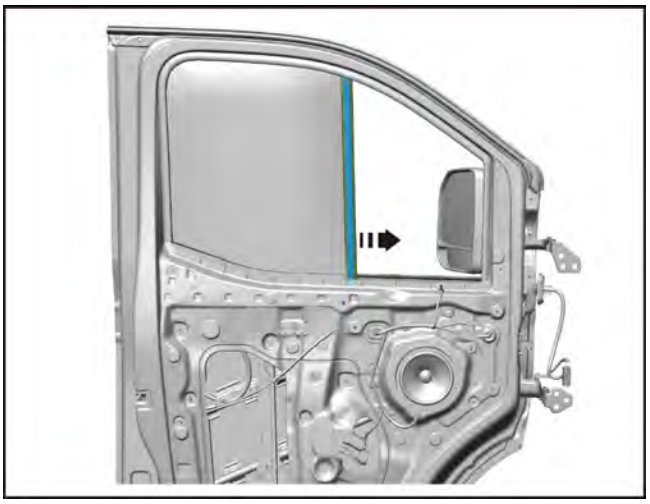
1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

4 Remove left front door inner belt weatherstrip. Refer to:Left Front Door Inner Belt Weatherstrip, Repair Procedure

5 Remove left front III quarter window Glass Assembly. Refer to:Left Front III Quarter Window Glass Assembly, Repair Procedure



6 along direction arrow side direction release part section left front glass glass run channel, remove left front door glass center guide rail assembly.

Installation Steps

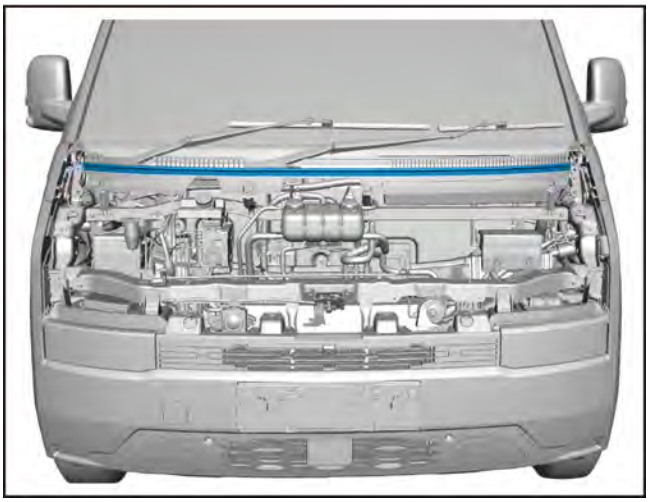
1 Install in the reverse order of removal.

seal unit

Repair Procedure

Bonnet Rear Weatherstrip, Repair Procedure

Removal Steps



1 remove bonnet rear weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

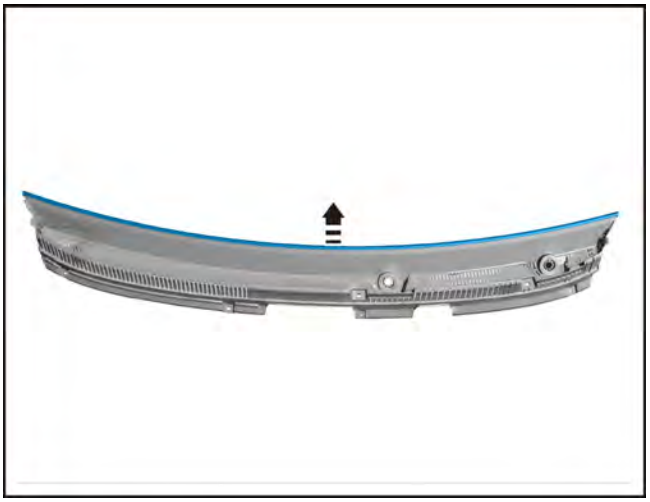
Front Gear at Weatherstrip, Repair Procedure

remove procedure

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove main, auxiliary wiper arm. Refer to:Main Wiper Arm, Repair Procedure

3 Remove Windscreen Lower Trim panel body assembly. Refer to:Windscreen Lower Trim Panel Body Assembly, Repair Procedure



4 remove front gear at weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Water Shield, Repair Procedure

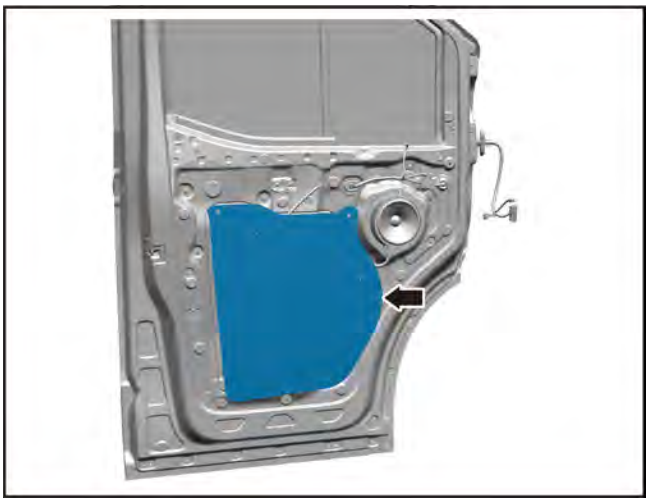
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation



3 remove left front door water shield.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 water shield for standard hole position affix upper, from center direction IV around use wipe panel push level pressure tight, side edge all pressure in adhesive upper

Left Front Door Door Opening Weatherstrip, Repair Procedure

Tips

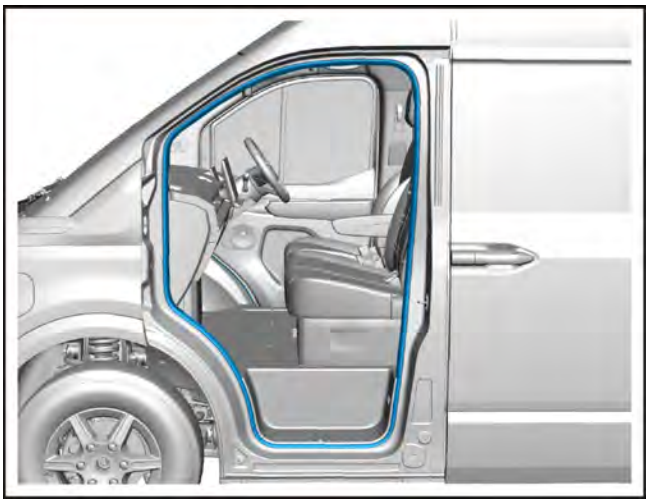
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove luggage compartment lamp. Refer to:Luggage Compartment Lamp, Repair Procedure

3 Remove left front scuff plate assembly. Refer to:Left Front Scuff Plate Assembly, Repair Procedure



4 remove left front door door opening weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

Left Sliding Door Door Opening Weatherstrip, Repair Procedure

Tips

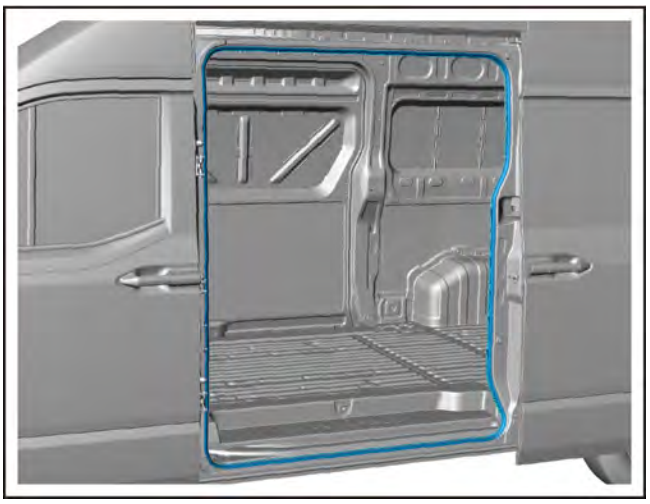
The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Full-open Limit Lock. Refer to:Left Full-Open Limit Lock, Repair Procedure

3 Remove left Sliding Door lower hinge assembly. Refer to:Left Sliding Door Lower Hinge Assembly, Repair Procedure



4 remove left Sliding Door door opening weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

Tailgate Door Opening Weatherstrip, Repair Procedure

Removal Steps



1 remove tailgate door opening weatherstrip.

Installation Steps

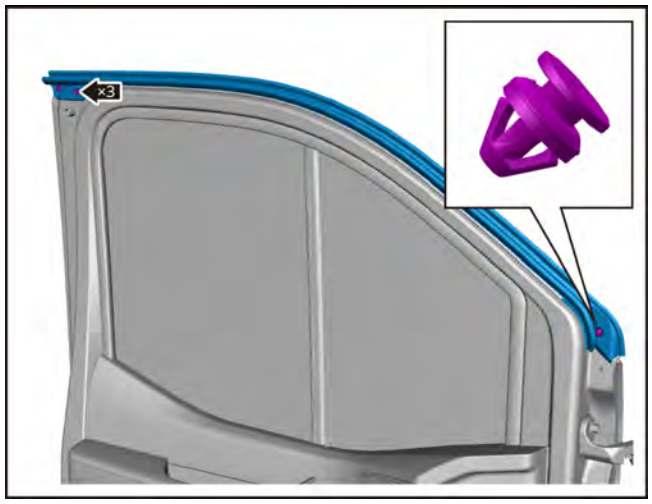
1 Install in the reverse order of removal.

Left Front Door Upper Frame Weatherstrip, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 Remove 3 retaining clip, remove left front door upper frame weatherstrip.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Front Door B Pillar Weatherstrip, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release retaining clip, remove left front door B pillar weatherstrip.

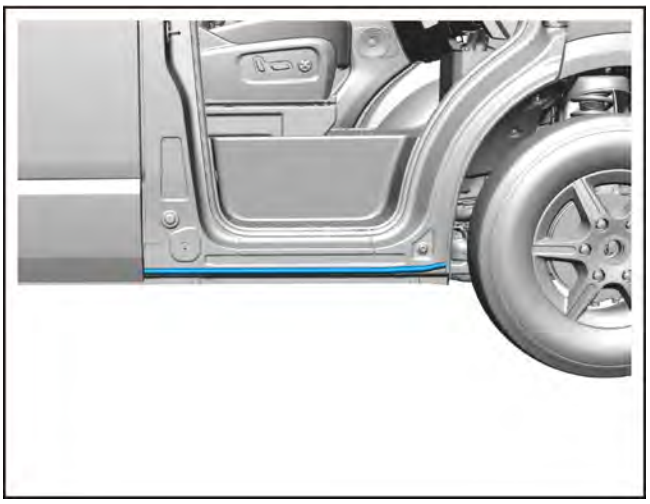
Installation Steps

1 Observe the following points, then install in the reverse order of removal.

2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Right Front Door Rocker Panel Weatherstrip - Single Sliding Door, Repair Procedure

Removal Steps



1 remove right front door rocker panel weatherstrip - single Sliding Door.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Glass Glass Run Channel Assembly, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation

3 Remove left front door inner belt weatherstrip. Refer to:Left Front Door Inner Belt Weatherstrip, Repair Procedure

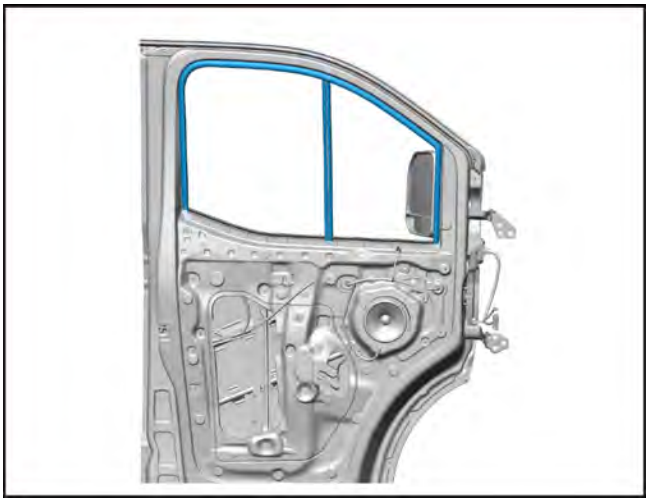
4 Remove left front door outer belt weatherstrip. Refer to:Left Front Door Outer Belt Weatherstrip, Repair Procedure

5 Remove left front door water shield. Refer to:Left Front Door Water Shield, Repair Procedure

6 Remove left front door glass assembly. Refer to:Left Front Door Glass Assembly, Repair Procedure

7 Remove left front III quarter window Glass Assembly. Refer to:Left Front III Quarter Window Glass Assembly, Repair Procedure

8 Remove left front door glass center guide rail assembly. Refer to:Left Front Door Glass Center Guide Rail Assembly, Repair Procedure



9 remove left front door glass glass run channel assembly.

Installation Steps

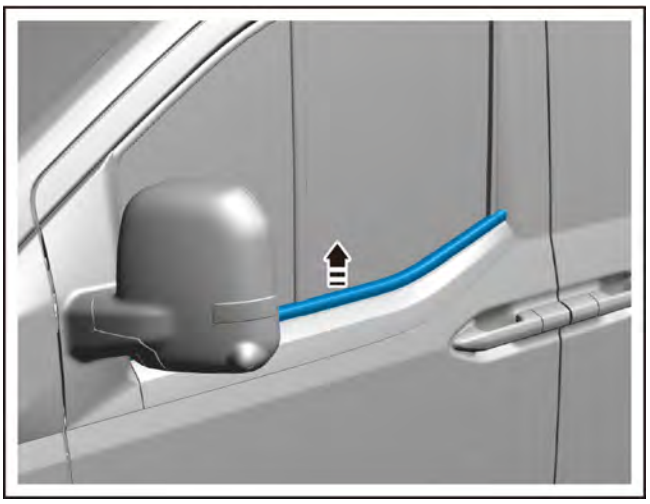
1 Install in the reverse order of removal.

Left Front Door Outer Belt Weatherstrip, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 remove left front door outer belt weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

Left Front Door Inner Belt Weatherstrip, Repair Procedure

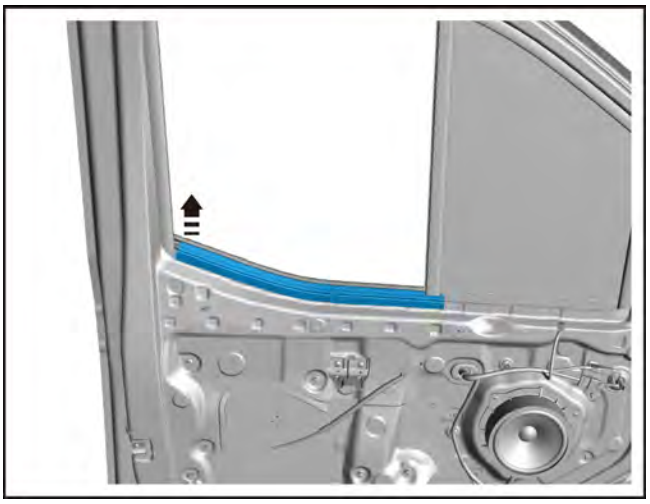
Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps

1 Power down the vehicle low-voltage system. Refer to:Low-voltage Power-up/Power-down Procedure

2 Remove Left Front Door Trim Panel Assembly. Refer to:Left Front Door Trim Panel Assembly, Removal and Installation



3 remove left front door inner belt weatherstrip.

Installation Steps

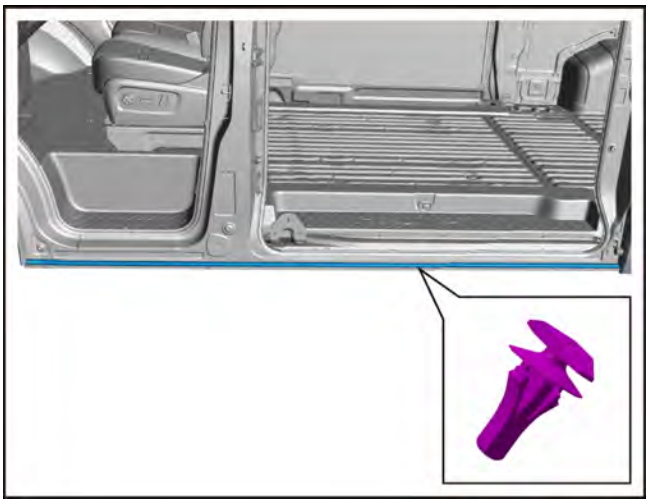
1 Install in the reverse order of removal.

Left Body Side Lower Weatherstrip, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 release retaining clip, remove Left Body Side Lower Weatherstrip.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

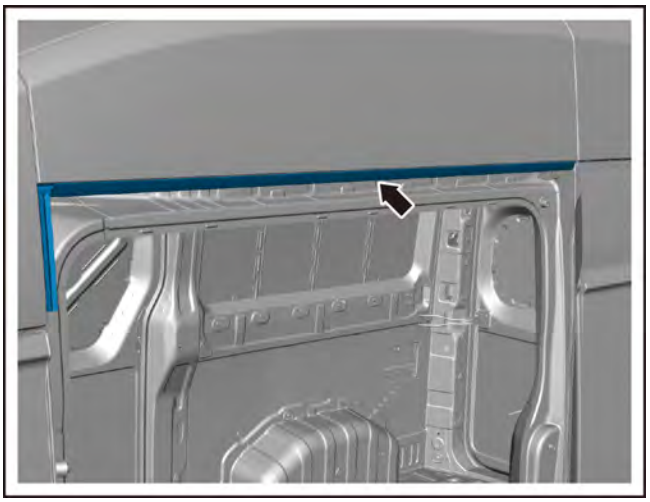
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Sliding Door Upper Frame Weatherstrip, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



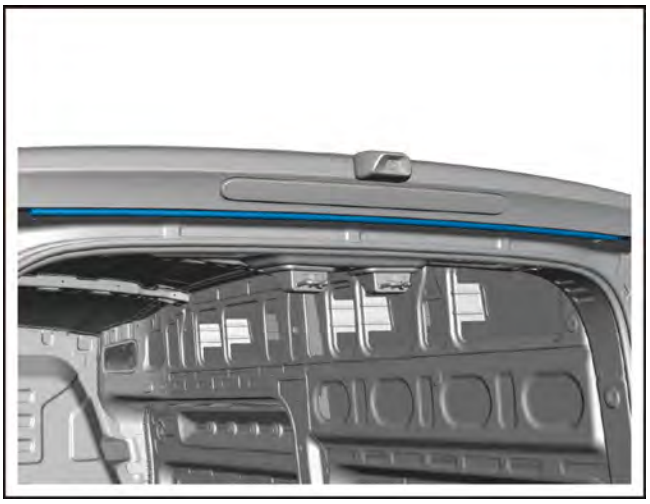
1 remove left Sliding Door upper frame weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

Tailgate Upper Frame Weatherstrip, Repair Procedure

Removal Steps



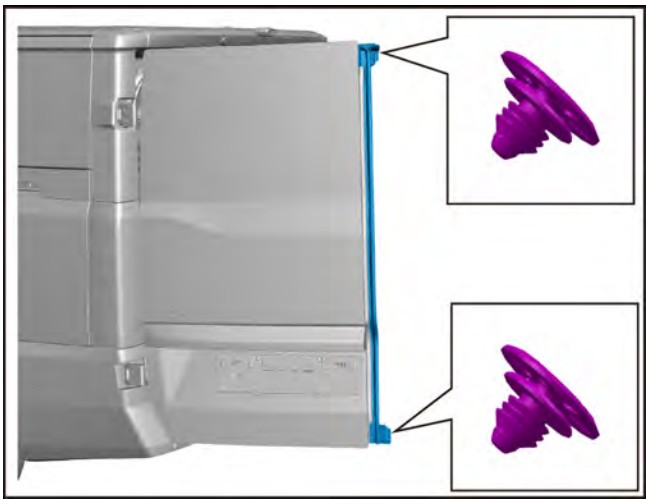
1 remove tailgate upper frame weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

Tailgate Center Seam Weatherstrip, Repair Procedure

Removal Steps



1 release retaining clip, remove tailgate center seam weatherstrip.

Installation Steps

1 Observe the following points, then install in the reverse order of removal.

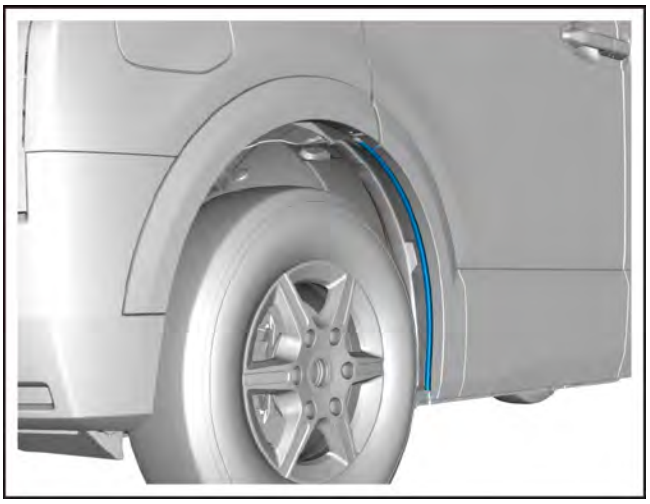
2 Before installation, visually inspect the retaining clips for deformation or damage. Replace any damaged clips with new ones as necessary.

Left Front Door Wheelhouse Weatherstrip, Repair Procedure

Tips

The removal and installation procedure is shown for the left side. Perform the right-side procedure in the same manner.

Removal Steps



1 remove left front door wheelhouse weatherstrip.

Installation Steps

1 Install in the reverse order of removal.

blocked part assembly

Repair Procedure