ENGINE HOOD/DOOR

GENERAL INFORMATION

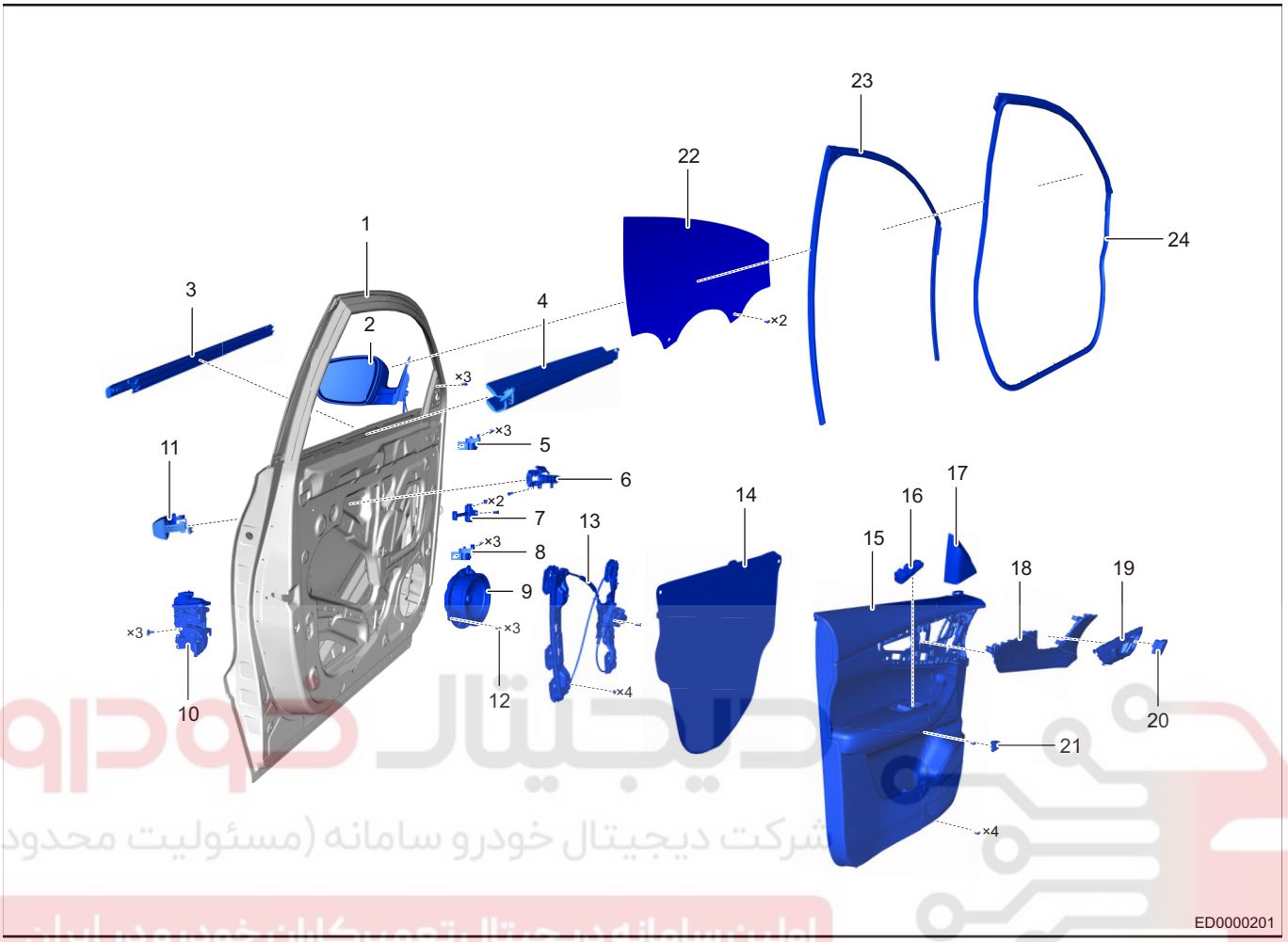
Overview

Description

Engine Hood Assembly

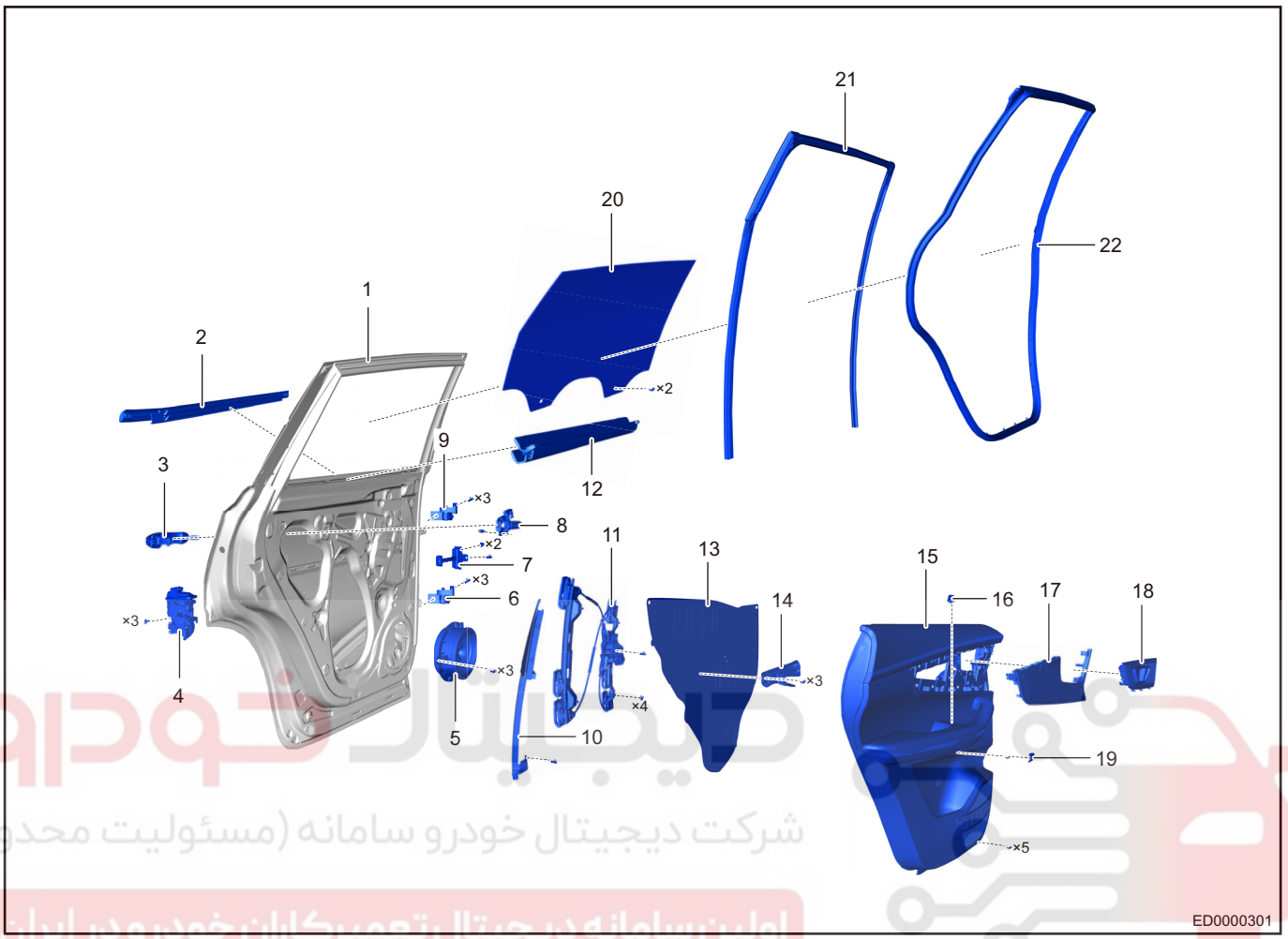
1 - Engine Hood Assembly	2 - Engine Hood Upper Adjusting Block
3 - Engine Hood Right Weatherstrip	4 - Hood Right Air Spring Assembly
5 - Hood Left Air Spring Assembly	6 - Engine Hood Left Weatherstrip
7 - Right Engine Hood Hinge Assembly	8 - Left Engine Hood Hinge Assembly
9 - Engine Hood Sound-absorbing Pad	10 - Engine Compartment Contact Switch

Front Door Assembly



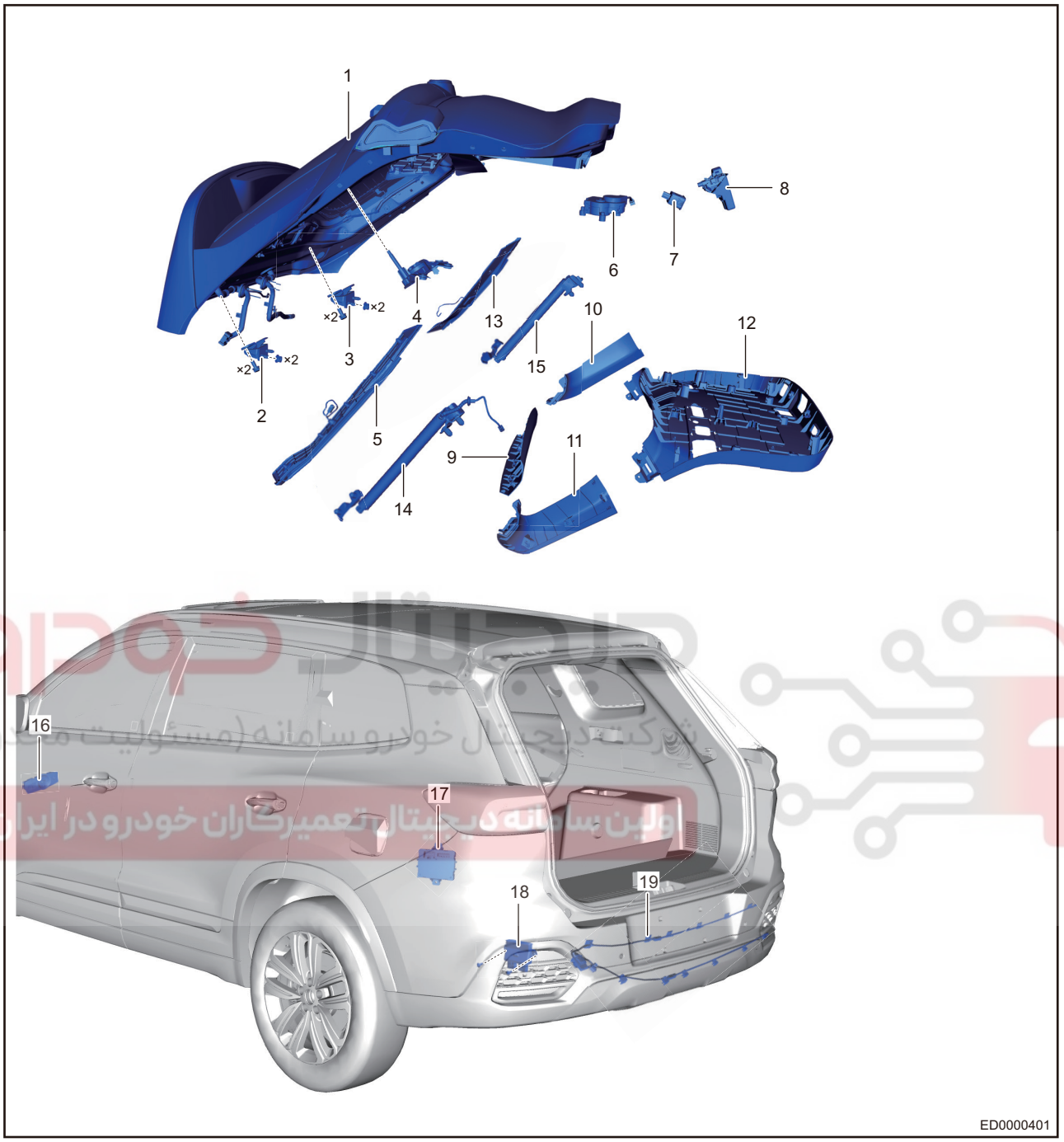
1 - Front Door Assembly	2 - Outside Rear View Mirror Assembly
3 - Front Door Outer Weather Bar Assembly	4 - Front Door Inner Weather Bar
5 - Front Door Upper Hinge Assembly	6 - Front Door Outside Handle Base Assembly
7 - Front Door Check Assembly	8 - Front Door Lower Hinge Assembly
9 - Front Door Woofer	10 - Front Door Lock Assembly
11 - Front Door Outside Handle	12 - Front Door Woofer Fixing Screw
13 - Front Door Power Glass Regulator Assembly	14 - Front Door Protective Film Assembly
15 - Front Door Protector Body	16 - Power Glass Regulator and Control Master Switch Assembly
17 - Outside Rear View Mirror Inner Triangular Block	18 - Front Door Trim Panel Body
19 - Front Door Inside Handle Assembly	20 - Central Lock Switch
21 - Front Left Door Grip Cover	22 - Front Door Glass Assembly
23 - Front Door Glass Run	24 - Front Door Frame Weatherstrip

Rear Door Assembly



1 - Rear Door Assembly	2 - Rear Door Outer Weather Bar Assembly
3 - Rear Door Outside Handle	4 - Rear Door Lock Assembly
5 - Rear Door Woofer	6 - Rear Door Lower Hinge Assembly
7 - Rear Door Check Assembly	8 - Rear Door Outside Handle Base Assembly
9 - Rear Door Upper Hinge Assembly	10 - Rear Door Glass Guide Rail Assembly
11 - Rear Door Power Glass Regulator Assembly	12 - Rear Door Inner Weather Bar
13 - Rear Door Protective Film Assembly	14 - Rear Door Handle Mounting Bracket Assembly
15 - Rear Door Inner Protector Assembly	16 - Rear Door Power Glass Regulator Switch Assembly
17 - Rear Door Trim Panel Body	18 - Rear Door Inside Handle Assembly
19 - Rear Left Door Grip Cover	20 - Rear Door Glass Assembly
21 - Rear Door Glass Run	22 - Rear Door Frame Weatherstrip

Back Door Assembly



1 - Back Door Assembly	2 - Back Door Left Hinge Assembly
3 - Back Door Right Hinge Assembly	4 - Rear Wiper Motor Assembly
5 - Left Anti-pinch Strip Assembly	6 - Back Door Self Pick-up Assembly
7 - Back Door Lower Edge Switch	8 - Rear Door Lock Assembly
9 - Back Door Upper Protector Assembly	10 - Back Door Right Protector Assembly
11 - Back Door Left Protector Assembly	12 - Back Door Lower Protector Assembly
13 - Right Anti-pinch Strip Assembly	14 - Power Support Assembly
15 - Back Door Right Air Spring	16 - Instrument Panel Switch
17 - Power Back Door Controller	18 - Kick Sensor Module
19 - Kick Sensor Sensing Antenna	

The vehicle is designed as a structure with four doors & two covers (front left door, rear left door, front right door, rear right door, power back door (power back door system consists of PLG module, power support, anti-pinch strip, each functional switch, back door and pick-up mechanism, etc. When system receives functional switch signal, it opens or closes back door, which is driven by motor) and hood.

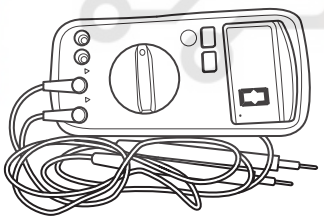
Specifications

Torque Specifications

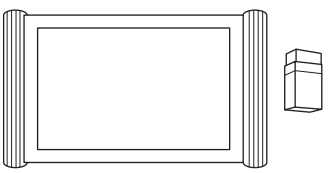
Description	Torque (N·m)
Engine Support Fixing Screw	1.5 ± 0.5
Engine Hood Hinge Fixing Nut	22 ± 1.0
Engine Hood Lock Assembly Fixing Nut	10 ± 1.0
Front Door Protector Fixing Screw	1.5 ± 0.5
Front Door Inside Handle Fixing Screw	1.5 ± 0.5
Front Door Metal Bracket Fixing Bolt	5 ± 1.0
Front Door Outside Handle Fixing Screw	5 ± 1.0
Front Door Outside Handle Seat Fixing Screw	1.5 ± 0.5
Fixing Nut Between Stopper and Door	24 ± 2.0
Fixing Bolt Between Door and Hinge	55 ± 5.0
Fixing Bolt Between Hinge Assembly and Body Quarter	32 ± 3.0
Door Lock Striker Fixing Bolt	23 ± 2.0
Back Door Lower Protector Assembly Fixing Screw	1.5 ± 0.5
Back Door Switch Fixing Nut	3 ± 0.5

Tools

General Tool

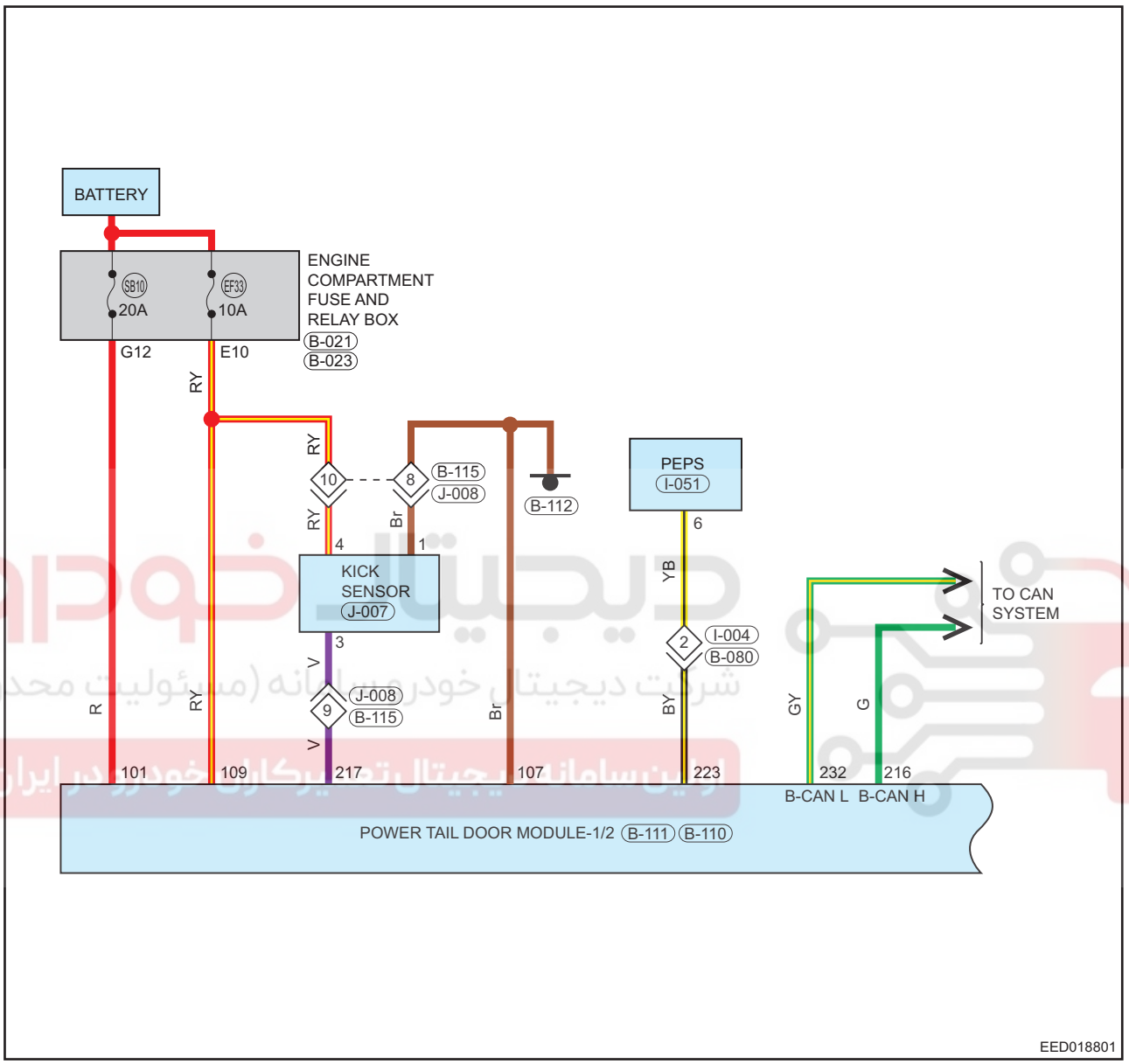
Digital Multimeter	 002

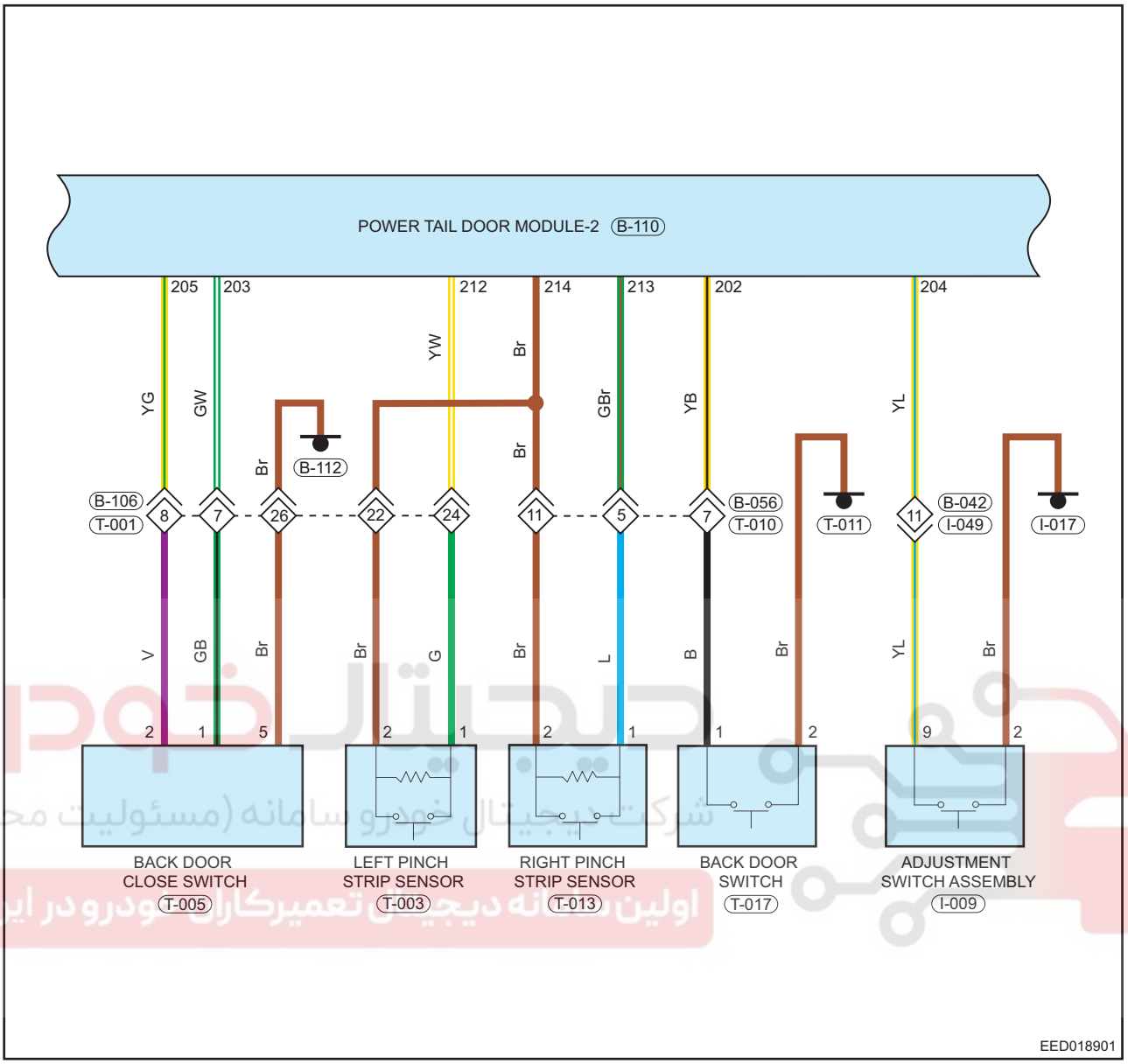
Special Tool

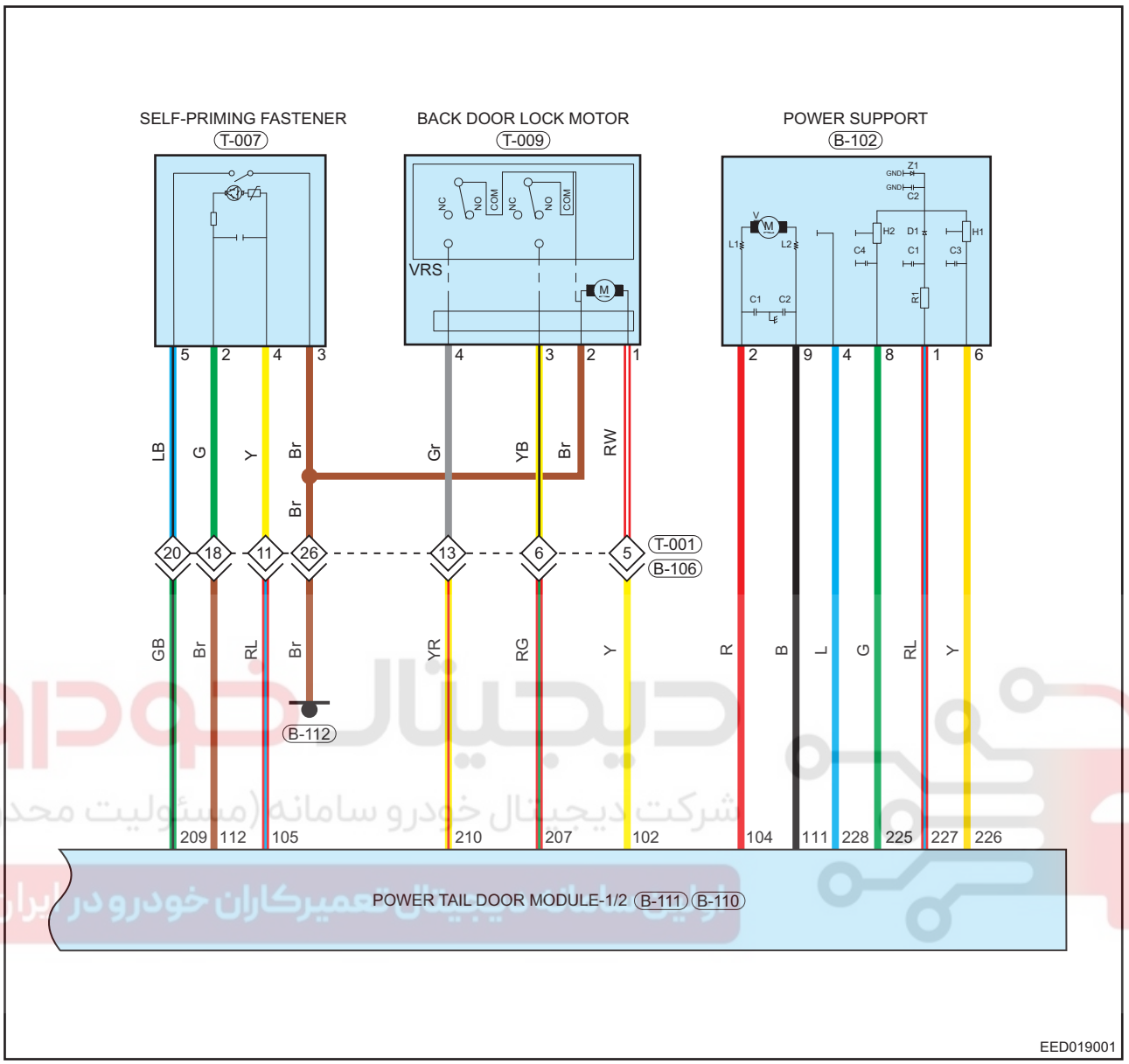
X-431 3G Diagnostic Tester	 001

GENERAL INFORMATION

Circuit Diagram







Function Introduction:

Function Introduction

Function	
1 - Instrument Panel Switch Opening or Closing Back Door	2 - Back Door Outer Opener Switch Opening Back Door
3 - Back Door Lower Edge Switch Closing Back Door	4 - Remote Control Switch ON or OFF Back Door
5 - Opening Height Setting	6 - Soft Stopping Function
7 - Anti-pinch Function	8 - Suddenly Closing Self-protection
9 - Back Door Manual Operation Function	10 - Mechanical Unlocking Function
11 - On-line Freshing Function	12 - DVD Setting Opening Height
13 - DVD Voice Opening/Closing Back Door	14 - T-BOX APP
15 - Opening Condition Sleeping	16 - Kicking Door Opening/Closing
17 - Environment Self-adaptation	18 - Emergency Stopping Function
19 - Diagnostic and Recording Function	

Power Back Door Opening Patten

1. For your convenience, power door can be opened/closed by a variety of ways, such as manually opening/closing door, one-button opening/closing door, tail kick back door opening/closing door (if equipped), voice opening/closing door, remote control opening/closing back door (if equipped), sensitive switch opening/closing back door (if equipped), so as to achieve the height regulating function and make you fully feel the convenience of power back door.
   (a) Power back door switch is located at left side of instrument panel. ENGINE START STOP switch is changed to OFF, ACC or ON mode and gear is switched to P position, so as to make vehicle in unfortified mode. In such condition, long press power back door switch to illuminate turn signal light and open/close power back door.
   (b) ENGINE START STOP switch is changed to OFF, ACC or ON mode and gear is switched to P position: l Manually opening/closing door: with central control lock in unlocked condition, press back door switch to illuminate turn signal light and open/close power back door. l Manually opening/closing door: with central control lock in locked condition, carry smart key to approach rear of vehicle and press back door switch to illuminate turn signal light and open/close power back door.
   (c) Kicking door opening/closing: with ENGINE START STOP switch in OFF mode, carry smart key and do kicking action to open/close power back door.
   (d) One-button opening/closing: long press back door opener button on smart key to illuminate turn signal light and open/close power back door.
   (e) Voice opening and closing: opening: with power back door in closed condition, perform "Open trunk" by voice patten in audio/visual system and power back door is opened; closing: with power back door in opened condition, perform "Close trunk" by voice patten in audio/visual system and power back door is closed;
   (f) For details about back door remote control, refer to Remote Control System.
   (g) The smart key should not be placed with +computer wireless mouse, mobile phone, etc., which may cause the electric rear door to be unable to open/close.

Power Back Door Opening Height Setting

1. Perform setting by audio/visual system.
   (a) Touch "Vehicle Setting" in No disc DVD screen and enter vehicle setting screen.
   (b) Touch "Opening Height" in "Vehicle Setting" to adjust back door opening height.
   (c) Back door adjusting height rang: 50% - 100%.
2. Perform setting by back door lower edge switch
   (a) After power back door is opened, adjust power back door to desired height.

(b) Long press power back door button until light hint is sent from vehicle, which indicates that power back door opening height is set successfully.
Caution:
- It is suggested that back door desired height cannot be set too low, otherwise, it cannot be realized.

Power Back Door Anti-pinch Function

1. Positive anti-pinch: During power back door opening, if resistance is met (for example: wall, obstruct, etc.), back door positive anti-pinch function operates to prevent damage to vehicle.
2. Negative anti-pinch: During power back door closing, if resistance is met (for example: children, trunk, etc.), back door negative anti-pinch function operates to prevent injury to children, or damage to vehicle.

Others

1. During power back door movement, if any switch (power back door switch, power back door button, back door opener button) is activated or effective kicking action is performed, back door will stop moving.
2. After power is shut off, it is necessary to perform power back door manual learning. Learning method: Close back door to Lock position, press back door switch to open back door and wait until back door opens to Max. opening position. The learning is completed successfully.
3. When power back door is opened, never pull power support rod laterally, which may cause damage to relevant parts.
4. When power back door opens to highest position, do not push or support it upward by hands, otherwise, it may cause damage to relevant parts.
5. Make sure that there is no debris, wall, etc. within back door opening range before opening power back door, so as to avoid back door scratching.
6. Before vehicle is driving, confirm that back door is closed in place, so as to prevent accidents or damage to relevant parts as power back door is not closed completely.
7. When power back door is closed manually, perform closing operation slowly by hands. Never close it forcibly, or it may cause damage to motor and module.
8. The power back door may be unable to open or close due to the change in center of gravity on uphill or downhill. This phenomenon is normal. Please manually open/close the power back door.
9. During back door closing, ensure that there is no person is caught. If the closing operation is interrupt, it is necessary to perform back door closing operation again.
10. Before vehicle is driving, confirm that back door is closed in place, so as to prevent accidents or damage to relevant parts as power back door is not closed completely.
11. Although the vehicle is equipped with anti-pin function, never make any part of body test this function, so as to avoid personal injury.

Diagnostic Tester Menu Function and Data Stream

PLGM System

1. Version Information

Version Information	-	Part No., supplier code, hardware version, software version, BOOT software version

2. Read Fault Code

Read Fault Code	Read Current Fault Codes	Read current fault codes. If there is DTC, fault information is displayed; if there is no DTC, "No DTC" is displayed.
	Read Historical Fault Codes	Read historical fault codes. If there is DTC, fault information is displayed; if there is no DTC, "No DTC" is displayed.

3. Clear DTCs

Clear DTCs	-	After DTCs are cleared, all historical fault codes clearing are finished, but current fault codes still exist.

4. Read Data Stream

- Back Door Input Status

Read Data Stream	Back Door Input Status	Driver side switch: Not Activated; Driver side switch pressed：Activated
		Power back door inside switch: Not Activated; Inside switch pressed：Activated
		Trunk opener switch: Not Activated; Trunk opener switch pressed：Activated
		Global menu switch: Not Activated; Global menu switch pressed：Activated
		Half-locked switch: Not Activated; Half-locked switch pressed: Activated
		Full-locked switch: Not Activated; Full-locked switch pressed: Activated

- Power Supply Voltage Status

Read Data Stream	Power Supply Voltage Status	Power voltage logical value: normal voltage value is displayed
		Power voltage control value: normal voltage value is displayed

- Sensor Input

Read Data Stream	Sensor Input	Left rod anti-pinch strip collecting AD value: normal AD value is displayed
		Right rod anti-pinch strip collecting AD value: normal AD value is displayed
		Temperature value: normal operating temperature is displayed

- Vehicle Information

Read Data Stream	Vehicle Information	Power condition: correct switch modes OFF/ACC/ON/CRANK ON
		Driver door lock condition: correct locked/unlocked information is displayed
		RKE_Trunk condition: correct back door switch information is displayed
		Information source: correct signal source (RKE/PKE/Smart Information) is displayed
		Command information: correct signal source (RKE/PKE/Smart locked/unlocked signal) is displayed
		Mileage: actual mileage is displayed
		Outside temperature: normal outside temperature is displayed
		Outside temperature fault condition: normal/abnormal
		Start and stop condition: correct start and stop condition is displayed
		Vehicle speed: correct vehicle speed is displayed
		Vehicle speed valid condition: vehicle effectiveness is displayed
		Gear indication: actual vehicle gear signal is displayed
		Collision condition: collision signal is displayed
		Back door position set by DVD: back door set height percentage value is displayed
		Voice control back door command: voice turns on/off input indication
		TBOX control back door command: remote control turns on/off input indication
		Lateral acceleration signal valid mark: lateral acceleration signal effectiveness is displayed
		Lateral acceleration: lateral acceleration specified value is displayed
		Longitudinal acceleration signal valid mark: longitudinal acceleration signal effectiveness is displayed
		Longitudinal acceleration: Longitudinal acceleration specified value is displayed

- Left rod motor data

Read Data Stream	Left rod motor data	Left rod motor speed: correct motor speed is displayed
		Left rod motor moving direction: correct turning on/off direction is displayed
		Left rod motor position: actual Hall position is displayed
		Left rod motor current: support rod actual drive current is displayed

- Back Door Status

Read Data Stream	Back Door Status	Lock position status: half-lock/full-lock information is displayed
		Lock pull-in status: correct pulling-in/pulled-in action information is displayed
		Lock control condition: correct initialization/pulled-in/pulling-in action information is displayed
		Ratchet position: PCM actual signals are displayed
		Back door position: back door actual position (Hall position) is displayed
		Back door position: back door actual area is displayed
		Back door operation status: back door action status is displayed
		Obstacle main detection status: blocking is detected according to current
		Obstacle secondary detection status: blocking is detected according to anti-pinch strip

- Back Door Learning Position

Read Data Stream	Back Door Learning Position	Mechanical max. opening position: mechanical max. opening learning position is displayed
		User set opening position: user set max. opening position is displayed
		Differential value between two rods: /

- PLG software configuration code

Read Data Stream	PLG software configuration code	PLG Software configuration code: correct configuration code C001000000000000 is displayed

- Back Door Switch Input Detection

Read Data Stream	Back Door Switch Input Detection	Driver side switch: whether driver side switch condition had changed or not is detected
		Power back door inside switch: whether driver side switch condition had changed or not is detected
		Trunk opener switch: whether trunk opener switch condition had changed or not is detected
		Global menu switch: whether power back door global switch condition had changed or not is detected

5. Actuation Test
   - Lock Condition Control

Actuation Test	Lock Condition Control	Lock motor rotates clockwise: click "ON" Lock motor rotates clockwise: click "OFF" Click "Back".
		Lock motor rotates counterclockwise: click "ON" Lock motor rotates counterclockwise: click "OFF" Click "Back".
		Unlock motor control: click "ON" Lock motor rotates clockwise: click "OFF" Click "Back".

   - Left Rod Motor Control

Actuation Test	Left Rod Motor Control	Left rod motor ON: user chooses 50%, 75%, 100% three speed drive support rod used to open back door Click "Back" to cancel drive
		Left rod motor OFF: user chooses 50%, 75%, 100% three speed drive support rod used to open back door Click "Back" to cancel drive

   - Left Rod Hall Power Supply

Actuation Test	Left Rod Hall Power Supply	Click "ON": turn on Hall power supply
		Click "OFF": turn off Hall power supply
		Click "Back".

   - LED Indicator Output

Actuation Test	LED Indicator Output	Click "ON": turn on LED background indicator
		Click "OFF": turn off LED background indicator
		Click "Back".

6. Special operation
   - Write software configuration information

Special operation	Write software configuration information	User enters 16-digit software configuration information: software configuration information writing-in is successful; software configuration information writing-in fails

   - PLG Self-learning

Actuation Test	PLG Self-learning	Click "Special Operation - PLG Self-learnig": start self-learning
		Click "Emergency Stopping" menu: self-learning can be stopped immediately
		Click "Back".

Diagnosis & Testing

Diagnosis Procedure

Hint

Use following procedures to troubleshoot the system.

1	**Vehicle brought to workshop**

Result

Proceed to
NEXT

NEXT

2	**Check battery voltage**

Check if battery voltage is normal.

OK

Standard voltage: Not less than 12 V

Result

Proceed to
OK
NG

NG → **Check and repair battery**

OK

3	**Customer problem analysis**

Result

Proceed to
NEXT

NEXT

4	**Check and clear DTCs**

Result

Proceed to
NEXT

NEXT

5	Confirm and reappear problem

Result

Proceed to
No DTC
Current DTC
History DTC

History DTC

6	Problem Repair (No DTC)

Result

Proceed to
NEXT

NEXT → Go to step

7	Troubleshoot according to Diagnostic Trouble Code (DTC) chart

Result

Proceed to
NEXT

NEXT → Go to step

8	Troubleshoot according to Problem Symptoms Table

Result

Proceed to
NEXT

NEXT

9	Conduct test and confirm malfunction has been repaired

Result

Proceed to
NEXT

NEXT → End

DTC Confirmation Procedure

Confirm that battery voltage is normal before performing following procedures.

- Turn ENGINE START STOP switch to "OFF".

- Connect the diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn start button to ON.
- Use the diagnostic tester to record and clear stored DTCs.
- Turn ignition switch to OFF and wait several seconds.
- Using the diagnostic tester, select Read DTCs.
- If DTC is detected, malfunction indicated by DTC is current. Go to diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent. Please refer to Intermittent DTC Troubleshooting.

System Diagnostic

1. Description
   (a) Instrument cluster data and Diagnostic Trouble Code (DTC) can be read from OBD diagnostic interface of vehicle. When system seems to be malfunctioning, use diagnostic tester to check for a malfunction and perform repairs.
2. Check battery voltage
   (a) Standard voltage:
   Not less than 12 V
   If voltage is below 12 V, check and repair battery before proceeding to next step.

Intermittent DTC Troubleshooting

If malfunction is intermittent, perform the followings:

- Check if connector is loose.
- Check if wire harness is worn, pierced, pinched or partially broken.
- Wiggle related wire harness and connector and observe if signal in related circuit is interrupted.
- If possible, try to duplicate conditions under which DTC was set.
- Look for data that has changed or DTC to reset during wiggle test.
- Check for broken, bent, protruded or corroded terminals.
- Check and clean all wire harness connectors and ground parts related to DTC.
- If multiple trouble codes were set, refer to circuit diagrams to look for any common ground circuit or power supply circuit applied to DTC.
- Refer to any Technical Bulletin that may apply to this malfunction.

Ground Inspection

Ground points are very important to the proper operation of circuits. Ground points are often exposed to moisture, dirt and other corrosive environments. Corrosion (rust) may increase load resistance. This situation may change the way in which a circuit operates. Circuits are very sensitive to proper grounding. A loose or corroded ground can severely affect the control circuit. Check the ground points as follows:

1. Remove ground bolt or nut.
2. Check all contact surfaces for tarnish, dirt and rust, etc.
3. Clean as necessary to ensure that contact is in good condition.
4. Reinstall ground bolt or nut securely.
5. Check if any additional accessories interfere with ground circuit.
6. If several wire harnesses are crimped into one ground terminal, check for proper crimp condition. Make sure that all wire harnesses are clean and securely fastened while providing a proper ground path.

Diagnostic Trouble Code (DTC) Chart

DTC	DTC Definition
U0073-88	CAN Busoff Failure
U0140-87	Lost Communication with BCM
U0214-87	Lost Communication With PEPS
U0151-87	Lost Communication With ABM

DTC	DTC Definition
U0164-87	Lost Communication With CLM
U0155-87	Lost Communication with ICM
U0101-87	Lost Communication with TCU
U0129-87	Lost Communication with BSM
U0100-87	Lost Communication With EMS
U1300-55	Software Configuration Error
U1191-87	PLG Lost Communication With KSM
B1A90-16	VBAT Power is Open Circuit
B1A91-15	LH Pinch Strip Sensor Failure
B1A92-15	RH Pinch Strip Sensor Failure
B1A93-07	Driver Switch Failure
B1A94-07	Handle Switch Failure
B1A95-07	Inner Switch Failure
B1A96-07	Global Switch Failure
B1A97-01	LH Hall Pulse is Out Of Range
B1A98-13	LH Hall Sensor Failure (LH Spindle Unit Failure)
B1A99-14	LH Hall Sensor Power Supply Failure
B1A9A-1C	LH Spindle Motor Output Failure
B1A9B-1D	LH Spindle Motor Overload
B1A9C-01	RH Hall Pulse is Out Of Range
B1A9D-13	RH Hall Sensor Failure (RH Spindle Unit Failure)
B1A9E-14	RH Hall Sensor Power Supply Failure
B1A9F-1C	RH Spindle Motor Output Failure
B1AA0-1D	RH Spindle Motor Overload
B1AA1-1C	Cinch Latch Motor Output Failure
B1AA2-1D	Cinch Latch Motor Overload
B1AA3-1C	Release Motor Output Failure
B1AA4-07	Half/Full Latch Abnormality
B1AA5-07	PCM Switch Failure
B1AA6-07	PLG Position is Out Of Range
B1AA7-07	Dual Spindles Position Misalignment
B1AA8-07	Cinch Failure
B1AA9-07	Closure Motor Overheat
B1AAA-04	ECU Failure
B1AAB-17	Ks Over Voltage Error
B1AAC-16	Ks Under Voltage Error
B1AAD-01	Ks Electrode Error
B1AAE-45	Ks ECU ROM Error
B1AAF-87	Ks LIN Response Error
U300051	Control Module-Not Programmed

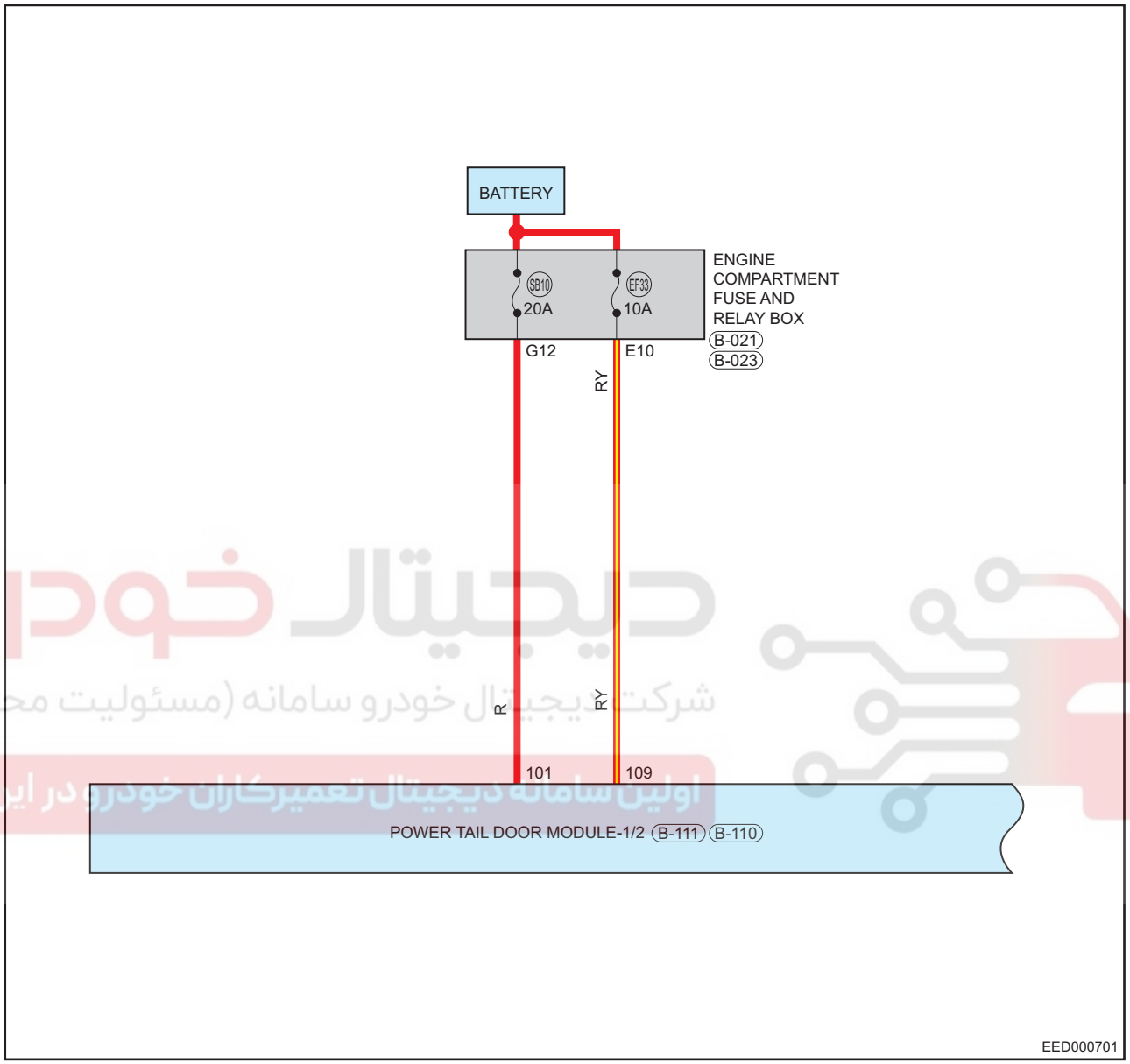
DTC	U0073-88	CAN Bus Off Failure
DTC	U0140-87	Lost Communication with BCM
DTC	U0214-87	Lost Communication With PEPS
DTC	UO151-87	Lost Communication With ABM
DTC	U0164-87	Lost Communication With CLM
DTC	U0155-87	Lost Communication With ICM
DTC	U0101-87	Lost Communication With TCU
DTC	UO129-87	Lost Communication With BSM
DTC	U0100-87	Lost Communication with EMS
DTC	B1AAF-87	Ks LIN Response Error
DTC	U1191-87	PLG Lost Communication With KSM

Procedure

1	Refer to CAN Communication System.

DTC	B1A90-16	VBAT Power is Open Circuit

Circuit Diagram



Description

DTC	DTC Definition
B1A90-16	Open Circuit in Power Supply

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Confirmation Procedure
Confirm that battery voltage is Not less than 12 V before performing following procedures.

Procedure

1	Check fuse

(a) Check if fuses SB10, EF33 are blown out.

Result

Proceed to
OK
NG

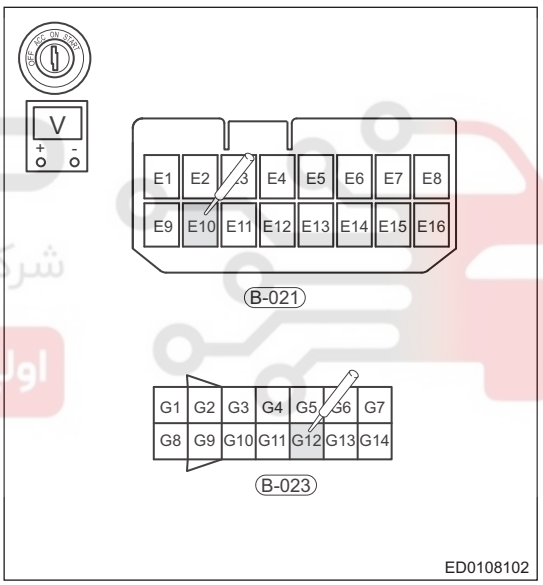
NG → **Replace fuse**

OK

2	Check output voltage of front compartment

(a) Turn ENGINE START STOP switch to ON.
(b) Check voltage between terminal E10 of B-021, terminal G12 of B-023 in front compartment fuse and relay box and ground.

Multimeter Connection	Condition	Specified Condition
B-021(E10) - Body ground	ON	Not less than 12 V
B-023(G12) - Body ground	ON	Not less than 12 V



Result

Proceed to
OK
NG

NG → **Replace front compartment fuse and relay box assembly**

OK

3	Check if there is an open circuit in wire harnesses

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect the negative battery terminal cable.
(c) Disconnect power back door module connector B-111, front compartment connectors B-021 and B-023.

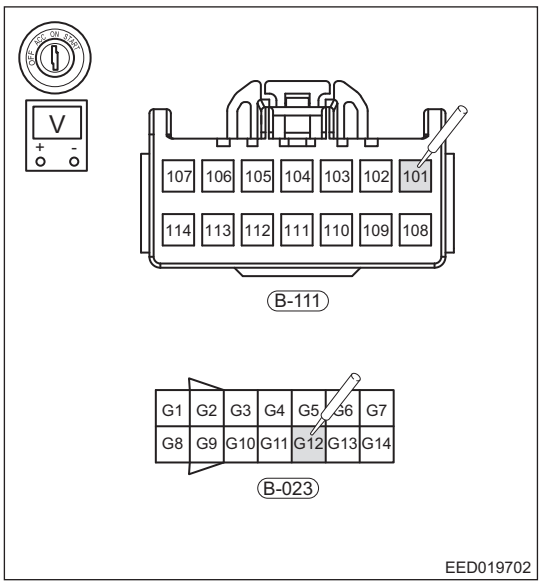
(d) Using ohm band of digital multimeter, measure resistance between B-111 (1-1) and B023 (G12); and B-111 (1-9) - B021 (E10) to check wire harness for open.

OK

Multimeter Connection	Condition	Specified Condition
B-111 (1-1) - B023 (G12)	ENGINE START STOP switch "OFF"	⩽ 1 Ω
B-111 (1-9) - B021 (E10)	ENGINE START STOP switch "OFF"	⩽ 1 Ω

Result

Proceed to
OK
NG



OK	**Replace the PLG module assembly.**
NG	**Repair the related wire harness**

DTC	B1A93-07	Driver Switch Failure

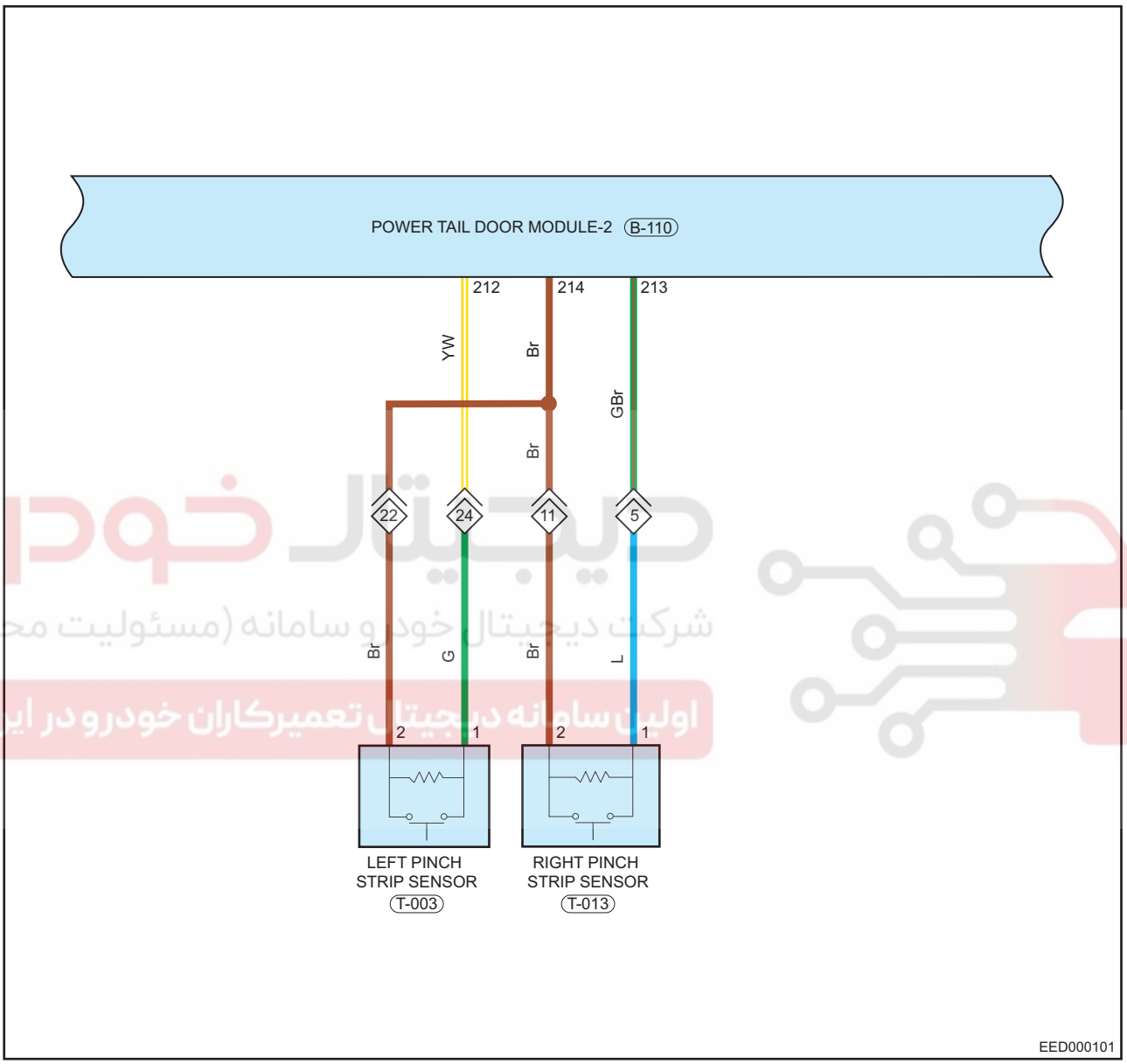
DTC	B1A94-07	Handle Switch Failure

Procedure
Refer to PEPS System

DTC	B1A91-15	LH Pinch Strip Sensor Failure

DTC	B1A92-15	RH Pinch Strip Sensor Failure

Circuit Diagram



Description

DTC	DTC Definition
B1A91-15	LH Pinch Strip Sensor Failure
B1A92-15	RH Pinch Strip Sensor Failure

Caution:
When performing circuit diagnosis and test, always refer to the circuit diagram for specific circuit and component information.

Take left anti-pinch strip as an example. For right anti-pinch strip, refer to LH side.

1	Check left anti-pinch strip connector

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect the negative battery terminal cable.
(c) Disconnect left anti-pinch connectors T-003 and B-106.
(d) Check wire harness, connector and terminal for deformation, bend or damage.

Result

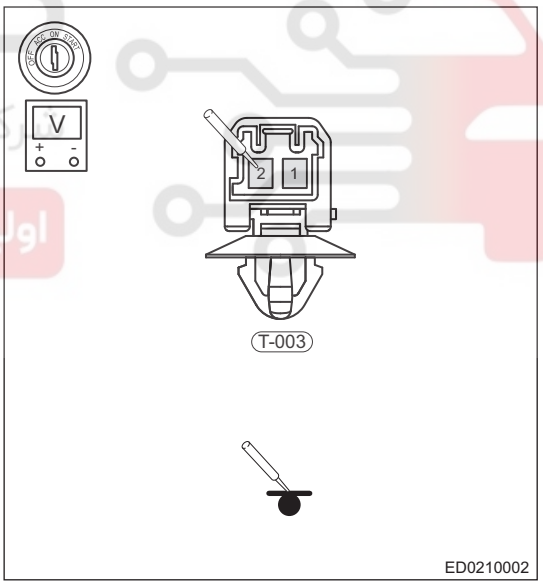
Proceed to
OK
NG

NG → **Repair or replace left anti-pinch strip wire harness**

OK →

2	Check left anti-pinch strip wire harness for short circuit

(a) Connect the negative battery terminal cable.
(b) Turn ignition switch to ON.
(c) Disconnect left anti-pinch strip connector T-003 and check if left anti-pinch strip is short to power supply.



OK

Multimeter Connection	Condition	Specified Condition
T-003 (2) - Body ground	Always	≈ 0 V
T-003 (1) - Body ground	Always	5 V

Result

Proceed to
OK
NG

NG → **Repair or replace left anti-pinch strip wire harness**

OK →

3	Test left rod anti-pinch strip

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect left anti-pinch strip wire harness connector and use digital multimeter to measure left rod anti-pinch strip internal resistance.

Warning:

- The measurement result is minus multimeter error when measuring internal resistance.

Result

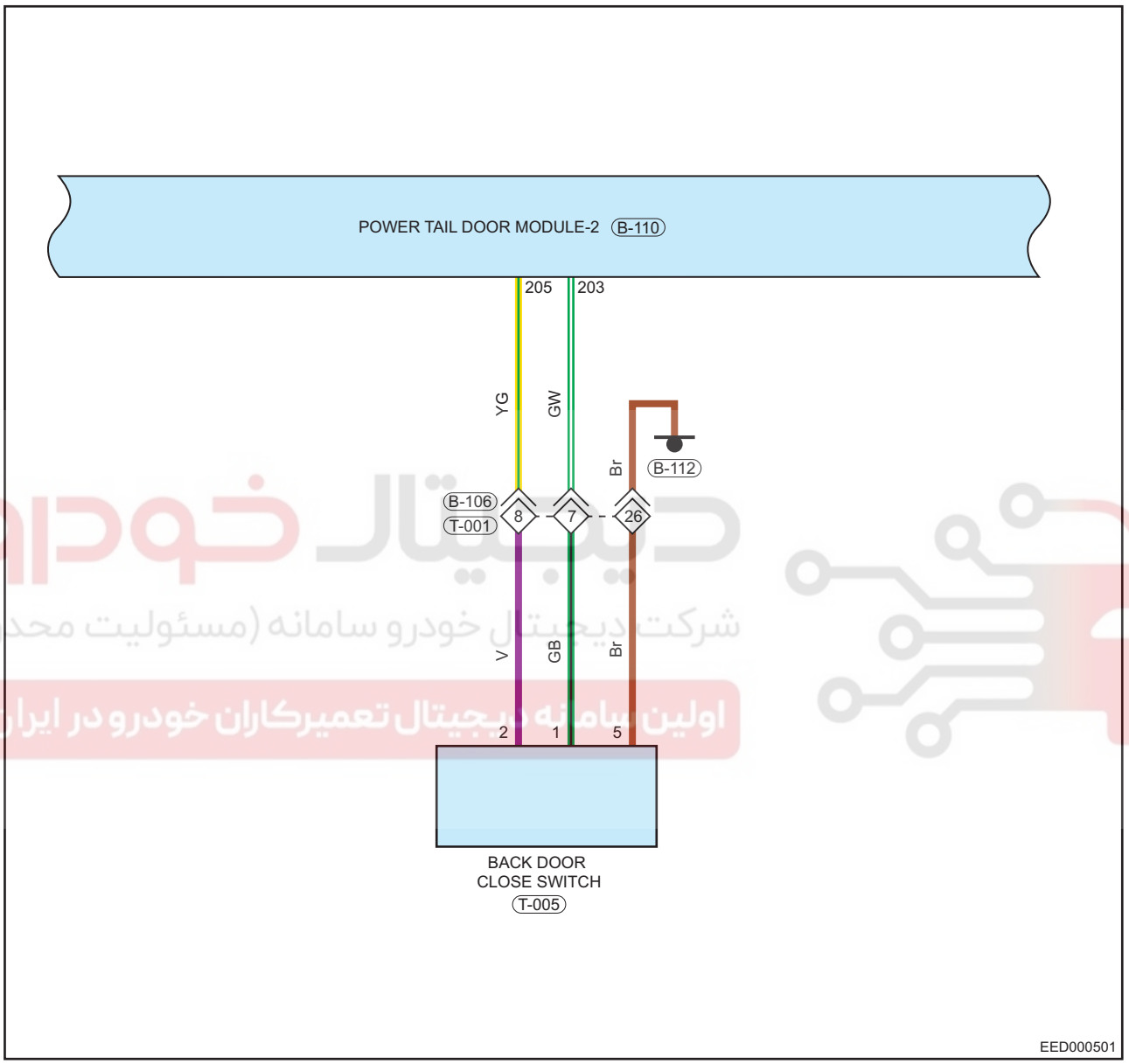
Proceed to
OK
NG

OK	**System is normal**
NG	**Replace the left rod anti-pinch strip.**

DTC	B1A95-07	Inner Switch Failure

DTC	B1A96-07	Global Switch Failure

Circuit Diagram



DTC	DTC Definition
B1A95-07	Inner Switch Failure
B1A96-07	Global Switch Failure

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Problem causes:
- Back door closer switch assembly.
- Wire harness or connector.
- Power back door module assembly.

Procedure

1	**Check vehicle malfunction condition**

(a) Check if back door can be closed normally after back door closer switch is pressed.

Result

Proceed to
OK
NG

NG → **Turn off vehicle power supply (disconnect the negative battery cable), then turn on power supply again and clear DTC.**

OK

2	**Check if back door closer switch power supply is normal**

(a) Turn start button to "ON".
(b) Using digital multimeter, check back door switch signal according to following table.

OK

Multimeter Connection	Condition	Specified Condition
T-005 (1) - Body ground	Initial Condition	12 V
	Inner switch pushed	1.5 V
T-005 (2) - Body ground	Inner switch pushed	12 V
T-005 (5) - Body ground	Always	0V

Result

Proceed to
OK
NG

NG → **Check if power supply fuse is burnt**

OK

3	**Check wire harness and connector**

(a) Disconnect the connector T-005.
(b) Check if wire harnesses are worn, pierced, pinched or partially broken.
(c) Check for broken, bent, protruded or corroded terminals.
(d) Check if terminal contact pins of related connectors are in good condition.

Result

Proceed to
OK
NG

NG → **Repair or replace wire harness and connector**

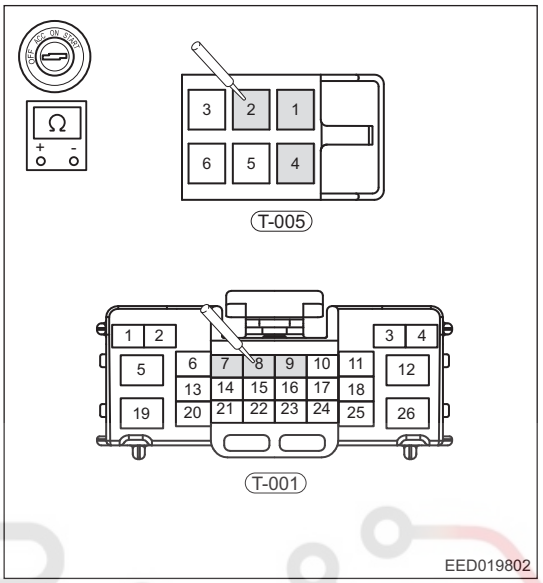
OK

4	Check back door closer switch wire harness

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect the connector T-001, T-005.
(c) Using ohm band of multimeter, check resistance between F-005 (2) and T001 (8); T-005 (1) and T-001 (7).

OK

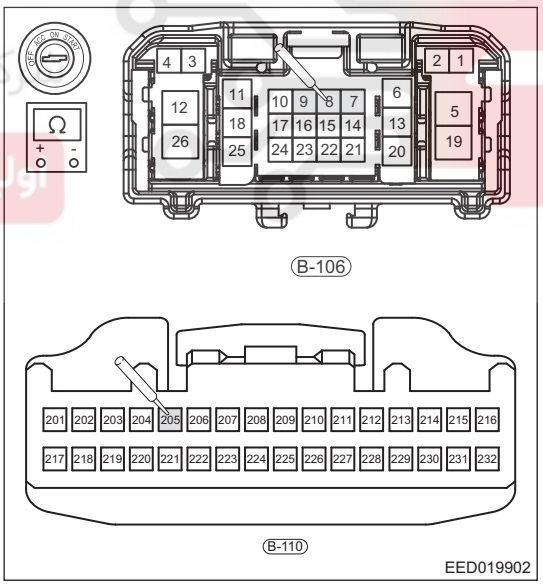
Multimeter Connection	Condition	Specified Condition
T-005 (2) - T001 (8)	Ignition switch "OFF"	⩽ 1 Ω
T-005 (1) - T-001 (7)		⩽ 1 Ω



(d) Using ohm band of multimeter, check for continuity between B-106 (8) - B-110 (205) and B-106 (7) - B-110 (203).

OK

Multimeter Connection	Condition	Specified Condition
B-106 (8) - B-110 (205)	Ignition switch "OFF"	⩽ 1 Ω
B-106 (7) - B-110 (203)		⩽ 1 Ω



44

Result

Proceed to
OK
NG

NG → **Replace the back door closer switch assembly.**

OK

5	Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery terminal cable.
(c) Turn ENGINE START STOP switch to "OFF".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

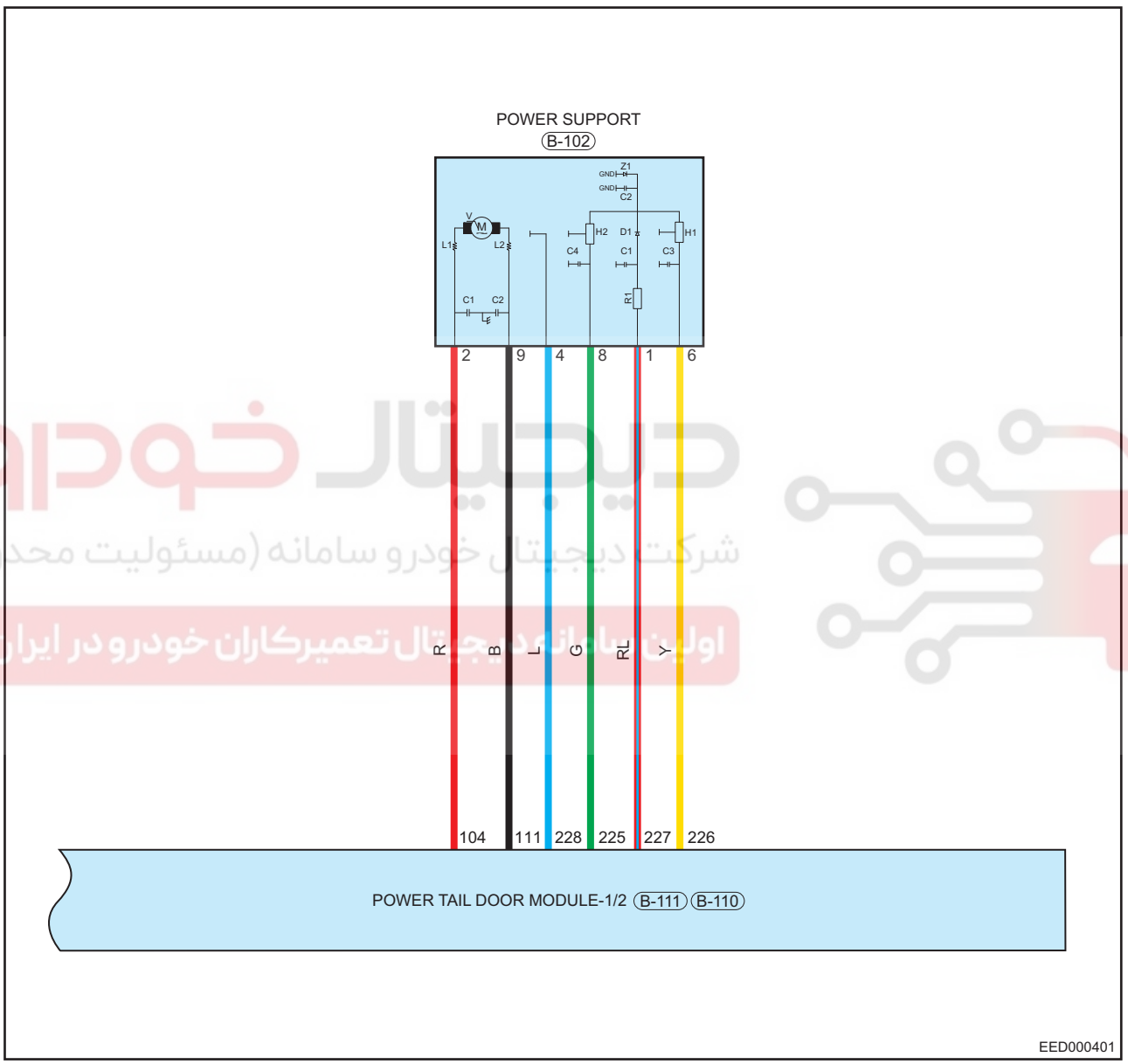
OK	System is normal
NG	Replace the PLG module assembly.

DTC	B1A98-13	LH Hall Sensor Failure (LH Spindle Unit Failure)

DTC	B1A99-14	LH Hall Sensor Failure (LH Spindle Unit Failure)

DTC	B1A97-01	LH Hall Pulse is Out Of Range

Circuit Diagram



Description

DTC	DTC Definition
B1A98-13	LH Hall Sensor Failure (LH Spindle Unit Failure)
B1A99-14	LH Hall Sensor Failure (LH Spindle Unit Failure)
B1A97-01	LH Hall Pulse is Out Of Range

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Problem causes:
- Power support rod assembly.
- Wire harness or connector.
- Power back door module assembly.

Procedure

1	**Check left support rod wire harness connector**

(a) Turn ENGINE START STOP switch to "OFF", disconnect the power support rod connector B-102.
(b) Check for broken, bent, protruded or corroded terminals.
(c) Check if wire harnesses are worn, pierced, pinched or partially broken.

Result

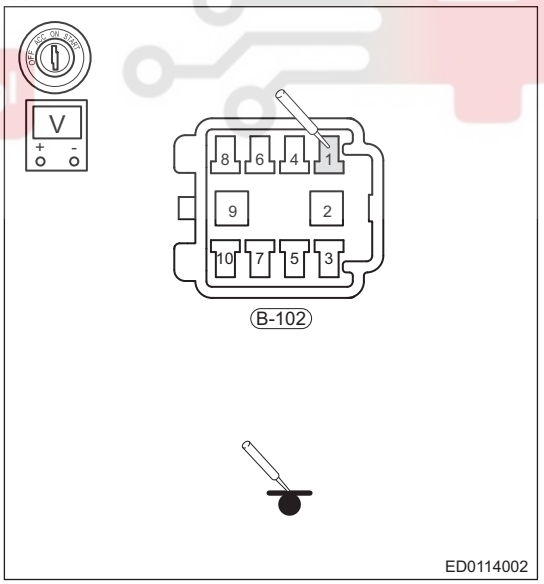
Proceed to
OK
NG

NG → **Repair or replace wire harness and connector**

OK →

2	**Check sensor power supply**

(a) Turn ENGINE START STOP switch to "ON".
(b) Disconnect connector B-102, and measure the voltage between terminal 1 and body ground. The value should be not less than 12 V.



OK

Multimeter Connection	Condition	Specified Condition
B-102 (1) - Body ground	Ignition switch "ON"	Not less than 12 V

Result

Proceed to
OK
NG

NG → **Repair or replace wire harness and connector**

OK →

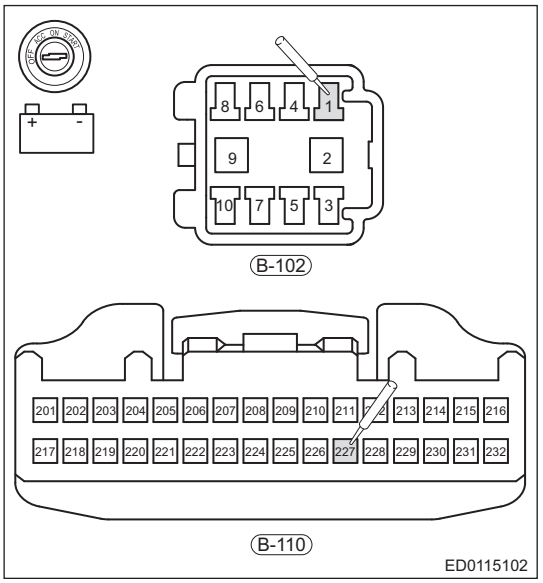
3	**Check power supply wire harness**

(a) ENGINE START STOP switch is in "OFF".

(b) Disconnect power back door module connectors B-110 and B-102.
(c) Using ohm band of multimeter, check if B-110 (227) and B-102 (1) are short to power supply separately.

OK

Multimeter Connection	Condition	Specified Condition
B-110 (227) - Battery (+)	ENGINE START STOP switch "OFF"	∞
B-102 (1) - Battery (+)	ENGINE START STOP switch "OFF"	∞



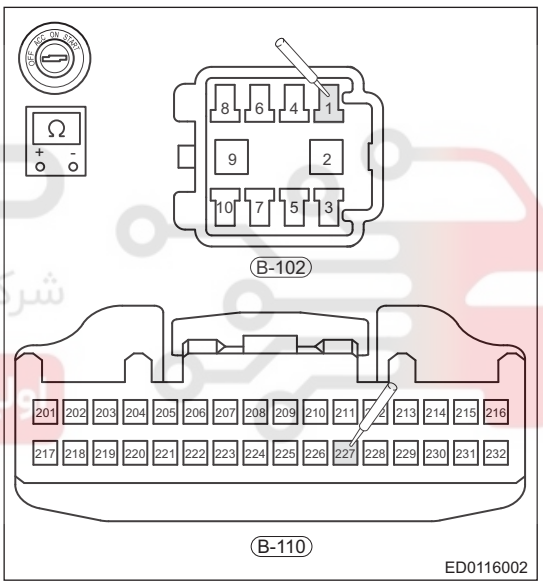
(d) Using ohm band of multimeter, check for continuity between B-110 (227) and B-102 (1).

OK

Multimeter Connection	Condition	Specified Condition
B-110 (227) - B-102 (1)	ENGINE START STOP switch "OFF"	⩽ 1 Ω

Result

Proceed to
OK
NG



44

NG → **Repair or replace power support rod.**

OK

4 Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery terminal cable.
(c) Turn ENGINE START STOP switch to "ON".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK	System is normal
NG	Replace the PLG module assembly.

DTC	B1AA6-07	PLG Position is Out Of Range

Description

DTC	DTC Definition
B1AA6-07	PLG Position is Out Of Range

1	Check power support rod appearance

(a) Check if power support rod is deformed or damaged.

Result

Proceed to
OK
NG

NG → **Replace the power support rod.**

OK

2	Check power support rod

(a) Install power support rod onto new vehicle and observe if same malfunction occurs

Result

Proceed to
OK
NG

NG → **Replace the power support rod.**

OK

3	Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery cable.
(c) Turn ENGINE START STOP switch to "ON".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK → **System is normal**

NG → **Replace the PLG module assembly.**

DTC	B1A9A-1C	LH Spindle Motor Output Failure

DTC	B1A9B-1D	LH Spindle Motor Overload

Description

DTC	DTC Definition
B1A9A-1C	LH Spindle Motor Output Failure
B1A9B-1D	LH Spindle Motor Overload

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Problem causes:
- Power support rod assembly.
- Wire harness or connector.
- Power back door module assembly.

1	Check left rod motor connector

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect connector B-102 and check if connector terminals are damaged or displaced.

Result

Proceed to
OK
NG

NG → **Repair or replace power support rod.**

OK

2	Check motor power supply

(a) Turn ENGINE START STOP switch to "ON".

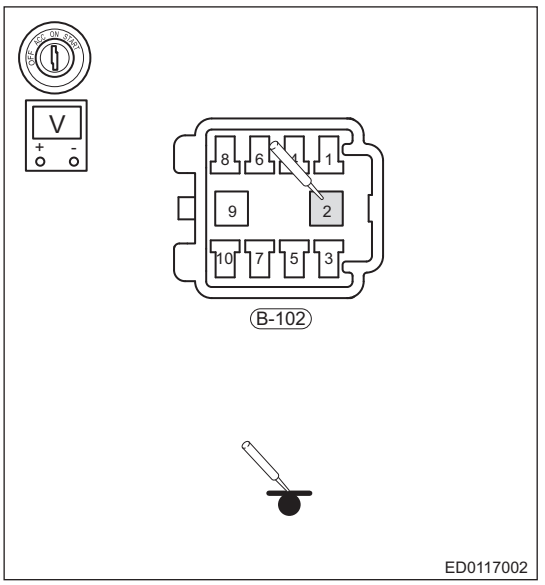
(b) Disconnect support rod connector B-102 and measure the voltage of B-102 (2) to ground. The value should be not less than 12 V.

OK

Multimeter Connection	Condition	Specified Condition
B-102 (2) - Body ground	ENGINE START STOP switch "ON"	Not less than 12 V

Result

Proceed to
OK
NG



NG → **Repair and replace power supply wire harness**

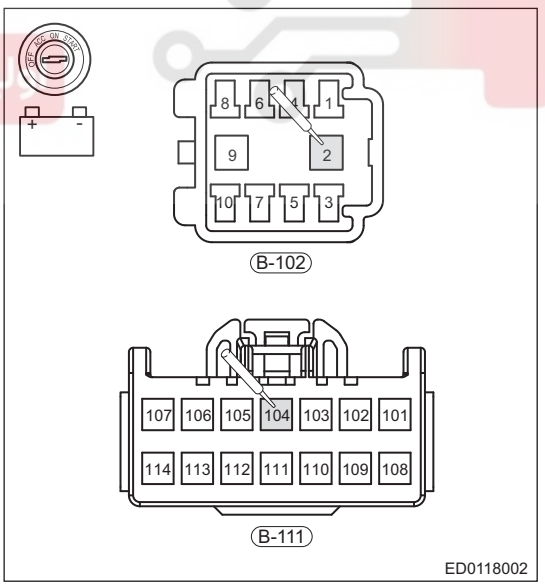
OK

3 Check motor wire harness

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect power back door module connectors B-111 and B-102.
(c) Using ohm band of multimeter, check the continuity between B-111 (104), B-102 (2) and battery (+) and confirm if there is an open circuit to power supply.

OK

Multimeter Connection	Condition	Specified Condition
B-111 (104) - Battery (+)	ENGINE START STOP switch "OFF"	∞
B-102 (2) - Battery （+）		∞



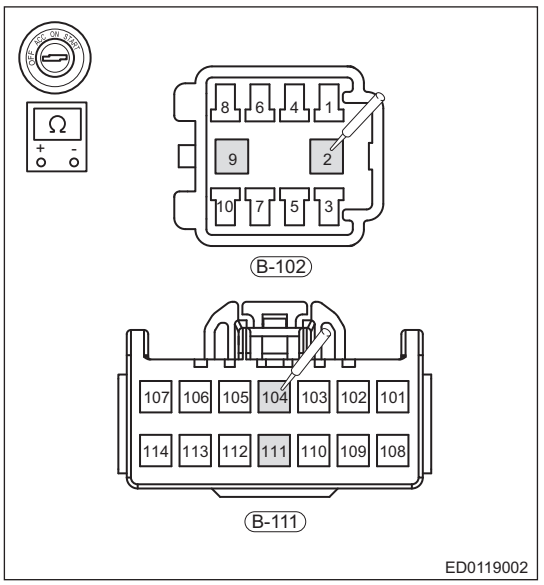
(d) Using ohm band of multimeter, check the continuity between B-111 (104) and B-102 (2), B-111 (11) - B-102 (9) and confirm if there is an open circuit.

OK

Multimeter Connection	Condition	Specified Condition
B-111 (104) - B-102 (2)	ENGINE START STOP switch "OFF"	⩽ 1 Ω
B-111 (111) - B-102 (9)		⩽ 1 Ω

Result

Proceed to
OK
NG



NG → **Repair or replace left rod motor**

OK

4 Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery cable.
(c) Turn ENGINE START STOP switch to "ON".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

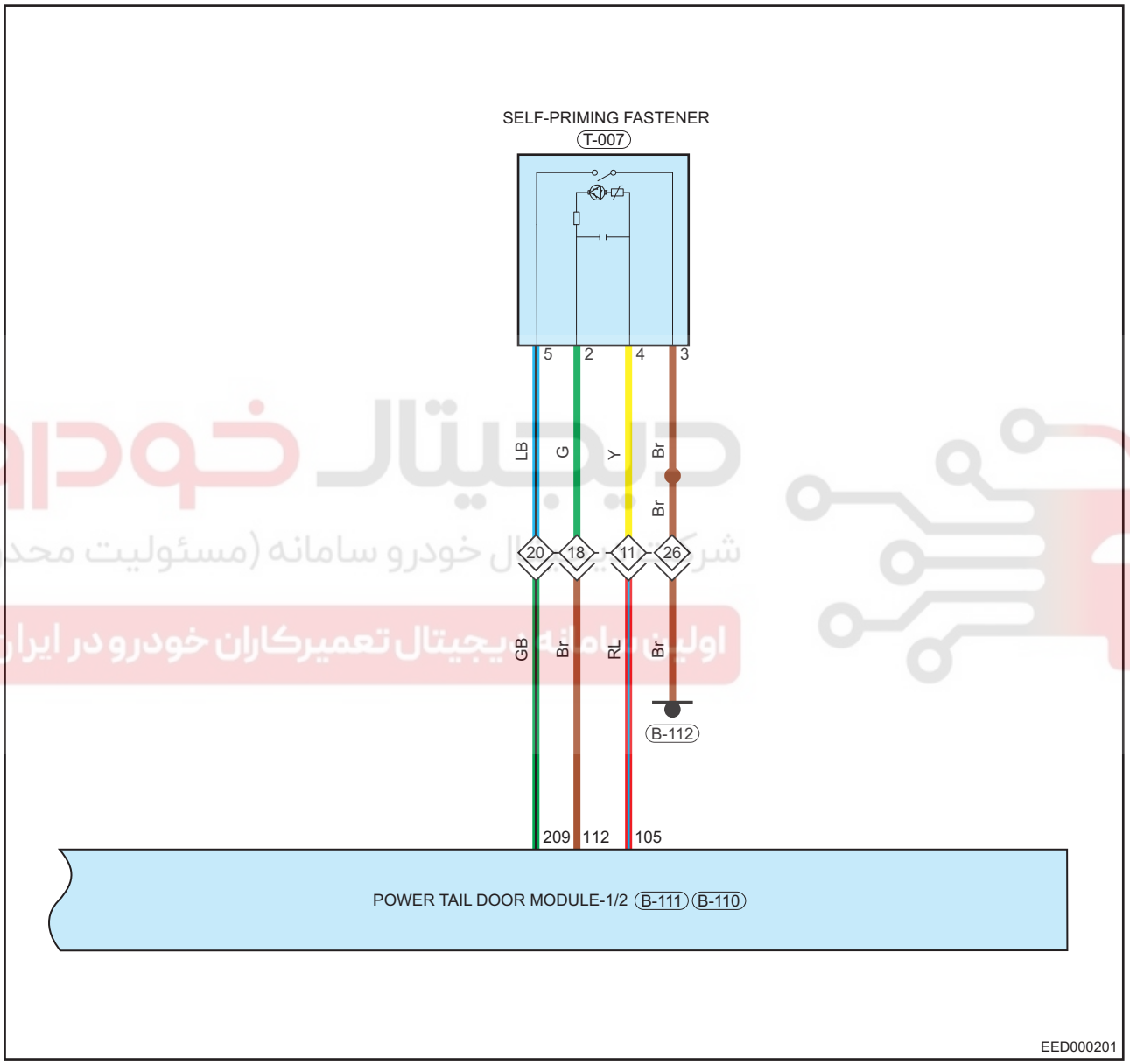
Proceed to
OK
NG

OK → **System is normal**

NG → **Replace the PLG module assembly.**

DTC	B1AA1-1C	Cinch Latch Motor Output Failure
DTC	B1AA2-1D	Cinch Latch Motor Overload
DTC	B1AA9-07	Closure Motor Overheat

Circuit Diagram



Description

DTC	DTC Definition
B1AA1-1C	Cinch Latch Motor Output Failure
B1AA2-1D	Cinch Latch Motor Overload
B1AA9-07	Closure Motor Overheat

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Problem causes:
- Fastener assembly
- Wire harness or connector.
- Power back door module assembly.

1	Check fastener motor connector

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect the connector T-001, T-007 and check terminals.

Result

Proceed to
OK
NG

NG → **Repair or replace motor wire harness**

OK →

2	Check fastener motor signal voltage

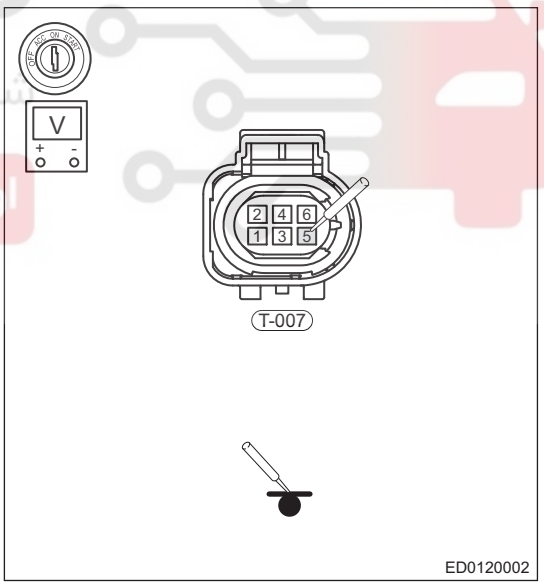
(a) Turn ENGINE START STOP switch to "ON".
(b) Using multimeter, measure the voltage of T-007 (5). The value should be not less than 12 V.

OK

Multimeter Connection	Condition	Specified Condition
T-007 (5) - Ground	ENGINE START STOP switch "ON"	Not less than 12 V

Result

Proceed to
OK
NG



NG → **Repair or replace motor wire harness**

OK →

3	Check fastener motor wire harness

(a) Turn ENGINE START STOP switch to "OFF".
(b) Disconnect the connector T-007, B-111, B-110.

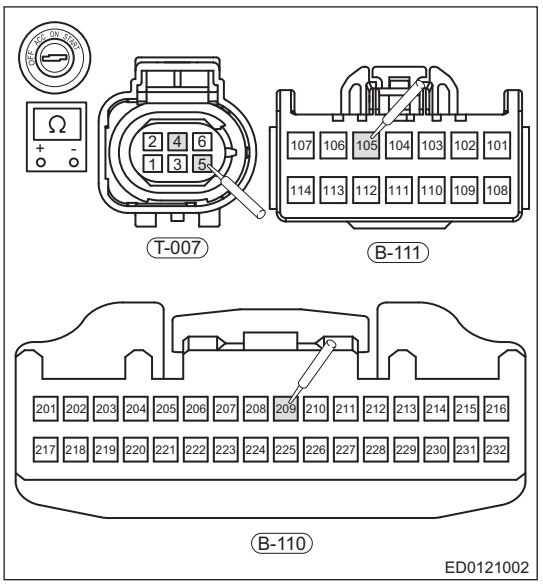
(c) Using ohm band of multimeter, check the continuity between T-007 (5) and T-007 (4), B-111 (105) and B-110 (209).

OK

Multimeter Connection	Condition	Specified Condition
T-007 (5) - B-110 (209)	ENGINE START STOP switch "OFF"	⩽ 1 Ω
T-007 (4) - B-111 (105)		⩽ 1 Ω

Result

Proceed to
OK
NG



NG → **Repair or replace motor wire harness**

OK

4 Check motor control circuit

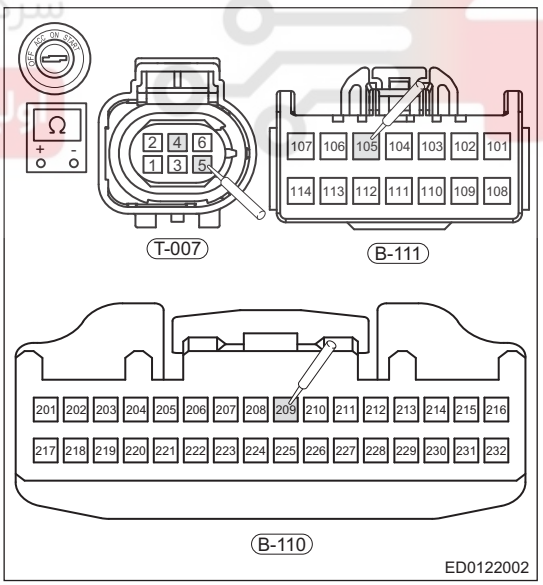
(a) Turn ENGINE START STOP to "OFF", Disconnect the negative battery terminal cable.
(b) Disconnect the lock motor connector T-007, PLGM connectors B-110, B-111.
(c) Using ohm band of multimeter, check the continuity between B-111(5), T-007 (4) and battery (+).

OK

Multimeter Connection	Condition	Specified Condition
T-007 (5) - B-110 (209)	ENGINE START STOP switch "OFF"	⩽ 1 Ω
T-007 (4) - B-111 (105)		⩽ 1 Ω

Result

Proceed to
OK
NG



NG → **Repair or replace motor wire harness**

OK

5 Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery cable.

(c) Turn ENGINE START STOP switch to "ON".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

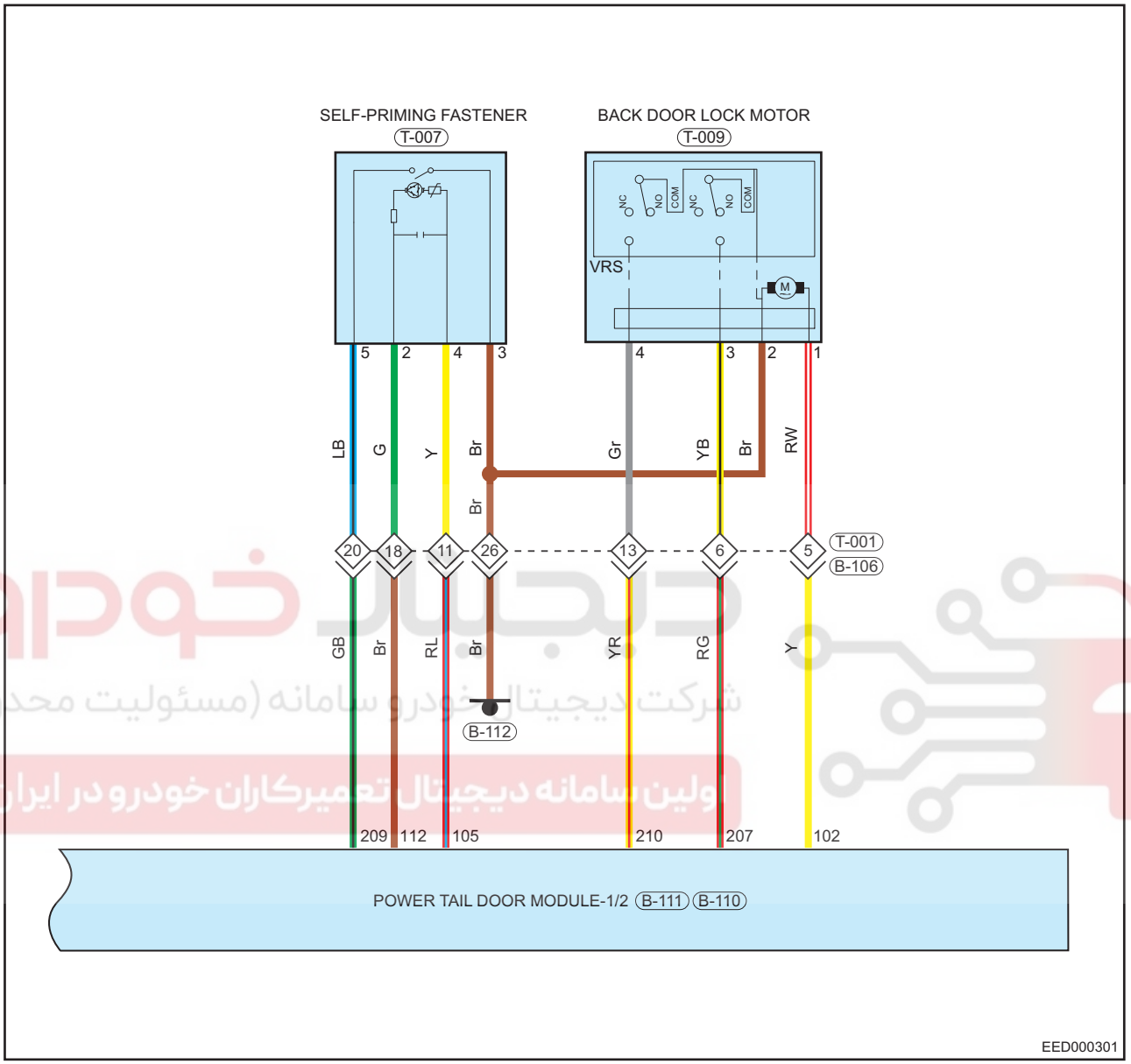
Result

Proceed to
OK
NG

OK	**System is normal**
NG	**Replace fastener assembly**

DTC	B1AA3-1C	Release Motor Output Failure

Circuit Diagram



Description

DTC	DTC Definition
B1AA3-1C	Release Motor Output Failure

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

Problem causes:
- Back door lock assembly.
- Wire harness or connector.
- Power back door module assembly.

1	Check unlock motor connector

(a) Turn ENGINE START STOP to "OFF", Disconnect the negative battery cable.
(b) Disconnect the back door lock connector T-009.
(c) Check if wire harnesses are worn, pierced, pinched or partially broken.
(d) Check for broken, bent, protruded or corroded terminals.

Result

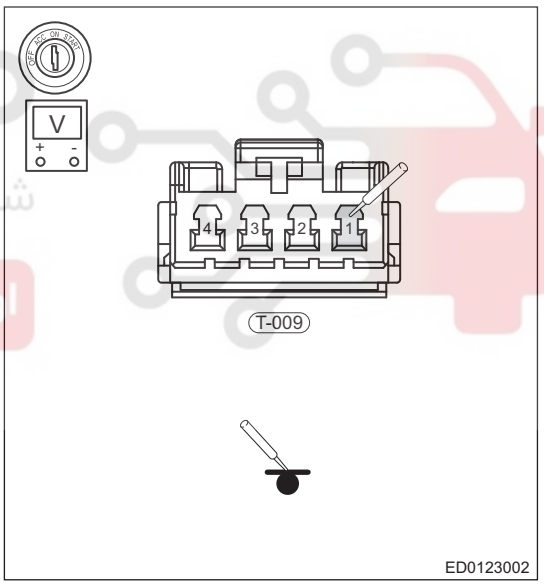
Proceed to
OK
NG

NG → **Repair or replace back door lock wire harness.**

OK

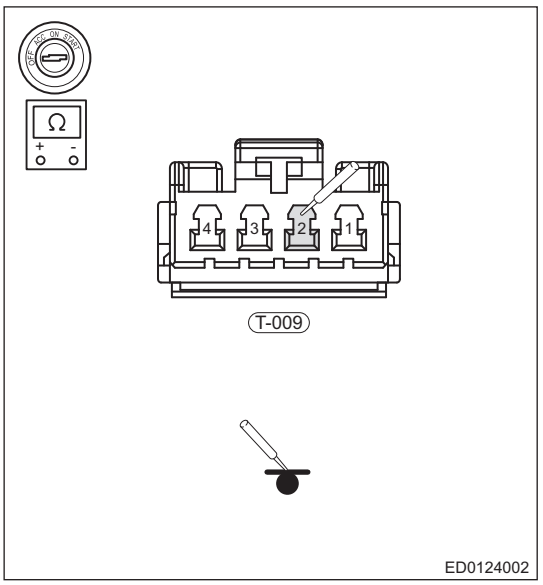
2	Check unlock motor wire harness connector

(a) Disconnect the back door lock connector T-009.



(b) Turn ENGINE START STOP switch to "ON".

(c) Using multimeter, measure the voltage of T-009 (1). The value should be not less than 12 V.



Inspect power supply voltage

Multimeter Connection	Condition	Specified Condition
T-009 (1) - Body ground	ENGINE START STOP switch "ON"	Not less than 12 V

Check for Open

Multimeter Connection	Condition	Specified Condition
T-009 (2) - Body ground	ENGINE START STOP switch "OFF"	⩽ 1 Ω

Result

Proceed to
OK
NG

NG → **Repair or replace back door lock wire harness.**

OK

3 Check back door lock

(a) Install back door lock on failed vehicle onto new vehicle to test if inspection is normal.

Result

Proceed to
OK
NG

NG → **Replace back door lock.**

OK

4 Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery cable.
(c) Turn ENGINE START STOP switch to "ON".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK → **System is normal**

NG → **Replace PLG module**

DTC	B1AA4-07	Half/Full Latch Abnormality

DTC	B1AA5-07	PCM Switch Failure

Description

DTC	DTC Definition
B1AA4-07	Half/Full Latch Abnormality
B1AA5-07	PCM Switch Failure

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

1	Check back door lock wire harness connector

(a) Disconnect the connector T-007.
(b) Check if wire harnesses are worn, pierced, pinched or partially broken.

Result

Proceed to
OK
NG

NG → **Repair or replace back door lock wire harness**

OK →

2	Check half-lock and full-lock position signals

Check signal voltage

(a) Disconnect the wire harness connector T-009.
(b) Turn ENGINE START STOP switch to "ON".
(c) Using multimeter, measure the voltage of T-009(4) and T-009(3). The value should be not less than 12 V.

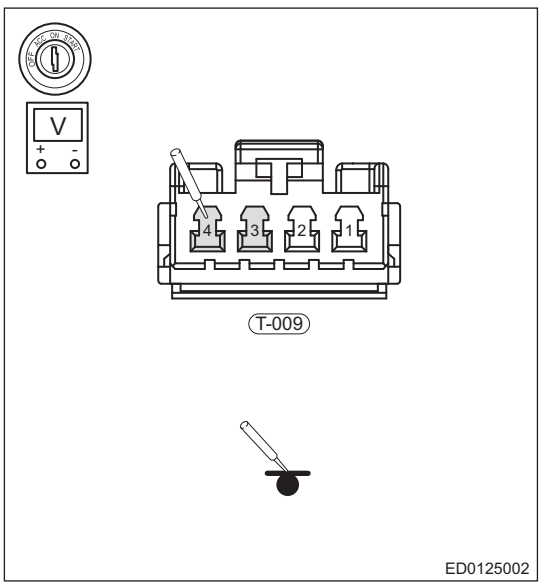
Multimeter Connection	Condition	Specified Condition
T-009 (4) - Body ground	ENGINE START STOP switch "ON"	Not less than 12 V
T-009 (3) - Body ground		Not less than 12 V

Check for Open

Multimeter Connection	Condition	Specified Condition
T-009 (2) - Body ground	ENGINE START STOP switch "OFF"	⩽ 1 Ω

Result

Proceed to
OK
NG



NG → **Repair or replace back door lock wire harness.**

OK

3	Check back door lock

(a) Install back door lock on failed vehicle onto new vehicle to test if inspection is normal.

Result

Proceed to
OK
NG

NG → **Replace back door lock.**

OK

4	Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery cable.
(c) Turn ENGINE START STOP switch to "ON".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

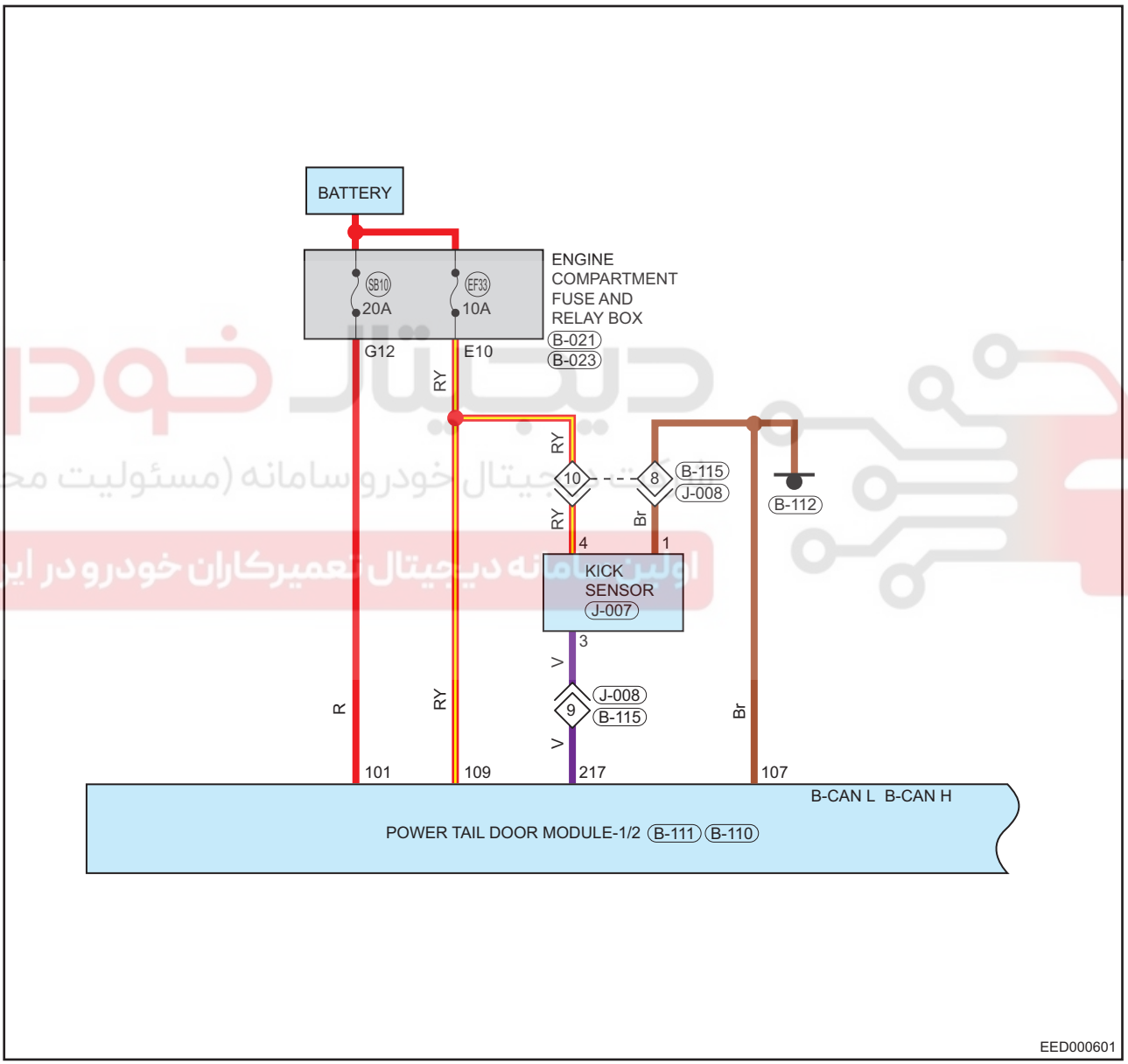
Proceed to
OK
NG

OK → **System is normal**

NG → **Replace PLG module**

DTC	B1AAB-17	Ks Over Voltage Error
DTC	B1AAC-16	Ks Under Voltage Error
DTC	B1AAD-01	Ks Electrode Error
DTC	B1AAE-45	Ks ECU ROM Error

Circuit Diagram



Description

DTC	DTC Definition
B1AAB-17	Ks Over Voltage Error
B1AAC-16	Ks Under Voltage Error
B1AAD-01	Ks Electrode Error
B1AAE-45	Ks ECU ROM Error

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

1	Check battery voltage

(a) Check that battery terminals are not loose or corroded.
(b) Turn ENGINE START STOP switch, measure battery voltage with a digital multimeter. The rated voltage should be between 12 V and 13 V.

Result

Proceed to
OK
NG

NG → **Check or replace battery**

OK

2	Check fuse EF33

(a) Check if fuse EF33 is blown or no power.

Result

Proceed to
OK
NG

NG → **Replace fuse or check the cause for no power**

OK

3	Check power supply voltage of kick sensor

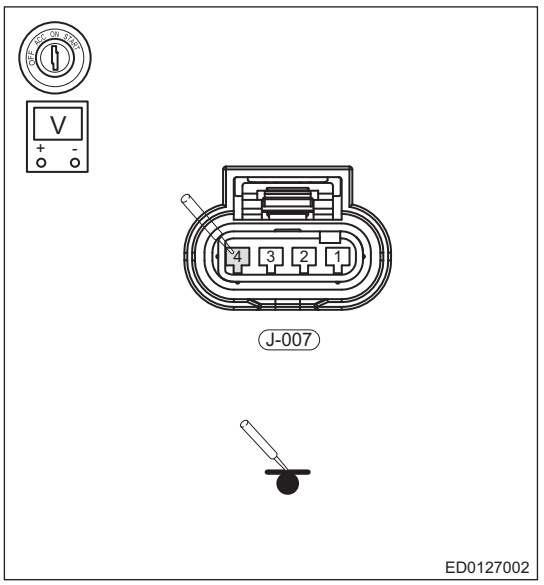
(a) Turn ENGINE START STOP switch to ON.

(b) Using multimeter, measure the voltage between J-007 (4) and body ground. The value should be not less than 12 V.

Multimeter Connection	Condition	Specified Condition
J-007 (4) - Body ground	ENGINE START STOP switch "ON"	Not less than 12 V

Result

Proceed to
OK
NG



NG → **Repair or replace sensor wire harness**

OK

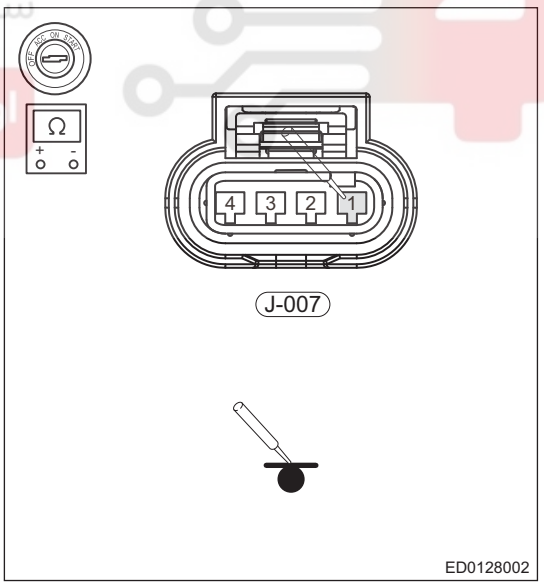
4 Check wire harness for an open circuit

(a) Turn ENGINE START STOP switch to "OFF".
(b) Check if kick sensor wire harness connector J-007 is worn, pierced, pinched or partially broken.
(c) Check for continuity between J-007 (1) and body ground with ohm band of multimeter.

Multimeter Connection	Condition	Specified Condition
J-007 (1) - Body ground	ENGINE START STOP switch "OFF"	⩽ 1 Ω

Result

Proceed to
OK
NG



NG → **Repair or replace sensor wire harness**

OK

5 Check kick sensor

(a) Install kick sensor onto failed vehicle and observe if it is normal.

Result

Proceed to
OK
NG

NG → **Replace kick sensor**

OK

6	Reconfirm DTCs

(a) Connect all connectors.
(b) Connect the negative battery cable.
(c) Turn ENGINE START STOP switch to "ON".
(d) Use diagnostic tester (the latest software) to read the DTCs stored in body control system again.

Result

Proceed to
OK
NG

OK → **System is normal**

NG → **Replace PLG module**

DTC	B1AAA-04	ECU Failure

Description

DTC	DTC Definition
B1AAA-04	ECU Failure

Caution:
When performing electrical equipment diagnosis and test, always refer to circuit diagram for related circuit and component information.

1	Clear DTCs

(a) Use diagnostic tester to enter PLG system to perform DTCs clearing.
(b) After clearing DTCs, reconfirm DTCs

Result

Proceed to
OK
NG

OK	Reconfirm power back door operating function
NG	Replace PLG module assembly

ON-VEHICLE SERVICE

Open the hood assembly

Removal

Warning/Caution/Hint

Caution:

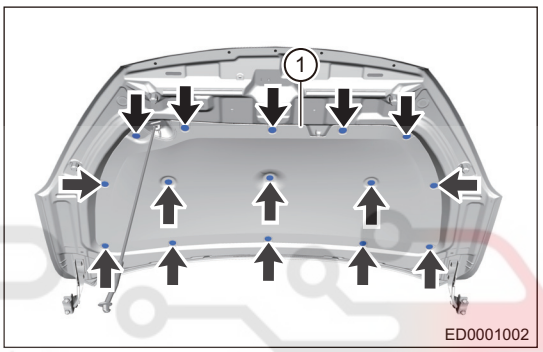
- Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood lock assembly.
- During removal of engine hood assembly, avoid engine hood falling off during operation, resulting in damage to body or front windshield.

Warning:

- When removing engine hood assembly, an assistant is needed to hold it. Try to prevent hood from dropping or suddenly closing to cause accidents during operation.

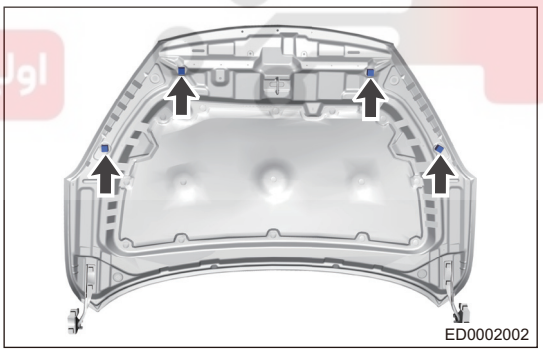
1. Remove the engine compartment sound insulator.

   (a) Remove clips (arrow) on engine compartment sound insulator (1).



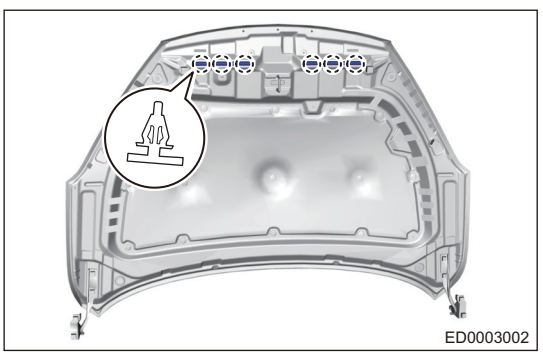
2. Remove the engine hood adjustable buffer block.

   (a) Rotate engine hood adjustable buffer block (arrow) in counterclockwise and remove it.



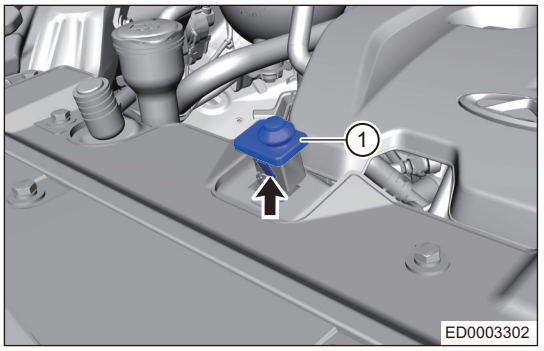
3. Remove the engine weatherstrip.

   (a) Disengage clips from engine weatherstrip and remove weatherstrip.

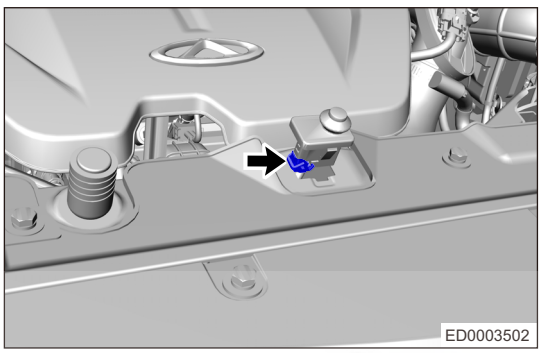


4. Remove the engine compartment contact switch

(a) Remove rubber protector (1) from engine compartment contact switch, and using a screwdriver wrapped with protective tape, pry off fixing clip (arrow) from engine compartment contact switch.



(b) Disconnect wire harness connector (arrow) from engine compartment contact switch and remove compartment contact switch



5. Remove the engine hood support.

(a) Using a screwdriver wrapped with protective tape, pry off upper fixing clips from front compartment left and left air spring assembly.

Caution:

- Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood support.
- Try to prevent body paint surface from being scratched when removing engine hood support.
- During removal of engine hood support, avoid engine hood falling off during operation, resulting in damage to body or front windshield.

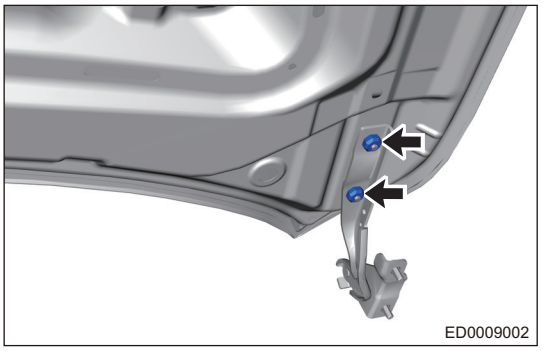
Warning:

- When removing engine hood support, an assistant is needed to hold it. Try to prevent hood from dropping or suddenly closing to cause accidents during operation.

6. Remove the engine hood assembly.

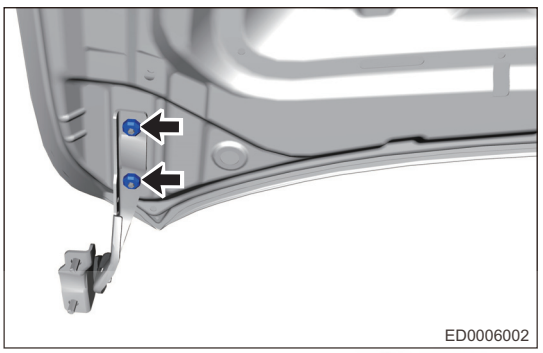
(a) Remove 2 fixing nuts (arrow) between engine hood assembly and engine hood left hinge assembly.

Tightening torque
22 ± 1.0 N·m



(b) Remove 2 fixing nuts (arrow) between engine hood assembly and engine hood right hinge assembly and remove engine hood assembly.

Tightening torque
22 ± 1.0 N·m



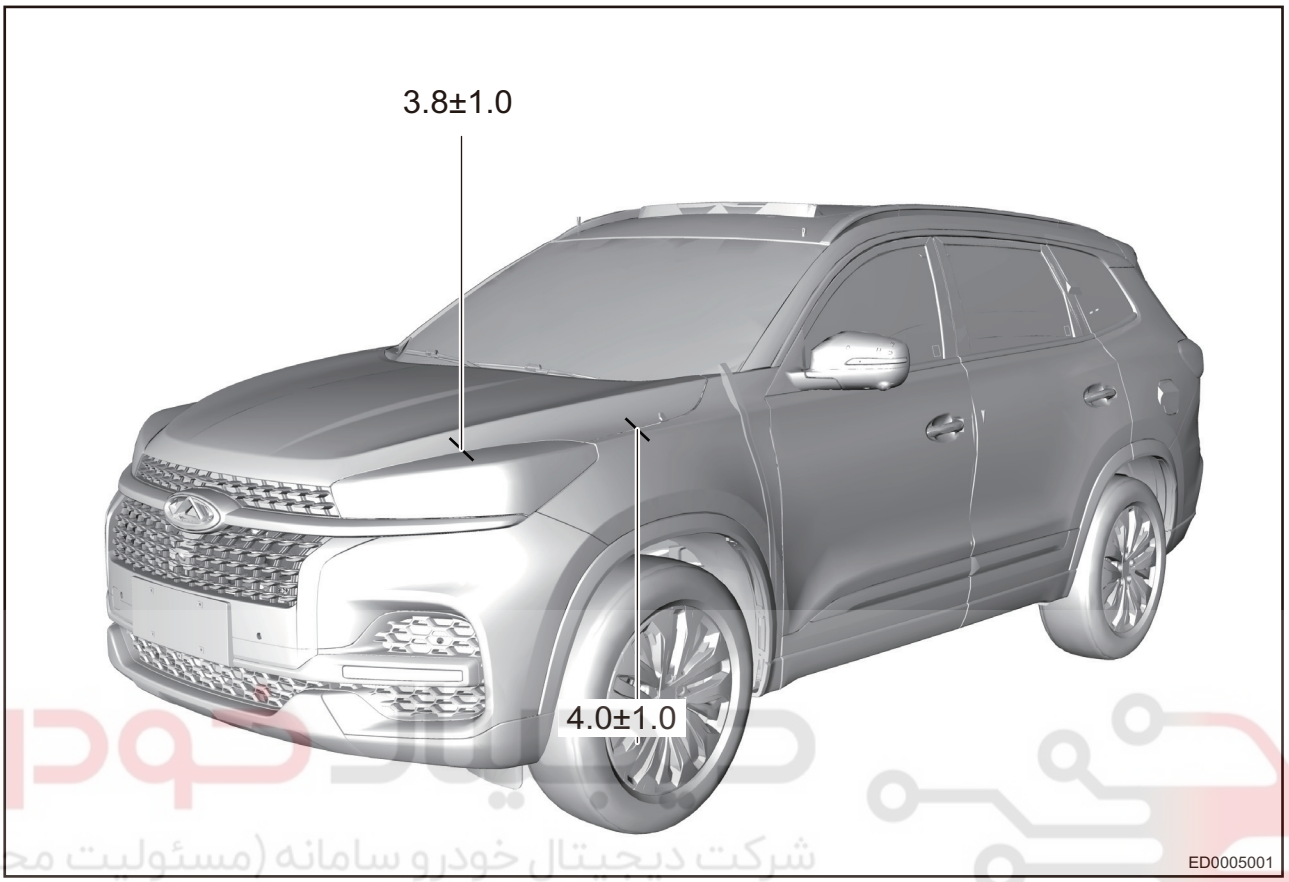
Installation

1. Installation is in the reverse order of removal.

Adjustment

1. Adjust the hood assembly.
   (a) Loosen fixing bolts of engine hood hinge assembly.
   (b) Adjust the clearance of engine hood assembly within standard range and pre-tighten fixing bolts of engine hood hinge assembly.

(c) Standard ranges of clearance between installation position of hood assembly and each part are as in illustration.



(d) After adjustment, tighten fixing bolts between hood hinge assembly and hood assembly to specified torque.

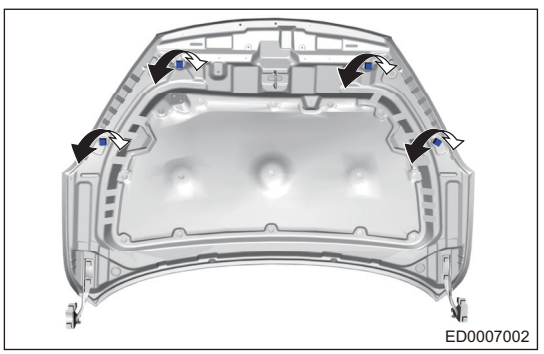
Tightening torque
22 ± 1.0 N·m

(e) After adjustment, tighten fixing bolts between hood hinge assembly and body to specified torque.

Tightening torque
22 ± 1.0 N·m

2. Adjust the height of hood front end with adjustment blocks.

(a) Raise or lower the hood front end by rotating the adjustment blocks clockwise or counterclockwise.



(b) After adjustment, make sure that alignment between hood assembly and wing assembly is within the standard range.

Standard alignment
3.8 ± 1.0 mm

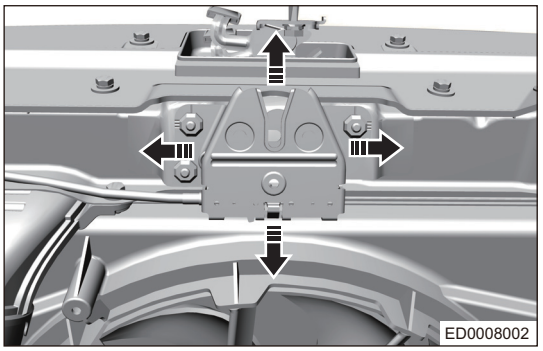
(c) After adjustment, make sure that alignment between hood assembly and front combination light is within the standard range.

Standard alignment

4.0 ± 1.0 mm

3. Adjust the hood lock assembly.

(a) Slightly loosen the fixing bolts of hood lock assembly, and adjust the hood lock assembly in direction of arrow.



(b) Tighten the hood lock assembly fixing bolts to specified torque after adjustment.

Tightening torque

9 ± 1.5 N·m

Inspection

1. Check hood for wear or deformation during installation, and repair as necessary.
2. Check if fixing bolts are set in position. Tighten them to specified torque as necessary.
3. Check if clearance and alignment between hood assembly installation position and each part are within the specified range. Adjust as necessary.

Hood Hinge Assembly

Removal

Warning/Caution/Hint

Hint:

- Use same procedures for right and left sides.
- Procedures listed below are for left side.

Caution:

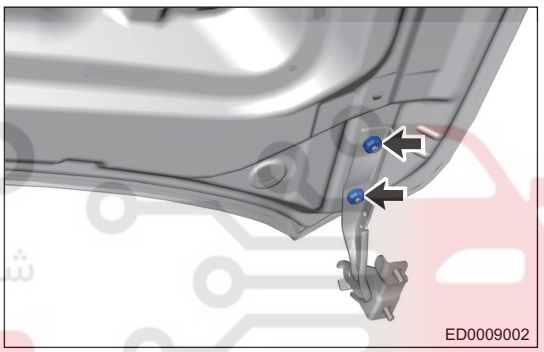
- Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood hinge assembly.
- During removal of engine hood hinge assembly, avoid engine hood falling off during operation, resulting in damage to body or front windshield.

Warning:

- When removing engine hood hinge assembly, an assistant is needed to hold it. Try to prevent hood from dropping or suddenly closing to cause accidents during operation.

1. Remove the engine hood left hinge assembly.
   (a) Remove the wing trim panel assembly (See page 45-16).
   (b) Remove the wing assembly (See page 45-18).
   (c) Remove 2 fixing nuts (arrow) between left hinge assembly and engine hood assembly.

   Tightening torque
   22 ± 1.0 N·m



   (d) Remove 2 fixing bolts (arrow) between engine hood left hinge assembly and body.

   Tightening torque
   22 ± 1.0 N·m

   (e) Remove the engine hood left hinge assembly.

Engine Hood Cable Assembly

Removal

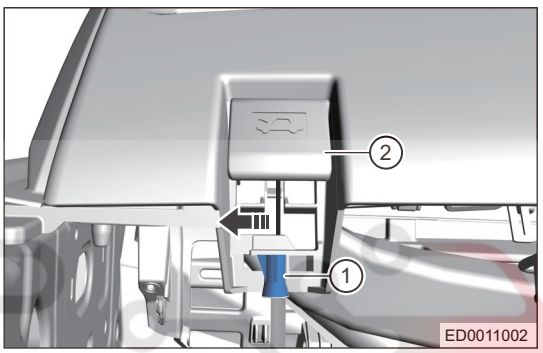
Warning/Caution/Hint

Caution:

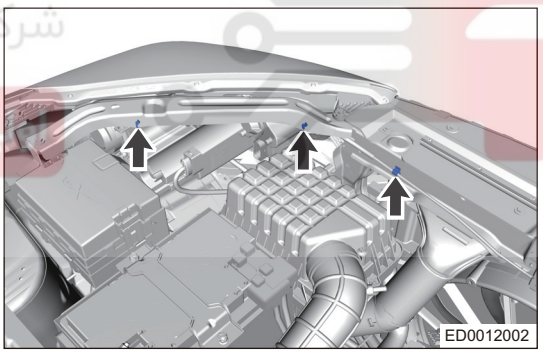
- Be sure to wear necessary safety equipment to prevent accidents, when removing engine hood cable assembly.
- Prevent interior and body paint from being scratched, when removing engine hood cable assembly.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the wing assembly (See page 45-18).
4. Remove the engine hood lock assembly (See page 32-30).
5. Remove the A-pillar lower protector assembly (See page 46-14).
6. Remove the engine hood cable assembly.

(a) Disengage engine hood cable assembly (1) from engine hood grip drive block (2) in direction of arrow.

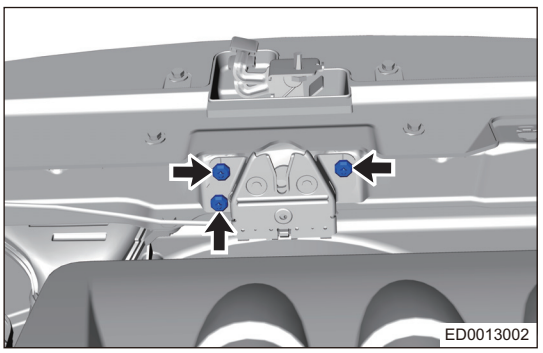


(b) Disengage fixing clips from engine hood cable assembly.

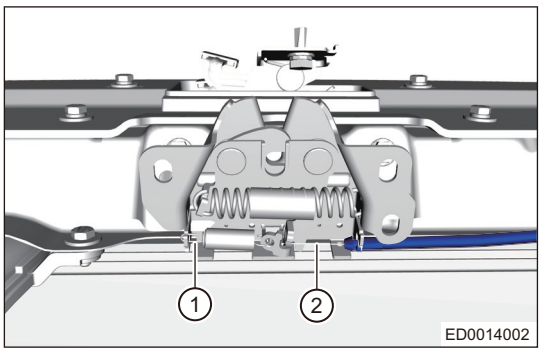


(c) Remove 3 fixing nuts (arrow) from engine hood lock.

Tightening torque
10 ± 1.0 N·m



(d) Remove engine hood cable return spring (1) and disengage engine hood cable from hood locking block (2).



(e) Remove the engine hood cable assembly.

Installation

1. Installation is in the reverse order of removal.

Caution:

- After installing hood cable assembly, make sure that hood can be opened smoothly without seizuring.

Front Door Inner Protector Assembly

Removal

Warning/Caution/Hint

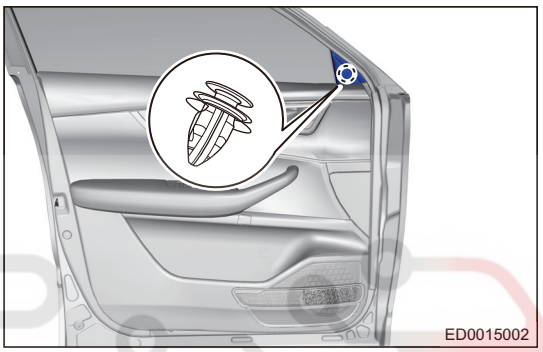
Hint:

- Use same procedures for right and left sides, procedures listed below are for left side.

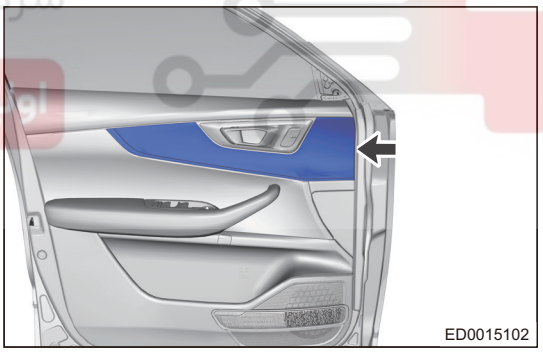
Caution:

- Be sure to wear safety equipment to prevent accidents, when removing front door inner protector assembly.
- Try to prevent front door inner protector surface from being damaged, when removing front door inner protector assembly.

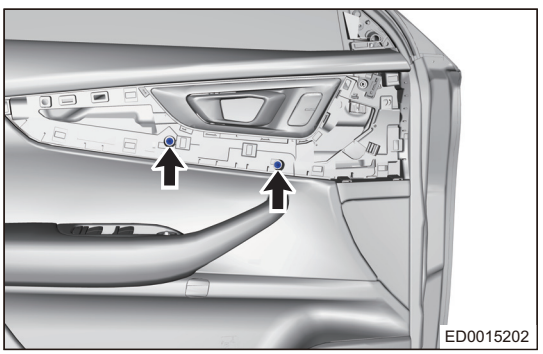
1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the left outside rear view mirror inner triangular block.
   (a) Using an interior crow plate, pry off clip on outside rear view mirror inner triangular block, and remove outside rear view mirror inner triangular block.


ED0015002

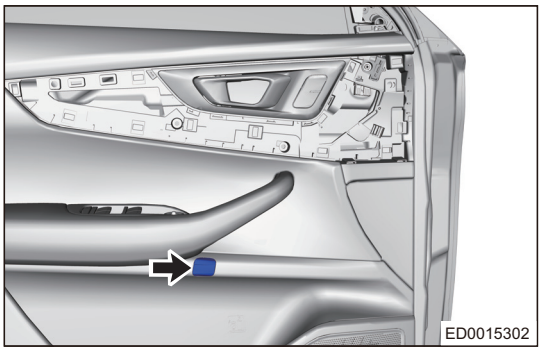
4. Remove the front left door trim panel body.
   (a) Using an interior crow plate, carefully pry off front left door trim panel body (arrow direction is removal part).


ED0015102

5. Remove the front left door inner protector assembly.
   (a) Remove 2 fixing screws (arrow) on the rear side of front left door trim panel body.
   Tightening torque
   1.5 ± 0.5 N·m

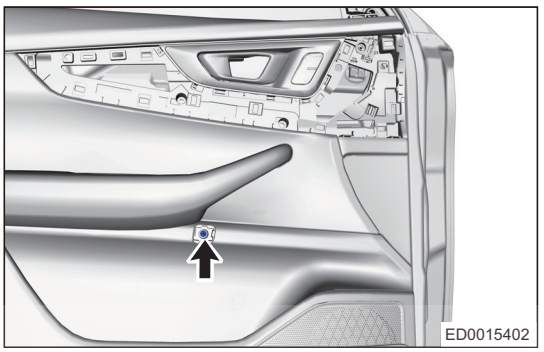

ED0015202

(b) Remove the front door lower grip cover (arrow direction is removal part).



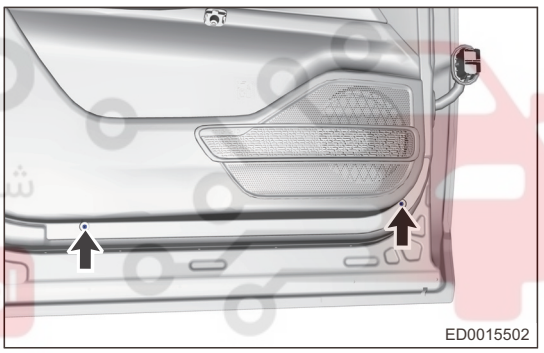
(c) Remove fixing screw (arrow) on the rear side of front door lower grip cover.

Tightening torque
1.5 ± 0.5 N·m

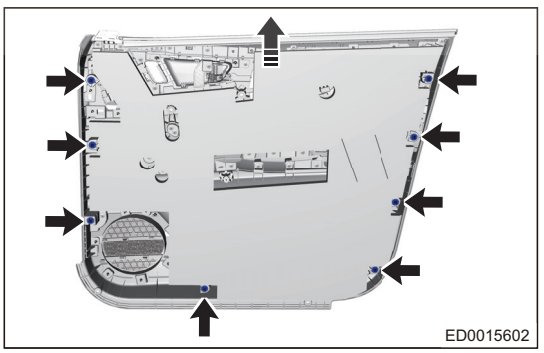


(d) Remove 2 fixing screws (arrow) at the bottom of door protector.

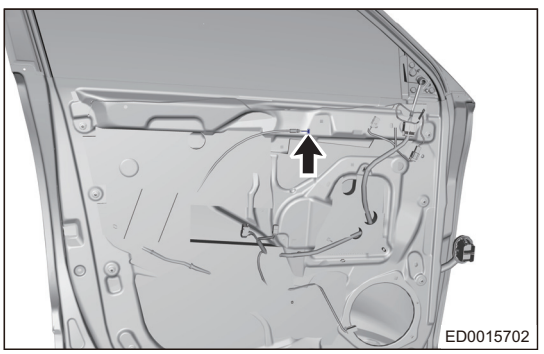
Tightening torque
1.5 ± 0.5 N·m



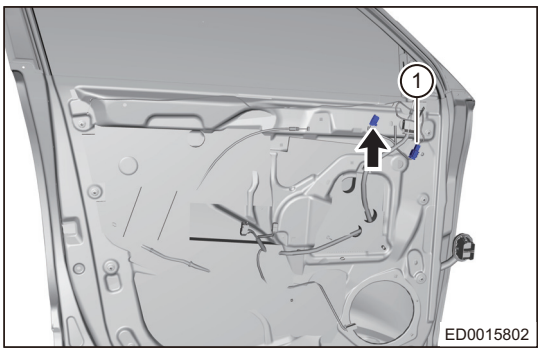
(e) Using an interior crow plate, carefully pry off clips on front door inner protector assembly, and loosen front door inner protector assembly in direction of arrow as shown in illustration.



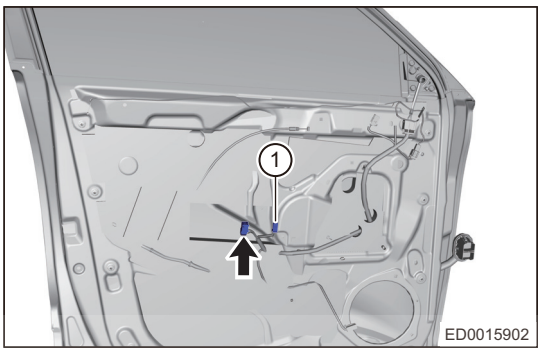
(f) Disengage front door inside handle cable (arrow) from front door inside handle.



(g) Disconnect wire harness connectors from central lock (arrow) and front door atmosphere light (1).



(h) Disconnect front door power glass regulator switch connector (arrow) and rear view mirror adjustment switch connector (1).

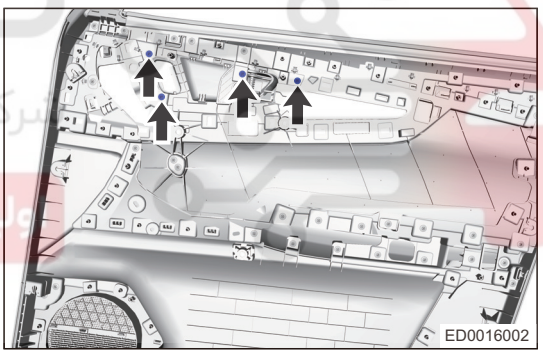


(i) Remove the front left door inner protector assembly.

6. Remove the front door inside handle.

(a) Remove 4 fixing screws (arrow) from front door inside handle.

Tightening torque
1.5 ± 0.5 N·m



(b) Remove the front door inside handle.

Installation

1. Installation is in the reverse order of removal.

Caution:

- Replace damaged clips and install front door inner protector assembly in place, when installing front door inner protector assembly.
- Install connectors in place, when installing front door inner protector assembly.
- Check that each function can operate properly, after installing front door inner protector assembly.

Front Assembly

Removal

Warning/Caution/Hint

Hint:

- Use same procedures for right and left sides.
- Procedures listed below are for left side.

Caution:

- When removing front door assembly, be sure to wear safety equipment to prevent accidents.
- Try to prevent body paint surface from being scratched, when removing front door assembly.

Warning:

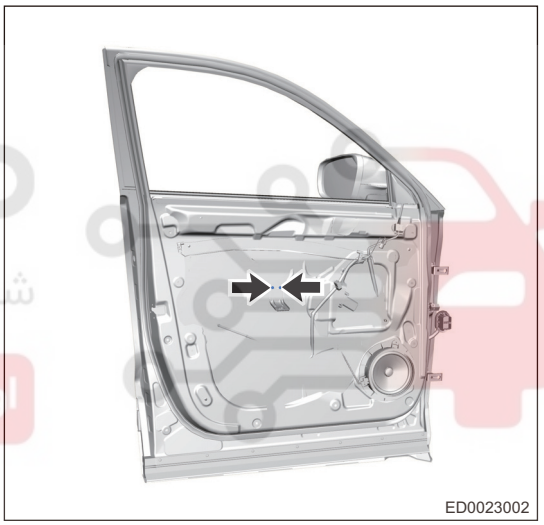
- When removing front door assembly, an assistant is needed to hold front door, to prevent front door from dropping to cause accidents during operation.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the front left door inner protector assembly (See page 44-62).
4. Remove the front left door protective film assembly.

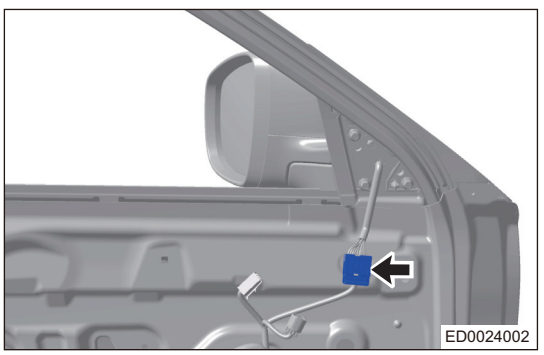
(a) Remove 2 fixing bolts (arrow) and front left door metal bracket.

Tightening torque

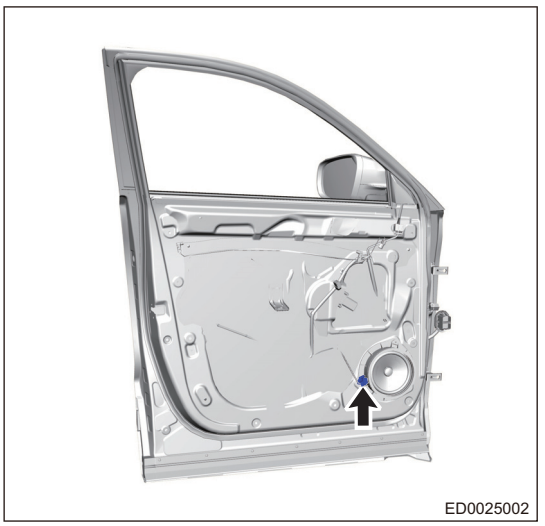
5 ± 1.0 N·m



(b) Disconnect the left rear view mirror connector plug (arrow).



(c) Disconnect the full-range speaker connector (arrow).


ED0025002

(d) As shown in illustration, remove the front left door protective film assembly (1) by gently peeling it along edges from one corner of front left door protective film assembly.

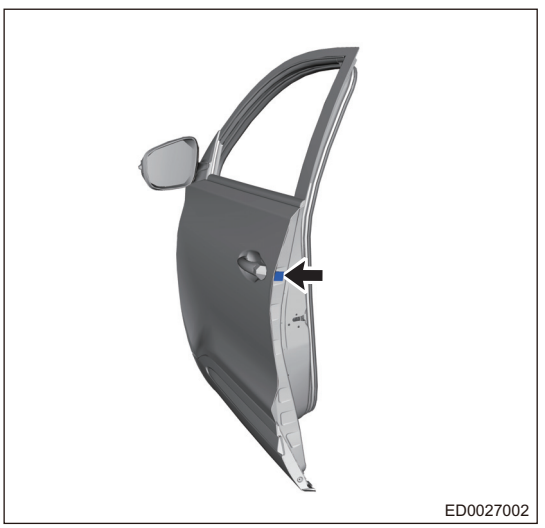
Warning:

- Try to prevent front door protective film from being damaged, when removing front door protective film assembly.
- Place front door protective film assembly properly after removal, and avoid adhesive sticker on front door protective film assembly from sticking to other components.

ED0026002

5. Remove the front door glass upper run (See page 40-84).
6. Remove the front door glass assembly (See page 40-85).
7. Remove the front door power glass regulator (See page 40-87).
8. Remove the front left door lock assembly (See page 32-31).
9. Remove the front left door key cylinder assembly (See page 32-34).
10. Remove the front left door outside handle (See page 44-68).

(a) Using interior special tool, pry off front left door lock block cover (arrow).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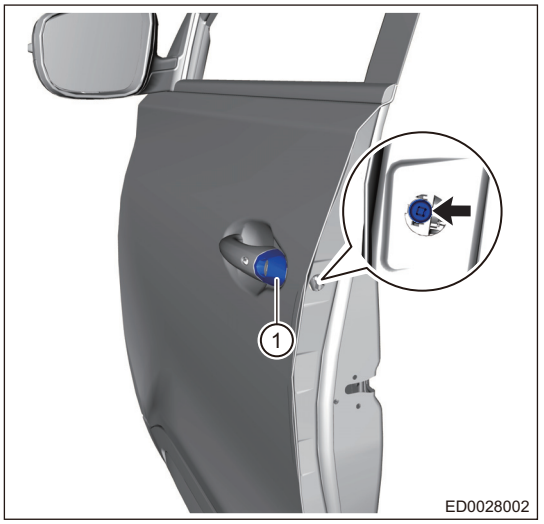
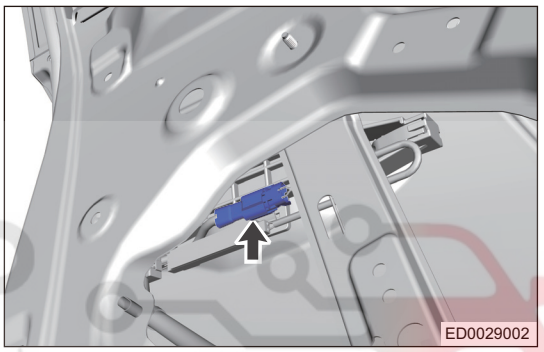
(b) Loosen the fixing screw (arrow) from front door outside handle and remove lock cylinder assembly (1).

Tightening torque
5 ± 1.0 N·m



(c) Disconnect the left door handle sensor connector (arrow).



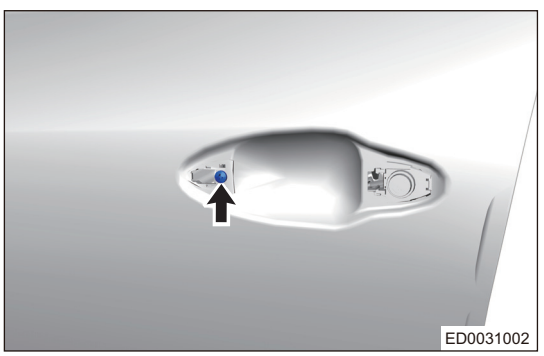
(d) Slide and pull the front door outside handle in direction of arrow, and remove it.

Hint:
- It is not necessary to remove the fixing screw from front door outside handle cover because fixing screw is integrated with front door handle base.

11. Remove the front left door outside handle seat assembly.

(a) Remove the fixing screw (arrow) from front door outside handle seat assembly.

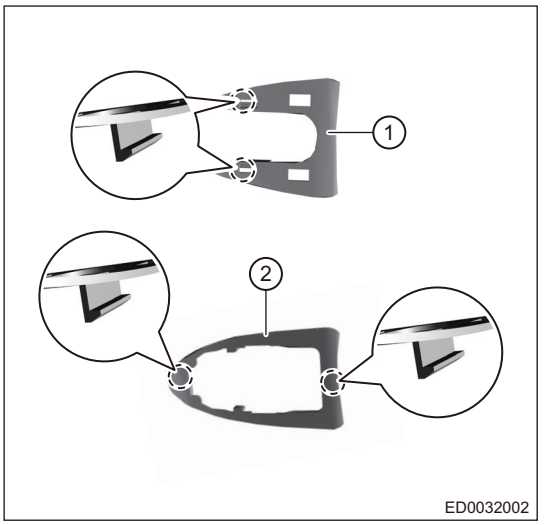
Tightening torque
1.5 ± 0.5 N·m



(b) Disengage clips from door lock connecting rod and remove front left door outside handle seat assembly.

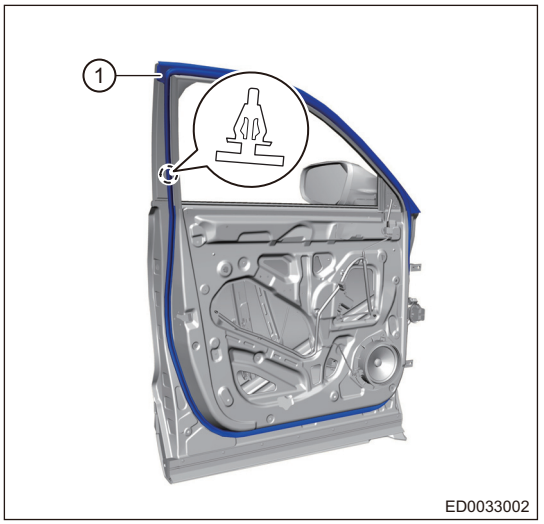
12. Remove the front left door outside handle gasket.

(a) Disengage claws from front door outside handle front shim, and remove front right door outside handle front shim (1).

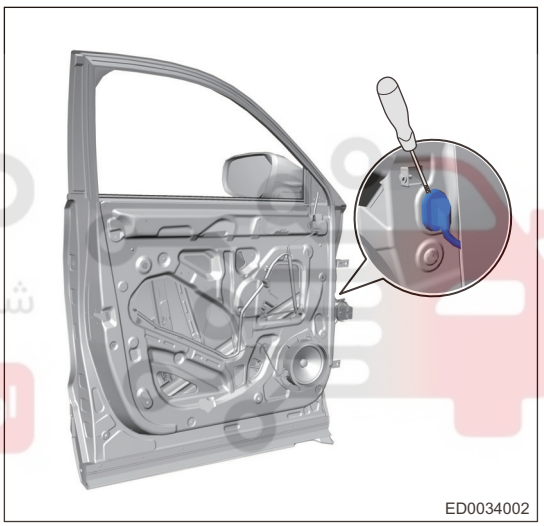


(b) Disengage claws from front door outside handle rear shim, and remove front right door outside handle front shim (2).

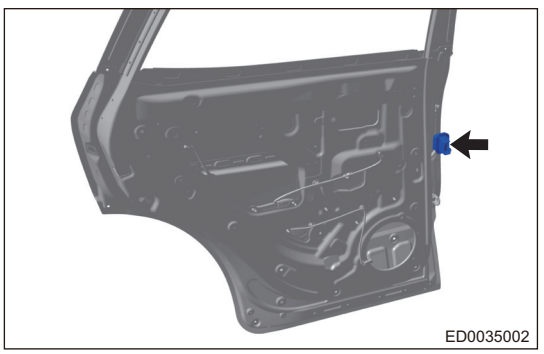
13. Remove the front left door frame weatherstrip.
    (a) Disengage clips from front door frame weatherstrip, and remove front left door frame weatherstrip (1).



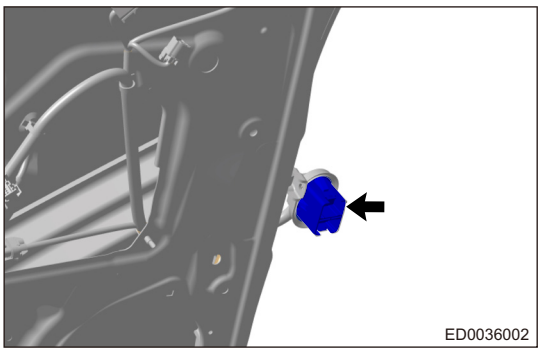
14. Disconnect the front left door wire harness connector.
    (a) Using screwdriver wrapped with tape, pry off front door wire harness dust boot.



    (b) Using screwdriver wrapped with tape, pry off claws (arrow) of front door wire harness connector.



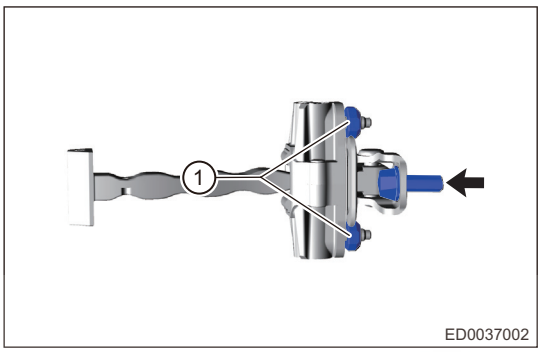
(c) Disconnect the front left wire harness connectors (arrow).


ED0036002

15. Remove the front left door check assembly.

(a) Remove coupling nut (1) between door check and door.

Tightening torque
24 ± 2.0 N·m



ED0037002

(b) Remove 1 coupling bolt (arrow) between door check and front left door.

Tightening torque
55 ± 5.0 N·m

(c) Remove the front left door check assembly

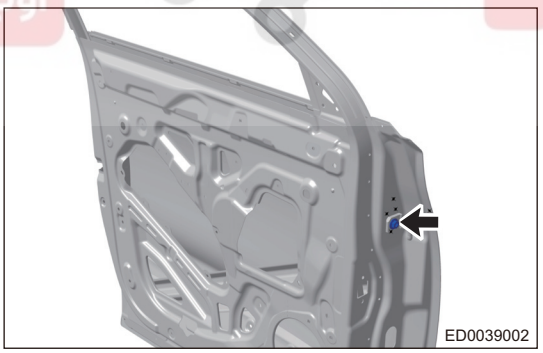
16. Remove the front left door assembly.

(a) Disconnect the front left door wire harness connector.

(b) Remove the front left door check assembly

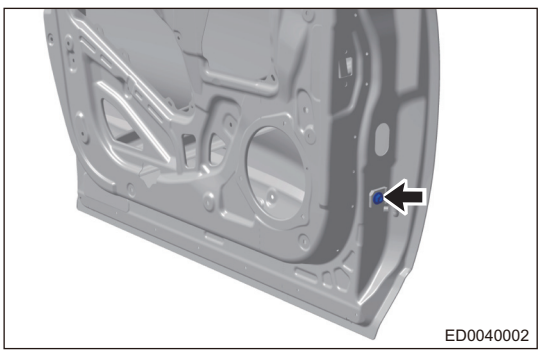
(c) Remove 1 fixing bolts (arrow) between door and upper hinge.

Tightening torque
55 ± 5.0 N·m


ED0039002

(d) Remove 1 fixing bolts (arrow) between door and lower hinge.

Tightening torque
55 ± 5.0 N·m

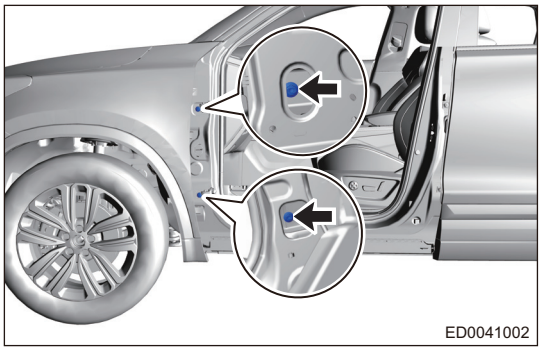

ED0040002

(e) Remove the front left door assembly.

17. Remove the front left door hinge assembly.

(a) Remove 2 fixing bolts (arrow) between front door hinge assembly and quarter assembly.

Tightening torque
32 ± 3.0 N·m


ED0041002

(b) Remove 2 fixing bolts (arrow) between front door lower hinge assembly and quarter assembly.

Tightening torque
32 ± 3.0 N·m

Installation

1. Installation is in the reverse order of removal.

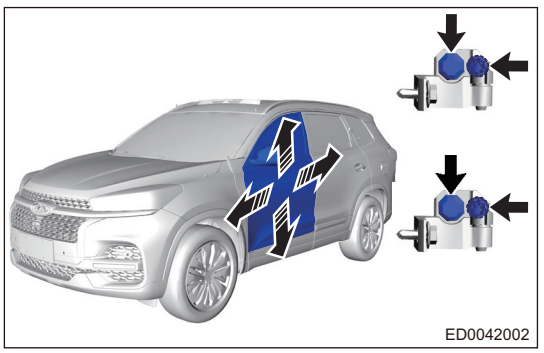
Caution:
- Replace damaged clips and install front door inner protector in place, when installing front door inner protector.
- Stick protective film in specified position, not in a wrong position or an asymmetric position between left and right sides or cover the mounting holes of other installation parts.
- DO NOT drag protective film when sticking. It should be installed under its original condition and ensure sheet metal is clean before installation.
- Finished protective film should have no defects, such as wrinkles, bubbles or turnups.
- Finished protective film should have powerful adherence. Protective film sticking should be finished at one time. Avoid repeat sticking.

Warning:
- When installing front door assembly, an assistant is needed to hold front door, to prevent front door from dropping to cause accidents during operation.
- When installing front door assembly, be sure to wear safety equipment to prevent accidents.

Adjustment

1. Adjust the front assembly.

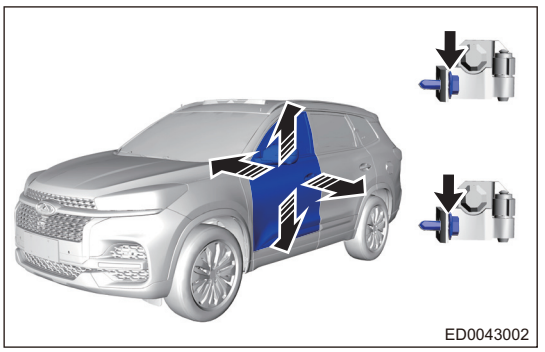
(a) Loosen 4 fixing bolts between front door hinge assembly and quarter, and adjust the front door assembly position in direction of arrow as shown in illustration.


ED0042002

(b) Tighten the fixing bolts on front door hinge assembly to specified torque after adjustment.

Tightening torque
32 ± 3.0 N·m

(c) Loosen 2 fixing bolts between front door hinge assembly and door, and adjust the front door assembly position in direction of arrow as shown in illustration.

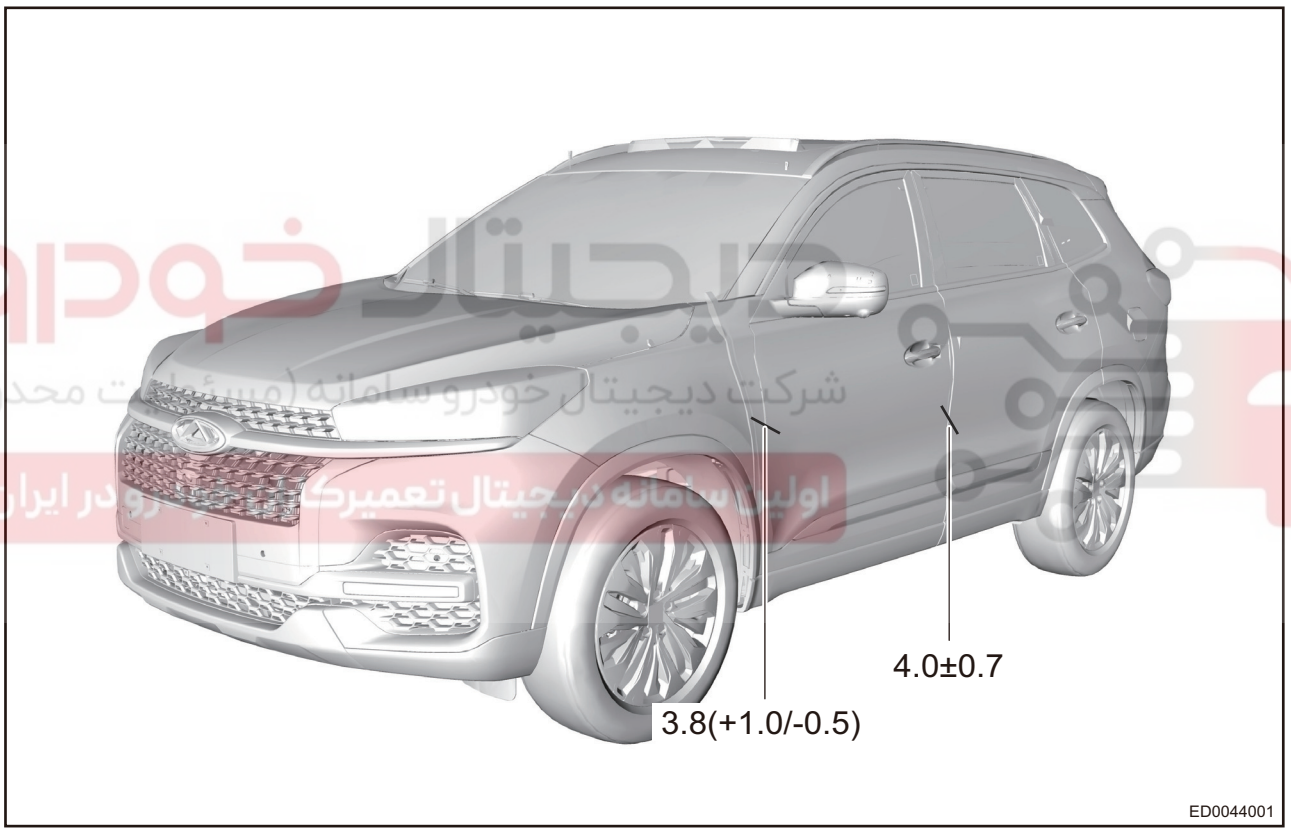

ED0043002

(d) Tighten the fixing bolts on front door hinge assembly to specified torque after adjustment.

Tightening torque

32 ± 3.0 N·m

(e) Standard ranges of clearance and alignment between installation positions of front door assembly and each part are as shown in illustration.



ED0044001

(f) After adjustment, make sure that alignment between front door assembly and rear door assembly is within the standard range.

Standard alignment

4.0 ± 0.7 mm

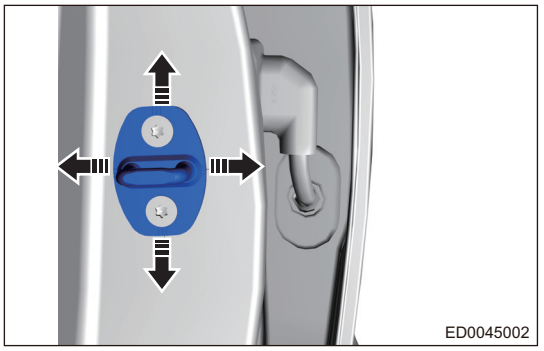
(g) After adjustment, make sure that alignment between front door assembly and rear door assembly is within the standard range.

Standard alignment

3.8 (+1.0/-0.5) mm

2. Adjust the front door lock striker.

   (a) Slightly loosen the fixing screws on front door lock striker and tap it with a plastic hammer in direction of arrow to adjust the lock striker position.



   (b) Tighten the fixing screws on front door lock striker to specified torque after adjustment.

   Tightening torque

   23 ± 2.0 N·m

Inspection

1. Check front door assembly for wear or deformation during installation, and repair as necessary.
2. Check if fixing bolts are set in position. Tighten them to specified torque as necessary.
3. Check if clearance and alignment between front door assembly installation position and each part are within the specified range. Adjust as necessary.

Rear Door Inner Protector Assembly

Removal

Warning/Caution/Hint

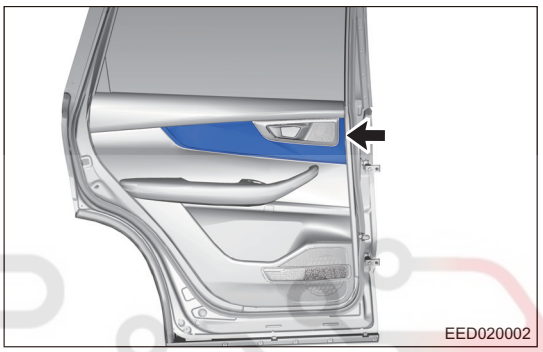
Hint:

- Use same procedures for right and left sides, procedures listed below are for left side.

Caution:

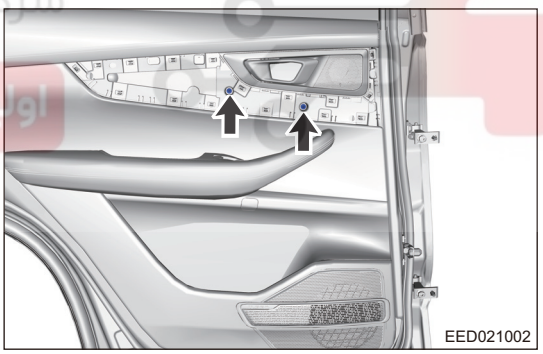
- Be sure to wear safety equipment to prevent accidents, when removing rear door inner protector assembly.
- Try to prevent rear door inner protector surface from being damaged, when removing rear door inner protector assembly.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the rear door trim panel assembly.
   (a) Using an interior crow plate, carefully pry off rear left door trim panel assembly (arrow direction is removal part).

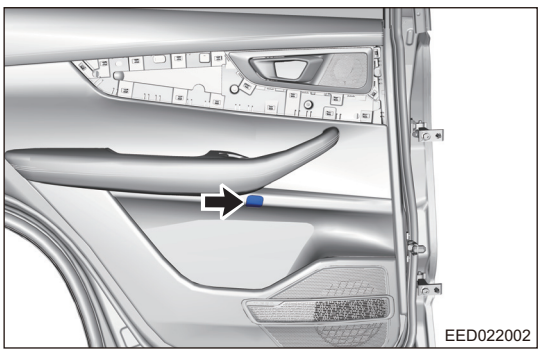


4. Remove the rear left door inner protector assembly.
   (a) Remove 2 fixing screws (arrow) on the rear side of rear left door trim panel assembly.

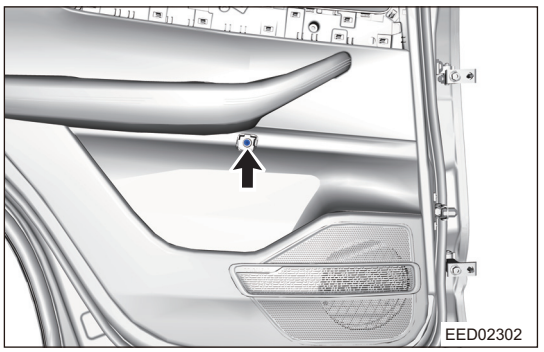
   Tightening torque
   1.5 ± 0.5 N·m



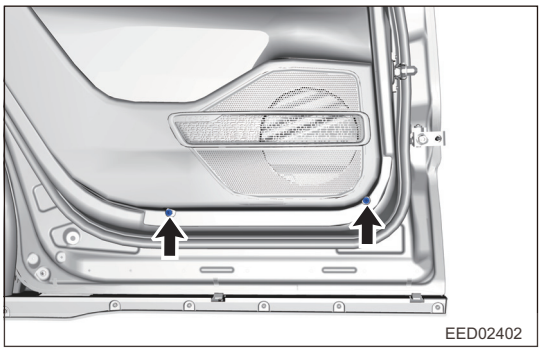
   (b) Using an interior crow plate, pry off rear door grip lower cover (arrow direction is removal part).



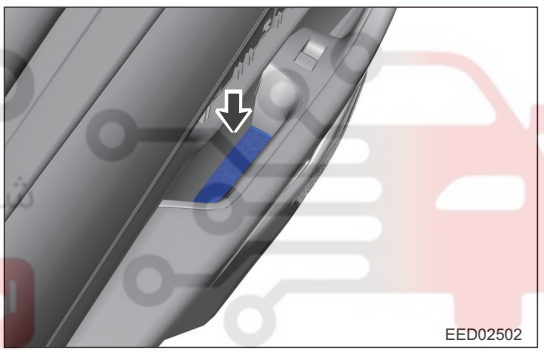
(c) Remove 1 fixing screw (arrow) on the rear side of rear door grip lower cover.
Tightening torque
1.5 ± 0.5 N·m


EED02302

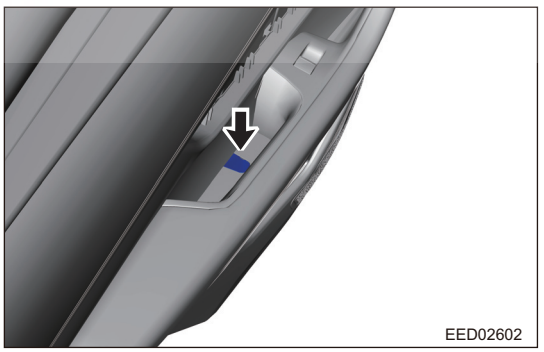
(d) Remove 2 fixing screws (arrow) on the lower side of rear left door inner protector assembly.
Tightening torque
1.5 ± 0.5 N·m


EED02402

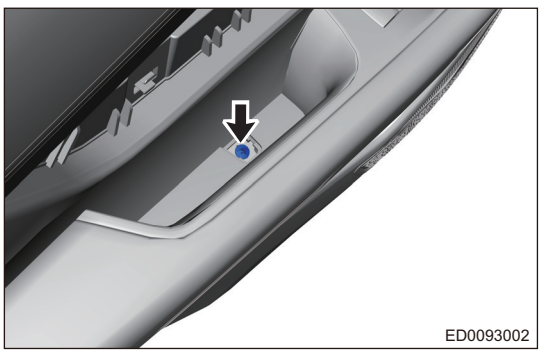
(e) Remove the inside handle trim cover gasket (arrow).


EED02502

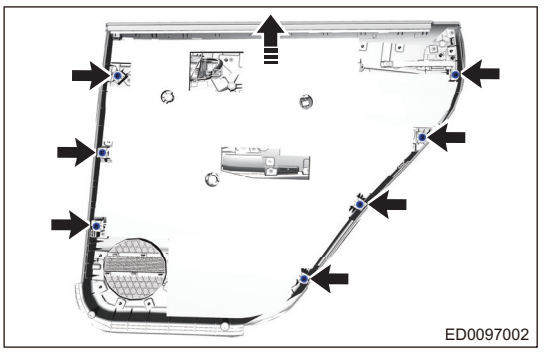
(f) Remove the rear door inside handle trim cover (arrow).


EED02602

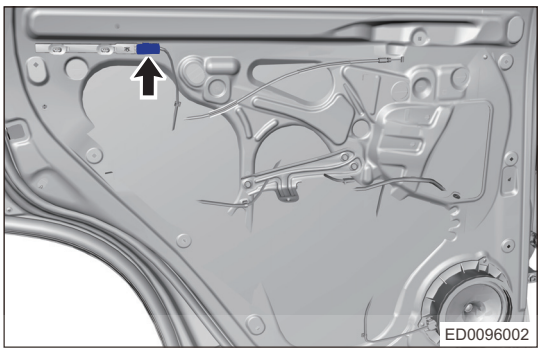
(g) Remove 1 fixing screw (arrow) on the rear side of rear door inside handle trim cover.
Tightening torque
1.5 ± 0.5 N·m


ED0093002

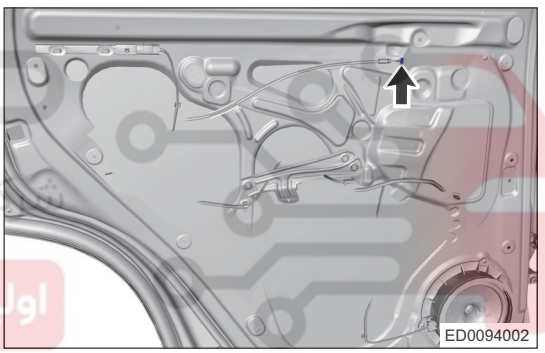
(h) Using an interior crow plate, pry off clips on rear door inner protector assembly, and remove rear door inner protector assembly in direction of arrow as shown in illustration.



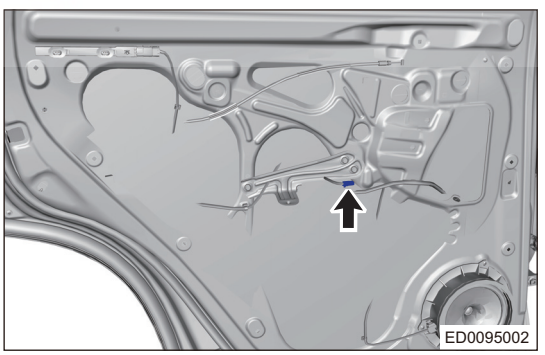
(i) Disconnect the connector (arrow) from low frequency antenna.



(j) Disengage handle cable (arrow) from rear door inside handle.



(k) Disconnect the rear door power glass regulator switch connector (arrow).

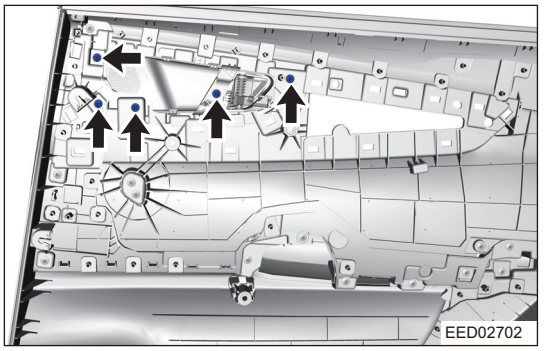


(l) Remove the rear left door inner protector assembly.

5. Remove the rear door inside handle.

(a) Remove 5 fixing screws (arrow) from rear door inside handle.

Tightening torque
1.5 ± 0.5 N·m



(b) Using an interior crow plate, pry off claws on rear door inside handle, and remove rear door inside handle.

Installation

1. Installation is in the reverse order of removal.

Caution:
- Replace damaged clips and install rear door inner protector assembly in place, when installing rear door inner protector assembly.
- Check that inside handle can be used properly, after installing rear door inner protector assembly.

Rear Door Assembly

Removal

Warning/Caution/Hint

Hint:

- Use same procedures for right and left sides, procedures listed below are for left side.

Caution:

- Be sure to wear safety equipment to prevent accidents, when installing rear door assembly.
- Try to prevent body paint surface from being scratched, when removing rear door assembly.

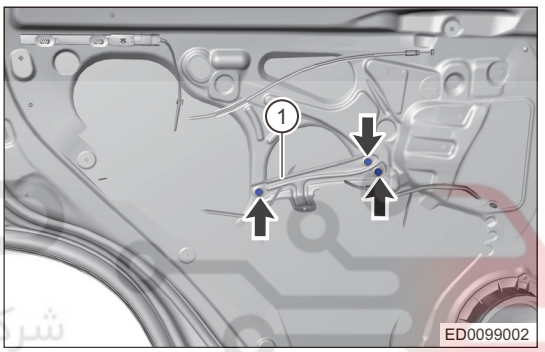
Warning:

- When removing rear door assembly, an assistant is needed to hold it, to prevent rear door from dropping to cause accidents during operation.

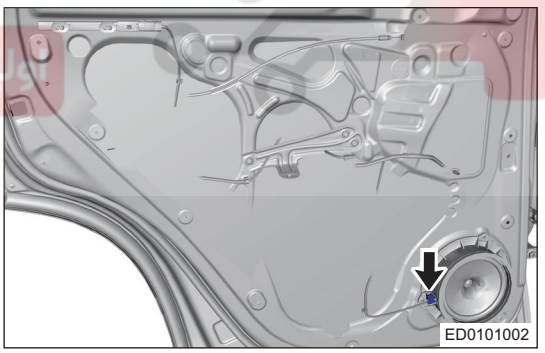
1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the rear left door inner protector assembly (See page 44-74).
4. Remove the rear left door protective film assembly.

(a) Remove 3 fixing bolts (arrow) and rear left door metal bracket (1).

Tightening torque
5 ± 1.0 N·m



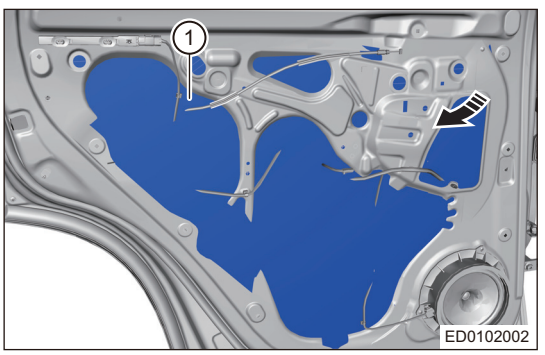
(b) Disconnect the full-range speaker connector (arrow).



(c) As shown in illustration, remove rear left door protective film assembly (1) by gently peeling it along edges from one corner.

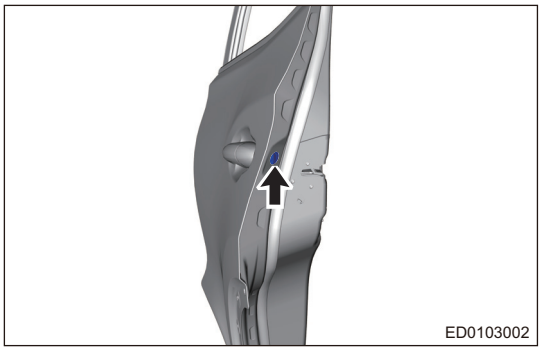
Caution:

- Try to prevent rear door protective film from being damaged, when removing rear door protective film assembly.
- Place rear door protective film assembly properly after removal, and avoid adhesive sticker on rear door protective film assembly from sticking to other components.

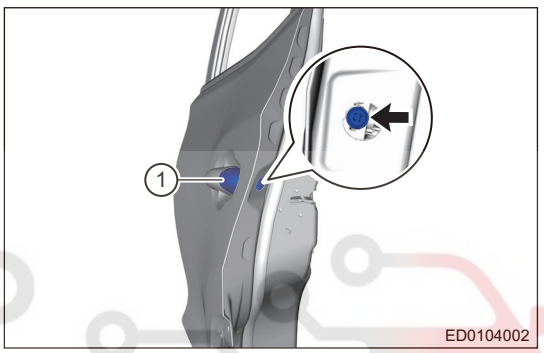


5. Remove the rear left door weather bar (See page 40-94).
6. Remove the rear door glass upper run (See page 40-95).
7. Remove the rear door glass assembly (See page 40-96).

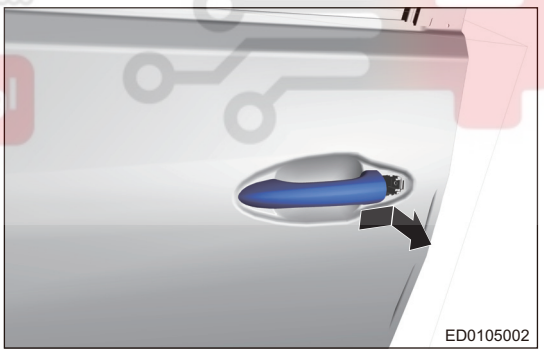
8. Remove the rear door glass guide rail assembly (See page 40-96).
9. Remove the rear door power glass regulator (See page 40-98).
10. Remove the rear left door lock assembly (See page 32-37).
11. Remove the rear left door outside handle cover.
    (a) Remove the rear door outside handle cover plug (arrow).



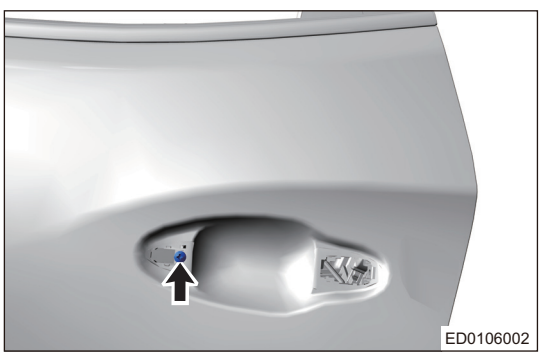
    (b) Loosen 1 fixing screw (arrow) from rear door outside handle cover, and remove rear door outside handle cover (1).
    Tightening torque
    5 ± 1.0 N·m



12. Remove the rear left door outside handle.
    (a) Slide and pull rear door outside handle in direction of arrow as shown in illustration, then remove it.

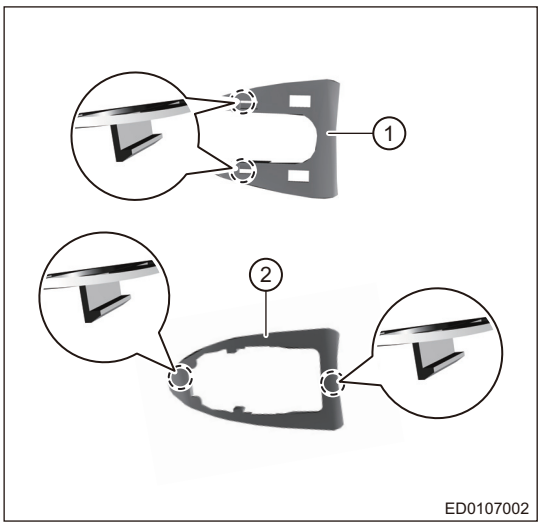


13. Remove the rear left door outside handle base assembly.
    (a) Remove 1 fixing screw (arrow) from rear door outside handle base assembly, and remove rear left door outside handle base assembly.
    Tightening torque
    1.5 ± 0.5 N·m



14. Remove the rear left door outside handle shim.

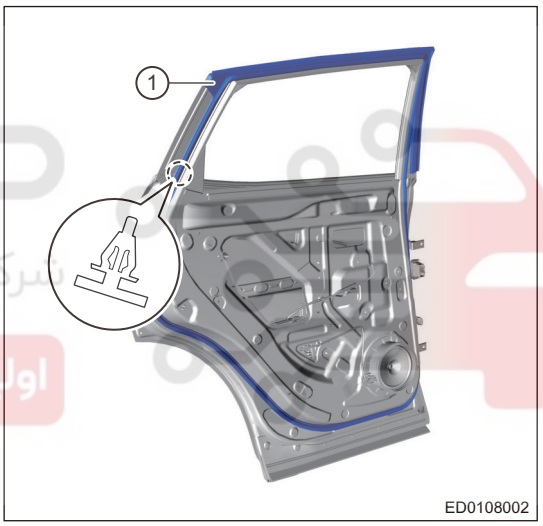
(a) Disengage claws on rear door outside handle front shim, and remove rear left door outside handle front shim (1).



(b) Disengage claws on rear door outside handle rear shim, and remove rear left door outside handle rear shim (2).

15. Remove the rear left door frame weatherstrip.

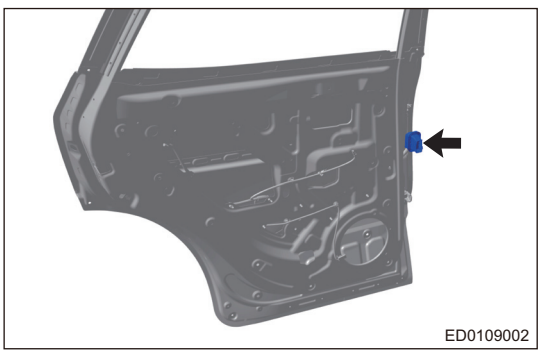
(a) Disengage clip on rear door frame weatherstrip, and remove rear left door frame weatherstrip (1).



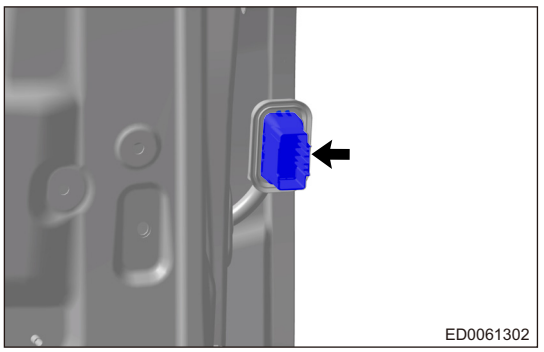
16. Disconnect the rear left door connector.

(a) Using an interior crow plate, pry off rear door dust boot.

(b) Using an interior crow plate, pry off claw (arrow) on connector.



(c) Disconnect the rear left door wire harness connector (arrow).


ED0061302

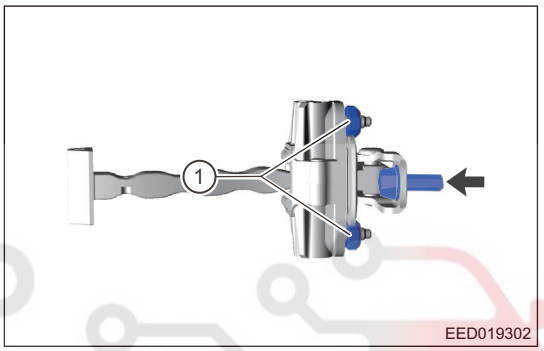
17. Remove the rear left door check.

(a) Remove 2 coupling nuts (1) between door check and rear left door.

Tightening torque
24 ± 2.0 N·m

(b) Remove coupling bolt (arrow) between door check and body.

Tightening torque
55 ± 5.0 N·m



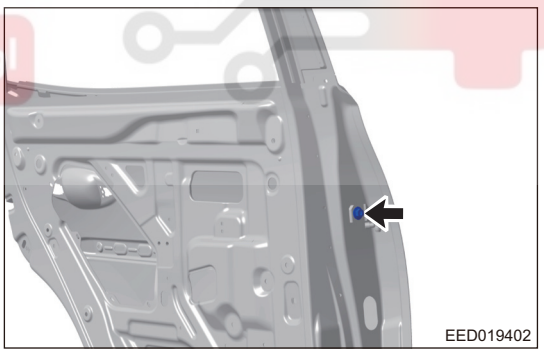
EED019302

(c) Remove rear left door check assembly from inside of door assembly.

18. Remove the rear left door assembly.

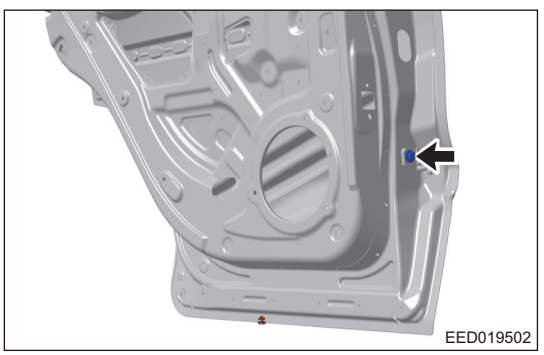
(a) Remove 1 fixing bolt (arrow) between rear door upper hinge assembly and rear door assembly.

Tightening torque
55 ± 5.0 N·m


EED019402

(b) Remove 1 fixing bolt (arrow) between rear door lower hinge assembly and rear door assembly.

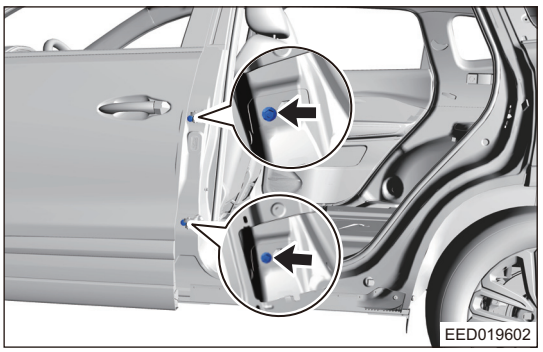
Tightening torque
55 ± 5.0 N·m


EED019502

19. Remove the rear left door hinge assembly.

(a) Remove 2 fixing bolts (arrow) between front door upper hinge assembly and side panel.

Tightening torque
32 ± 3.0 N·m


EED019602

(b) Remove 2 fixing bolts (arrow) between front door lower hinge assembly and side panel.

Tightening torque
32 ± 3.0 N·m

(c) Remove the rear left door hinge assembly.

Installation

1. Installation is in the reverse order of removal.

Caution:
- Replace damaged clips and install rear door inner protector in place, when installing rear door inner protector.
- Stick protective film in specified position, not in a wrong position or an asymmetric position between left and right sides or cover mounting holes of other installation parts.
- DO NOT drag protective film when sticking. It should be installed under its original condition and ensure sheet metal is clean before installation.
- Finished protective film should have no defects, such as wrinkles, bubbles or turnups.
- Finished protective film should have powerful adherence.Protective film sticking should be finished at one time. Avoid repeat sticking.

Warning:
- Be sure to wear safety equipment to prevent accidents, when installing rear door assembly.
- When installing rear door assembly, an assistant is needed to hold it, to prevent rear door from dropping to cause accidents during operation.

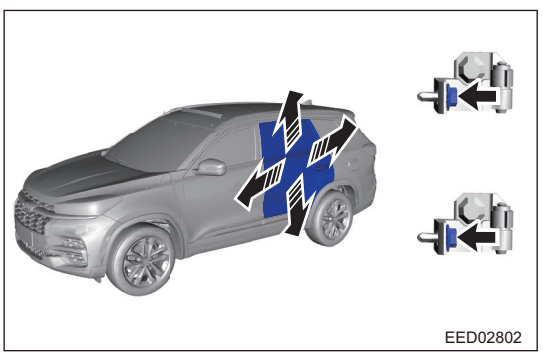
Adjustment

1. Adjust the rear door assembly.

(a) Loosen 2 fixing bolts between rear door hinge assembly and door, and adjust rear door assembly position in direction of arrow as shown in illustration.

(b) After adjustment, tighten fixing bolts on rear door hinge assembly to specified torque.

Tightening torque
55 ± 5.0 N·m

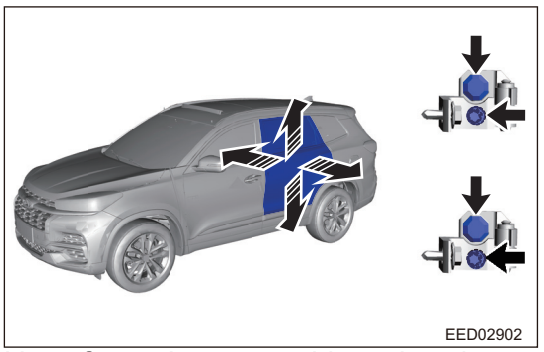

EED02802

(c) Loosen 4 fixing bolts between rear door hinge assembly and side panel, and adjust rear door assembly position in direction of arrow as shown in illustration.

(d) After adjustment, tighten fixing bolts on rear door hinge assembly to specified torque.

Tightening torque

32 ± 3.0 N·m



(e) Standard ranges of clearance between installation position of rear door assembly and each part are as shown in illustration.

(f) After adjustment, make sure that alignment between rear door assembly and front door assembly within the standard range.

Standard alignment

4.0 ± 0.7mm

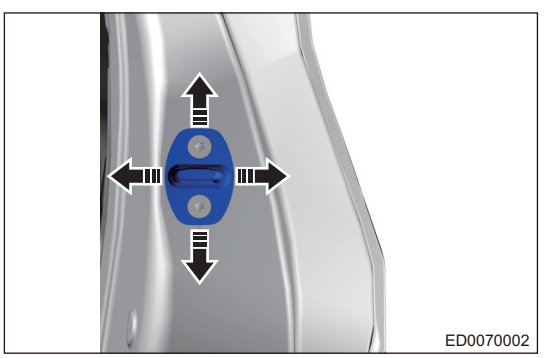
(g) After adjustment, make sure that alignment between rear door assembly and body outer panel is within the standard range.

Standard alignment

3.8 (+1.0/-0.5) mm

2. Adjust the rear left door lock striker assembly.

(a) Slightly loosen the fixing screws on rear door lock striker and tap it with a plastic hammer in direction of arrow to adjust the striker position.



(b) Tighten the fixing screws on rear door lock striker assembly to specified torque after adjustment.

Tightening torque

23 ± 2.0 N·m

Inspection

1. Check rear door assembly for wear or deformation during installation, and repair as necessary.
2. Check if fixing bolts are set in position. Tighten them to specified torque as necessary.
3. Check if clearance and alignment between rear door assembly installation position and each part are within the specified range. Adjust as necessary.

Back Door Protector Assembly

Removal

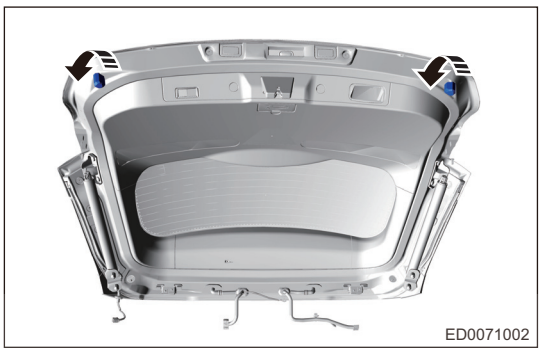
Warning/Caution/Hint

Caution:

- When removing back door protector assembly, be sure to wear safety equipment to prevent accidents.
- When removing back door protector assembly, try to prevent body paint surface from being scratched.

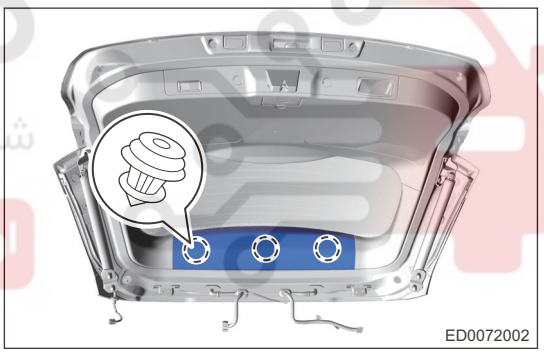
1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the luggage compartment door adjustable buffer blocks

   (a) Rotate 2 luggage compartment door adjustable buffer blocks (arrow) in counterclockwise and remove it.



4. Remove the luggage compartment door adjustment upper trim board assembly.

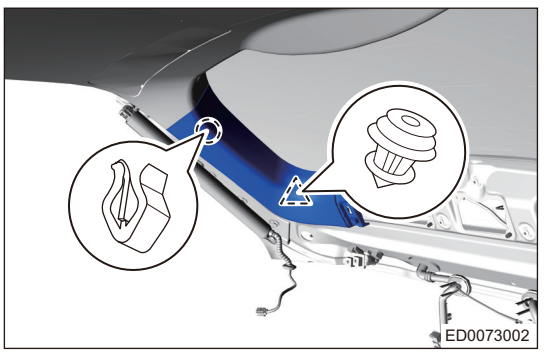
   (a) Using a screwdriver wrapped with protective tape, pry off claws from back door frame upper protector assembly.



   (b) Remove the back door upper trim board assembly.

5. Remove the back door left protector assembly (take left side as example).

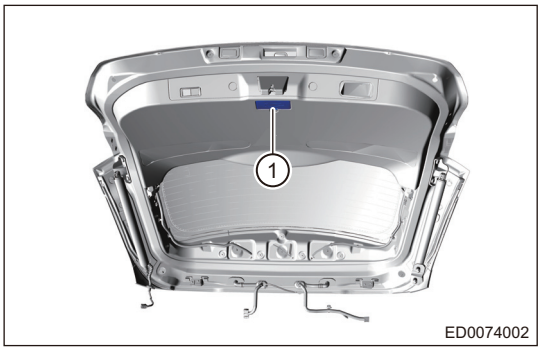
   (a) Using a screwdriver wrapped with protective tape, pry off plastic claws from back door frame left protector assembly.



   (b) Remove the back door left trim board assembly.

6. Remove the back door mechanical opener trim cover.

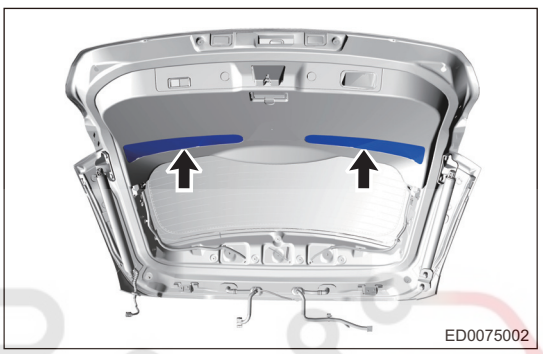
(a) Using a screwdriver wrapped with protective tape, pry off claws from back door mechanical opener trim cover.



(b) Remove the back door mechanical opener trim cover (1).

7. Remove the left/right position light service trim cover.

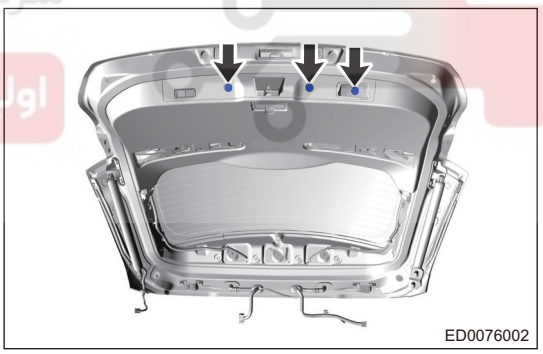
(a) Using a screwdriver wrapped with protective tape, pry up the claws from left/right position light.



(b) Remove the left/right position light service trim cover.

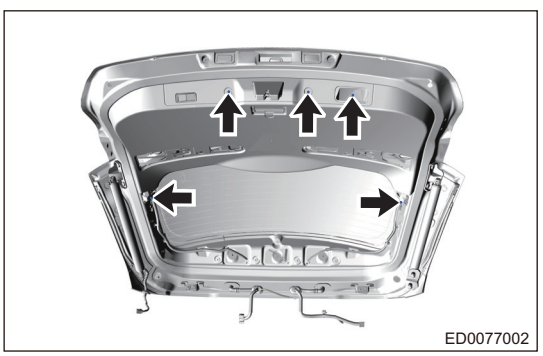
8. Remove the back door lower protector assembly.

(a) Using a screwdriver wrapped with protective tape, pry off trim cover (arrow) from luggage compartment door lower protector assembly.

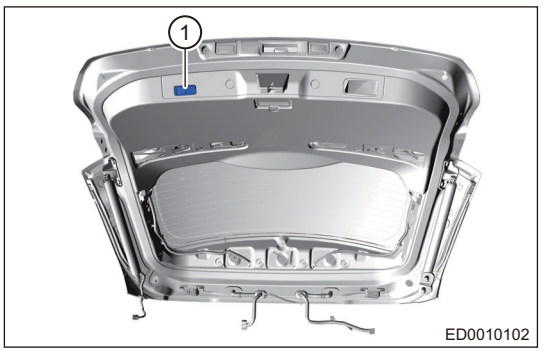


(b) Remove the fixing screws (arrow) from luggage compartment door lower protector assembly.

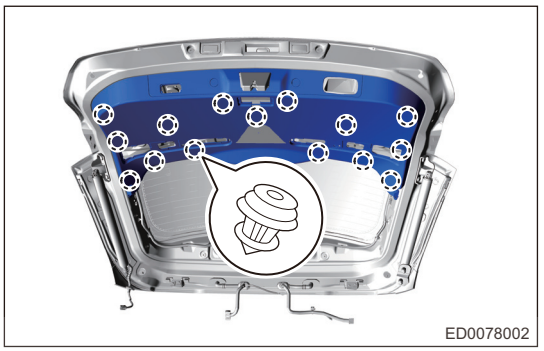
Tightening torque
1.5 ± 0.5 N·m



(c) Using a screwdriver wrapped with protective tape, pry off the back door inside switch assembly (1) and disconnect connector.



(d) Using a screwdriver wrapped with protective tape, pry off claws from luggage compartment door lower protector assembly.



(e) Remove the back door lower protector assembly.

Installation

1. Installation is in the reverse order of removal.

Caution:

- When installing back door protector assembly, be sure to wear safety equipment to prevent accidents.
- When installing back door assembly, try to prevent body paint surface from being scratched.

Back Door Assembly

Removal

Warning/Caution/Hint

Caution:

- When removing truck lid assembly, be sure to wear safety equipment to prevent accidents.
- When removing truck lid assembly, try to prevent body paint surface from being scratched.

Warning:

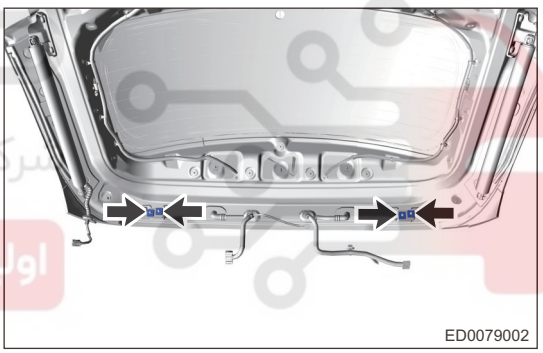
- When removing back door assembly, an assistant is needed to hold it. Try to prevent truck lid from dropping or suddenly closing to cause accidents during operation.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the back door protector assembly (See page 44-85).
4. Remove the back door wiper arm (See page 31-19).
5. Remove the back door wiper motor assembly (See page 31-20).
6. Remove the combination taillight (See page 30-69).
7. Remove the back door switch assembly (See page 44-93).
8. Remove the back door opening weatherstrip (See page 46-12).
9. Remove the roof assembly (See page 46-24).
10. Remove the back door assembly.

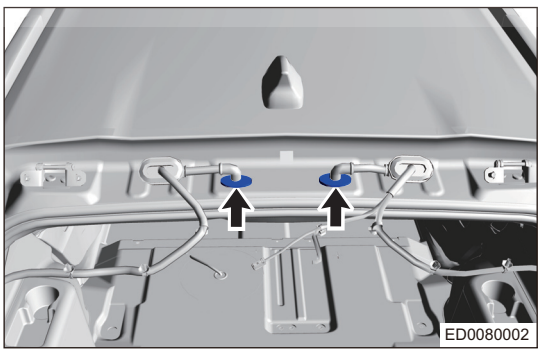
(a) Remove 4 fixing bolts (arrow) from back door left and right hinges

Tightening torque

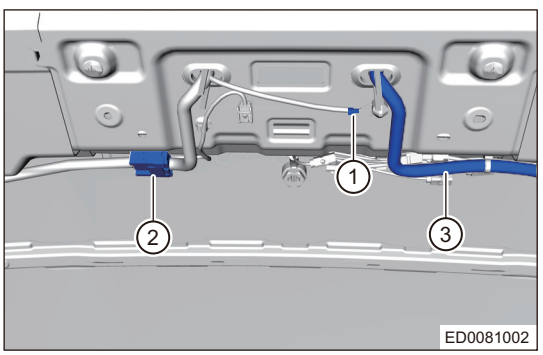
23 ± 2.0 N·m



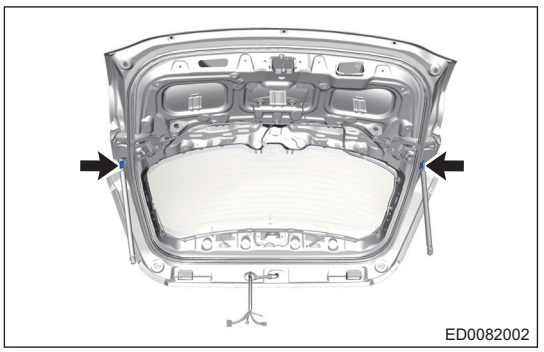
(b) Using interior special tool, pry up the back door wire harness dust boot.



(c) Disconnect back door wire harness assembly connector plug (2), back door wire harness ground fixing nut (1) and back door wiper spraying pipe joint (3).



(d) Using a screwdriver wrapped with protective tape, pry off the upper fixing clip between left power support and right air spring.

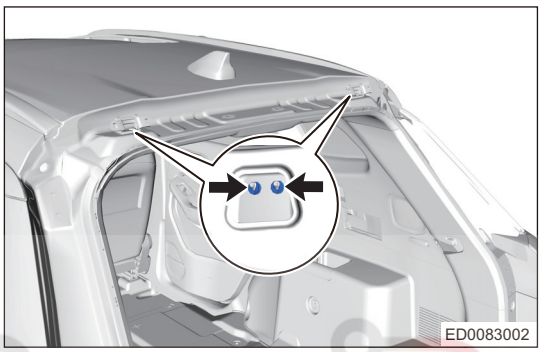


(e) Remove the back door assembly.

11. Remove the back door hinge assembly.

(a) Remove 4 fixing bolts (arrow) from back door hinge.

Tightening torque
23 ± 2.0 N·m



(b) Remove the back door hinge assembly.

Installation

1. Installation is in the reverse order of removal.

Warning:

- When removing back door hinge assembly, an assistant is needed to hold it. During operation, prevent the back door from dropping, which may cause an accident.

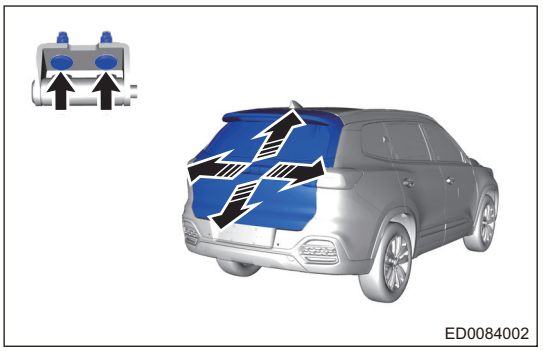
Caution:

- When installing luggage compartment door assembly, be sure to wear safety equipment to prevent accidents.
- When installing luggage compartment door assembly, try to prevent body paint surface from being scratched.
- After installing back door assembly, it is necessary to perform panoramic image calibration.

Adjustment

1. Adjust the back door assembly

(a) Loosen the fixing bolts on rear door hinge assembly and adjust the rear door assembly position in direction of arrow.

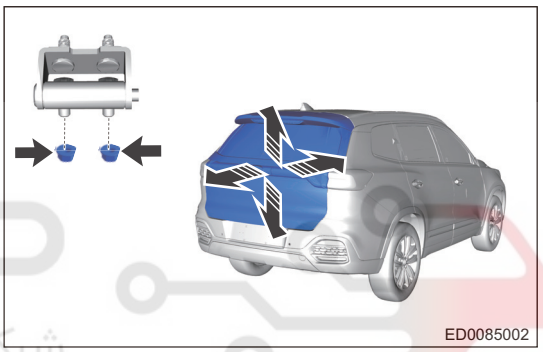


(b) Tighten back door assembly fixing bolts to specified torques after adjustment.

Tightening torque

23 ± 2.0 N·m

(c) Loosen the fixing bolts on rear door hinge assembly and adjust the rear door assembly position in direction of arrow.

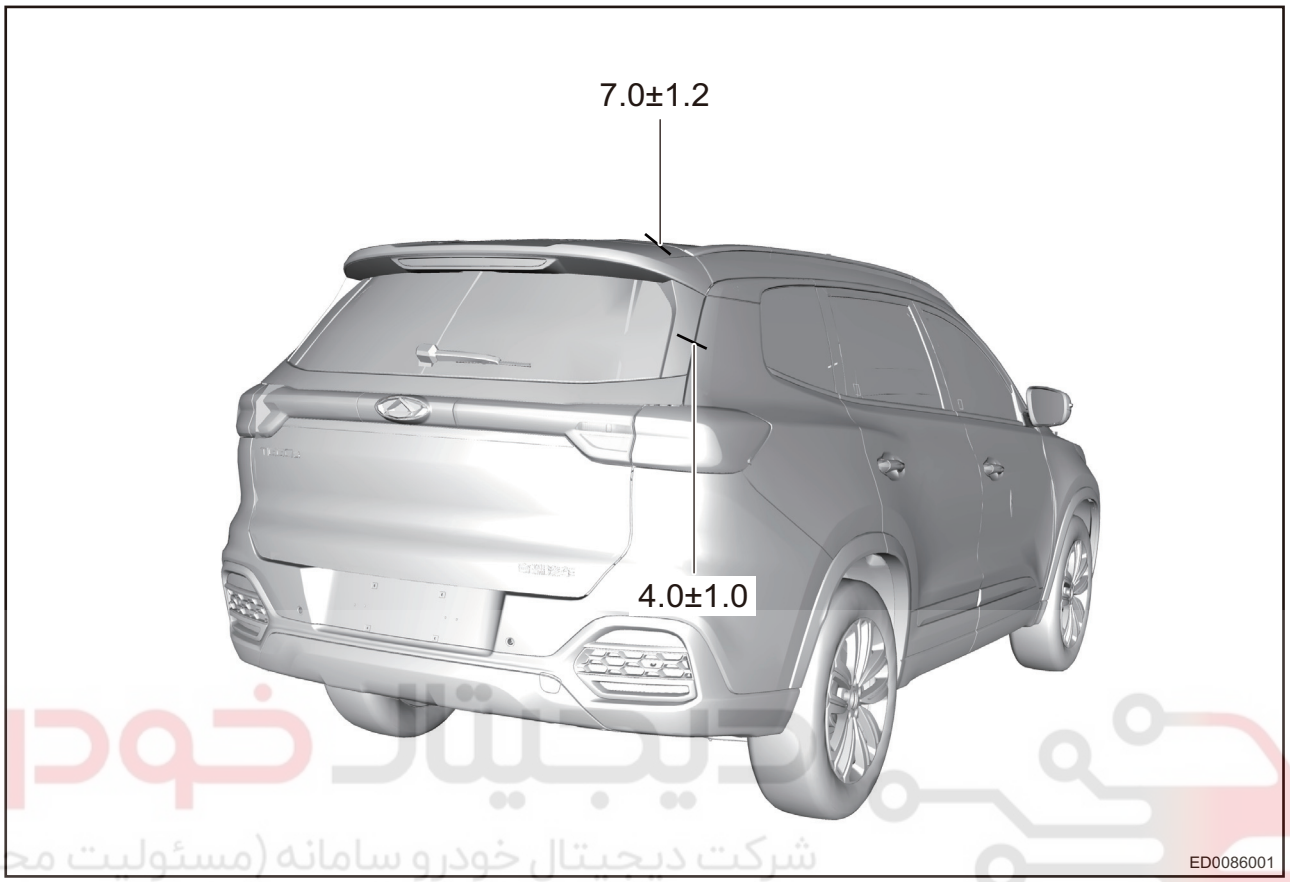


(d) Tighten back door assembly fixing bolts to specified torques after adjustment.

Tightening torque

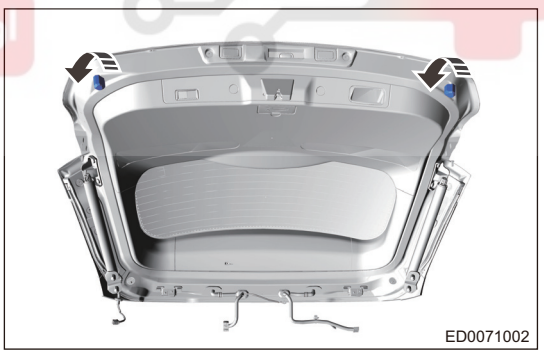
23 ± 2.0 N·m

(e) Standard ranges of clearance between installation position of back door assembly and each part are as shown in illustration.



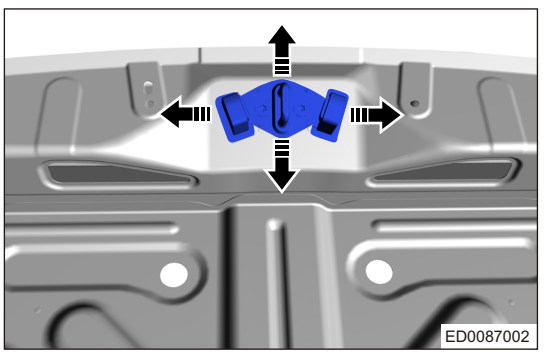
2. Adjust the height of back door assembly with back door assembly adjustable buffer block.

(a) Raise or lower the trunk lid by rotating the back door assembly adjustable buffer block clockwise or counterclockwise.



3. Adjust the back door assembly.

(a) Loosen the fixing bolts on rear door lock striker assembly and adjust the rear door assembly position in direction of arrow as shown in illustration.



(b) Tighten the fixing screws on back door lock striker assembly to specified torque after adjustment.

Tightening torque

23 ± 2.0 N·m

Inspection

1. Check back door for wear or deformation during installation, and repair as necessary.
2. Check if fixing bolts, fixing screws are set in position. Tighten them to specified torque as necessary.
3. Check if clearance and alignment between back door assembly installation position and each part are within the specified range. Adjust as necessary.

Back Door Switch Assembly

Removal

Warning/Caution/Hint

Caution:

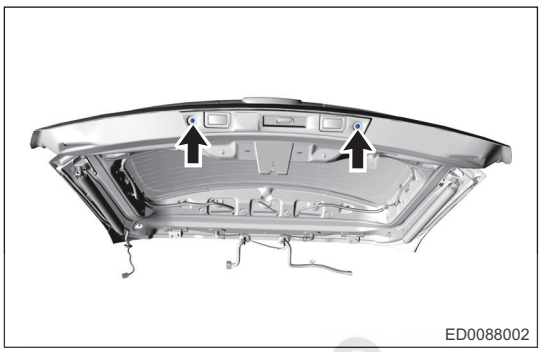
- When installing back door switch assembly, be sure to wear safety equipment to prevent accidents.
- When installing back door assembly, try to prevent body paint surface from being scratched.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the rear camera assembly (See page 35-28).
4. Remove the back door switch assembly.

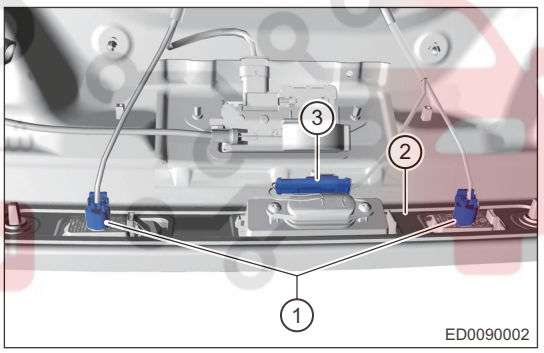
   (a) Remove 2 fixing nuts (arrow) from back door switch.

   Tightening torque

   3 ± 0.5 N·m



   (b) Using a screwdriver wrapped with protective tape, pry off back door switch assembly, and disconnect license plate light (1) camera connector (2) back door switch connector (3).



   (c) Remove the back door switch assembly.

Installation

1. Installation is in the reverse order of removal.

   Caution:

   - After back door opener switch assembly is installed, install the connector into place.
   - After back door opener switch assembly is installed, it is necessary to confirm that the function can operate normally.
   - After installing back door opener switch assembly, it is necessary to perform panoramic image calibration.

Back Door Power Support Assembly (If equipped)

Removal

Warning/Caution/Hint

Hint:

- Left side is power support with wire harness and right side is balance bar without wire harness.
- The following is the operation procedure of power support.

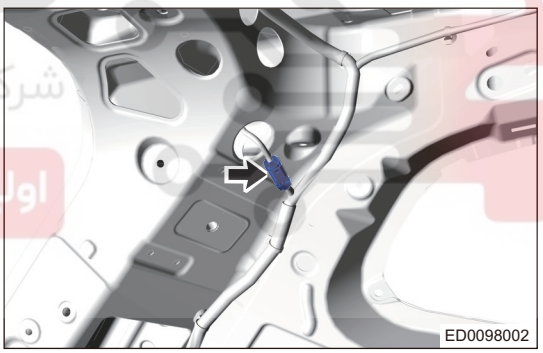
Caution:

- When removing back door power support assembly, be sure to wear safety equipment to prevent accidents.
- When installing back door power support assembly, try to prevent body paint surface from being scratched.

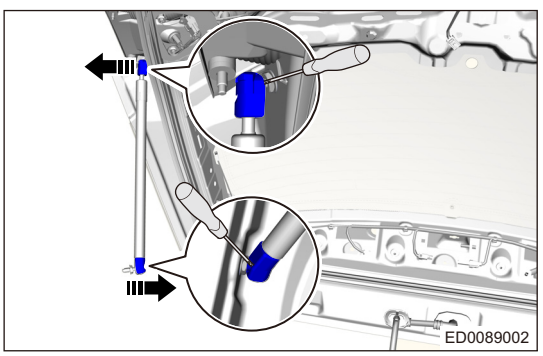
Warning:

- When removing back door power support assembly, pay attention to not separate power support by lateral force and during removal, one assistance is needed to hold back door; avoid back door falling down or closing suddenly during opening, resulting in accidents.
- Remove power support assembly carefully and avoid it falling down. Once it falls down, internal mechanical damage may occur, which may cause the power support impossible to use.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the left back door power support assembly.
   (a) Using a screwdriver wrapped with protective tape, pry off left C-pillar upper protector (until it is possible to disconnect power support connector).
   (b) Disconnect the power support connector (arrow).



   (c) Using a screwdriver wrapped with protective tape, pry off fixing clips (arrow) from upper and lower parts of back door power support.



   (d) Remove the power support assembly in direction of arrow.

Installation

1. Installation is in the reverse order of removal.
   Warning:
   - When removing back door power support assembly, one assistance is needed to hold back door; avoid back door falling down or closing suddenly during opening, resulting in accidents.

Caution:

- When removing back door power support assembly, be sure to wear safety equipment to prevent accidents.
- During removal of back door power support assembly, avoid back door falling off during operation, resulting in damage to body or front windshield.
- When installing back door power support assembly, it is necessary for wire harness grommet to be installed in place. If not, water leakage may occur at this area.

Back Door Air Spring Assembly (If equipped)

Removal

Warning/Caution/Hint

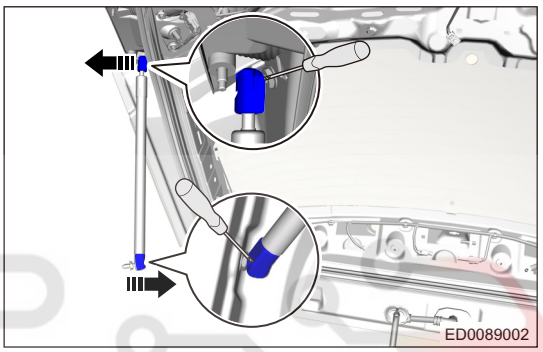
Caution:

- When removing luggage compartment door air spring assembly, be sure to wear necessary safety equipment to prevent accidents.
- When installing back door air spring assembly, try to prevent body paint surface from being scratched.

Warning:

- When removing back door air spring assembly, one assistance is needed to hold back door; avoid back door falling down or closing suddenly during opening, resulting in accidents.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the right back door air spring assembly.
   (a) Using a screwdriver wrapped with protective tape, pry off fixing clips (arrow) from upper part of back door air spring.



   (b) Using a screwdriver wrapped with protective tape, pry off fixing clips (arrow) from lower part of back door air spring.
   (c) Remove the air spring assembly in direction of arrow.

Installation

1. Installation is in the reverse order of removal.

   Warning:

   - When removing back door air spring assembly, one assistance is needed to hold back door; avoid back door falling down or closing suddenly during opening, resulting in accidents.

   Caution:

   - When removing luggage compartment door air spring assembly, be sure to wear necessary safety equipment to prevent accidents.
   - During removal of back door air spring assembly, avoid back door falling off during operation, resulting in damage to body or front windshield.

Back Door Anti-pinch Strip Assembly (If equipped)

Removal

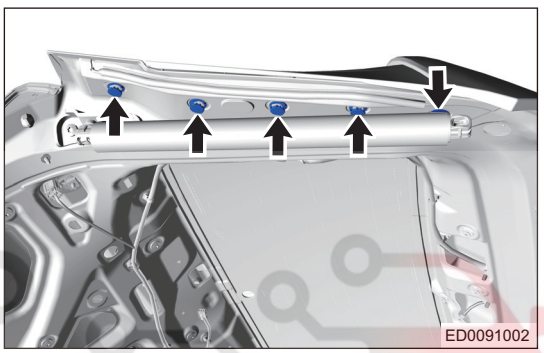
Warning/Caution/Hint

Caution:

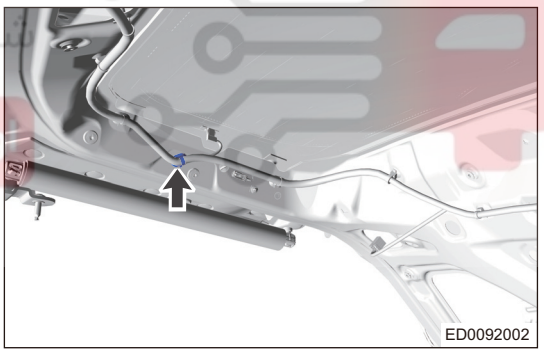
- When removing back door assembly, be sure to wear safety equipment to prevent accidents.
- When installing back door anti-pin strip assembly, try to prevent body paint surface from being scratched.
- Use the same procedure for left anti-pinch strip assembly and right anti-pin strip assembly.
- Procedure listed below are for left anti-pinch strip.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the left back door protector assembly (See page 44-85).
4. Remove the back door anti-pinch strip assembly.

   (a) Using a screwdriver wrapped with protective tape, pry off fixing plastic nuts (arrow) from back door anti-pinch assembly.



   (b) Disconnect the anti-pinch connector (arrow).



   (c) Remove the back door anti-pinch strip assembly.

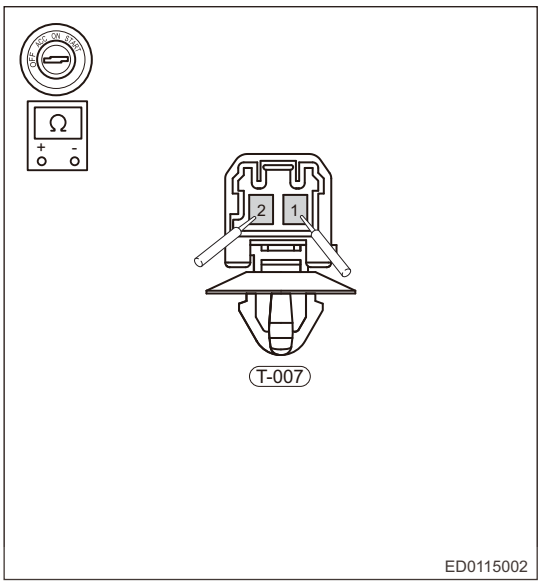
Inspection

Check if the anti-pinch function of anti-pinch strip is normal.

1. Check the jam protection function

   (a) Turn ignition switch to OFF position. Measure the resistance of occupancy sensor with a digital multimeter, standard resistance is shown in the table below:

Multimeter Connection	Condition	Specified Condition (at room temperature)
T-007 (1) - T-007 (2)	Jamming	31 Ω
T-007 (1) - T-007 (2)	Without jamming	5560 Ω



Installation

1. Installation is in the reverse order of removal.

Power Back Door Module Assembly (If equipped)

Removal

Warning/Caution/Hint

Caution:

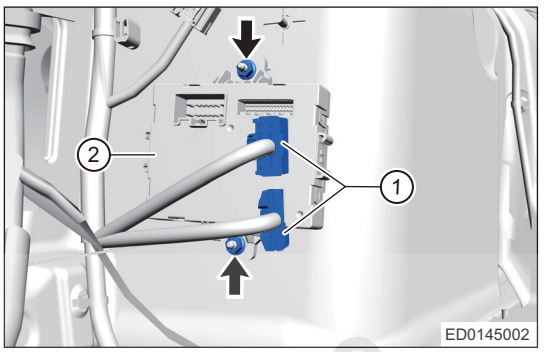
- When removing back door module assembly, be sure to wear safety equipment to prevent accidents.
- When installing back door module assembly, try to prevent body paint surface from being scratched.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the C-pillar left lower protector assembly (See page 46-17).
4. Remove the power back door module assembly.

   (a) Remove fixing nuts (arrow) from power back door module and disconnect power back door module wiring harness connector plug (1).

   Tightening torque

   7 ± 1 N·m



   (b) Remove the power back door module (2).

Installation

1. Installation is in the reverse order of removal.

   Caution:

   - After replacing power back door module, use diagnostic tester to perform self-learning operation, perform corresponding operation on each functional switch after learning is successful, so as to check each function of power back door operates normally.
   - When disconnecting battery negative cable or power back door module power supply; after power is turned on again, it is necessary to perform fortifying on vehicle.

Kick Sensor Module Assembly (If equipped)

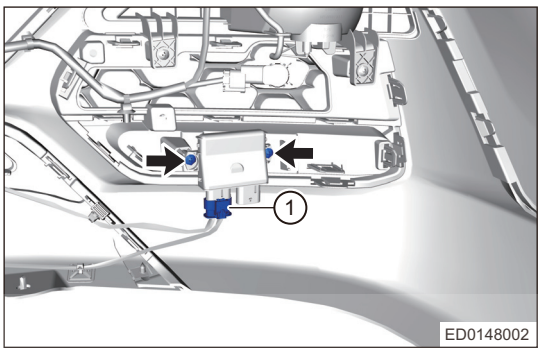
Removal

Warning/Caution/Hint

Caution:

- When removing kick sensor module assembly, be sure to wear safety equipment to prevent accidents.
- When installing kick sensor module assembly, try to prevent body paint surface from being scratched.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the kick sensor module assembly.
   (a) Remove 2 fixing screws (arrow) from kick sensor and disconnect kick sensor module wire harness connector plug (1).
   Tightening torque
   1.5 ± 0.5 N·m



   (b) Remove the kick sensor module assembly.

Installation

1. Installation is in the reverse order of removal.

Caution:

- After replacing kick sensor module, turn IGN to OFF, close four doors, carry PEPS key within 30 cm away from vehicle, do kick action in vertical direction toward license plate fixing area with foot face less than 8 cm away from rear bumper bottom for 0.5 s ~ 1.5 s. After action is completed, turn signal light flashes twice and back door is opened/closed automatically. Back door will stop when such action is performed during back door operation.
- If the function fails to operate due to several times of irregular actions, the system will enter environmental protection mode. Wait for 10 s and kick it again. In environmental protection mode, there is some delay in back door opening, which is normal.

Kick Sensor Sensing Antenna (If equipped)

Removal

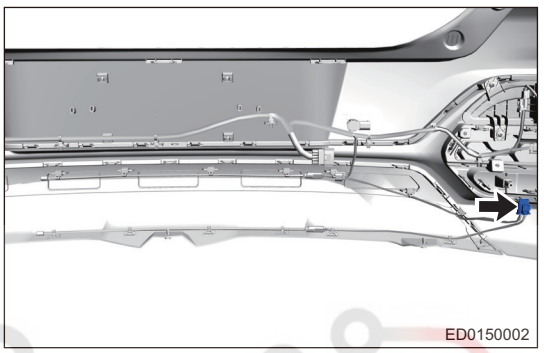
Warning/Caution/Hint

Caution:

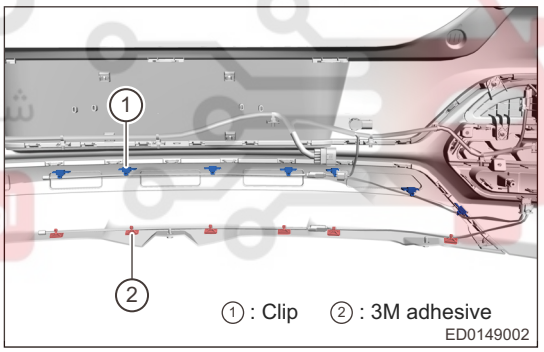
- When removing kick sensor sensing antenna assembly, be sure to wear safety equipment to prevent accidents.
- When installing kick sensor sensing antenna assembly, try to prevent body paint surface from being scratched.

1. Turn off all electrical equipment and the ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the kick sensor sensing antenna assembly.

   (a) Disconnect the kick sensor module wire harness connector plug (1).



   (b) Use tool to pry off upper fixing clips of sensing antenna and remove lower sensing antenna (lower sensing antenna is fixed with 3M adhesive (2)).



Installation

1. Installation is in the reverse order of removal.

   Caution:

   - Then antenna in sensing area should be installed flatly without any bending and breakage. There is no such requirements for antenna connecting wire.
   - Before adhering sensing antenna, first peel off bumper sticker protection film.
   - If the environmental temperature doesn't meet the adhering temperature requirements (adhering temperature should be 18°C-40°C), it is necessary to warm up the 3M adhesive of kick sensor sensing antenna in advance. The advanced temperature should be 23°C.
   - There is mark box reserved for mark adhering with 3M adhesive adhered into box.
   - When adhering, it is necessary to apply some pressure on 3M adhesive and the pressure range is 10-50N/cm^2.
   - After antenna is adhered, avoid contacting/shaking antenna and keep antenna stationary.

- MEMO -