SUPPLEMENTAL RESTRAINT SYSTEM

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Airbag Usage Precautions

Precautions During Usage

Airbag is passive safety system component. In order to actually protect the passengers in collision with airbag, users should follow the precautions related to airbag usage:

- Driver and passengers should use belt correctly. Correct belt usage can protect human body and reduce the personal injury in accidents.
- DO NOT add any additional units without permission that may interfere or damage belt pretensioner or airbag.
- DO NOT place any objects on steering wheel and front passenger side instrument panel, or these objects may cut into the inflated airbag or become trajectile to injure human body.
- DO NOT add or reversely place seat cover for vehicle seats with side airbag.
- Children that are under twelve are not allowed to sit in front seat. For vehicles equipped with passenger airbag, backward facing child seat is not allowed to use on front passenger seat.
- It’s only allowed to install genuine spare parts.
- Only authorized personnel can remove the controller, wire harness and connector from SRS system.
- If airbag and belt pretensioner are deployed in accident, airbag controller and all wire harness with airbag connectors must be replaced together with airbag and belt.
- Airbag manufacturer suggests that the airbag should be replaced after 10 years.
- SRS system in all vehicles have been matched and verified and it’s forbidden to change vehicle structure and SRS system. Random addition and modification of SRS system and wire harness will make SRS system operate abnormally, leading to airbag fault deployment and undeployment, which results in personal injury.
- Wire harness assembly: Arrange the wire harness without any torsion and wrinkles, etc. Never make it with metal or non-metal sharp edge. It should be connected with ACU, SIS and each airbag module firmly without any looseness.
- System power-on detection:
  1. After powering-on, ACU sends airbag indicator light on signal via CAN, the lighting time should last for 6s. After self-check is completed, ACU sends airbag indicator off signal via CAN, the warning light goes off for 1s, and then it will enter normal operation state;
  2. After completion of (remains on for 6s) and (goes off for 1s) states, if there is no DTC in system that requires the indicator light to be turned on, the indicator light will go off. If the indicator light remains on, it indicates that there is a malfunction in ACU, it is necessary to read fault with a diagnostic tester. Check corresponding components and wire harness connection according to the fault display of diagnostic tester. If the malfunction is still not eliminated, you must complete the corresponding adjustment operation under the guidance of the quality department, design department and suppliers until the indicator goes off.
  3. It is required to perform the airbag system diagnostic work when the vehicle is powered-on and airbag modules, etc. are fully fastened.
- The installation and repairing of all airbag parts must be performed with power off, and it’s strictly forbidden to install, remove and rework on production line with power on. If the replacement or repairing of airbag parts is involved, you must cut off power supply. Because within 30s of vehicle stalling or fuse removed (refer to Technology Instruction for Wire Harness System Assembly and Adjustment), sufficient power to deploy airbag is still remained inside airbag controller, so perform the repairing operation after 30 s of airbag controller and battery cut off.
- After assembly of vehicle is completed, make sure to clean all DTCs in ACU; When performing assembly or replacement of ACU firstly, if airbag light remains on or flashes, it may be not configured or be in configuration. ACU does not have the function of deployment, vehicle can not operate normally.

- Store the airbag in a place with enough spare space to prevent accidental airbag deployment. If there is no airbag deployment space, accidental airbag deployment may injure human body or damage the vehicle.
- In order to avoid DTC, never energize airbag system before connecting all airbag system components and performing diagnostic inspection.
- If airbag and ACU had fallen down from a position higher than 1 m, please do not reuse it and insulate it.
- Handle airbag and ACU carefully, and never tap or strike it fiercely.
- Assembly, detection and removal of airbag system must meet relevant requirements and specifications, and never perform operation casually.

Hint:
After system self-test is finished, the airbag warning light should go off. If it still comes on which indicates that airbag system has fault, the airbag will be disable to be triggered normally, or is impossible to be triggered, or is triggered in improper condition, resulting in serious injuries and death. In this case, it is necessary to contact service station to check airbag system.

Post-accident components replacement of deployed airbag

SRS system components should be replaced immediately in accordance with the provisions in this manual after the airbag is deployed in an accident. After the airbag is deployed, there may be powder particles on airbag surface, which are primarily composed of powder and chemical reaction product.

Post-accident components replacement of seat belt

Some seat belts need to be replaced or recommended to be replaced if airbag is deployed in an accident:

Seat Belt	Replace or Not
Used limiting type belt in the event of an accident	It is necessary to replace it
Seat belt with pretensioner that must be exploded or has been exploded	It is necessary to replace it
Used common emergency lock type belt in the event of an accident	It is necessary to replace it
Height adjuster (the seat belt had been used in the event of an accident)	It is necessary to replace it

Post-accident inspection of other components

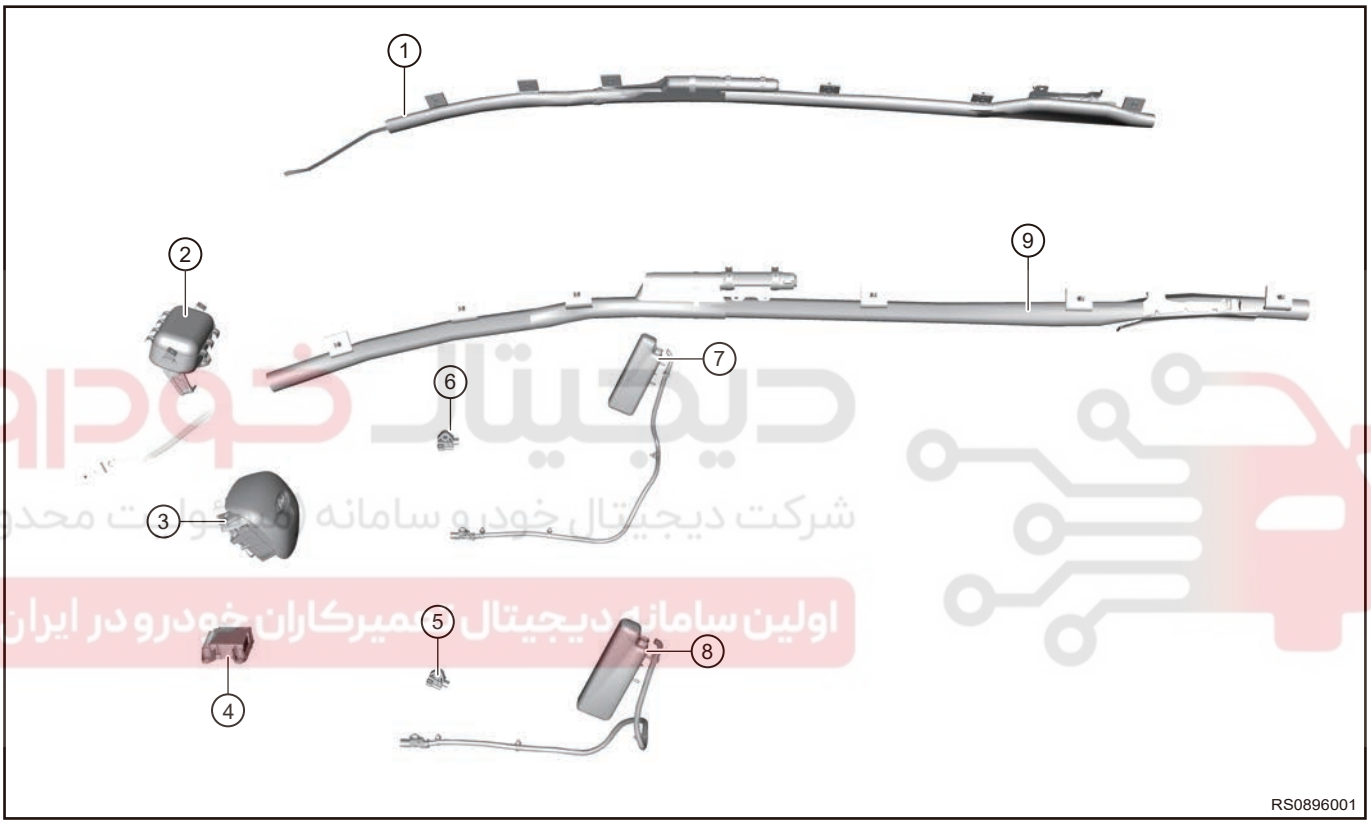
No matter whether the airbag is deployed or not, specific inspection must be carried out after any collision. The steering column must be measured for dimension (replace it if necessary). Check the instrument panel and steering column cover for cracks or other damage, check the instrument panel support for deformation, bending, cracks or other damage and check the seat belt and installation fixing point.

General Information

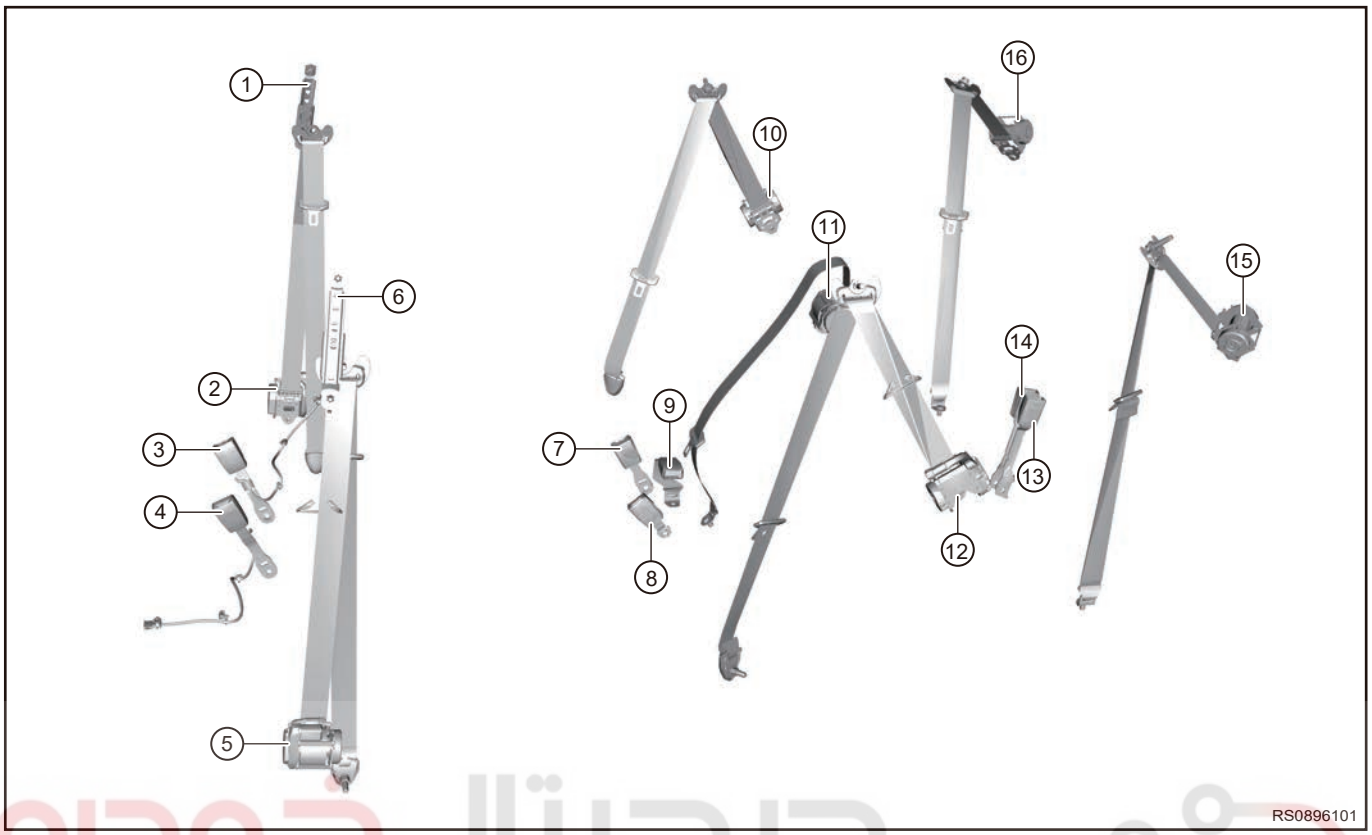
System Description

An airbag is a device that expands the airbag to protect the occupant before the occupant has a second impact during a crash. The airbag serves as an auxiliary device for occupant restraint device of seat belt, is called airbag system (Supplemental Restraint System, SRS). The airbag system, as integrated airbag module, consists of airbag and inflation mechanism (gas generator), collision sensor which can detect collision and send deployment command to airbag module and wire harness which sends signals from sensor.

System Components Diagram



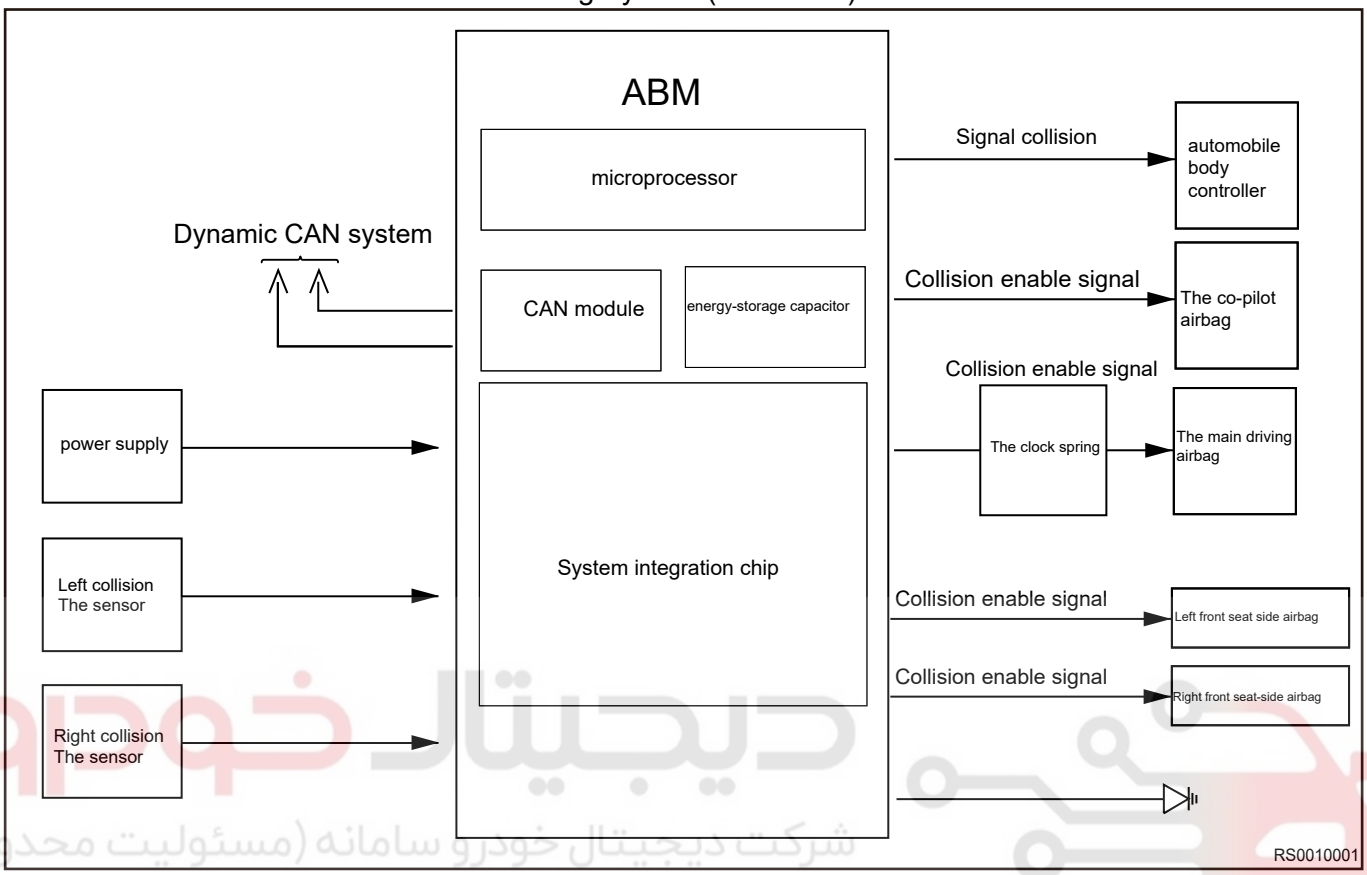
1	Right Curtain Shield Airbag Assembly	6	Right Side Collision Sensor
2	Front Passenger Airbag Assembly	7	Front Right Seat Side Airbag Assembly
3	Driver Airbag Assembly	8	Front Left Seat Side Airbag Assembly
4	Airbag Controller Assembly	9	Left Curtain Shield Airbag Assembly
5	Left Side Collision Sensor	10	



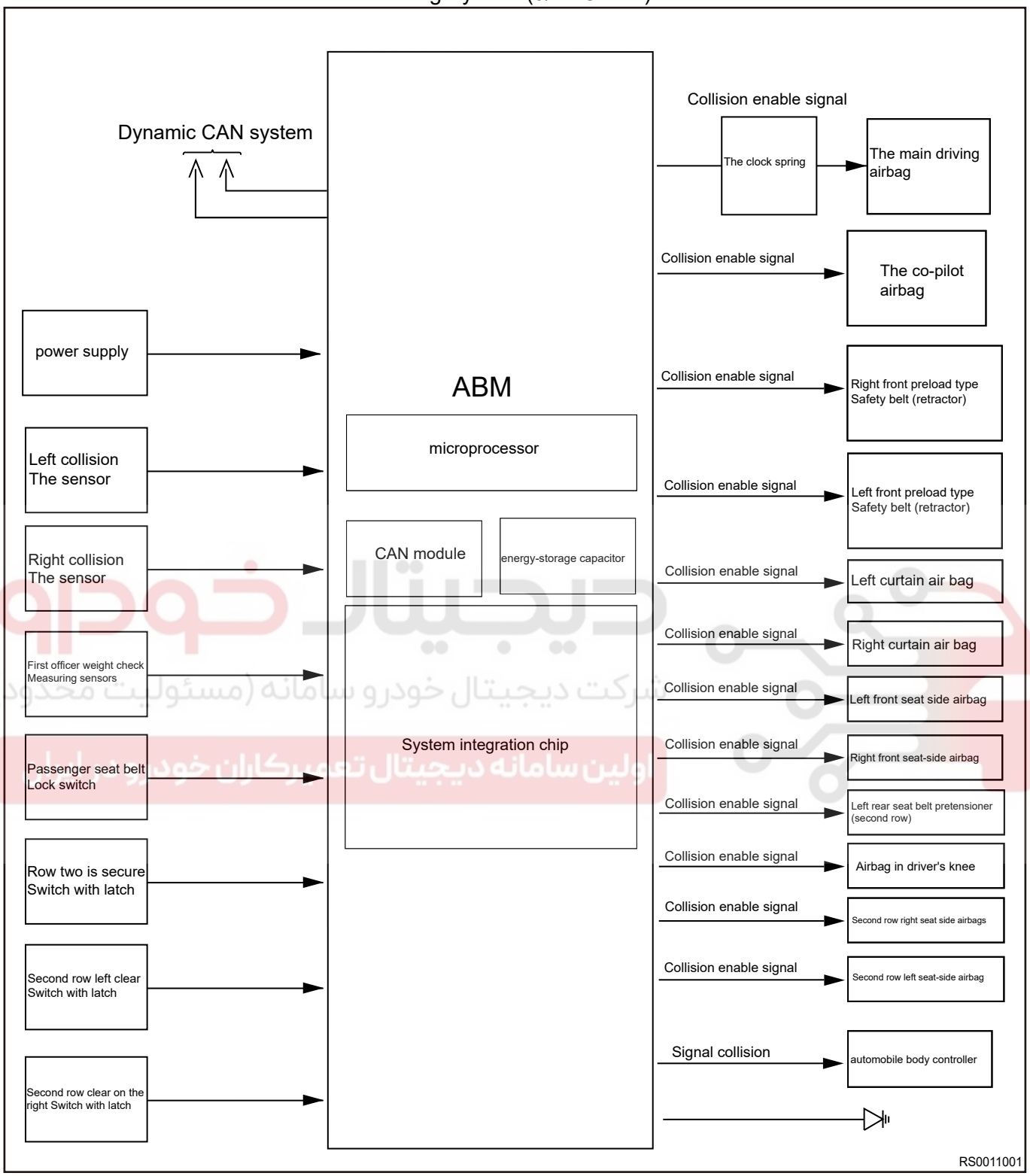
1	Right Height Adjuster Assembly	9	Second Row Middle Buckle Assembly
2	Front Right Seat Belt Assembly	10	Second Row Right Seat Belt Assembly
3	Right Front Buckle Assembly	11	Second Row Center Seat Belt Assembly
4	Front Left Buckle Assembly	12	Second Row Left Seat Belt Assembly
5	Front Left Seat Belt Assembly	13	Third Row Left Buckle Assembly
6	Left Height Adjuster Assembly	14	Third Row Right Buckle Assembly
7	Second Row Right Buckle Assembly	15	Third Row Left Seat Belt Assembly
8	Second Row Left Buckle Assembly	16	Third Row Right Seat Belt Assembly

Operation

Airbag System (2/4 Circuit)



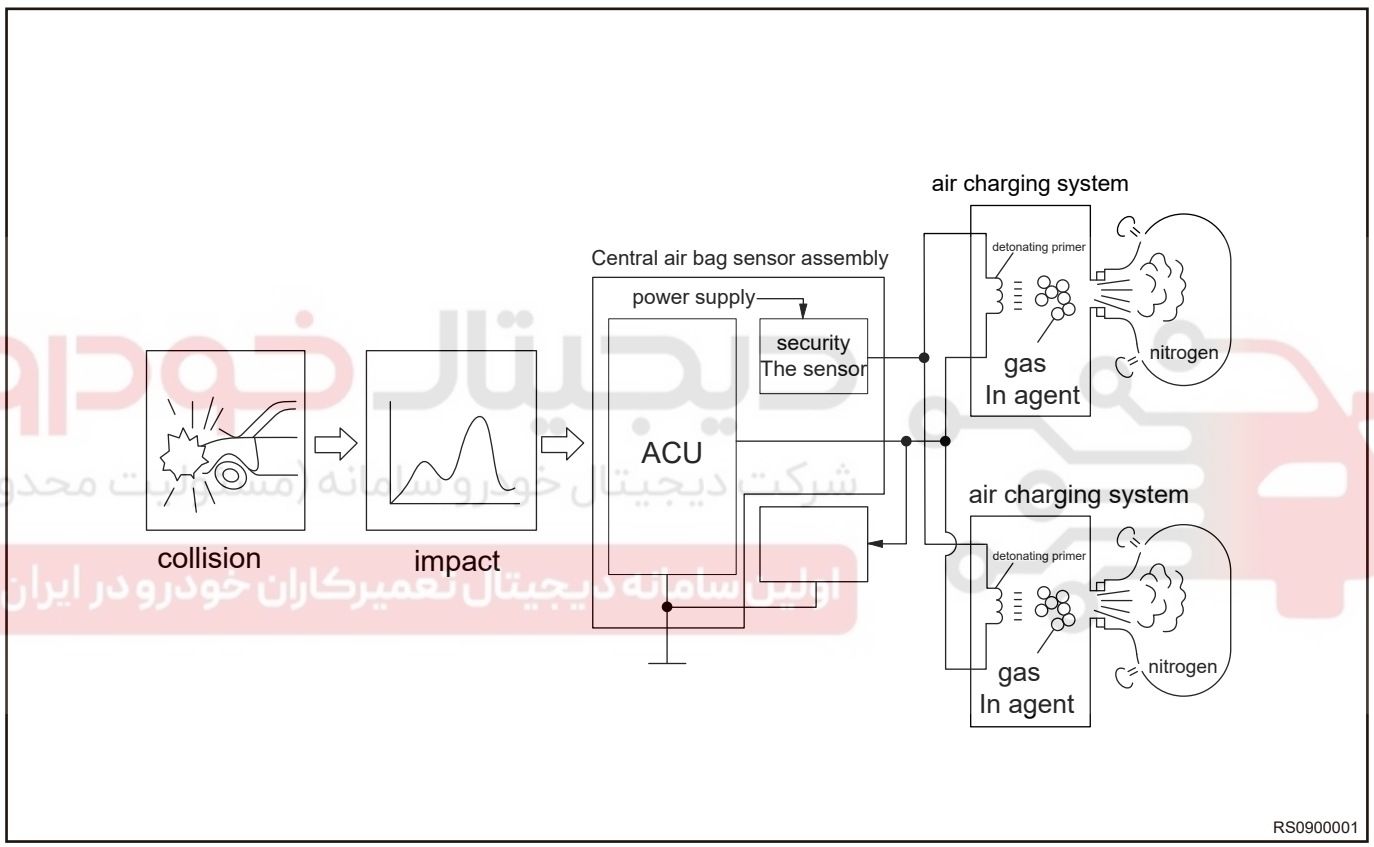
Airbag System (9/12 Circuit)



- Each deployment device of restraint system (squib) is activated by “ignition circuit” consisting of double-line interface, which needs to be isolated with vehicle chassis electrical.
- The detection and judgment of front collision is finished by controller.
- The controller is installed on vehicle center channel, so as to detect the longitudinal impact.
- When impact possibility is detected, which has reached the initiation severity, the controller will immediately issue the ignition command to cause the restraint system to initiate.

- In “Ignition” condition, the vehicle battery is responsible to supply power to the airbag controller. If the collision ignition is supported by energy storage capacitor in the controller, the energy can be enough to support one ignition cycle of typical collision event.
- As a secondary function, the controller diagnoses the electrical integrity of the restraint system to detect system failures that may prevent point explosion or increase possibility of false detonation on system fault.
- When collision output is used as collision occurs, signals are sent to other devices. (For example: body electronic control). It is used to further unlocking or oil shut-off operation. Within one ignition cycle, collision output can reflect every collision event (front collision, side collision). This model collision output is sent through CAN communication. The normal condition and collision condition signals use 500 ms cycle signals.

System Function Description

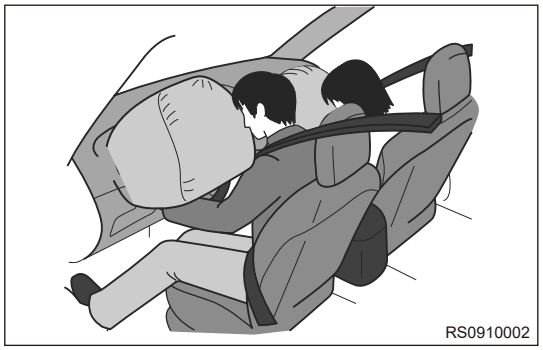


- The airbag controller assembly of this model is divided into two kinds: 2/4 (maximum 8 circuits) circuit and 9/12 circuit (maximum 12 circuits).
- The two switch interfaces are used for passenger seat belt buckle and passenger load detection.
- High-speed CAN communication.
- Diagnostic communication interface.
- The application system integrated ships are used for power supply, watchdog clock, safety mechanism and initiation command, initiation and ignition circuit fault detection and communication with microprocessor.
- The microprocessor (for example, ROM, RAM, NVM, A/D converter) is used to perform collision algorithms and supporting other airbag controller tasks.
- The energy storage capacitor is used to maintain the signal perception and instant deployment capability of controller in case of loss of vehicle power supply in the event of collision.
- Watchdog (hardware and software)
- System detection and self-diagnosis function.

- Malfunction handling.
- Collision data record.
- When airbag controller is in diagnosis mode, deployment function is prohibited.
- When deployment is required, the real-time deployment current is provided.

Front collision The controller will send an ignition signal when sensor signal received by the controller exceeds the set value in an accident, the ignition circuit will explode.

- Front collision is detected by the center acceleration sensor in controller;
- Frontal collision initiation deployment circuit: driver frontal airbag and passenger frontal airbag

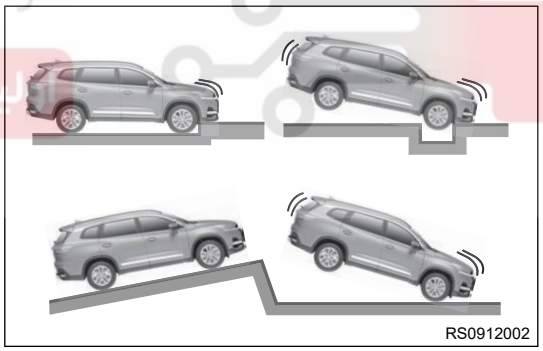


Hint:

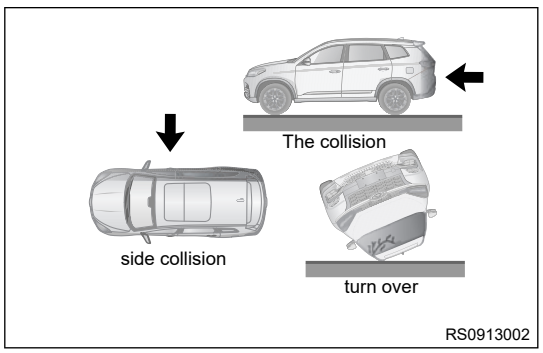
- After deployment command is issued, each initiation circuit is activated.
- Even collision occurs, battery power supply is shut off, the airbag is still deployed (as power is supplied by itself) and collision report is saved.
- Collision output: When the collision occurs and activated, collision output signal can be used to start other functions, such as other functions are realized through body controller (fuel is cut off, door lock is turned on, etc.).

Other collisions

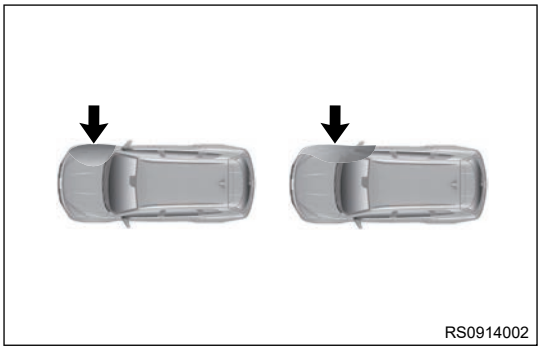
If the bottom of vehicle is subjected to a severe impact, the driver airbag and front passenger airbag may also deploy as shown in illustration.



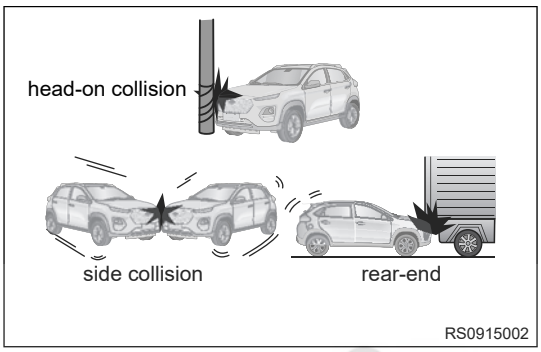
When vehicle is involved in side collision, rear collision, roll over or frontal collision at low speed, the driver airbag and front passenger airbag will not generally deploy.



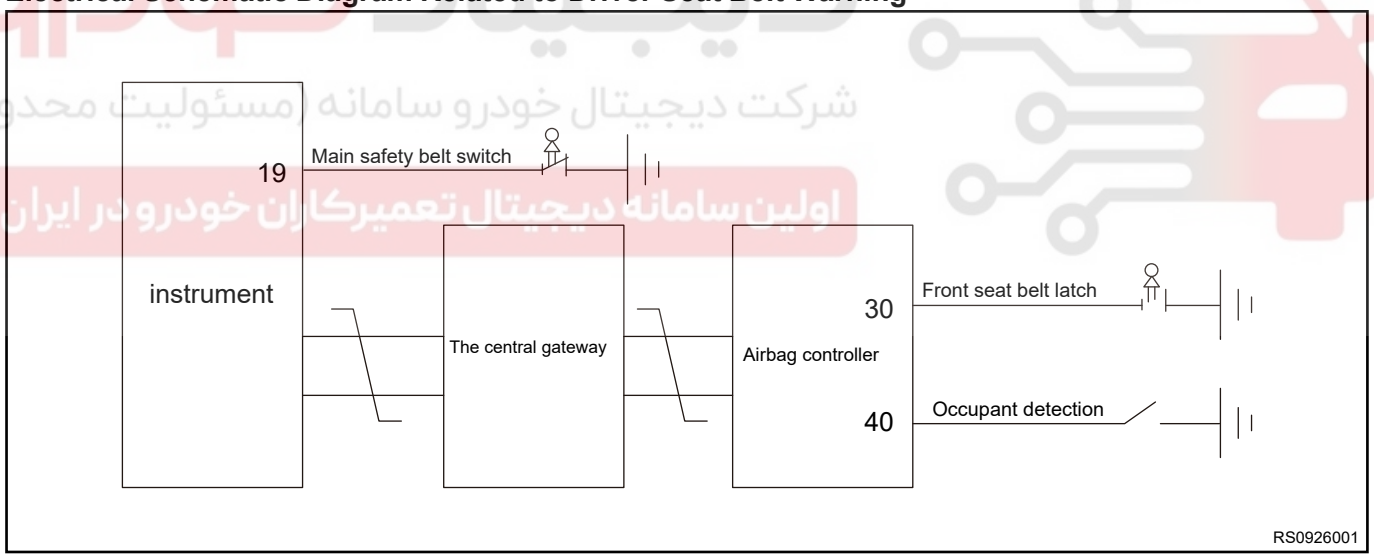
If a collision to the side of the vehicle body other than the passenger compartment, or the vehicle is subjected to a collision from the side at certain angles, the front side airbag and curtain shield airbag may not deploy as shown in illustration.



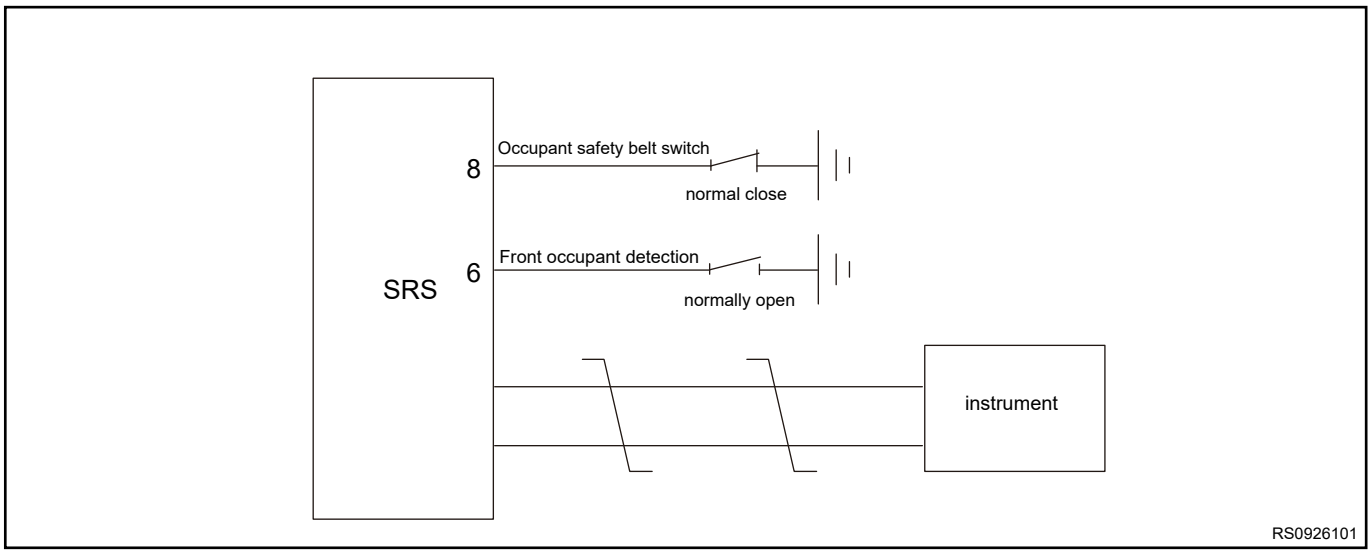
Front side airbag and curtain shield airbag will not generally deploy if the vehicle is involved in a front or rear collision, roll over or side collision at low speed.



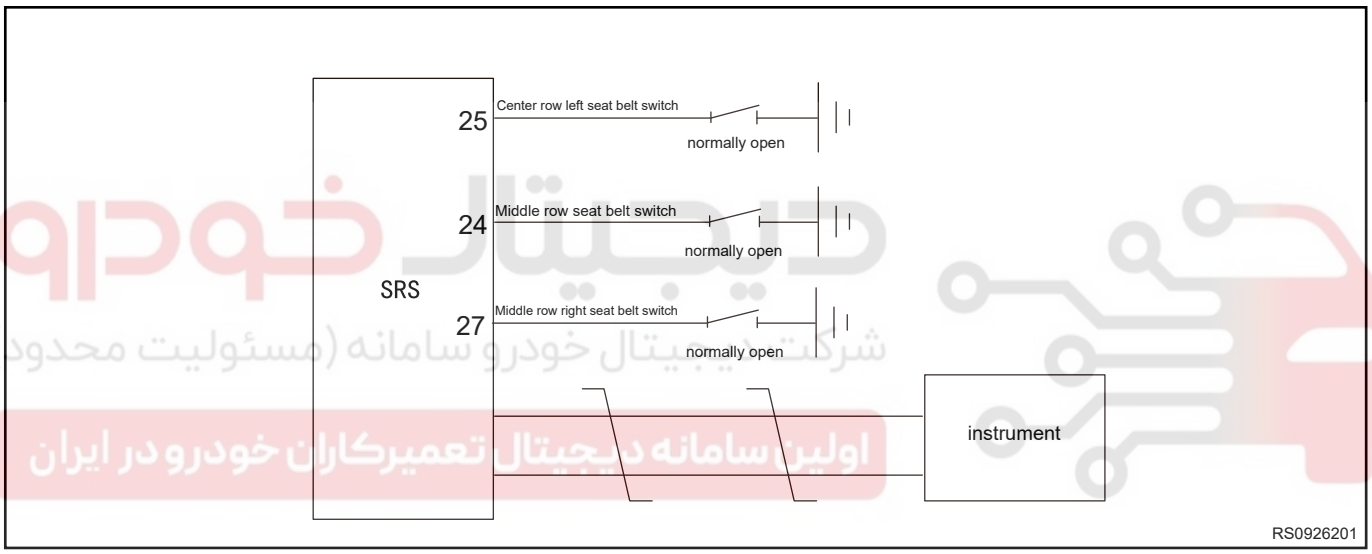
Electrical Schematic Diagram Related to Driver Seat Belt Warning



Electrical Schematic Diagram Related to Front Passenger Seat Belt Warning



Electrical Schematic Diagram Related to Middle Seat Belt Warning



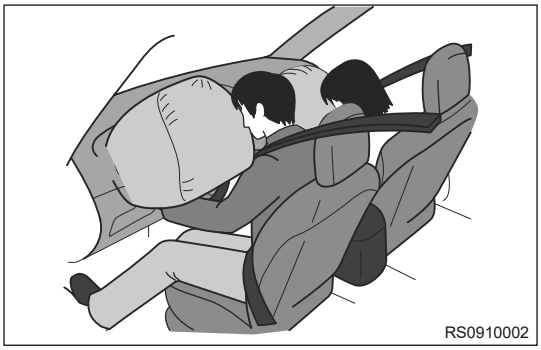
Warning strategy is as follows

- When ENGINE START STOP switch is in ON position:
- The front seat belt is unfastened or improperly fastened (if equipped): Vehicle speed < 25 km/h; combination meter red indicator flashes; vehicle speed ⩾ 25 km/h and combination meter red indicator flashed with sound warning.
- The second row seat belt is unfastened or improperly fastened (if equipped): Vehicle speed ⩾ 25 km/h and combination meter red indicator turn s on for 30 seconds and then turns off, accompanied by the sound warning. Note: The second row seat belt unfastened, red indicator turns on; fastened, green indicator turns on; full-fastened, indicator turns off.

System Components Description

Airbag

The control module controls initiation circuit and make airbag deploy, so as to form an air curtain between passenger and interior, thus playing the role of protecting the occupant in the vehicle.


RS0910002

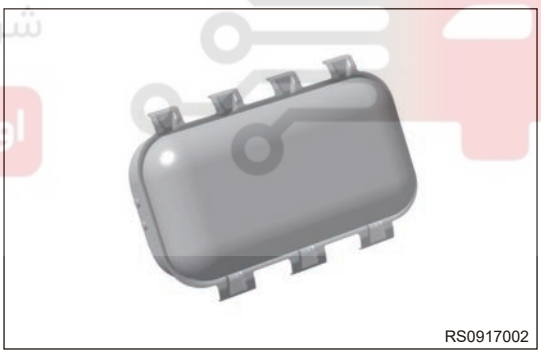
Driver front airbag

Resistance value is between 1.7 Ω and 3.8 Ω, it’s strictly forbidden to measure resistance with multimeter!


RS0918002

Passenger front airbag

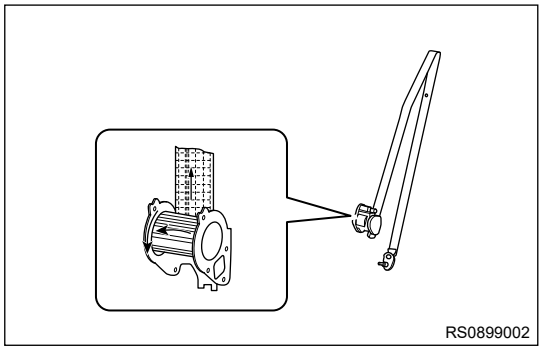
Resistance value is between 1.7 Ω and 3.8 Ω, it’s strictly forbidden to measure resistance with multimeter!


RS0917002

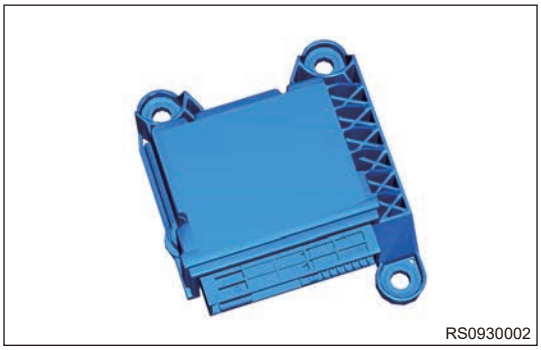
Limiting type belt:

Tighten the passenger firmly and extend the force applied on passenger, dispersing the applied force instantly; restraint the passenger within a limited space, so as to reduce the possibility of passenger impacting the other parts in vehicle.

- If the seat belt webbings cannot be pulled out, it is necessary to make a preliminary judgment on the seat belt. If the seat belt is locked due to the sensitivity function of seat belt.
- Judgment method: Slowly contract the webbing for 10-15 mm, and then pull out it slowly. If the seat belt can be pulled out normally and there are no other problems, the seat belt is normal. If the webbing can not be pulled out, further testing of seat belt is required.



Airbag system controller


RS0930002

The airbag controller is the core of whole airbag system. First, it receives and processes the collision signal acquired by collision sensor; Second, collision signal is processed by some algorithm to judge if initiation signal is issued and issue the corresponding command according to judgment result; meanwhile, it needs to communicate with other unit communication on vehicle.

- Repair or replacement of damaged airbag control module must be performed by an authorized worker.
- During the life of the airbag control module, the same airbag control module must always be installed on the vehicle where it was originally installed and not allowed to be used in other vehicles.
- Airbag control module must be replaced after the airbag deploys.
- The airbag control module and peripheral sensors have a high-precision structure, be sure to handle these components carefully. The components must be disposed if they fall to the ground.
- When airbag controller is in diagnosis mode, deployment function is prohibited.
- There are only three fixing points on airbag controller that can be connected to the vehicle structure. These contacts must be grounded, so the area between center passage and module cannot be covered by insulating materials (such as paint and other isolation coatings). The maximum impedance is 100 mΩ, and ECU should have a separate ground wire (the maximum distance between the grounding point and module is 10cm, make sure to avoid electromagnetic induction in this connection).
- ACU of this model adopts the software offline configuration mode, the maximum configurable range for both types of hardware has been set. Detailed configuration can be defined according to the vehicle configuration table, and select the configuration in the system.

Spiral cable:

It is used to connect driver airbag while ensuring that steering wheel has enough steering angle.

Wire harness:

It is yellow and used to connect elements of supplemental restraint system. The connector has a safety mechanism.

- In order to meet the requirements of electromagnetic immunity and system stability, and to avoid the risks related to occupant safety, CAN and collision sensor adopt twisted pair, the airbag circuit wire harness also needs to adopt twisted pair. All twisted pair requires at least 30 turns per meter, wire diameter ⩾ 0.5 square millimeters.

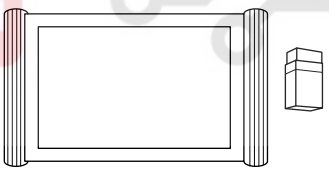
Specifications

Torque Specifications

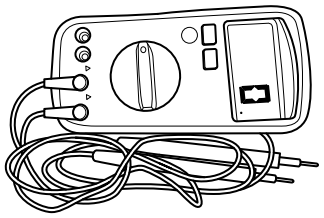
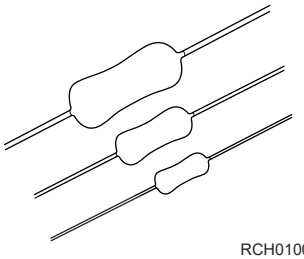
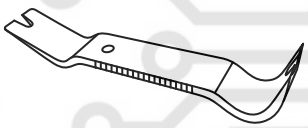
Description	Torque (N•m)
Airbag Module Assembly Fixing Bolt	9 ± 1
Side Collision Sensor Assembly Fixing Bolt	9 ± 1
Left/Right C-pillar Airbag Guide Bracket	10 ± 1
Front Passenger Airbag Fixing Bolt	23 ± 2
Front Passenger Airbag Fixing Screw	2.5 ± 0.5

Tools

Special Tool

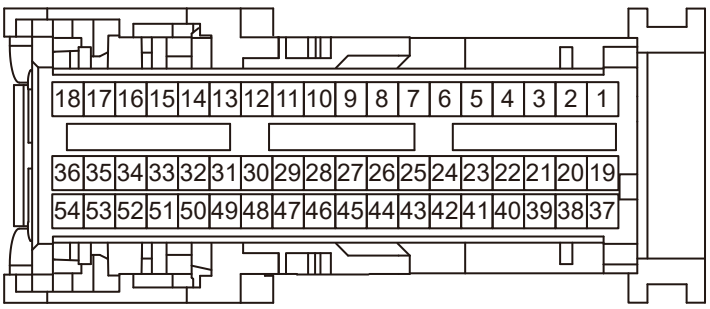
Tool Name	Tool Drawing
X-431 PAD Diagnostic Tester	 RCH0001006

General Tools

Tool Name	Tool Drawing
Digital Multimeter	 RCH0002006
Resistor (2 Ω)	 RCH010006
Interior & Exterior Remover	 RCH002506

Module Terminal Definition

ACU Control Module Assembly Terminal List (2/4 Circuit)

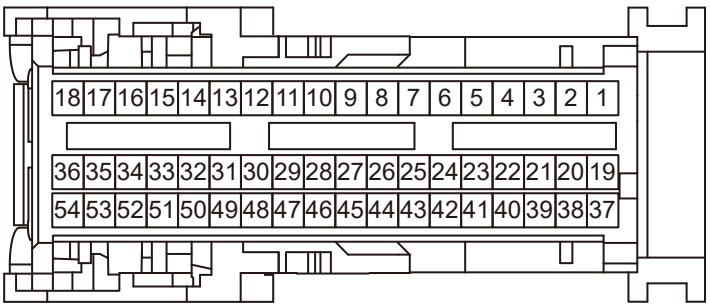


Airbag control module (2/4 loop)

RS0047501

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
PIN1	Driver Seat Belt Pretensioner -	PIN28	NA
PIN2	CAN_H	PIN29	NA
PIN3	CAN_L	PIN30	Passenger Side Collision Sensor +
PIN4	Driver Airbag +	PIN31	Passenger Side Collision Sensor -
PIN5	Driver Airbag -	PIN32	Driver Side Collision Sensor -
PIN6	NA	PIN33	Driver Side Collision Sensor +
PIN7	NA	PIN34	Front Passenger Airbag +
PIN8	NA	PIN35	Seat Belt Pretensioner FR +
PIN9	NA	PIN36	IGN Power Supply
PIN10	Collision Output	PIN37	NA
PIN11	NA	PIN38	NA
PIN12	NA	PIN39	NA
PIN13	NA	PIN40	NA
PIN14	NA	PIN41	NA
PIN15	NA	PIN42	NA
PIN16	Front Passenger Airbag -	PIN43	NA
PIN17	Seat Belt Pretensioner FR -	PIN44	NA
PIN18	Ground	PIN45	NA
PIN19	Driver Seat Belt Pretensioner +	PIN46	NA
PIN20	NA	PIN47	NA
PIN21	NA	PIN48	NA
PIN22	Driver Side Airbag -	PIN49	NA
PIN23	Driver Side Airbag +	PIN50	NA
PIN24	NA	PIN51	Side Airbag FR -
PIN25	NA	PIN52	Side Airbag FR +
PIN26	NA	PIN53	NA
PIN27	NA	PIN54	NA

ACU Control Module Assembly Terminal List (9/10 Circuit)



Airbag control module (9/10 circuit)

RS0047511

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
PIN1	Driver Seat Belt Pretensioner -	PIN28	NA
PIN2	CAN_H	PIN29	NA
PIN3	CAN_L	PIN30	Passenger Side Collision Sensor +
PIN4	Driver Airbag +	PIN31	Passenger Side Collision Sensor -
PIN5	Driver Airbag -	PIN32	Driver Side Collision Sensor -
PIN6	Front Passenger Detection	PIN33	Driver Side Collision Sensor +
PIN7	NA	PIN34	Front Passenger Airbag +
PIN8	Seat Belt Switch FR	PIN35	Seat Belt Pretensioner FR +
PIN9	NA	PIN36	IGN Power Supply
PIN10	Collision Output	PIN37	NA
PIN11	Ground	PIN38	NA
PIN12	NA	PIN39	Seat Belt Pretensioner RL -
PIN13	NA	PIN40	Seat Belt Pretensioner RL +
PIN14	NA	PIN41	Knee Airbag -
PIN15	NA	PIN42	Knee Airbag +
PIN16	Front Passenger Airbag -	PIN43	NA
PIN17	Seat Belt Pretensioner FR -	PIN44	NA
PIN18	Ground	PIN45	NA

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
PIN19	Driver Seat Belt Pretensioner +	PIN46	NA
PIN20	Driver Curtain Shield Airbag +	PIN47	Middle Row Right Airbag +
PIN21	Driver Curtain Shield Airbag -	PIN48	Middle Row Right Airbag -
PIN22	Driver Side Airbag -	PIN49	Driver Seat Belt Pretensioner 2+(SA10)/ Middle Row Left Side Airbag +(SA12)
PIN23	Driver Side Airbag +	PIN50	Driver Seat Belt Pretensioner 2-(SA10)/ Middle Row Left Side Airbag -(SA12)
PIN24	Middle Row Left Center Seat Belt Switch	PIN51	Side Airbag FR -
PIN25	Middle Row Left Seat Belt Switch	PIN52	Side Airbag FR +
PIN26	NA	PIN53	Front Passenger Curtain Shield Airbag +
PIN27	Middle Row Right Seat Belt Switch	PIN54	Front Passenger Curtain Shield Airbag -

DIAGNOSIS & TEST

Problem Symptoms Table

Caution
Use symptoms table below to help determine cause of problem. Check each suspected area in sequence. Repair, replace or adjust faulty components as necessary.

Symptom	Possible Cause
Airbag light remains on	Airbag assembly (damaged)
	Collision sensor assembly (damaged)
	Configuration error (configuration information error)
	Circuit fault
	Module fault (damaged)
Airbag light intermittent malfunction	Circuit is connected loosely
	Sensor (damaged)
	Module fault (damaged)

Diagnosis Procedure

Hint:
Use following procedures to troubleshoot the control system.

1	**Vehicle brought to workshop**

Next

2	**Examine vehicle and check basic items**

Check system power supply voltage, and check that fuse, wire harness and connector are connected normally.

OK

Standard voltage: Not less than 12 V.

Result

NG → **Check and replace malfunctioning parts**

OK

3	**Using a diagnostic tester, read related DTC and data stream information**

Result

Result	Go to
No DTC	A
DTC occurs	B

A → **Perform troubleshooting procedure without DTCs according to malfunction symptom**

B

4	**Troubleshoot according to DTCs troubleshooting procedure**

Result

Result	Go to
Problem is not resolved	A
Problem is resolved	B

A → **Return to procedure 1 and troubleshoot the process again**

B

5	**According to airbag system malfunction repair completion inspection and delivery, confirm that malfunction is resolved**

Result

Result	Go to
Delivery inspection is failed	A
Delivery inspection is qualified	B

A → **Return to procedure 1 and troubleshoot the process again**

B

6	**Finished**

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 ENGINE START STOP switch to ON.
- Use diagnostic tester to record and clear DTCs stored in supplemental restraint system.
- Turn the ENGINE START STOP switch to OFF and wait for several seconds.
- Turn ENGINE START STOP switch to “ON”, and then select read DTC.
- If DTC is detected, it indicates current malfunction. Go to inspection procedure - Step 1.
- If no DTC is detected, malfunction indicated by the DTC is intermittent.

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.
- Monitor diagnostic tester (the latest software) data that is related to this circuit.
- Wiggle related wire harnesses and connectors and observe if signal is interrupt in related circuit.
- If possible, try to duplicate the conditions under which DTC was set.
- Look for data that has changed or DTC to reset during wiggling test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect airbag components and mounting areas for damage, foreign matter, etc. that will cause incorrect signals.
- 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 seriously 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.

Preparations before Dealing with Airbag System Wire Harness

Malfunction

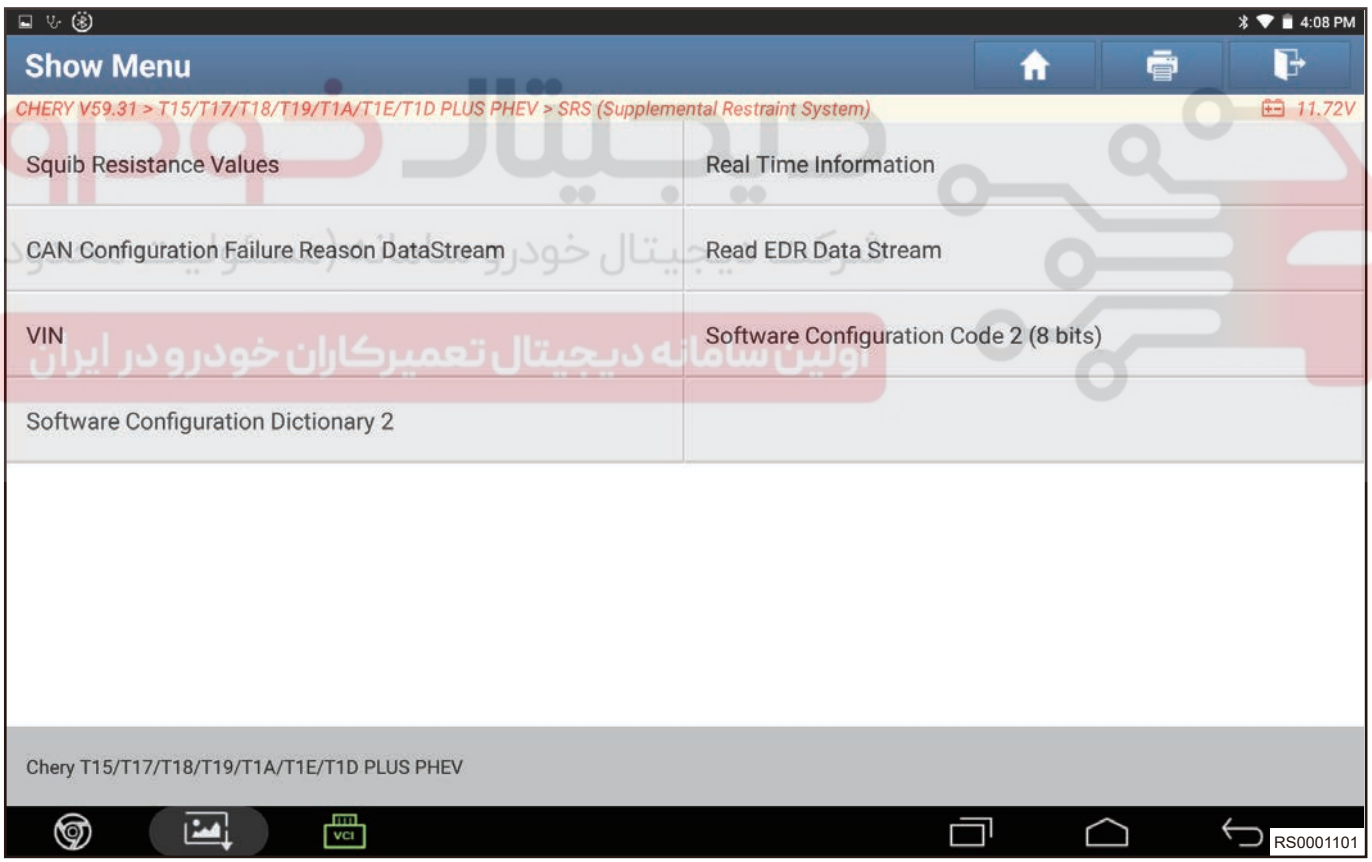
1. To prevent deployment by mistake, take the following countermeasures when handling vehicle controller or the corresponding wire harness:
2. Before connecting or disconnecting the controller and wire harness, turn ENGINE START STOP switch to OFF, disconnect the negative battery cable at least 1 minute so that the airbag controller has enough time to discharge.
3. When the wire harness is connected with controller, never loosen the fixing screws.
4. Before connecting wire harness, ensure that controller has fixed on corresponding position of vehicle (3 mounting bolts).

5. Prevent electric static discharge, such as static-proof wrist strap.
6. To prevent the ignition element from igniting accidentally during wire harness measurement, it is necessary to disengage all elements connected to wire harness, such as airbag, module, sensor etc. before measuring.

Module Matching Learning

Items	Applicable Situations	Actions Required by Diagnostic Tester	Note
Module replacement	• Module damaged, needs replacement	Write VIN CodeWrite software configuration code 2 (8-bit configuration code)	

1. Connect diagnostic tester, turn ENGINE START STOP switch to ON.
2. Select "T15/T17/T18/T19/T1A/T1E/T1D PLUS PHEV" models.
3. Proceed to next interface and click “SRS (airbag system)” to select.
4. Proceed to next interface, click “Special Operations”.
5. Select “Write VIN Code”/“Write software configuration code 2 (8-bit configuration code)”.



- When all conditions are satisfied, ACU starts to write the configuration word. After writing, ACU automatically restarts and detects if there is a current fault. The time for determining and writing the configuration word is about 10 s;
- Case 1: No fault, ACU directly locks the configuration;
- Case 2: There is a fault, all associated DTC faults are solved in ACU before the configuration can be locked.
- If ACU configuration needs to be changed after locking, activate it again through the diagnostic tester and turn on ACU reconfiguration function.

- State description for airbag light:
  a.When the vehicle is powered on and initialized, airbag light will be on for 6 seconds and off for 1 second;
  b.The airbag light flashes during the initial configuration of ACU factory or activating configuration again using the diagnostic tester;
  c.After ACU configuration is completed, if there is a fault, the airbag light will remain on; if there is no fault, the airbag light will turn off.

Caution
• ACU is divided into high configuration and low configuration (179AA is low configuration, 180AA is high configuration). Confirm the vehicle configuration information during installation firstly. • Handle ACU carefully and it’ s strictly forbidden to tap and crash it fiercely. • There should be no other objects between ACU installation plane and ACU module, and ACU must be installed directly on body panel. • Make sure that the ignition key cylinder is in OFF state during installation and removal of ACU, and never install or remove it with power on. • Reconfirm the installation direction of ACU after installation and make sure that label arrow direction is facing vehicle head. If fitted reversely, airbag controller assembly will not operate normally. • ACU is not configured or during in configuration (when airbag light is flashing), ACU does not have the function of deployment, vehicle can not operate normally.

Diagnostic Trouble Code (DTC) Chart

DTC	DTC Definition
B0001-11	Driver Frontal Airbag Deployment Control Circuit Short To Ground
B0001-12	Driver Frontal Airbag Deployment Control Circuit Short To Power Supply
B0001-1A	Driver Frontal Airbag Deployment Control Circuit Resistance Below Threshold
B0001-1B	Driver Frontal Airbag Deployment Control Circuit Resistance Above Threshold
B0010-11	Front Passenger Frontal Airbag Deployment Control Circuit Short To Ground
B0010-12	Front Passenger Frontal Airbag Deployment Control Circuit Short To Power Supply
B0010-1A	Front Passenger Frontal Airbag Deployment Control Circuit Resistance Below Threshold
B0010-1B	Front Passenger Frontal Airbag Deployment Control Circuit Resistance Above Threshold
B0020-11	Left Side Airbag Deployment Control Circuit Short To Ground
B0020-12	Left Side Airbag Deployment Control Circuit Short To Power Supply
B0020-1A	Left Side Airbag Deployment Control Circuit Resistance Below Threshold

DTC	DTC Definition
B0020-1B	Left Side Airbag Deployment Control Circuit Resistance Above Threshold
B0028-11	Right Side Airbag Deployment Control Circuit Short To Ground
B0028-12	Right Side Airbag Deployment Control Circuit Short To Power Supply
B0028-1A	Right Side Airbag Deployment Control Circuit Resistance Below Threshold
B0028-1B	Right Side Airbag Deployment Control Circuit Resistance Above Threshold
B0021-11	Left Curtain Airbag Deployment Control Circuit Short To Ground
B0021-12	Left Curtain Airbag Deployment Control Circuit Short To Power Supply
B0021-1A	Left Curtain Airbag Deployment Control Circuit Resistance Below Threshold
B0021-1B	Left Curtain Airbag Deployment Control Circuit Resistance Above Threshold
B0029-11	Right Side Airbag Deployment Control Circuit Short To Ground
B0029-12	Right Side Airbag Deployment Control Circuit Short To Power Supply
B0029-1A	Right Side Airbag Deployment Control Circuit Resistance Below Threshold
B0029-1B	Right Side Airbag Deployment Control Circuit Resistance Above Threshold
B1285-11	Left Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Short To Ground
B1285-12	Left Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Short To Power Supply
B1285-1A	Left Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Resistance Below Threshold
B1285-1B	Left Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Resistance Above Threshold
B1286-11	Right Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Short To Ground
B1286-12	Right Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Short To Power Supply
B1286-1A	Right Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Resistance Below Threshold

DTC	DTC Definition
B1286-1B	Right Seat Belt with Pretensioner (Retractor) Deployment Control Circuit Resistance Above Threshold
B1204-11	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Ground
B1204-12	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Power Supply
B1204-1A	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Below Threshold
B1204-1B	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Above Threshold
B1205-11	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Ground
B1205-12	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Power Supply
B1205-1A	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Below Threshold
B1205-1B	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Above Threshold
B0073-11	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Short To Ground
B0073-12	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Short To Power Supply
B0073-1A	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Resistance Below Threshold
B0073-1B	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Resistance Above Threshold
B0075-11	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Short To Ground
B0075-12	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Short To Power Supply
B0075-1A	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Resistance Below Threshold
B0075-1B	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Resistance Above Threshold

DTC	DTC Definition
B0030-11	Second Row Left Seat Side Airbag Deployment Control Circuit Short To Ground
B0030-12	Second Row Left Seat Side Airbag Deployment Control Circuit Short To Power Supply
B0030-1A	Second Row Left Seat Side Airbag Deployment Control Circuit Resistance Below Threshold
B0030-1B	Second Row Left Seat Side Airbag Deployment Control Circuit Resistance Above Threshold
B0038-11	Second Row Right Seat Side Airbag Deployment Control Circuit Short To Ground
B0038-12	Second Row Right Seat Side Airbag Deployment Control Circuit Short To Power Supply
B0038-1A	Second Row Right Seat Side Airbag Deployment Control Circuit Resistance Below Threshold
B0038-1B	Second Row Right Seat Side Airbag Deployment Control Circuit Resistance Above Threshold
B00C7-12	Passenger Presence Detection Switch Circuit Short To Power Supply
B1233-12	Passenger Buckle Switch Circuit Short To Power Supply
B1234-12	Second Row Left Buckle Switch Circuit Short To Power Supply
B1235-12	Second Row Middle Buckle Switch Circuit Short To Power Supply
B1236-12	Second Row Right Buckle Switch Circuit Short To Power Supply
B00C8-12	Second Row Left Load Detection Switch Short to Power Supply
B00C9-12	Second Row Left Load Detection Switch Short to Power Supply
B00CA-12	Second Row Left Load Detection Switch Short to Power Supply
B0090-11	Left Front Restraints Sensor Circuit Short To Ground
B0090-12	Left Front Restraints Sensor Circuit Short To Power Supply
B0090-13	Left Front Restraints Sensor Circuit Open
B0090-96	Left Front Restraints Sensor Component Internal Failure
B0090-00	Left Front Restraints Sensor Communication Failure

DTC	DTC Definition
B0090-95	Left Front Restraints Sensor Configured Fault
B0095-11	Right Front Restraints Sensor Circuit Short To Ground
B0095-12	Right Front Restraints Sensor Circuit Short To Power Supply
B0095-13	Right Front Restraints Sensor Circuit Open
B0095-96	Right Front Restraints Sensor Component Internal Failure
B0095-00	Right Front Restraints Sensor Communication Failure
B0095-95	Right Front Restraints Sensor Configured Fault
B0091-11	Left Side Restraints Sensor Circuit Short To Ground
B0091-12	Left Side Restraints Sensor Circuit Short To Power Supply
B0091-13	Left Side Restraints Sensor Circuit Open
B0091-96	Left Side Restraints Sensor Component Internal Failure
B0091-00	Left Side Restraints Sensor Communication Failure
B0091-95	Left Side Restraints Sensor Configured Fault
B0096-11	Right Side Restraints Sensor Circuit Short To Ground
B0096-12	Right Side Restraints Sensor Circuit Short To Power Supply
B0096-13	Right Side Restraints Sensor Circuit Open
B0096-96	Right Side Restraints Sensor Component Internal Failure
B0096-00	Right Side Restraints Sensor Communication Failure
B0096-95	Right Side Restraints Sensor Configured Fault
B1250-16	Power Supply Circuit Voltage Below Threshold
B1250-17	Power Supply Circuit Voltage Above Threshold
B1215-00	Squib Cross Coupling Error-No Sub Type Information
B1240-00	ICM Airbag Lamp Failed-No Sub Type Information
U0073-88	ACU Lost Communication with Other Module
U0100-87	Lost Communication with Engine Control System Module

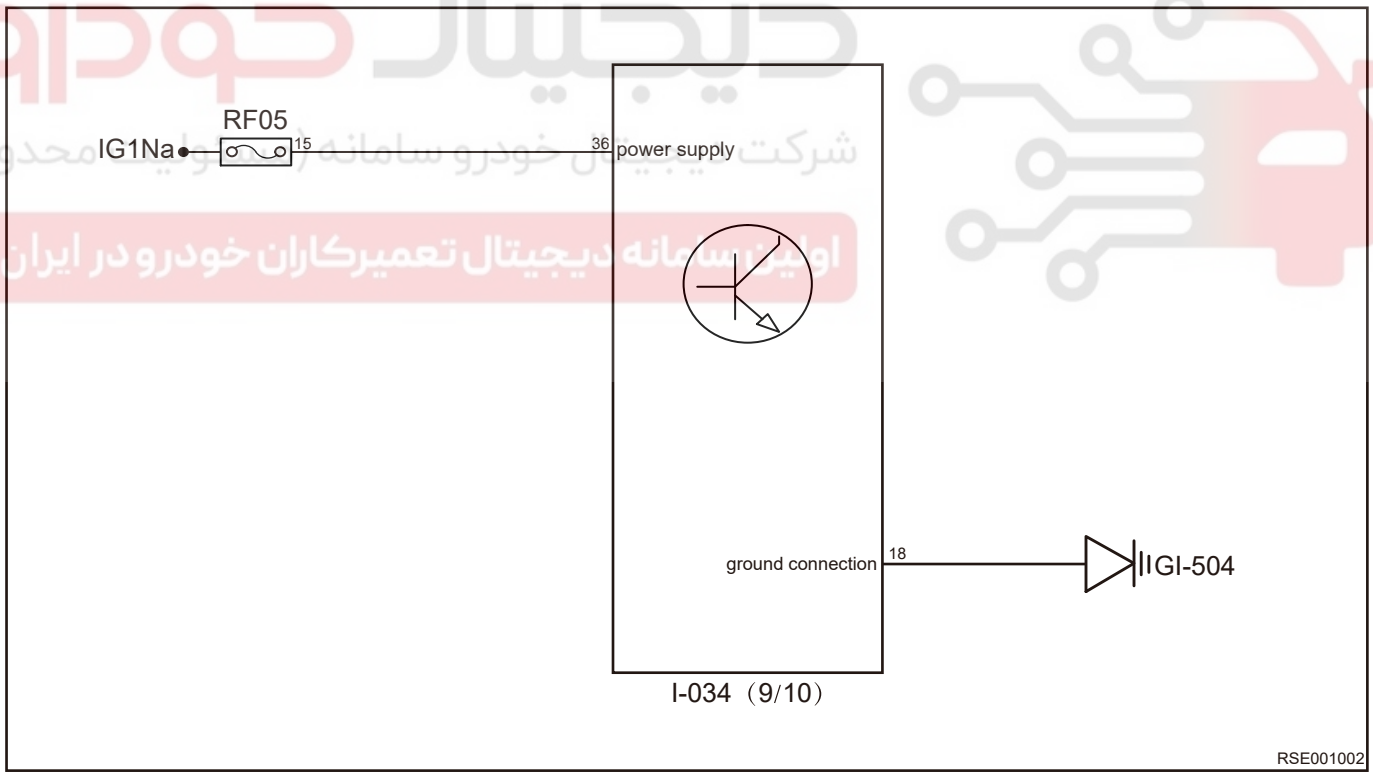
DTC	DTC Definition
U0129-87	Lost Communication With Controller (0x2E9)
U0155-87	Lost Communication with ICM
U0140-87	Lost Communication with BCM
U0101-87	Lost Communication with TCU
U0126-87	Lost Communication with SAM
B1251-00	Internal Error
B1216-47	Crash Front
B1217-47	Crash Side-Watchdog / Safety µC Failure
B1218-47	Crash Row-Watchdog / Safety µC Failure
B127F-47	Crash Recording Locked
U1300-55	EOL Configuration
B122F-55	VIN Code Not Written into ABM
B122C-00	ACU Has Been Scrapped-No Sub Type Information
B122D-95	Driver Airbag Unexpected Config-Incorrect Assembly
B122E-95	Passenger Airbag Unexpected Config-Incorrect Assembly
B121F-95	Left Side Airbag Unexpected Config-Incorrect Assembly
B1220-95	Right Side Airbag Unexpected Config-Incorrect Assembly
B1221-95	Left Curtain Unexpected Config-Incorrect Assembly
B1222-95	Right Curtain Unexpected Config-Incorrect Assembly
B1223-95	Front Row Left Seatbelt Retractor Pretensioner Unexpected Config-Incorrect Assembly
B1224-95	Front Row Right Seatbelt Retractor Pretensioner Unexpected Config-Incorrect Assembly
B1225-95	Belt Pretensioner Driver Unexpected Config-Incorrect Assembly
B1226-95	Belt Pretensioner Pass Unexpected Config-Incorrect Assembly
B1227-95	Second Row Left Seatbelt Pretensioner Unexpected Config-Incorrect Assembly
B1229-95	Second Row Right Seatbelt Pretensioner Unexpected Config-Incorrect Assembly

DTC	DTC Definition
B0004-95	Driver Knee Airbag Unexpected Config-Incorrect Assembly
B0030-95	Second Row Left Seat Side Airbag Unexpected Config-Incorrect Assembly
B0038-95	Second Row Right Seat Side Airbag Unexpected Config-Incorrect Assembly
B1284-12	Crash Output Fault Short to Power Supply
B1284-11	Crash Output Fault Short To Ground
B1284-13	Crash Output Fault Circuit Open

DTC Diagnosis Procedure

DTC	**B1250-16**	**Power Supply Circuit Voltage Below Threshold**
DTC	**B1250-17**	**Power Supply Circuit Voltage Above Threshold**

Description
Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-250-16	Power Supply Circuit Voltage Below Threshold	Circuit voltage below threshold	External	• When voltage is less than 7.2 V, the malfunction is detected; • When voltage is less than 8.5 V, the malfunction may be detected;	When voltage is 9 V, the malfunction disappears, when voltage is 7.7 V, the malfunction may disappear	• Excessive low vehicle power supply voltage	The vehicle power supply voltage control is within normal range	Warning light comes on
B1-250-17	Power Supply Circuit Voltage Above Threshold	Circuit voltage above threshold;	External	• When voltage is 19.5 V, the malfunction is detected; • When voltage is 16.5 V, the malfunction may be detected;	When the voltage is less than 16 V, the malfunction disappears. when the voltage is less than 19 V, the malfunction may disappear	• Excessive high vehicle power supply voltage	The vehicle power supply voltage control is within normal range	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Check system voltage**

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Start engine, and use voltage band of multimeter to check if battery voltage is normal. (Rated voltage: Not less than 12 V)

Voltage Inspection

Multimeter Connection	Detection Condition	Specified Condition
Battery (+) - Battery (-)	ENGINE START STOP switch ON	Not less than 12 V

NG → **Repair or replace battery**

OK ↓

2	**Check fuse**

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Check if fuse RF05 is blown or no power.

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

OK ↓

3	**Check airbag controller connector**

(a) Turn ENGINE START STOP switch to OFF.

(b) Check connector for bad contact, bending, distortion, poor contact, etc.

NG → **Repair or replace airbag controller connector.**

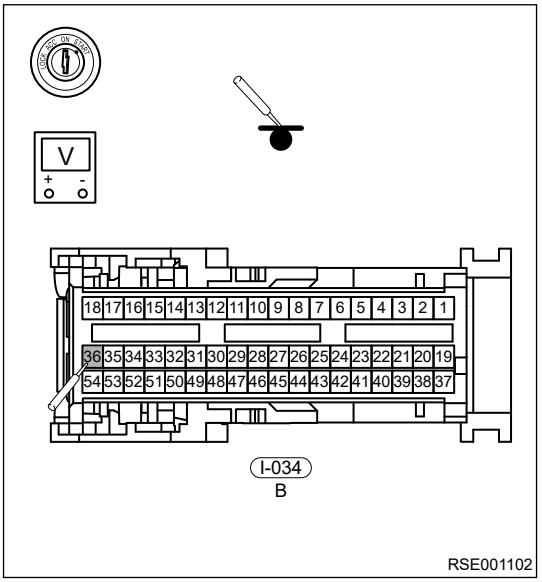
OK ↓

4	**Check airbag controller power supply circuit**

(a) Turn ENGINE START STOP switch to ON.

(b) Perform the voltage inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (36) - Body ground	ENGINE START STOP switch ON	12V



NG → **Repair the airbag system controller power supply wire harness.**

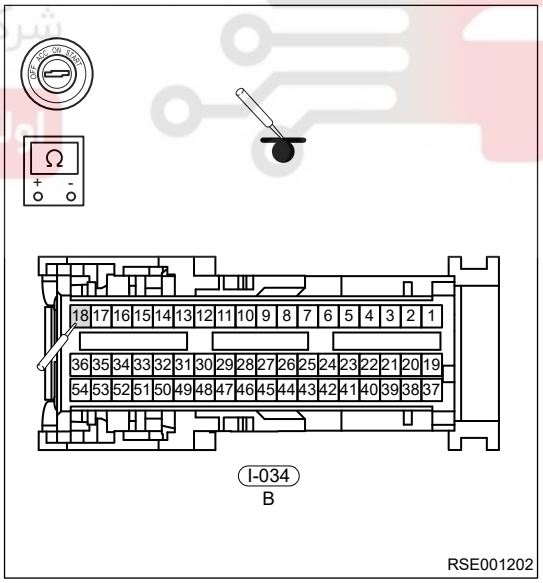
OK →

5	Check airbag controller ground circuit

(a) Turn ENGINE START STOP switch to OFF.

(b) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (18) - Body ground	ENGINE START STOP switch OFF	⩽ 1 Ω



NG → **Repair airbag system controller ground wire harness.**

OK →

6	Reconfirm DTCs

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

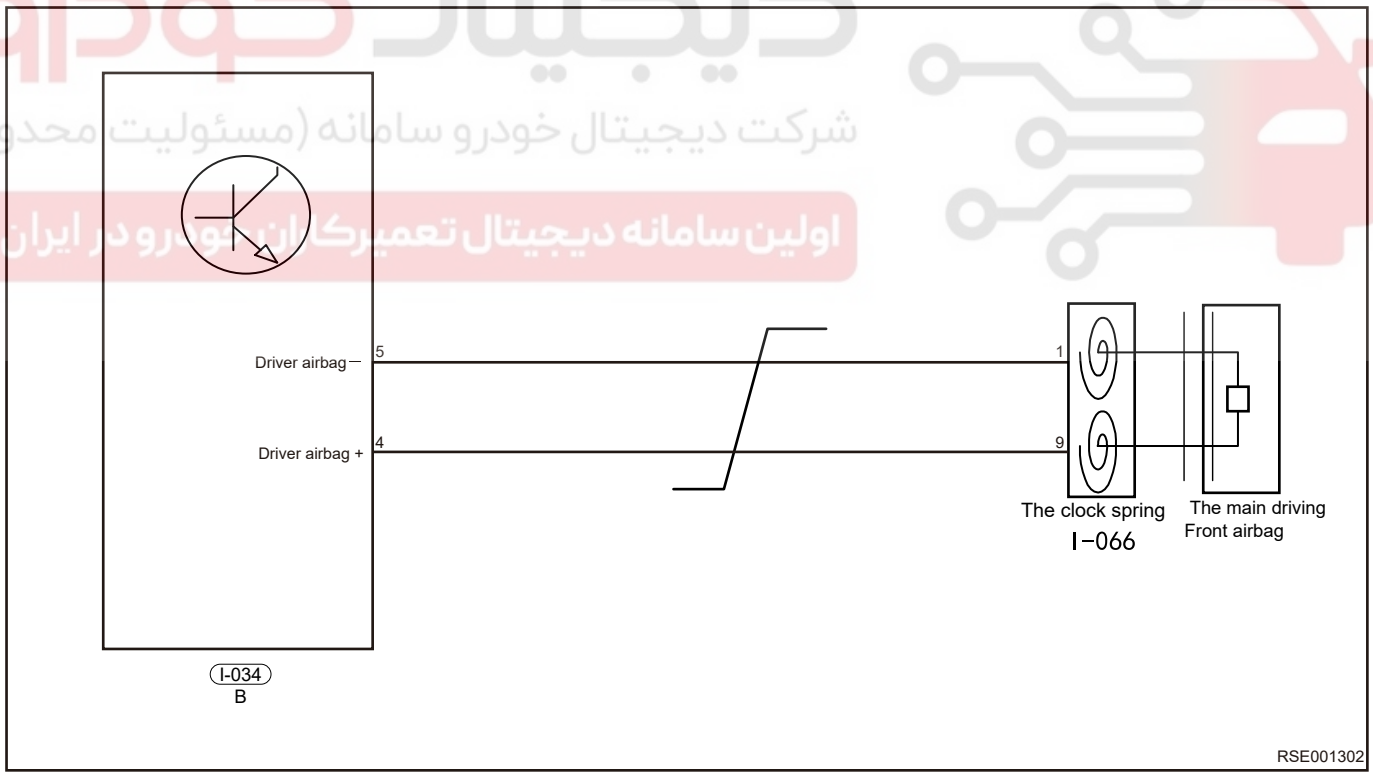
NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B0001-11**	**Driver Frontal Airbag Deployment Control Circuit Short To Ground**
DTC	**B0001-12**	**Driver Frontal Airbag Deployment Circuit Short To Power Supply**
DTC	**B0001-1A**	**Driver Frontal Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0001-1B**	**Driver Frontal Airbag Deployment Control Circuit Resistance Above Threshold**

Description

Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-00-1-11	Driver Frontal Airbag Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Driver front airbag initiation circuit is short to ground, and short-circuit current is detected by controller (Pins 4 and 5)	Protect the wire harness integrity	Warning light comes on
B0-00-1-12	Driver Frontal Airbag Deployment Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction is detected, check the driver front airbag initiation circuit;	• Driver front airbag initiation circuit is short to power supply, short-circuit current is detected by controller	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-00-1-1A	Driver Frontal Airbag Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Driver frontal airbag initiation circuit resistance is below set threshold	Correctly define resistance range/ system operation	Warning light comes on
B0-00-1-1B	Driver Frontal Airbag Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 4.4 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 4.4 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Driver frontal airbag initiation circuit resistance is above set threshold	Correctly define resistance range/ system operation	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Inspect the driver frontal airbag voltage to power supply**

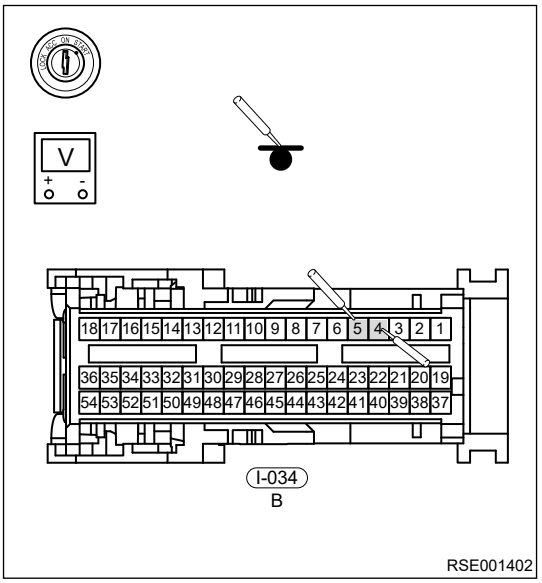
(a) Disconnect the driver frontal airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to ON.

(d) Perform the voltage inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (4) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (5) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace driver frontal airbag power supply wire harness.**

OK →

2	**Inspect resistance between driver frontal airbag wire harness and ground**

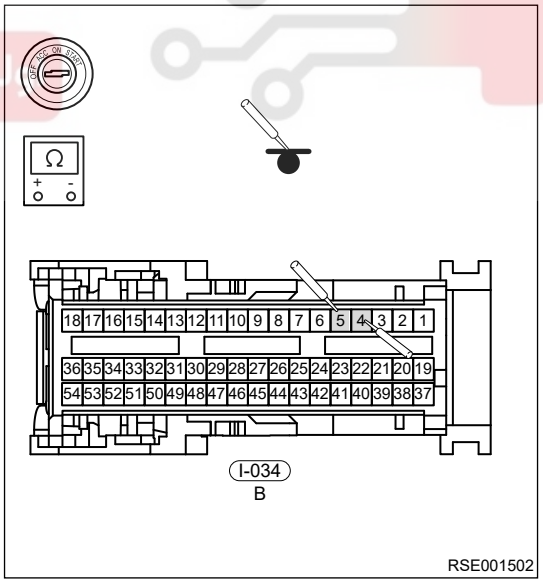
(a) Disconnect the driver frontal airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (4) - Body ground	ENGINE START STOP switch OFF	∞
I-034 (5) - Body ground	ENGINE START STOP switch OFF	∞



NG → **Repair or replace driver frontal airbag ground wire harness.**

OK →

3	**Check circuit between airbag controller and driver frontal airbag**

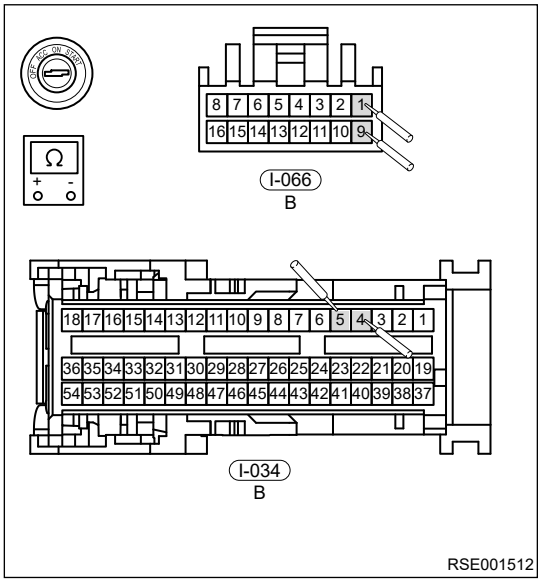
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Disconnect the driver frontal airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.



Multimeter Connection	Condition	Specified Condition
I-034 (11) - I-066 (1)	ENGINE START STOP switch OFF	Less than 1 Ω
I-034 (10) - I-066 (9)	ENGINE START STOP switch OFF	Less than 1 Ω

NG → **Repair or replace wire harness between airbag controller and driver frontal airbag.**

OK

4	Check the driver frontal airbag

(a) Substitute one 2.5 Ω resistance for airbag.

(b) Check if DTC exists.

NG → **Repair or replace driver frontal airbag.**

OK

5	Check spiral cable

(a) Check if spiral cable has any damage, stuck or other symptoms.

(b) Check if spiral cable is normal.

NG → **Repair or replace spiral cable.**

OK

6	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

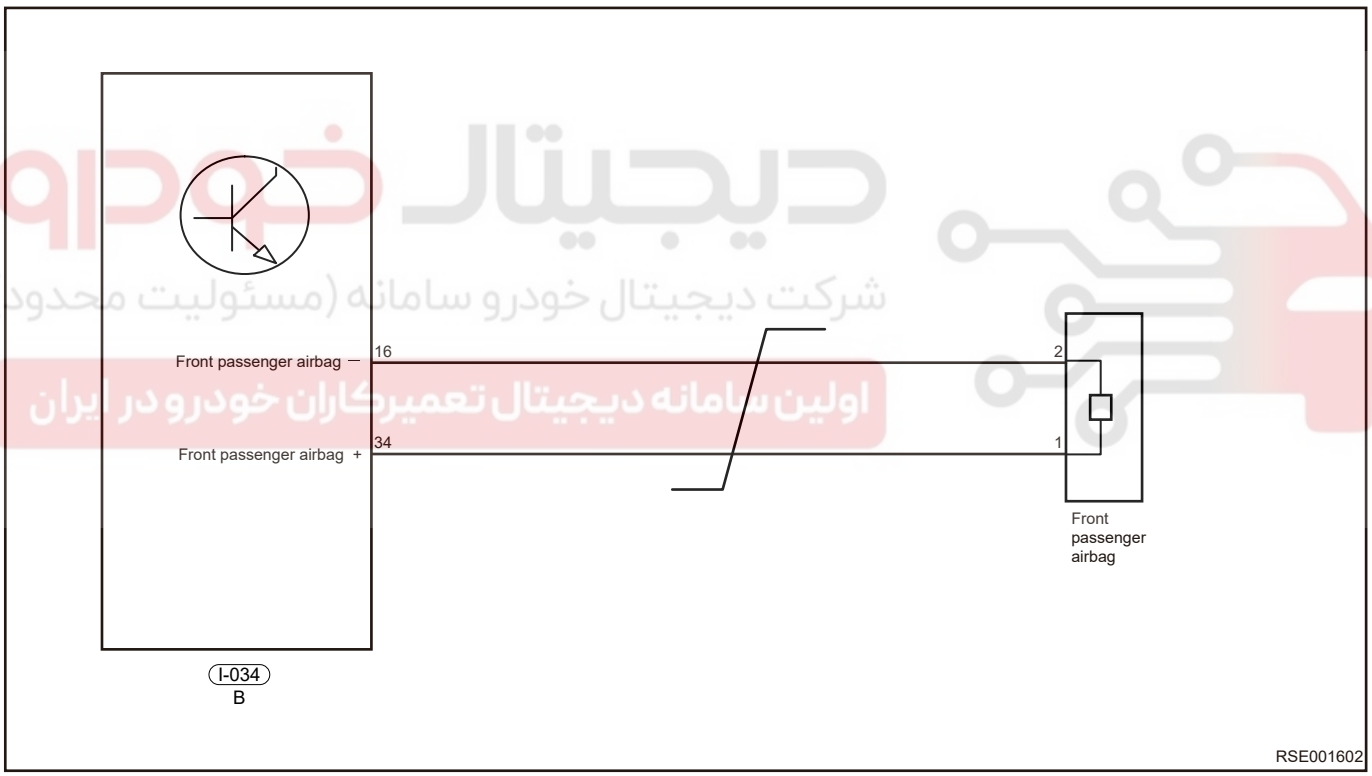
NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B0010-11**	**Passenger Frontal Airbag Deployment Control Circuit Short To Ground**
DTC	**B0010-12**	**Passenger Frontal Airbag Deployment Control Circuit Short To Power Supply**
DTC	**B0010-1A**	**Passenger Frontal Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0010-1B**	**Passenger Frontal Airbag Deployment Control Circuit Resistance Above Threshold**

Description

Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-01-0-11	Passenger Frontal Airbag Deployment Control	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Front passenger front airbag initiation circuit is short to ground, short-circuit current is detected by controller	Protect the wire harness integrity	Warning light comes on
B0-01-0-12	Passenger Frontal Airbag Deployment Control	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Front passenger front airbag initiation circuit is short to power supply, short-circuit current is detected by controller	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-01-0-1A	Passenger Frontal Airbag Deployment Control	Circuit Resistance Below Threshold	External	• When airbag is less than 1.1 Ω, the malfunction is detected; • When airbag resistance value is between 1.1 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Front passenger airbag ignition circuit resistance below set threshold	Correctly define resistance range/ system operation	Warning light comes on
B0-01-0-1B	Passenger Frontal Airbag Deployment Control	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Front passenger frontal initiation circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Check front passenger front airbag voltage to power supply**

Use circuit diagram as a guide to perform the following inspection procedures:

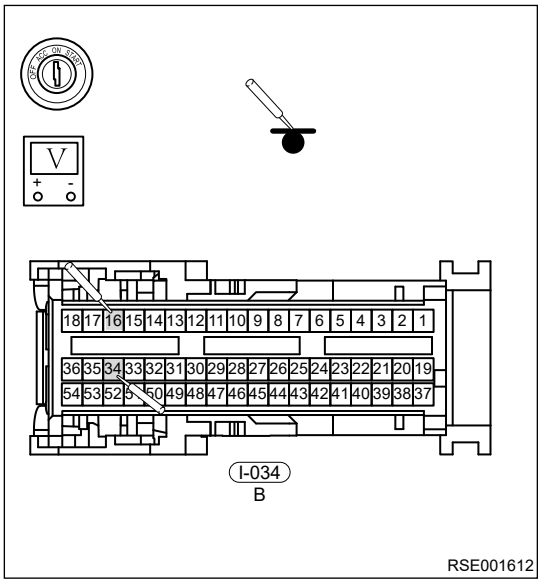
(a) Disconnect the front passenger frontal airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to ON.

(d) Perform the voltage inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (34) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (16) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace wire harness between front passenger front airbag and power supply**

OK →

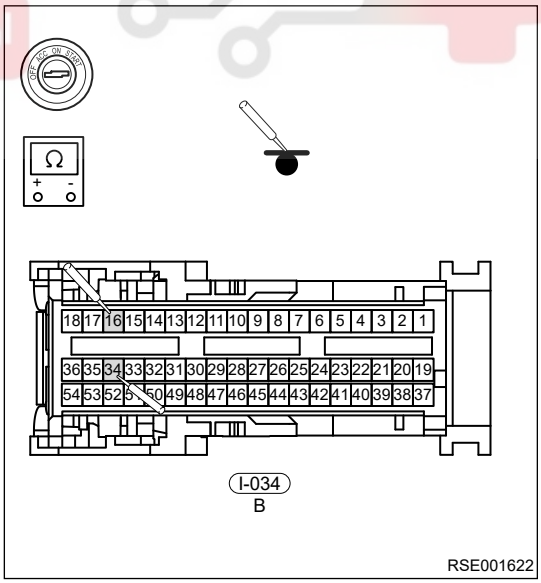
2	**Check front passenger front airbag resistance to power supply**

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Turn ENGINE START STOP switch to ON.

(b) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (34) - Body ground	ENGINE START STOP switch OFF	∞
I-034 (16) - Body ground	ENGINE START STOP switch OFF	∞



NG → **Repair or replace wire harness and connectors of front passenger frontal airbag wire harness to ground**

OK →

3	Check circuit between airbag controller and front passenger frontal airbag

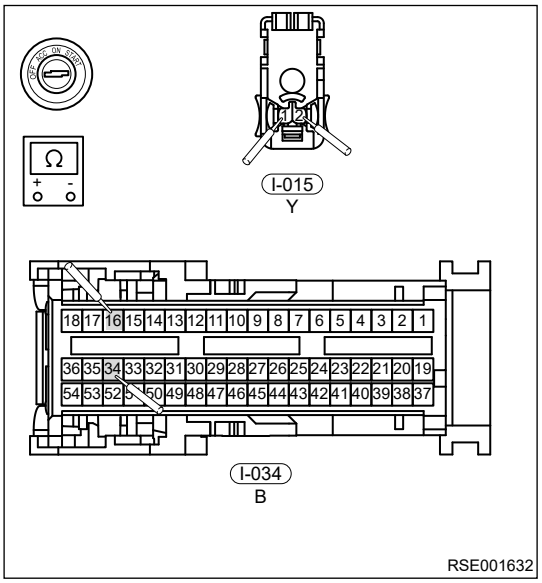
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Disconnect the front passenger frontal airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.



Multimeter Connection	Condition	Specified Condition
I-034 (16) - I-015 (2)	ENGINE START STOP switch OFF	Less than 1 Ω
I-034 (34) - I-015 (1)	ENGINE START STOP switch OFF	Less than 1 Ω

NG → **Repair or replace wire harness between airbag controller and front passenger frontal airbag.**

OK

4	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

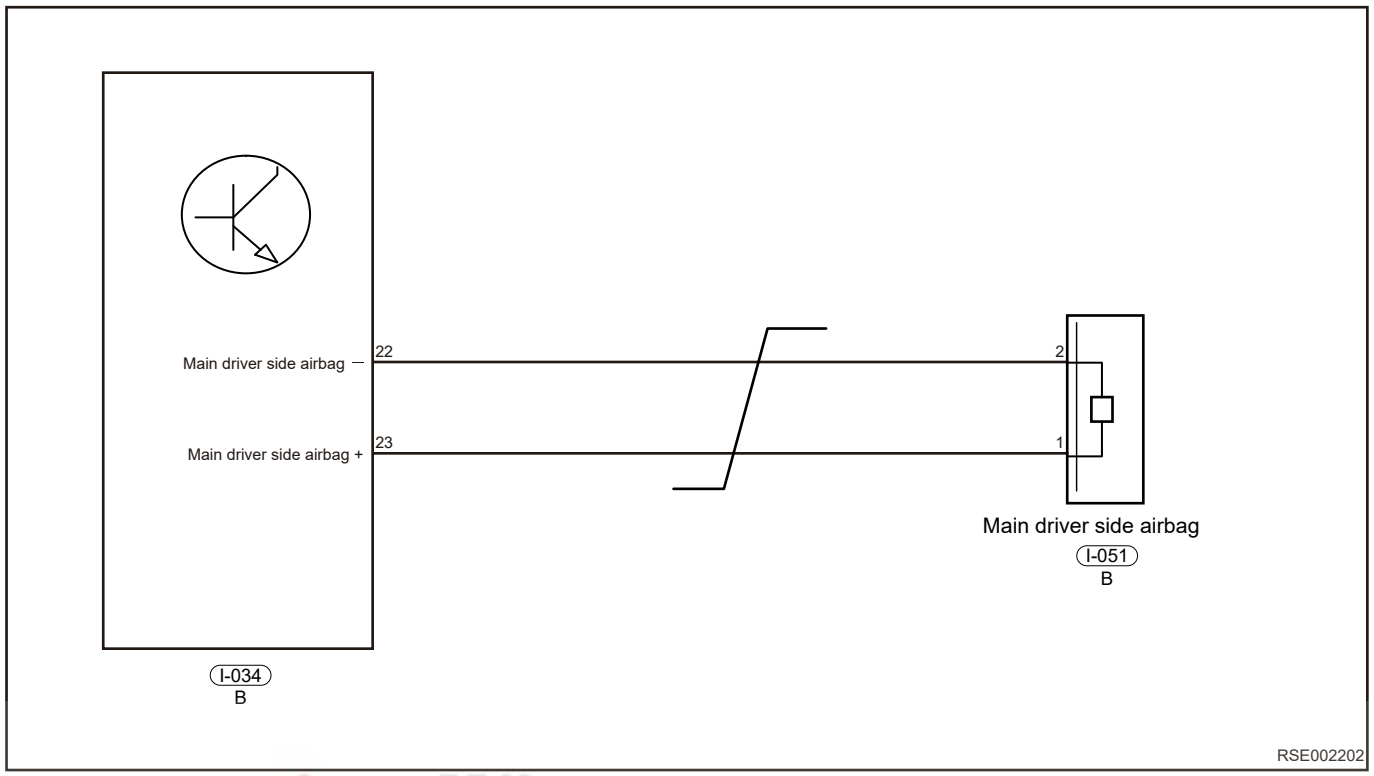
(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B0020-11**	**Left Side Airbag Deployment Control Circuit Short To Ground**
DTC	**B0020-12**	**Left Side Airbag Deployment Control Circuit Short To Power Supply**
DTC	**B0020-1A**	**Left Side Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0020-1B**	**Left Side Airbag Deployment Control Circuit Resistance Above Threshold**

Description
Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-02-0-11	Left Side Airbag Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-02-0-12	Left Side Airbag Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-02-0-1A	Left Side Airbag Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.1 Ω, the malfunction is detected; • When airbag resistance value is between 1.1 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.1 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Airbag ignition circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-02-0-1B	Left Side Airbag Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 5.0 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Airbag initiation circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Inspect voltage between driver seat side airbag and power supply**

(a) Unplug the driver seat side airbag connector.

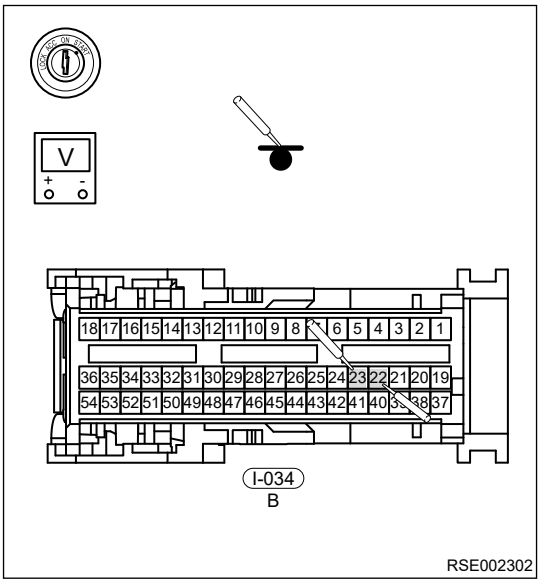
(b) Unplug the airbag module connector.

(c)

(d) Turn ENGINE START STOP switch to ON.

(e) Perform the voltage inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (22) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (23) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace driver seat side airbag power supply wire harness.**

OK →

2	**Inspect resistance between driver seat side airbag and ground**

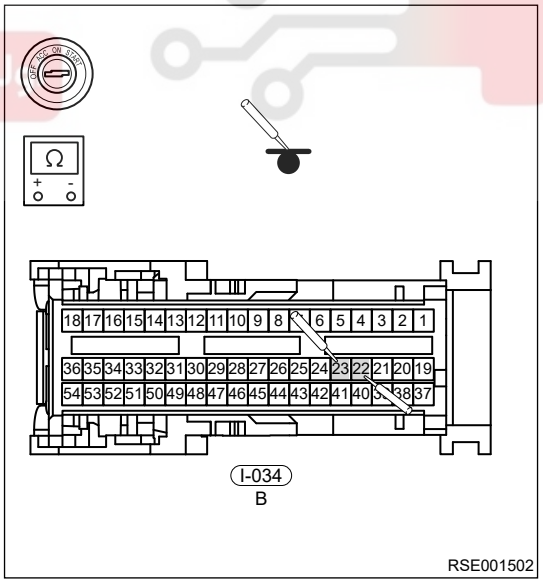
(a) Unplug the driver seat side airbag connector.

(b) Unplug the airbag module connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (22) - Body ground	ENGINE START STOP switch OFF	∞
I-034 (23) - Body ground	ENGINE START STOP switch OFF	∞



NG → **Repair or replace driver seat side airbag ground wire harness.**

OK →

3	**Check circuit between airbag controller and driver seat side airbag**

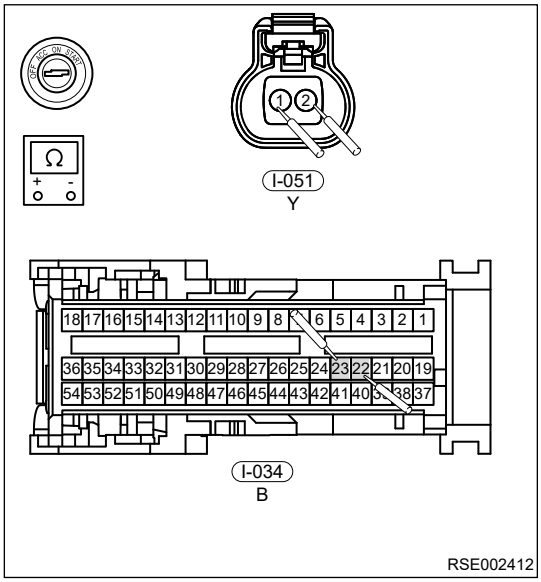
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Disconnect the driver seat side airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.



Multimeter Connection	Condition	Specified Condition
I-034 (24) - I-051 (2)	ENGINE START STOP switch OFF	Less than 1 Ω
I-034 (23) - I-051 (1)	ENGINE START STOP switch OFF	Less than 1 Ω

NG → **Repair or replace wire harness between airbag controller and driver seat side airbag.**

OK →

4	**Inspect driver seat side airbag**

(a) Substitute one 2.5 Ω resistance for airbag.

(b) Check if DTC exists.

NG → **Repair or replace driver seat side airbag.**

OK →

5	**Reconfirm DTCs**

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

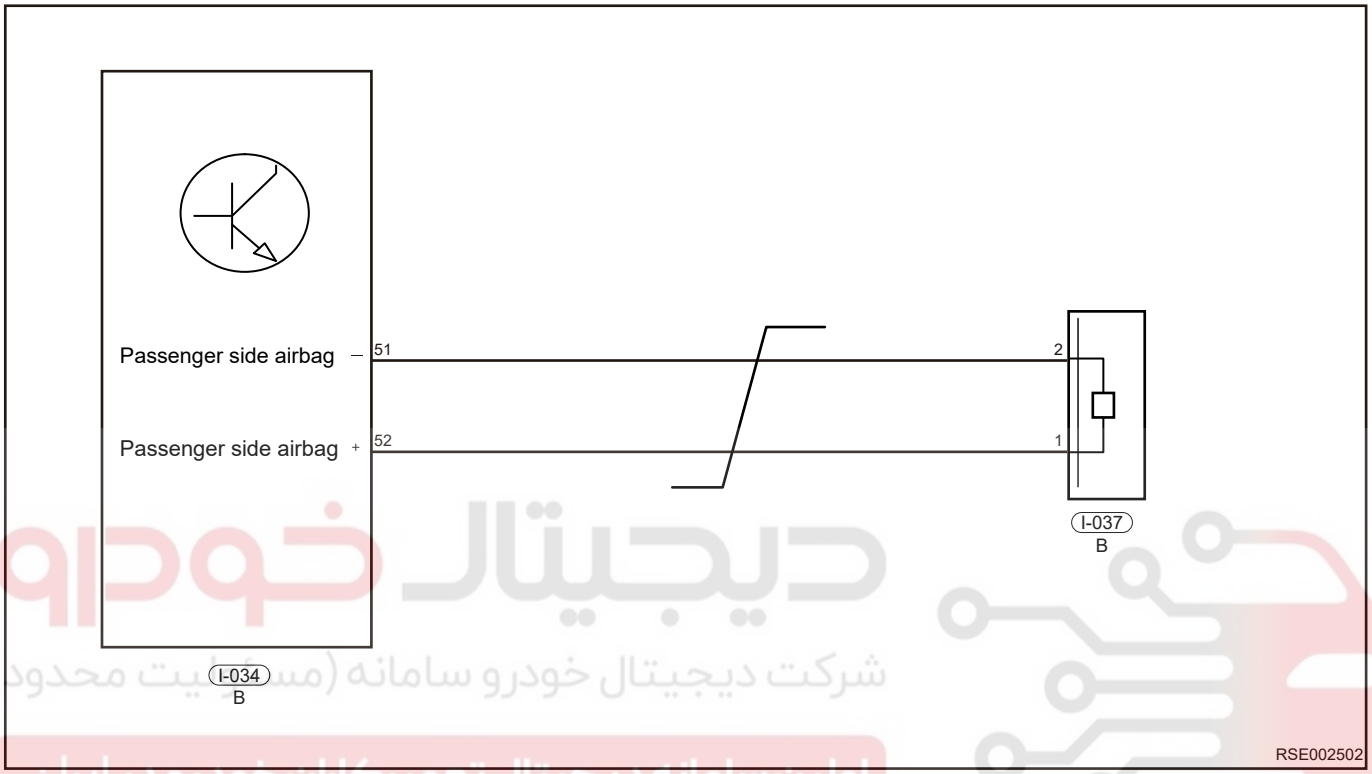
NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B0028-11**	**Right Side Airbag Deployment Control Circuit Short To Ground**
DTC	**B0028-12**	**Right Side Airbag Deployment Control Circuit Short To Power Supply**

DTC	**B0028-1A**	**Right Side Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0028-1B**	**Right Side Airbag Deployment Control Circuit Resistance Above Threshold**

Description
Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-02-8-11	Right Side Airbag Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-02-8-12	Right Side Airbag Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-02-8-1A	Right Side Airbag Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag resistance value is less than 1.1 Ω, the malfunction is detected; • When airbag resistance value is between 1.1 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.1 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Airbag ignition circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-02-8-1B	Right Side Airbag Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Airbag initiation circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Inspect voltage between front passenger seat side airbag and power supply**

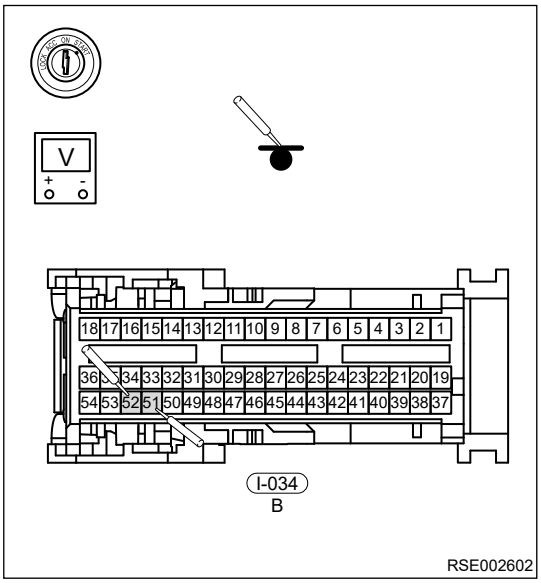
(a) Unplug the front passenger seat side airbag connector.

(b) Unplug the airbag module connector.

(c) Turn ENGINE START STOP switch to ON.

(d) Perform the voltage inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (51) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (52) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace front passenger seat side airbag power supply wire harness.**

OK

2	**Inspect resistance between front passenger seat side airbag and ground**

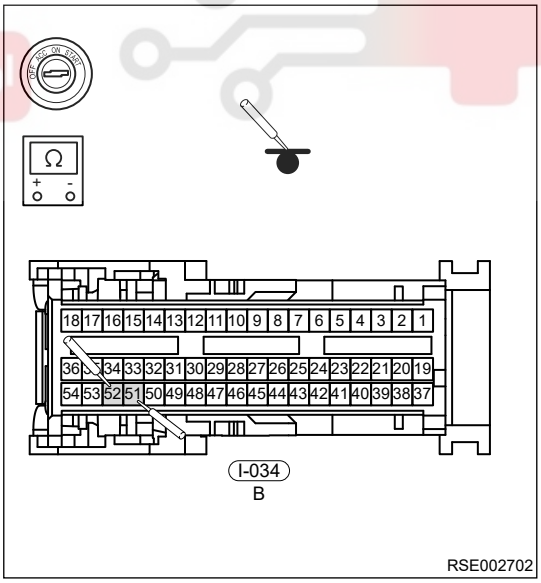
(a) Unplug the front passenger seat side airbag connector.

(b) Unplug the airbag module connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (51) - Body ground	ENGINE START STOP switch OFF	∞
I-034 (52) - Body ground	ENGINE START STOP switch OFF	∞



NG → **Repair or replace front passenger seat side airbag ground wire harness.**

OK

3	**Check circuit between airbag controller and front passenger seat side airbag**

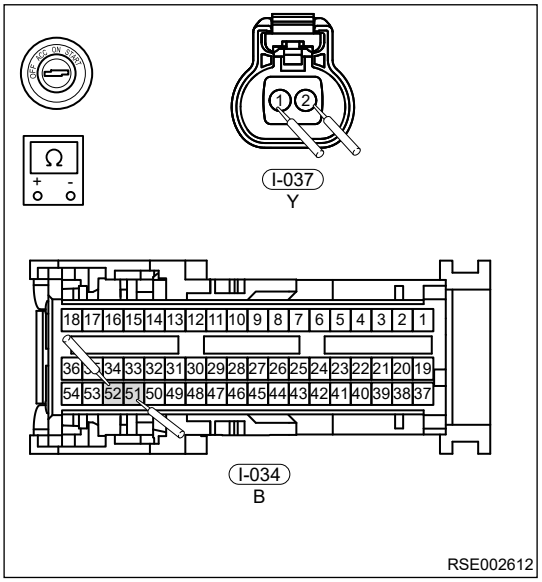
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Disconnect the front passenger seat side airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.



Multimeter Connection	Condition	Specified Condition
I-034 (51) - I-037 (2)	ENGINE START STOP switch OFF	Less than 1 Ω
I-034 (52) - I-037 (1)	ENGINE START STOP switch OFF	Less than 1 Ω

NG → **Repair or replace wire harness between airbag controller and front passenger seat side airbag.**

OK

4	**Inspect front passenger seat side airbag**

(a) Substitute one 2.5 Ω resistance for airbag.

(b) Check if DTC exists.

NG → **Repair or replace front passenger seat side airbag.**

OK

5	**Reconfirm DTCs**

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

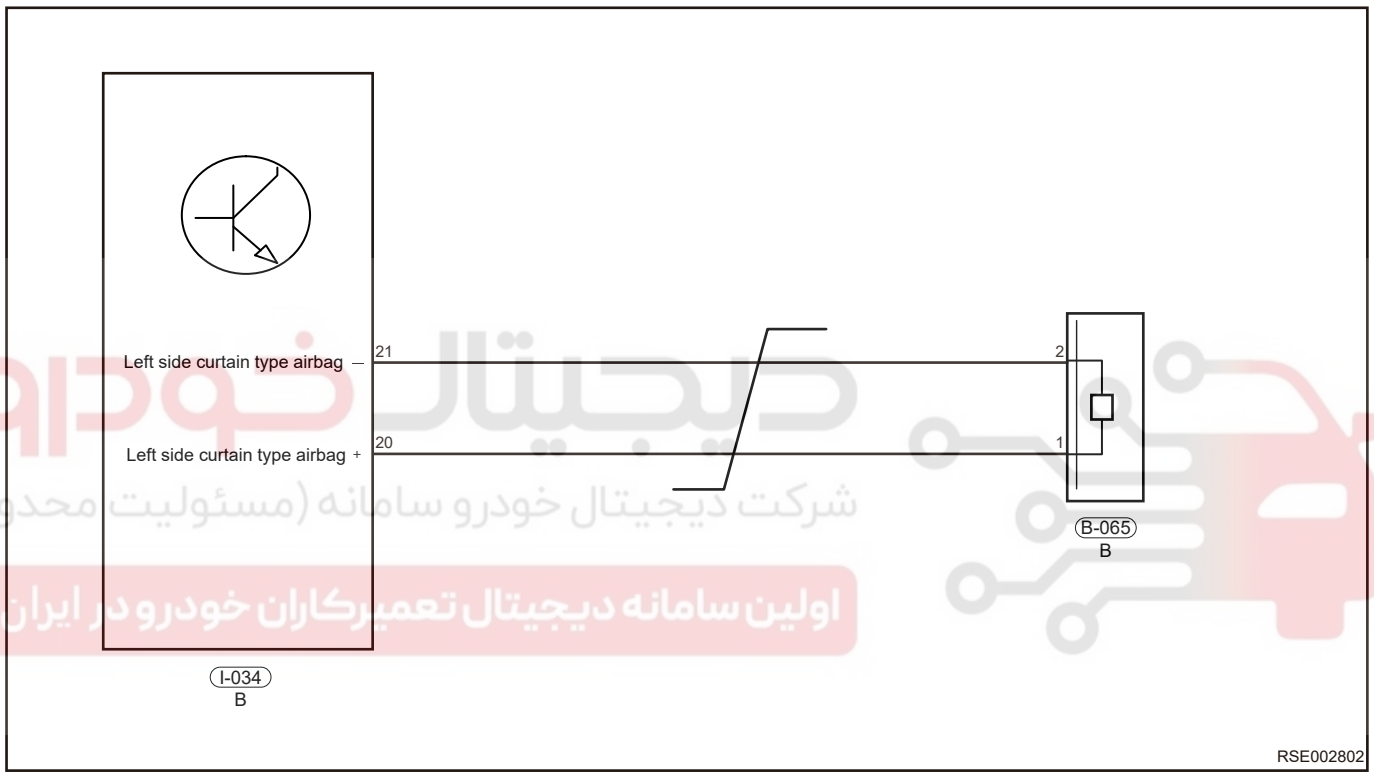
(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B0021-11**	**Left Curtain Airbag Deployment Control Circuit Short To Ground**
DTC	**B0021-12**	**Left Curtain Airbag Deployment Control Circuit Short To Power Supply**
DTC	**B0021-1A**	**Left Curtain Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0021-1B**	**Left Curtain Airbag Deployment Control Circuit Resistance Above Threshold**

Description
Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-02-1-11	Left Curtain Airbag Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-02-1-12	Left Curtain Airbag Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-02-1-1A	Left Curtain Airbag Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-02-1-1B	Left Curtain Airbag Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Inspect voltage between driver curtain shield airbag and power supply**

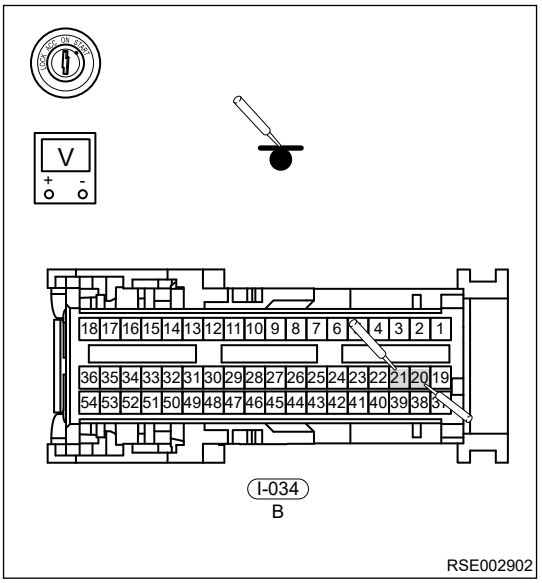
(a) Unplug the driver curtain shield airbag connector.

(b) Unplug the airbag module connector.

(c) Turn ENGINE START STOP switch to ON.

(d) Perform the voltage inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (20) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (21) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace driver curtain shield airbag power supply wire harness.**

OK

2	**Inspect resistance between driver curtain shield airbag and ground**

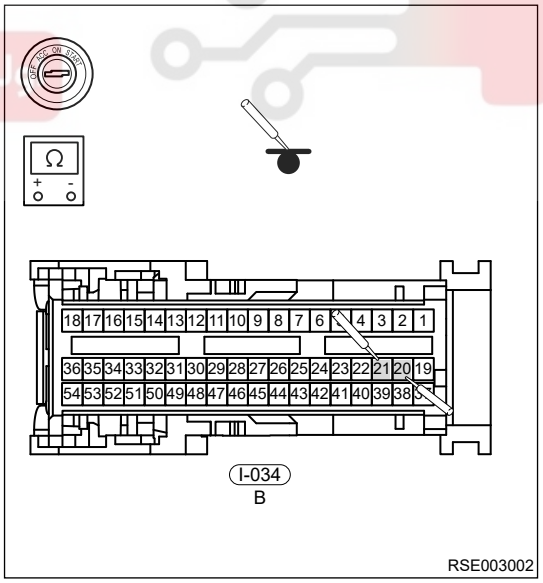
(a) Unplug the driver curtain shield airbag connector.

(b) Unplug the airbag module connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (20) - Body ground	ENGINE START STOP switch OFF	∞
I-034 (21) - Body ground	ENGINE START STOP switch OFF	∞



NG → **Repair or replace driver curtain shield airbag ground wire harness.**

OK

3	**Check circuit between airbag controller and driver curtain shield**

Use circuit diagram as a guide to perform the following inspection procedures:

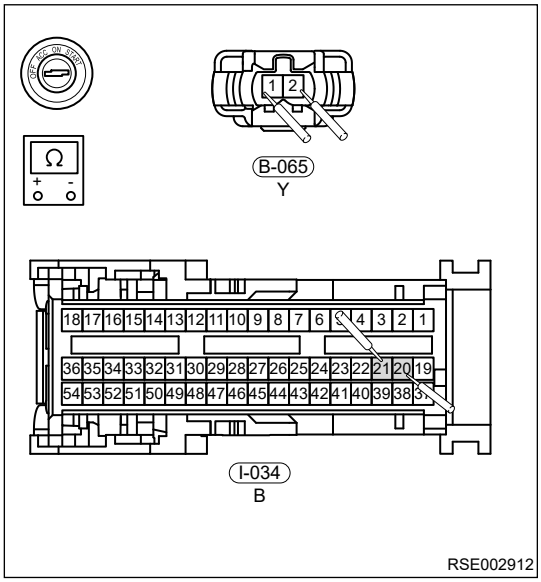
(a) Disconnect the driver curtain shield airbag connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (21) - B-065 (2)	ENGINE START STOP switch OFF	Less than 1 Ω
I-034 (20) - B-065 (1)	ENGINE START STOP switch OFF	Less than 1 Ω



NG → **Repair or replace wire harness between airbag controller and driver curtain shield airbag.**

OK →

4	**Inspect driver curtain shield airbag**

(a) Substitute one 2.5 Ω resistance for airbag.

(b) Check if DTC exists.

NG → **Repair or replace driver frontal airbag.**

OK →

5	**Reconfirm DTCs**

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

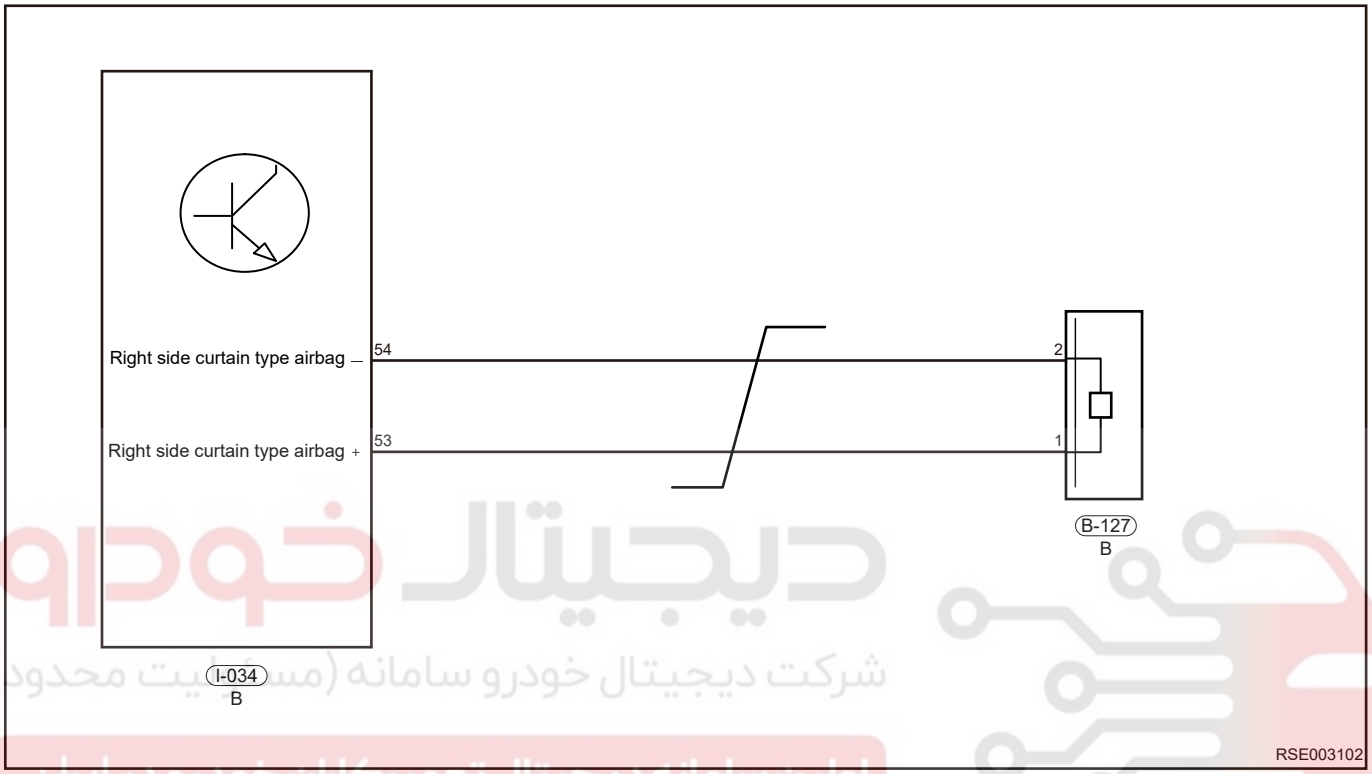
OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B0029-11**	**Right Side Airbag Deployment Control Circuit Short To Ground**
DTC	**B0029-12**	**Right Side Airbag Deployment Control Circuit Short To Power Supply**

DTC	**B0029-1A**	**Right Side Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0029-1B**	**Right Side Airbag Deployment Control Circuit Resistance Above Threshold**

Description

Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-02-9-11	Right Side Airbag Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-02-9-12	Right Side Airbag Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-02-9-1A	Right Side Airbag Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Airbag ignition circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-02-9-1B	Right Side Airbag Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Inspect voltage between right side curtain shield airbag and power supply**

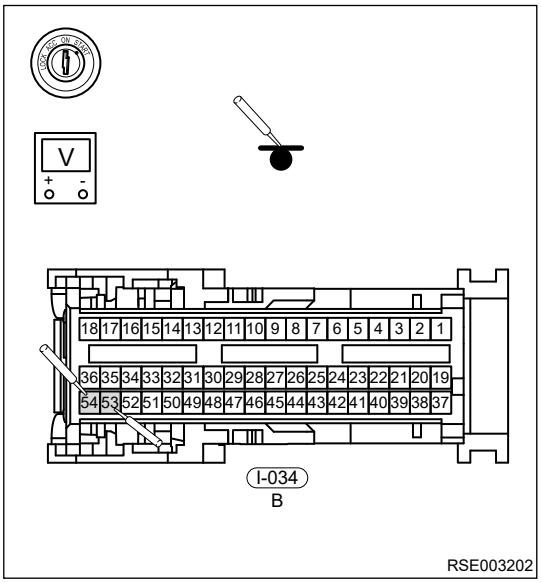
(a) Disconnect the right side curtain shield airbag connector.

(b) Disconnect the airbag module connector.

(c) Turn ENGINE START STOP switch to ON.

(d) Perform the voltage inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (54) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (53) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace right side curtain shield airbag power supply wire harness.**

OK →

2	**Inspect resistance between right side curtain shield airbag and ground**

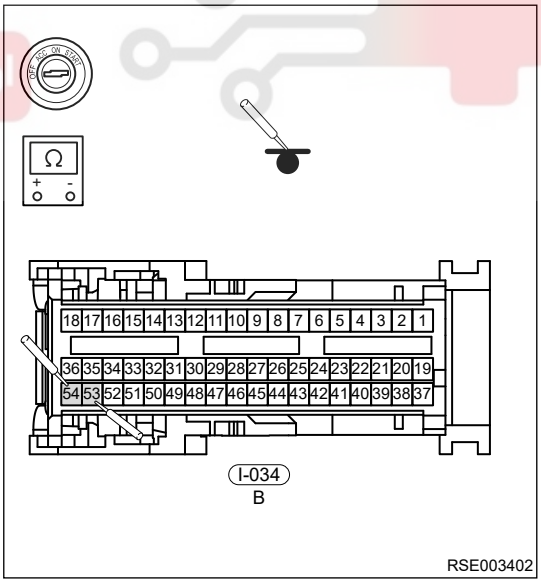
(a) Disconnect the right side curtain shield airbag connector.

(b) Disconnect the airbag module connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (54) - Body ground	ENGINE START STOP switch OFF	∞
I-034 (53) - Body ground	ENGINE START STOP switch OFF	∞



NG → **Repair or replace right side curtain shield airbag ground wire harness.**

OK →

3	**Check circuit between airbag controller and right side curtain shield airbag**

Use circuit diagram as a guide to perform the following inspection procedures:

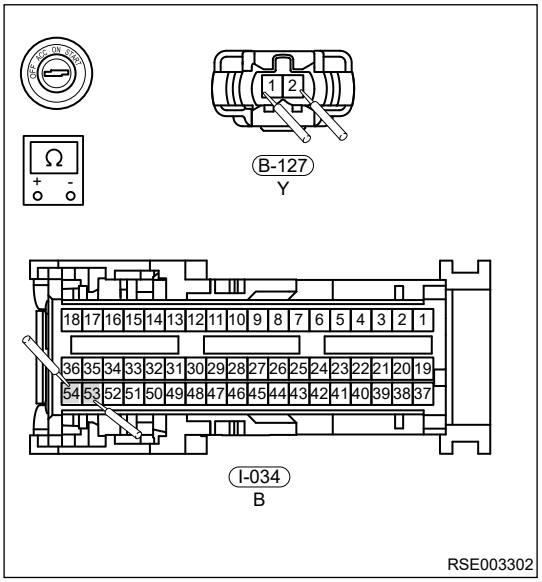
(a) Disconnect the right side curtain shield airbag connector.

(b) Disconnect the airbag module connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (54) - B-127 (2)	ENGINE START STOP switch OFF	Less than 1 Ω
I-034 (53) - B-127 (1)	ENGINE START STOP switch OFF	Less than 1 Ω



NG → **Repair or replace wire harness between airbag controller and right side curtain shield airbag.**

OK →

4	Inspect right side curtain shield airbag

(a) Substitute one 2.5 Ω resistance for airbag.

(b) Check if DTC exists.

NG → **Repair or replace right side curtain shield airbag.**

OK →

5	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B1285-11	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Ground
DTC	B1285-12	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Power Supply
DTC	B1285-1A	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Resistance Below Threshold
DTC	B1285-1B	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Resistance Above Threshold

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-28-5-11	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B1-28-5-12	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B1-28-5-1A	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B1-28-5-1B	Front Row Left Seatbelt Retractor Pretensioner Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	**B1286-11**	**Front Row Right Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Ground**
DTC	**B1286-12**	**Front Row Right Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Power Supply**

DTC	**B1286-1A**	**Front Row Right Seatbelt Retractor Pretensioner Deployment Control Circuit Resistance Below Threshold**
DTC	**B1286-1B**	**Front Row Right Seatbelt Retractor Pretensioner Deployment Control Circuit Resistance Above Threshold**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-28-6-11	Front Row Right Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B1-28-6-12	Front Row Right Seatbelt Retractor Pretensioner Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B1-28-6-1A	Front Row Right Seat-belt Retra-ctor Prete-nsion-er Depl-oyme-nt Contr-ol Circu-it Resi-stanc-e Below Thre-shold	Circuit Resist-ance Below Thres-hold	Exter-nal	• When airbag is less than 1.4 Ω, the malfunc-tion is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunc-tion may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistanc-e below set threshold.	Correctly define resistance range/ system operation	War-ning light com-es on
B1-28-6-1B	Front Row Right Seat-belt Retra-ctor Prete-nsion-er Depl-oyme-nt Contr-ol Circu-it Resi-stanc-e Abov-e Thre-shold	Circuit Resist-ance Above Thres-hold	Exter-nal	• When airbag resistance value is more than 5.0 Ω, the malfunc-tion is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunc-tion may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistanc-e above set threshold	Correctly define resistance range/ system operation	War-ning light com-es on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	**B1204-11**	**Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Ground**
DTC	**B1204-12**	**Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Power Supply**

DTC	**B1204-1A**	**Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Below Threshold**
DTC	**B1204-1B**	**Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Above Threshold**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-20-4-11	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B1-20-4-12	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B1-20-4-1A	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B1-20-4-1B	Front Left Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	**B1205-11**	**Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Ground**
DTC	**B1205-12**	**Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Power Supply**

DTC	**B1205-1A**	**Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Below Threshold**
DTC	**B1205-1B**	**Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Above Threshold**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-20-5-11	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B1-20-5-12	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B1-20-5-1A	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B1-20-5-1B	Front Right Seat Belt with Pretensioner (End Plate) Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	**B0073-11**	**Second Row Left Seat Belt Pretensioner Deployment Control Circuit Short To Ground**
DTC	**B0073-12**	**Second Row Left Seat Belt Pretensioner Deployment Control Circuit Short To Power Supply**

DTC	**B0073-1A**	**Second Row Left Seat Belt Pretensioner Deployment Control Circuit Resistance Below Threshold**
DTC	**B0073-1B**	**Second Row Left Seat Belt Pretensioner Deployment Control Circuit Resistance Above Threshold**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-07-3-11	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-07-3-12	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-07-3-1A	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-07-3-1B	Second Row Left Seat Belt Pretensioner Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	**B0075-11**	**Second Row Right Seat Belt Pretensioner Deployment Control Circuit Short To Ground**
DTC	**B0075-12**	**Second Row Right Seat Belt Pretensioner Deployment Control Circuit Short To Power Supply**

DTC	**B0075-1A**	**Second Row Right Seat Belt Pretensioner Deployment Control Circuit Resistance Below Threshold**
DTC	**B0075-1B**	**Second Row Right Seat Belt Pretensioner Deployment Control Circuit Resistance Above Threshold**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-07-5-11	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-07-5-12	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-07-5-1A	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-07-5-1B	Second Row Right Seat Belt Pretensioner Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	**B0030-11**	**Second Row Left Side Airbag Deployment Control Circuit Short To Ground**
DTC	**B0030-12**	**Second Row Left Side Airbag Deployment Control Circuit Short To Power Supply**

DTC	**B0030-1A**	**Second Row Left Side Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0030-1B**	**Second Row Left Side Airbag Deployment Control Circuit Resistance Above Threshold**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-03-0-11	Second Row Left Side Airbag Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-03-0-12	Second Row Left Side Airbag Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

B0-03-0-1A	Second Row Left Side Airbag Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-03-0-1B	Second Row Left Side Airbag Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	**B0038-11**	**Second Row Right Seat Side Airbag Deployment Control Circuit Short To Ground**
DTC	**B0038-12**	**Second Row Right Seat Side Airbag Deployment Control Circuit Short To Power Supply**
DTC	**B0038-1A**	**Second Row Right Seat Side Airbag Deployment Control Circuit Resistance Below Threshold**
DTC	**B0038-1B**	**Second Row Right Seat Side Airbag Deployment Control Circuit Resistance Above Threshold**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-03-8-11	Second Row Right Seat Side Airbag Deployment Control Circuit Short To Ground	Circuit Short to Ground	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the resistance between the driver frontal airbag initiation circuit and the ground;	• Airbag ignition circuit is short to ground, short-circuit current detected by controller;	Protect the wire harness integrity	Warning light comes on
B0-03-8-12	Second Row Right Seat Side Airbag Deployment Control Circuit Short To Power Supply	Circuit Short to Power Supply	External	• When leakage is less than 1 kΩ, the malfunction is detected; • When leakage resistance value is between 1 and 10 kΩ, the malfunction may be detected;	• When leakage resistance value is more than 1 kΩ, the malfunction may disappear; • When leakage resistance value is more than 10 kΩ, the malfunction disappears, check the driver knee airbag initiation circuit;	• Airbag ignition circuit short to power supply, short-circuit current detected by controller;	Connect the wire harness firmly or protect the wire harness integrity	Warning light comes on

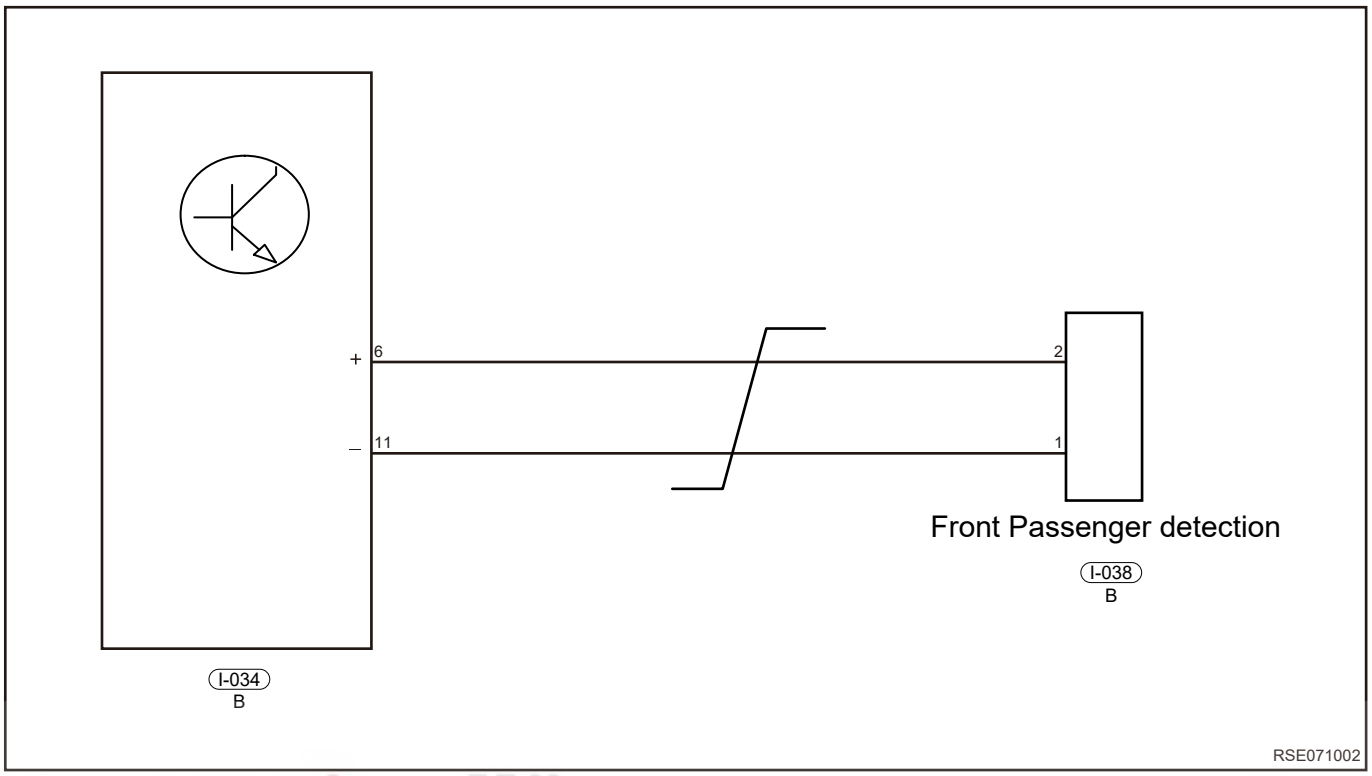
B0-03-8-1A	Second Row Right Seat Side Airbag Deployment Control Circuit Resistance Below Threshold	Circuit Resistance Below Threshold	External	• When airbag is less than 1.4 Ω, the malfunction is detected; • When airbag resistance value is between 1.4 and 1.7 Ω, the malfunction may be detected;	• When airbag resistance value is more than 1.4 Ω, the malfunction may disappear; • When airbag resistance value is more than 1.7 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Initiation circuit resistance below set threshold.	Correctly define resistance range/ system operation	Warning light comes on
B0-03-8-1B	Second Row Right Seat Side Airbag Deployment Control Circuit Resistance Above Threshold	Circuit Resistance Above Threshold	External	• When airbag resistance value is more than 5.0 Ω, the malfunction is detected; • When airbag resistance value is between 3.8 and 5.0 Ω, the malfunction may be detected;	• When airbag resistance value is less than 4.4 Ω, the malfunction may disappear; • When airbag resistance value is less than 3.8 Ω, the malfunction disappears, check the resistance of driver frontal airbag initiation circuit;	• Ignition circuit resistance above set threshold	Correctly define resistance range/ system operation	Warning light comes on

For repair methods, refer to “Driver Frontal Airbag Malfunction Troubleshooting Procedure” to perform troubleshooting and repair according to Circuit Diagram Manual.

DTC	B00C7-12	Passenger Presence Detection Switch Circuit Short To Power Supply

Description

Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-0C-7-12	Passenger Presence Detection Switch Circuit Short To Power Supply	Switch terminal connects with power supply	External	• Switch terminal connects with power supply;	• Remove wire harness lap part;	• System short circuit current occurs;	Protect the wire harness integrity	Warning light comes on

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

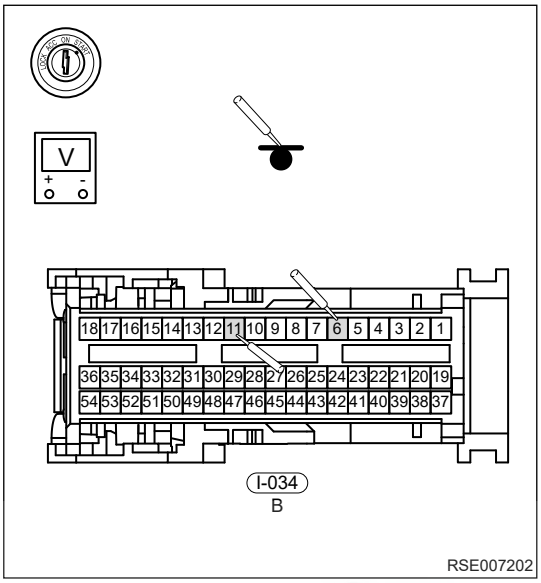
1	Check voltage between front passenger load detection switch and power supply

(a) Disconnect the airbag connector.

(b) Turn ENGINE START STOP switch to ON.

(c) Check the voltage between circuit of connector end and ground.

Multimeter Connection	Condition	Specified Condition
I-034 (6) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (11) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace front passenger load detection switch wire harness.**

OK →

2	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

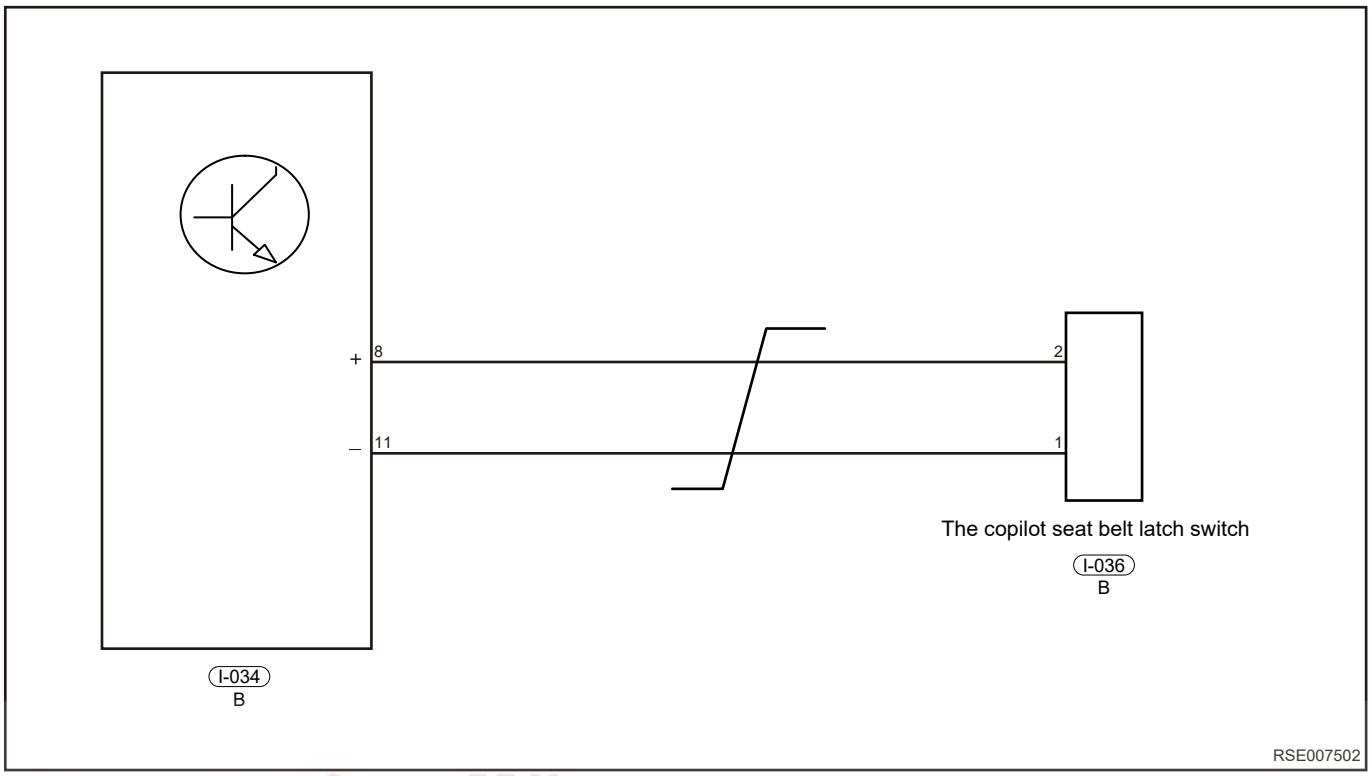
(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B1233-12	Passenger Buckle Switch Circuit Short To Power Supply

Description
Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-23-3-12	Passenger Buckle Switch Circuit Short To Power Supply	Switch terminal connects with power supply	External	• Switch terminal connects with power supply;	• Remove wire harness lap part;	• System short circuit current occurs;	Protect the wire harness integrity	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

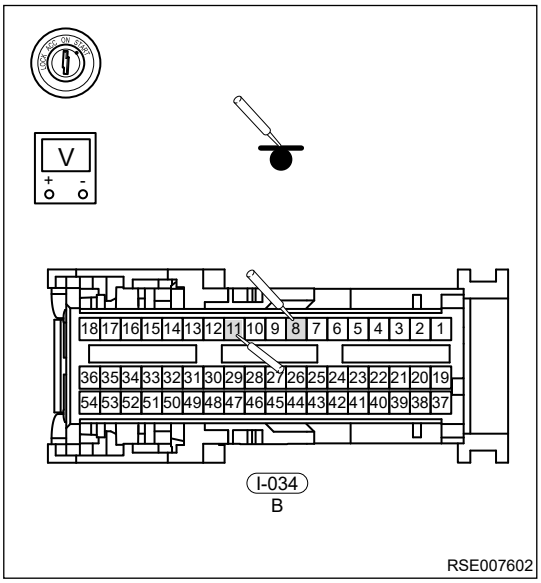
1	Inspect voltage between front passenger buckle switch and power supply

(a) Disconnect the airbag connector.

(b) Turn ENGINE START STOP switch to ON.

(c) Check the voltage between circuit of connector end and ground.

Multimeter Connection	Condition	Specified Condition
I-034 (8) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (11) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace front passenger buckle switch wire harness.**

OK →

2	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B1234-12	Second Row Left Buckle Switch Circuit Short To Power Supply

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-23-4-12	Second Row Left Buckle Switch Circuit Short To Power Supply	Switch terminal connects with power supply	External	• Switch terminal connects with power supply;	• Remove wire harness lap part;	• System short circuit current occurs;	Protect the wire harness integrity	Warning light comes on

Diagnosis method according to the circuit manual, refer to the check procedure of "Passenger Buckle Switch Circuit Short To Power Supply".

DTC	B1235-12	Second Row Middle Buckle Switch Circuit Short To Power Supply

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-23-5-12	Second Row Middle Buckle Switch Circuit Short To Power Supply	Switch terminal connects with power supply	External	• Switch terminal connects with power supply;	• Remove wire harness lap part;	• System short circuit current occurs;	Protect the wire harness integrity	Warning light comes on

Diagnosis method according to the circuit manual, refer to the check procedure of "Passenger Buckle Switch Circuit Short To Power Supply".

DTC	B1236-12	Second Row Right Buckle Switch Circuit Short To Power Supply

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-23-6-12	Second Row Right Buckle Switch Circuit Short To Power Supply	Switch terminal connects with power supply	External	• Switch terminal connects with power supply;	• Remove wire harness lap part;	• System short circuit current occurs;	Protect the wire harness integrity	Warning light comes on

Diagnosis method according to the circuit manual, refer to the check procedure of "Passenger Buckle Switch Circuit Short To Power Supply".

DTC	B0090-11	Left Front Restraints Sensor Circuit Short To Ground
DTC	B0090-12	Left Front Restraints Sensor Circuit Short To Power Supply
DTC	B0090-13	Left Front Restraints Sensor Circuit Open
DTC	B0090-96	Left Front Restraints Sensor Component Internal Failure
DTC	B0090-91	Left Front Restraints Sensor Configured Fault
DTC	B0090-00	Left Front Restraints Sensor Communication Failure

Description

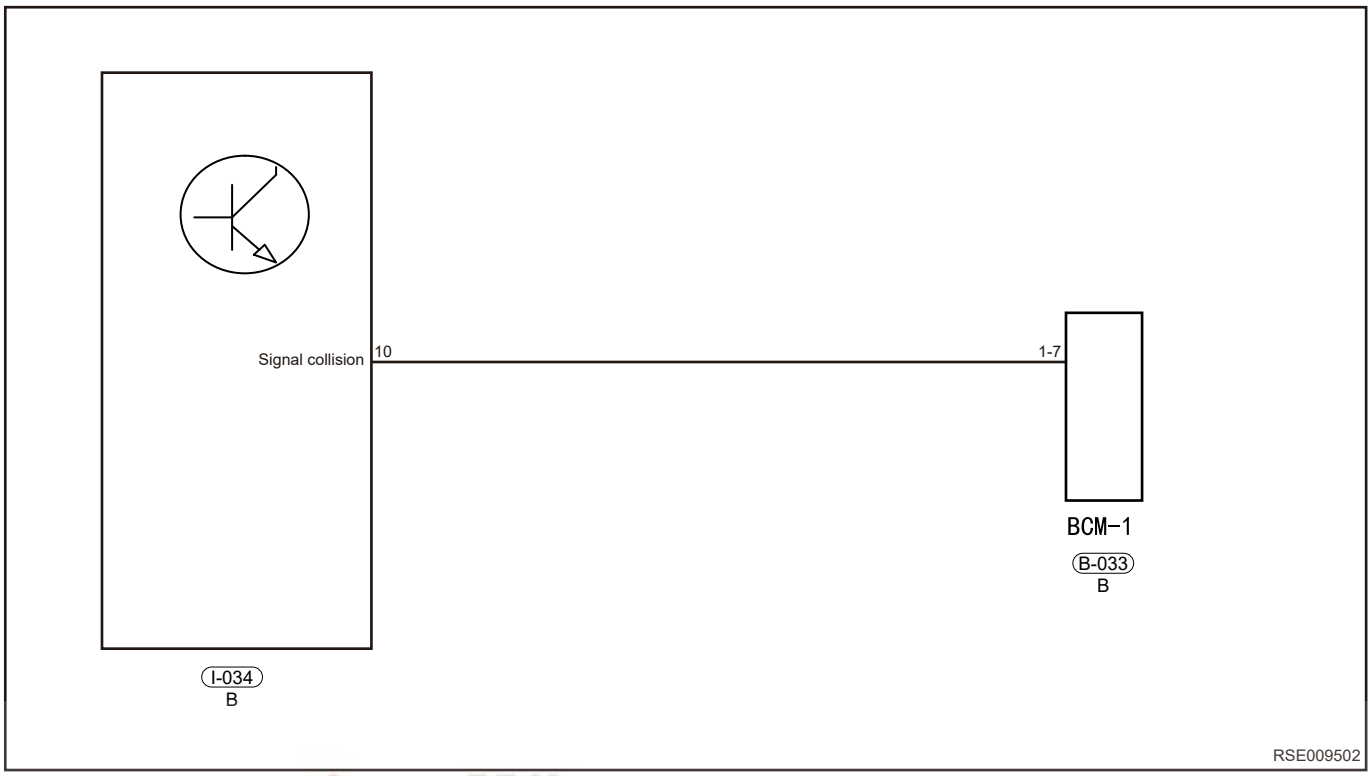
DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-09-0-11	Left Front Restraints Sensor Circuit Short To Ground	Circuit Short to Ground	External	Sensor terminal connects to ground	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on
B0-09-0-12	Left Front Restraints Sensor Circuit Short To Power Supply	Circuit Short to Power Supply	External	Sensor pins connected to power supply	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on
B0-09-0-13	Left Front Restraints Sensor Circuit Open	Circuit Open	External	Sensor not connected	Sensor connected	Sensor to be connected is not connected	Check for continuity of wire harness from ACU to sensor	Warning light comes on
B0-09-0-96	Left Front Restraints Sensor Component Internal Failure	Sensor internal problem	External	The sensor has a self-check function: Once a fault is detected, the sensor will report the fault	Replace sensor	Sensor is damaged	Qualified sensor is used	Warning light comes on

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-09-0-91	Left Front Restraints Sensor Configured Fault	Sensor parameter failure	External	The sensor has a self-check function: Once a fault is detected, the sensor will report the fault	Replace sensor	/	Qualified sensor is used	Warning light comes on
B0-09-0-00	Left Front Restraints Sensor Communication Failure	Communication error	External	A communication interface is connected to two identical sensors	Correct sensor is used	Use the same sensor connector to the same communication interface	Correct sensor is used	Warning light comes on

For reserved/ detection methods, refer to “Left Side Sensor Malfunction Diagnosis Procedure” to perform inspection and repair according to Circuit Diagram Manual.

DTC	**B0095-11**	**Right Front Restraints Sensor Circuit Short To Ground**
DTC	**B0095-12**	**Right Front Restraints Sensor Circuit Short To Power Supply**
DTC	**B0095-13**	**Right Front Restraints Sensor Circuit Open**
DTC	**B0095-96**	**Right Front Restraints Sensor Component Internal Failure**
DTC	**B0095-91**	**Right Front Restraints Sensor Configured Fault**
DTC	**B0095-00**	**Right Front Restraints Sensor Communication Failure**

Description
Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-09-5-11	Right Front Restraints Sensor Circuit Short To Ground	Circuit Short to Ground	External	Sensor terminal connects to ground	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on
B0-09-5-12	Right Front Restraints Sensor Circuit Short To Power Supply	Circuit Short to Power Supply	External	Sensor pins connected to power supply	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on

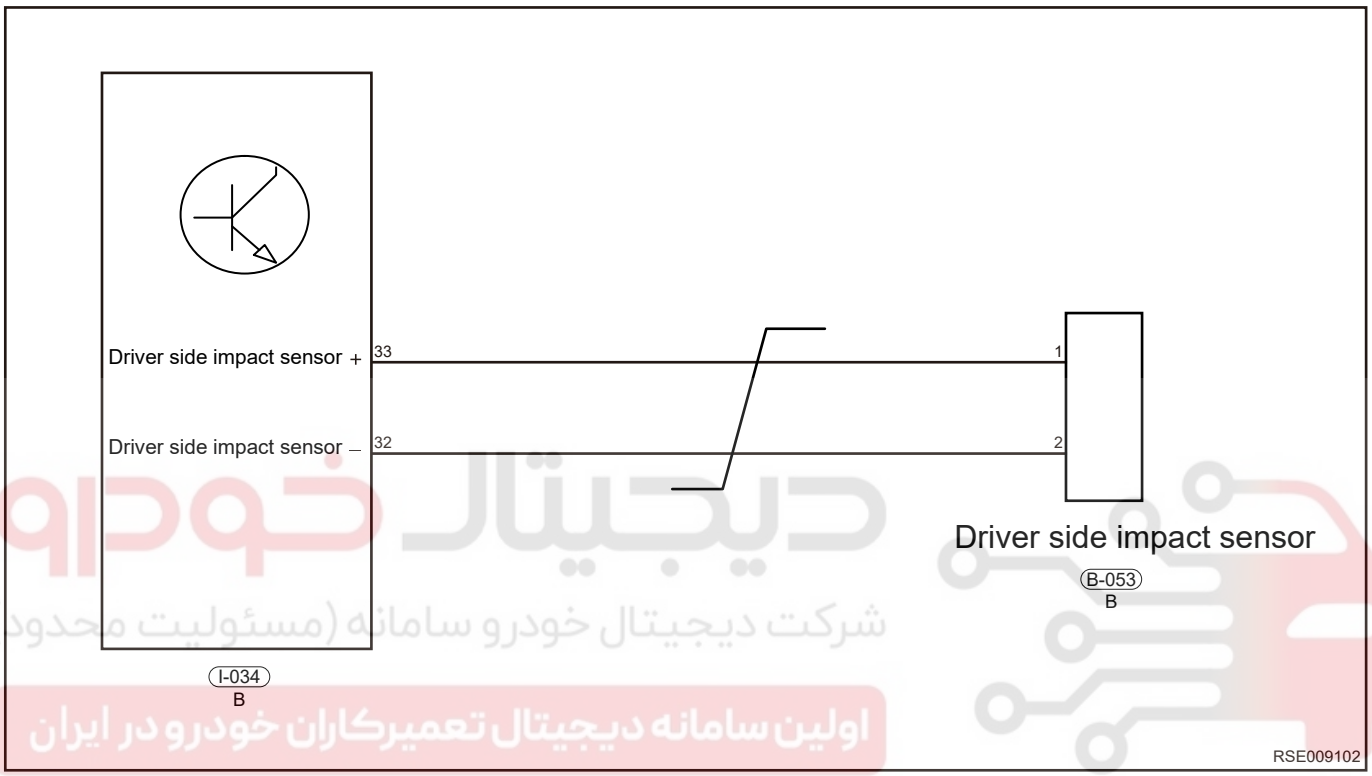
DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-09-5-13	Right Front Restraints Sensor Circuit Open	Circuit Open	External	Sensor not connected	Sensor connected	Sensor to be connected is not connected	Check for continuity of wire harness from ACU to sensor	Warning light comes on
B0-09-5-96	Right Front Restraints Sensor Component Internal Failure	Sensor internal problem	External	The sensor has a self-check function: Once a fault is detected, the sensor will report the fault	Replace sensor	Sensor is damaged	Qualified sensor is used	Warning light comes on
B0-09-5-91	Right Front Restraints Sensor Configured Fault	Sensor parameter failure	External	The sensor has a self-check function: Once a fault is detected, the sensor will report the fault	Replace sensor	/	Qualified sensor is used	Warning light comes on
B0-09-5-00	Right Front Restraints Sensor Communication Failure	Communication error	External	A communication interface is connected to two identical sensors	Correct sensor is used	Use the same sensor connector to the same communication interface	Correct sensor is used	Warning light comes on

For reserved/ detection methods, refer to “Left Side Sensor Malfunction Diagnosis Procedure” to perform inspection and repair according to Circuit Diagram Manual.

DTC	**B0091-11**	**Left Side Sensor Circuit Short To Ground**
DTC	**B0091-12**	**Left Side Restraints Sensor Circuit Short To Power Supply**

DTC	**B0091-13**	**Left Side Restraints Sensor Circuit Open**
DTC	**B0091-96**	**Left Side Restraints Sensor Component Internal Failure**
DTC	**B0091-95**	**Left Side Restraints Sensor Configured Fault**
DTC	**B0091-00**	**Left Side Restraints Sensor Communication Failure**

Description
Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-09-1-11	Left Side Restraints Sensor Circuit Short To Ground	Circuit Short to Ground	External	Sensor terminal connects to ground	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on
B0-09-1-12	Left Side Restraints	Circuit Short to	External	Sensor pins connected to power supply	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
	Sensor Circuit Short To Power Supply	Power Supply						
B0-09-1-13	Left Side Restraints Sensor Circuit Open	Circuit Open	External	Sensor not connected	Sensor connected	Sensor to be connected is not connected	Check for continuity of wire harness from ACU to sensor	Warning light comes on
B0-09-1-96	Left Side Restraints Sensor Component Internal Failure	Sensor internal problem	External	The sensor has a self-check function: Once a fault is detected, the sensor will report the fault	Replace sensor	Sensor is damaged	Qualified sensor is used	Warning light comes on

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-09-1-95	Left Side Restraints Sensor Configured Fault	Sensor parameter failure	External	The sensor has a self-check function: Once a fault is detected, the sensor will report the fault	Replace sensor	/	Qualified sensor is used	Warning light comes on
B0-09-1-00	Left Side Restraints Sensor Communication Failure	Communication error	External	A communication interface is connected to two identical sensors	Correct sensor is used	Use the same sensor connector to the same communication interface	Correct sensor is used	Warning light comes on

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

Hint:

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

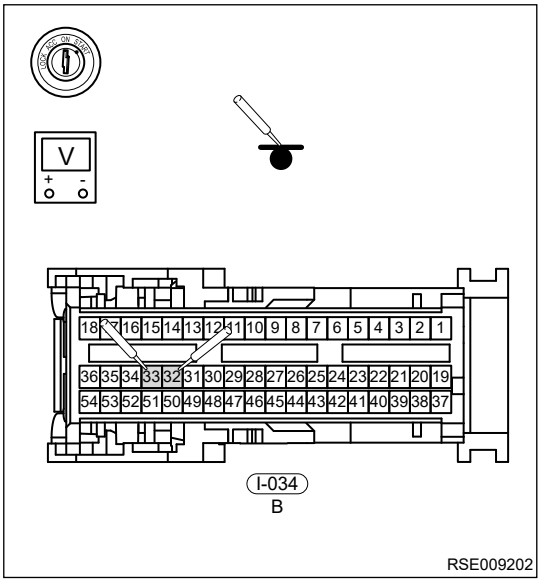
1	**Check voltage between left front collision sensor and power supply**

(a) Disconnect the airbag connector.

(b) Turn ENGINE START STOP switch to ON.

(c) Check the voltage between circuit of connector end and ground.

Multimeter Connection	Condition	Specified Condition
I-034 (32) - Body ground	ENGINE START STOP switch ON	0 V
I-034 (33) - Body ground	ENGINE START STOP switch ON	0 V



NG → **Repair or replace left front collision sensor wire harness.**

OK →

2	Check resistance between left front collision sensor and ground

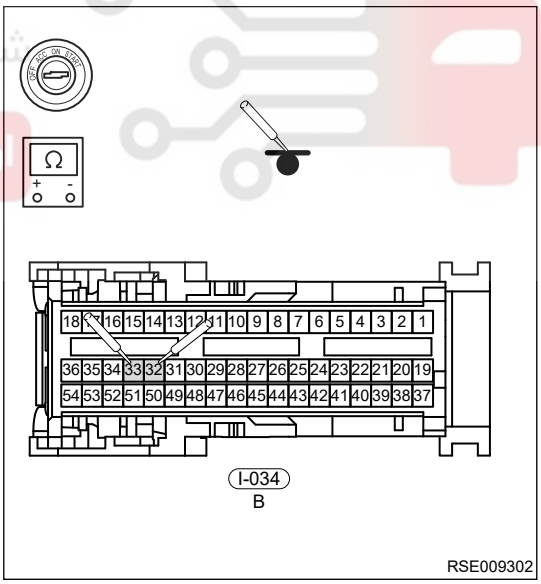
(a) Disconnect the left front collision sensor connector.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (32) - Body ground	ENGINE START STOP switch OFF	∞
I-034 (33) - Body ground	ENGINE START STOP switch OFF	∞



NG → **Repair or replace left front collision sensor wire harness.**

OK →

3	Check circuit between airbag controller and left front collision sensor

Use circuit diagram as a guide to perform the following inspection procedures:

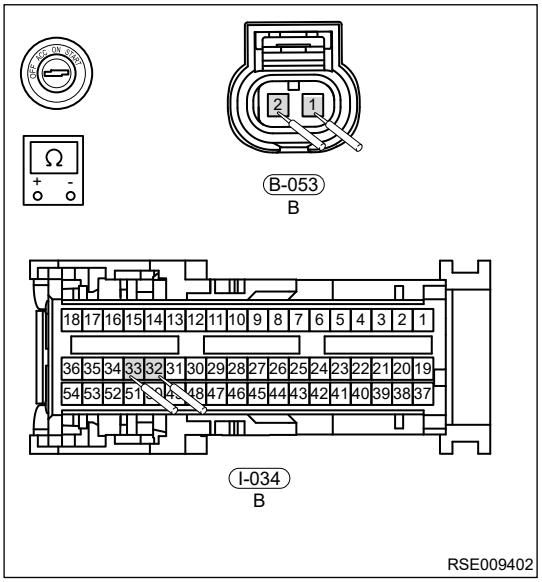
(a) Disconnect the left front collision sensor.

(b) Disconnect the airbag connector.

(c) Turn ENGINE START STOP switch to OFF.

(d) Perform the resistance inspection.

Multimeter Connection	Condition	Specified Condition
I-034 (32) - B-053 (2)	ENGINE START STOP switch OFF	Less than 1 Ω
I-034 (33) - B-053 (1)	ENGINE START STOP switch OFF	Less than 1 Ω



NG → **Repair or replace airbag controller and left front collision sensor wire harness.**

OK →

4	Check collision sensor

(a) Replace the collision sensor.

(b) Check if DTC exists.

OK → **Replace the collision sensor.**

NG →

5	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B0096-11	Right Side Restraints Sensor Circuit Short To Ground
DTC	B0096-12	Right Side Restraints Sensor Circuit Short To Power Supply
DTC	B0096-13	Right Side Restraints Sensor Circuit Open

DTC	B0096-96	Right Side Restraints Sensor Component Internal Failure
DTC	B0096-95	Right Side Restraints Sensor Configured Fault
DTC	B0096-00	Right Side Restraints Sensor Communication Failure

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-09-6-11	Right Side Restraints Sensor Circuit Short To Ground	Circuit Short to Ground	External	Sensor terminal connects to ground	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on
B0-09-6-12	Right Side Restraints Sensor Circuit Short To Power Supply	Circuit Short to Power Supply	External	Sensor pins connected to power supply	Remove wire harness lap part	System short circuit current occurs	Protect the wire harness integrity	Warning light comes on
B0-09-6-13	Right Side Restraints Sensor Circuit Open	Circuit Open	External	Sensor not connected	Sensor connected	Sensor to be connected is not connected	Check for continuity of wire harness from ACU to sensor	Warning light comes on
B0-09-6-96	Right Side Restraints Sensor	Sensor internal problem	External	The sensor has a self-check function: Once a fault is detected, the sensor will	Replace sensor	Sensor is damaged	Qualified sensor is used	Warning light comes on

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
	Component Internal Failure			report the fault				
B0-09-6-95	Right Side Restraints Sensor Configured Fault	Sensor parameter failure	External	The sensor has a self-check function: Once a fault is detected, the sensor will report the fault	Replace sensor	/	Qualified sensor is used	Warning light comes on
B0-09-6-00	Right Side Restraints Sensor Communication Failure	Communication error	External	A communication interface is connected to two identical sensors	Correct sensor is used	Use the same sensor connector to the same communication interface	Correct sensor is used	Warning light comes on

For detection methods, refer to “Left Side Sensor Malfunction Diagnosis Procedure” to perform inspection and repair according to Circuit Diagram Manual.

DTC	**B1251-00**	**ACU Internal Error-No Sub Type Information**
DTC	**B122C-00**	**ACU Has Been Scrapped-No Sub Type Information**
DTC	**B1216-47**	**Crash Front**
DTC	**B1217-47**	**Crash Side-Watchdog / Safety µC Failure**
DTC	**B1218-47**	**Crash Row-Watchdog / Safety µC Failure**
DTC	**B127F-47**	**Crash Recording Locked**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-25-1-00	ACU Internal Error-No Sub Type Information	No Subtype Information	External	CAN active, CAN self diagnosis active	Replace controller	Hardware is damaged	Use the controller according to the specification	Warning light comes on
B1-22-C-00	ACU Has Been Scrapped-No Sub Type Information	Controller has been scrapped	External	NA	NA	ACU has been scrapped	NA	Warning light comes on
B1-21-6-47	Crash Front	Crash	External	Front Crash	Replace controller	Front crash occurs	Prevent live operation of the controller	Warning light comes on
B1-21-7-47	Crash One Side	Crash	External	Crash Side	Replace controller	Side collision occurs	Prevent live operation of the controller	Warning light comes on
B1-21-8-47	Crash Row-Watchdog / Safety µC Failure	Crash	External	Crash Side	Replace controller	Side collision occurs	Prevent live operation of the controller	Warning light comes on
B1-27-F-47	Crash Recording Locked	Crash	External	EDR Lock	Replace controller	EDR lock	Prevent live operation of the controller	Warning light comes on

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Reconfirm DTCs**

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B1215-00**	**Squib Cross Coupling Error-No Sub Type Information**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-21-5-00	Squib Cross Coupling Error-No Sub Type Information	No Subtype Information	External	Airbag circuit cross coupling	No cross coupling for airbag circuit	Short circuit occurs in wire harness of different ignition circuits	Strong initiation circuit wire harness protection	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	Check for DTCs

(a) Using diagnostic tester, clear DTC and read DTC again.
(b) Check if DTC occurs again.

NG → **Check whether there is a series fault in the related fault circuit.**

OK

2	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:
(a) Connect diagnostic tester and clear DTCs.
(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.
(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B1240-00	ICM Airbag Lamp Failed-No Sub Type Information

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-24-0-00	ICM Airbag Lamp Failed-No Sub Type Information	No Subtype Information	External I-015	Airbag indicator signal value error of instrument panel cluster	Repair BCM or instrument cluster	BCM or instrument cluster fault	Use qualified instrument cluster and BCM	Warning light comes on

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

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

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

1	**Check for DTCs**

(a) Using diagnostic tester, clear DTC and read DTC again.
(b) Check if DTC occurs again.

NG → **Replace BCM or instrument cluster module.**

OK

2	**Reconfirm DTCs**

For preparations, refer to "Preparations before dealing with airbag system wire harness malfunction". Use circuit diagram as a guide to perform the following inspection procedures:
(a) Connect diagnostic tester and clear DTCs.
(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.
(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B122D-95	Driver Airbag Unexpected Config-Incorrect Assembly
DTC	B122E-95	Passenger Airbag Unexpected Config-Incorrect Assembly
DTC	B122F-95	Left Side Airbag Unexpected Config-Incorrect Assembly
DTC	B1220-95	Right Side Airbag Unexpected Config-Incorrect Assembly
DTC	B1221-95	Left Curtain Unexpected Config-Incorrect Assembly
DTC	B1222-95	Right Curtain Unexpected Config-Incorrect Assembly
DTC	B1223-95	Front Row Left Seatbelt Retractor Pretensioner Unexpected Config-Incorrect Assembly
DTC	B1224-95	Front Row Right Seatbelt Retractor Pretensioner Unexpected Config-Incorrect Assembly
DTC	B1225-95	Belt Pretensioner Driver Unexpected Config-Incorrect Assembly
DTC	B1226-95	Belt Pretensioner Pass Unexpected Config-Incorrect Assembly
DTC	B1227-95	Second Row Left Seatbelt Pretensioner Unexpected Config-Incorrect Assembly
DTC	B1229-95	Second Row Right Seatbelt Pretensioner Unexpected Config-Incorrect Assembly

DTC	**B0004-95**	**Driver Knee Airbag Unexpected Config-Incorrect Assembly**
DTC	**B0030-95**	**Second Row Left Seat Side Airbag Unexpected Config-Incorrect Assembly**
DTC	**B0038-95**	**Second Row Right Seat Side Airbag Unexpected Config-Incorrect Assembly**

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-22-D-95	Driver Airbag Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN4 and PIN5 are empty set originally, but they are connected with external circuit.	Check controller PIN4 and PIN5, whether there is external connection, measure the resistance between pins.	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	Warning light comes on
B1-22-E-95	Passenger Airbag Unexpected Config-Incorrect	EOL initiation circuit configuration is wrong and ACU	External	Terminals PIN34 and PIN16 are empty set originally, but they are connected with external circuit.	Check controller PIN34 and PIN16, whether there is external connection, measure the resistance between terminals.	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
	Assembly	terminals are connected with additional initiation circuit					configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-21-F-95	Left Side Airbag Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN23 and PIN22 are empty set originally, but they are connected with external circuit.	Check controller PIN23 and PIN22, whether there is external connection, measure the resistance between terminals.	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-22-0-95	Right Side Airbag Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN52 and PIN51 are empty set originally, but they are connected with external circuit;	Check controller PIN52 and PIN51, whether there is external connection, measure the resistance between terminals.	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-22-1-95	Left Curtain Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN20 and PIN21 are empty set originally, but they are connected with external circuit.	Check controller PIN20 and PIN21, whether there is external connection, measure the resistance between terminals.	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
							circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-22-2-95	Right Curtain Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN53 and PIN54 are empty set originally, but they are connected with external circuit;	Check controller PIN53 and PIN54, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-22-3-95	Front Row Left Seatbelt Retractor Pretensioner	EOL initiation circuit configuration is wrong and ACU	External	Terminals PIN19 and PIN1 are empty set originally, but they are connected with external circuit.	Check controller PIN19 and PIN1, whether there is external connection, measure the resistance between terminals.	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
	Unexpected Config-Incorrect Assembly	terminals are connected with additional initiation circuit					configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-22-4-95	Front Row Right Seatbelt Retractor Pretensioner Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN35 and PIN17 are empty set originally, but they are connected with external circuit;	Check controller PIN35 and PIN17, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-22-5-95	Belt Pretensioner Driver Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN49 and PIN50 are empty set originally, but they are connected with external circuit;	Check controller PIN49 and PIN50, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-22-6-95	Belt Pretensioner Pass Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN47 and PIN48 are empty set originally, but they are connected with external circuit;	Check controller PIN47 and PIN48, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
							circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-22-7-95	Second Row Left Seatbelt Pretensioner Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals PIN40 and PIN39 are empty set originally, but they are connected with external circuit;	Check controller PIN40 and PIN39, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B1-22-9-95	Second Row Right Seatbelt Pretensioner Unex-	EOL initiation circuit configuration is wrong and ACU	External	Terminals PIN41 and PIN42 are empty set originally, but they are connected with external circuit;	Check controller PIN41 and PIN42, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
	pected Config-Incorrect Assembly	terminals are connected with additional initiation circuit					configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B000495	Driver Knee Airbag Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit				ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B0-03-0-95	Second Row Left Seat Side Airbag Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals are empty set originally, but they are connected with external circuit;	Check controller, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	
B0-03-8-95	Second Row Right Seat Side Airbag Unexpected Config-Incorrect Assembly	EOL initiation circuit configuration is wrong and ACU terminals are connected with additional initiation circuit	External	Terminals are empty set originally, but they are connected with external circuit;	Check controller, whether there is external connection, measure the resistance between terminals	ACU software configuration or real vehicle configuration error	Compare the vehicle configuration table (ACU software configuration or real vehicle configuration error is determined). Airbag does not match with ACU. 1. ACU	

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
							circuit is misconfigured. 2. There are many assembly errors in the whole vehicle.	

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

Hint:

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

1	**Check for DTCs**

(a) Using diagnostic tester, clear DTC and read DTC again.

(b) Check if DTC occurs again.

NG → **Compare the configuration table to confirm whether the actual vehicle has the corresponding fault configuration.**

OK

2	**Rewrite the correct configuration code with diagnostic tester**

(a) Using diagnostic tester, clear DTC and read DTC again.

(b) Rewrite the correct configuration code with diagnostic tester.

NG → **Check whether the configuration code is consistent with the actual vehicle configuration. If not, obtain the correct configuration code.**

OK

3	**Reconfirm DTCs**

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

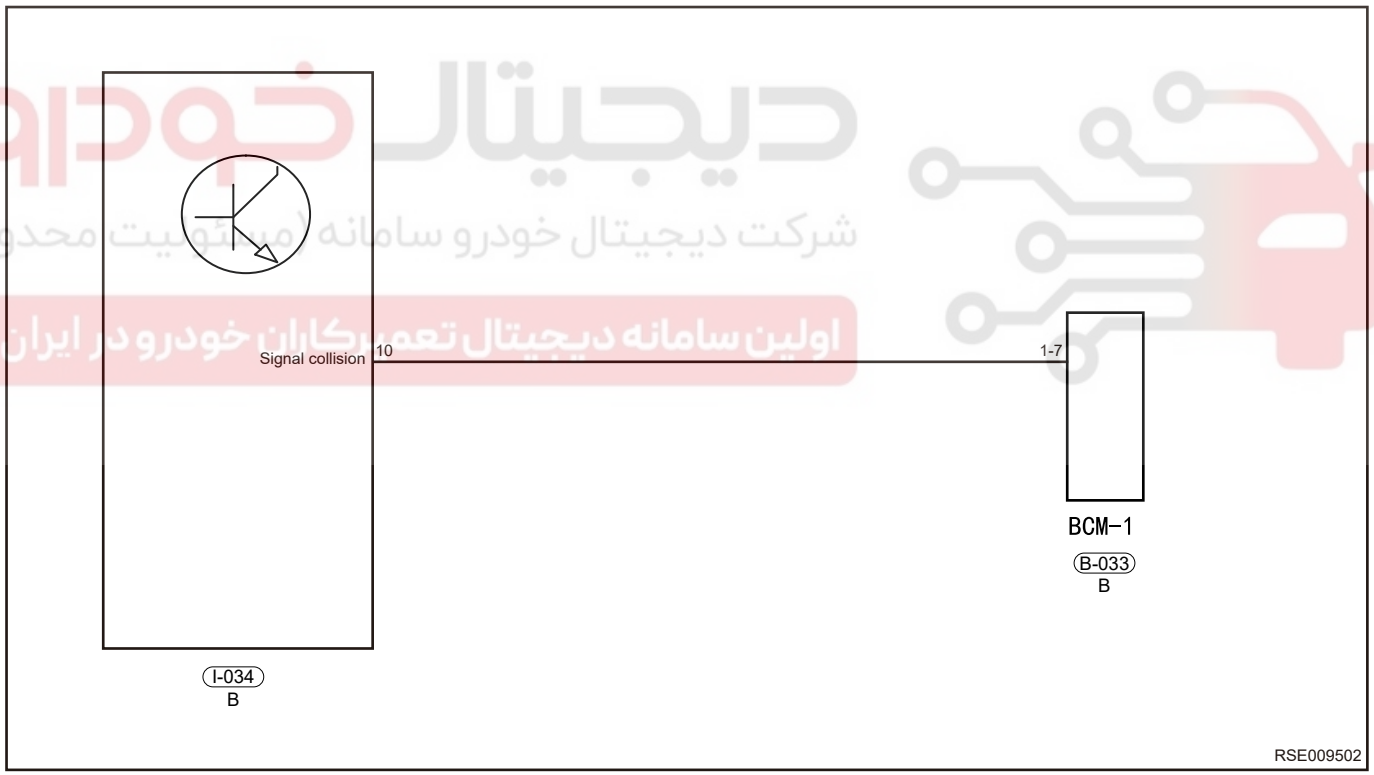
NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	**B1284-12**	**Crash Output Fault Short to Power Supply**
DTC	**B1284-11**	**Crash Output Fault Short To Ground**
DTC	**B1284-13**	**Crash Output Fault Circuit Open**

Description

Control Schematic Diagram



DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-28-4-12	Crash Output Fault Short to Power Supply	Terminal PIN10 output failure.	External	Remove wire harness lap part	PIN10 connects with power supply	Restraint Event Notification short to battery		Warning light comes on
B1-28-4-11	Crash Output Fault Short To Ground	Terminal PIN10 output failure.	External	Remove wire harness lap part	PIN10 connects with ground	Restraint Event Notification short to Gnd		
B1-28-4-13	Crash Output Fault Circuit Open	Terminal PIN10 output failure.	External	Terminal PIN10 output failure.	Check controller P10;	Restraint Event Notification circuit open		

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

Hint:

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

1	**Check for DTCs**

(a) Using diagnostic tester, clear DTC and read DTC again.

(b) Check if DTC occurs again.

NG

Check whether the circuit between airbag module and BCM is short or open according to Circuit Diagram Manual.

OK

2	Reconfirm DTCs

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B122D-95	Driver Airbag Unexpected Config-Incorrect Assembly

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-22-D-95	Driver Airbag Unexpected Config-Incorrect Assembly	Initiation circuit configuration is wrong and controller terminals are connected with additional initiation circuit	External	• Terminals 10 and 11 are empty set originally, but they are connected with external circuit;	/	• The actual connecting condition of terminals 10 and 11 on vehicle doesn’t match with controller configuration	Check if terminals 10 and 11 need to be connected with initiation circuit according to actual item require	Warning light comes on

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

Hint:

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

1	**Confirm if airbag controller are applicable to this model.**

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Confirm that the airbag controller configuration.

(b) Correct the controller spare part number.

NG → **Replace or repair the airbag controller.**

OK

2	**Reconfirm DTCs**

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.
Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECM to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

DTC	B122E-95	Passenger Airbag Unexpected Config-Incorrect Assembly

Description

DTC	Description	Fault Class Definition	Fault Type	Store Current DTC	Save as History DTC	Possible Causes	Malfunction Protection Measures	Malfunction Light
B1-22-E-95	Passenger Airbag Unexpected Config-Incorrect Assembly	Initiation circuit configuration is wrong and controller terminals are connected with additional initiation circuit	External	• Terminals 13 and 14 are empty set originally, but they are connected with external circuit;	/	• The actual connecting condition of terminals 13 and 14 on vehicle doesn’t match with controller configuration	Check if terminals 13 and 14 need to be connected with initiation circuit according to actual item require	Warning light comes on

DTC Confirmation Procedure

Confirm that battery voltage is not less than 12 V before performing the following procedures.

- Turn ENGINE START STOP switch to OFF.
- Connect the diagnostic tester (the latest software).
- Start engine and warm it up, and then read DTC again. If DTC is detected, malfunction is current.
- If DTC is not detected, malfunction is intermittent.

Hint:

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

1	**Confirm if airbag controller are applicable to this model.**

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Confirm that the airbag controller configuration.

(b) Correct the controller spare part number.

NG → **Replace or repair the airbag controller.**

OK

2	**Reconfirm DTCs**

For preparations, refer to “Preparations before dealing with airbag system wire harness malfunction”.

Use circuit diagram as a guide to perform the following inspection procedures:

(a) Connect diagnostic tester and clear DTCs.

(b) Run the vehicle as specified procedure. The operating way should meet the conditions for corresponding fault diagnosis.

(c) Read the fault information and confirm that the fault has been solved.

NG → **Replace with a new ECU to check if fault reoccurs.**

OK → **Conduct test and confirm malfunction has been repaired.**

ON-VEHICLE SERVICE

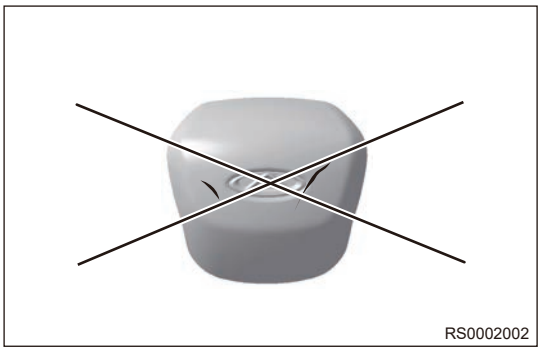
Driver Airbag Assembly (DAB)

On-vehicle Inspection

Warning
• Be sure to follow correct procedures to remove and install driver airbag assembly. • Handle airbag assembly and airbag control module assembly carefully, and never tap or strike them fiercely. • Removal, inspection and installation of airbag system must meet relevant requirements and specifications, and never perform operation casually. • Removed airbag should be kept properly with facing up. Store the airbag in a place with enough spare space to prevent accidental airbag deployment.

Hint:
If driver airbag assembly contact plate is deformed, never repair it. Always replace it with a new one. There should not be any contact between driver airbag assembly and steering wheel, and keep an uniform clearance all around, when installing new driver airbag assembly onto the steering wheel.

1. Check the driver airbag assembly (vehicle is not involved in a collision and airbag is not deployed).
   a. Perform the diagnosis system inspection.
   b. Perform visual inspection with the driver airbag assembly installed on vehicle: Check for cuts, cracks or discoloration on the outer surface and grooved portion of driver airbag assembly.If any defect above is found, replace the driver airbag assembly with a new one.
2. Check the driver airbag assembly (vehicle is involved in a collision and airbag is not deployed).
   a. Perform the diagnosis system inspection.
   b. Perform visual inspection with the driver airbag assembly removed from vehicle. Check wire harnesses for cuts and cracks, and if connectors are chipped. Check steering wheel for deformation.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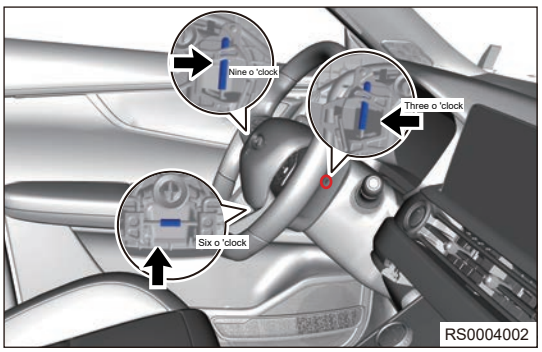
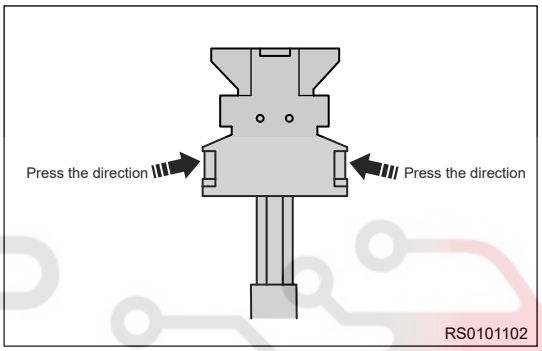
Removal

Warning
• Wait at least 90 seconds after disconnecting the negative battery cable to disable supplementary restraint system. • The vehicle has a collision but the airbag is not deployed. If the malfunction light is on and use diagnosis tester to read the DTCs of airbag, non-occasional fault, the relevant parts (airbag module, etc.) should be replaced according to the fault situation. • DO NOT damage the airbag wire harness when handling airbag assembly wire harness connector. • DO NOT pull the airbag wire harness when removing driver airbag assembly. • Removed airbag should be kept properly with facing up. Store the airbag in a place with enough spare space to prevent accidental airbag deployment. • The installation and repairing of driver airbag (DAB) must be performed with power off, and it’s strictly forbidden to install, remove and rework DAB on any production line with power on. DAB replacement and repairing must be performed with power off. Within 30s of vehicle stalling or fused removed (refer to Technology Instruction for Wire Harness System Assembly), sufficient power to deploy airbag is still remained inside airbag controller, so it’s necessary to perform repairing after 30s since the power of airbag controller is cut off. • In order to avoid DTC, never energize airbag system before connecting all airbag system components (including DAB) and performing diagnostic inspection; • Keep space in area for storing DAB to prevent accidental deployment of DAB. If there is no deployment space, accidental deployment of DAB may injure human body or damage the vehicle. • If DAB falls down from a position higher than 1 m, please do not reuse it and insulate it. • Handle DAB carefully, and never tap or strike it fiercely. • Assembly, detection and removal of DAB must meet relevant requirements and specifications, and never perform operation casually.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable
3. Remove the driver airbag assembly.
   a. Position the front wheels straight ahead.
   b. Using a slotted screwdriver, remove DAB in sequence through 3 removal holes in locations of 3 o’ clock, 9 o’ clock and 6 o’ clock on steering wheel. Insert the screwdriver into removal hole of 3 o’ clock position on steering wheel in removal direction and push it further lightly when reaching to snap spring until a “click” sound is heard, which means that the clip is detached, and the corresponding side of airbag will be bounced up. Then perform removal in 9 o’ clock direction with the same method as above. Finally perform removal in 6 o’ clock direction, and then take up the whole DAB module from steering wheel lightly with both hands.



   c. Removal of clock spring DAB connector: While taking up DAB with one hand, use 2 fingers of the other hand to press and hold lock clips of both sides in “pressing direction” as indicated in illustration and then remove DAB connector in removal direction.

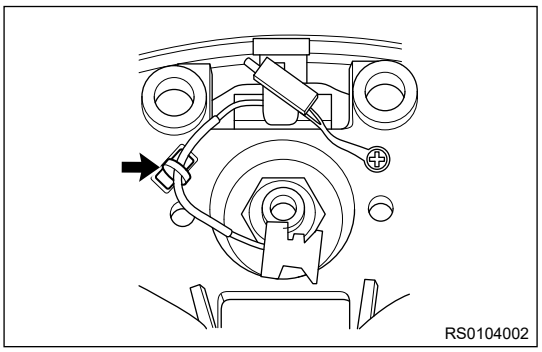


   d. Removal of horn connector: Remove horn connector in direction as indicated in illustration.

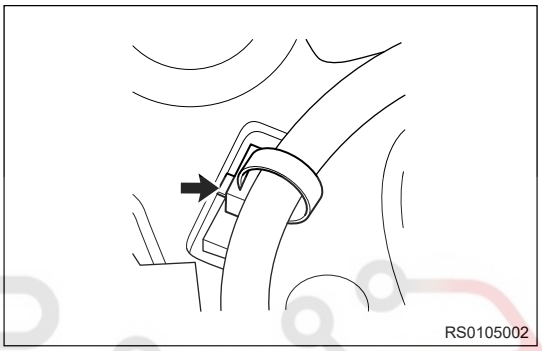
Installation

Warning
• DAB installation and repairing must be performed with power off, and it’ s strictly forbidden to perform installation and removal on any production line with power on. DAB replacement and repairing must be performed with power off. Within 30s of vehicle stalling or fused removed (refer to Circuit Diagram Manual), sufficient power to deploy airbag is still remained inside airbag controller, so it’ s necessary to perform repairing after 30s since the power of airbag controller is cut off. • In order to avoid DTC, never energize airbag system before connecting all airbag system components (including DAB) and performing diagnostic inspection; • Keep space in area for storing DAB to prevent accidental deployment of DAB. If there is no deployment space, accidental deployment of DAB may injure human body or damage the vehicle. • If DAB falls down from a position higher than 1 m, please do not reuse it and insulate it. • Handle DAB carefully, and never tap or strike it fiercely. • Assembly, detection and removal of DAB must meet relevant requirements and specifications, and never perform operation casually. • Confirm that label part number in DAB and configuration card part number in vehicle matches before assembly. • Then check DAB cover plate surface for trimming, residual, air vent, scratches, galling etc.; it’ s also forbidden for defects such as inclusion and dents etc. Peel off a bar code after inspection and attach it to record card in vehicle. • Install the DAB after completing the steering wheel; • Make sure that the ignition key cylinder is in OFF state during installation and never install it with power on. • Make sure that all connectors are securely connected and the wire harness is fixed in the set slot before pressing DAB into steering wheel. • After installing the DAB, airbag light is normal after the power is turned on, ensure that the horn pressing function is normal; • Press periphery and center part of DAB cover with palms to make sure that the pressing operation is smooth without sluggish.

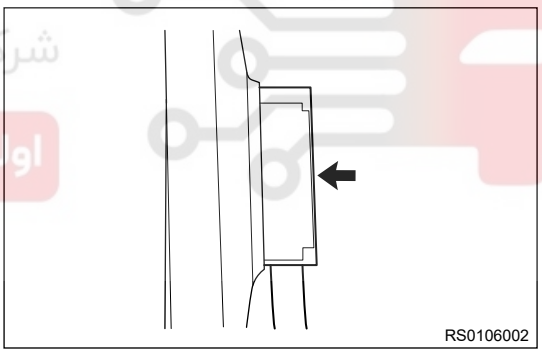
1. Pass airbag connector on clock spring side through the ribbon hole and zip up the ribbon and cut out the unnecessary ribbon tail part with a scissor. Connect airbag connector on clock spring to generator in DAB in pressing direction as indicated in illustration until a “click” sound is heard. The connector plane and generator port fitted flatly indicates that the connector is installed in place.
   a. Install the airbag connector and ribbon on clock spring side.



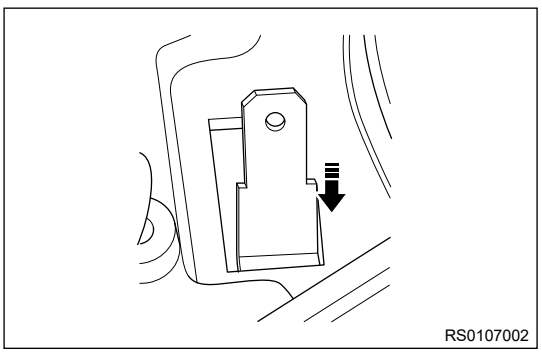
   b. Tighten the ribbon firmly and cut out the unnecessary part.



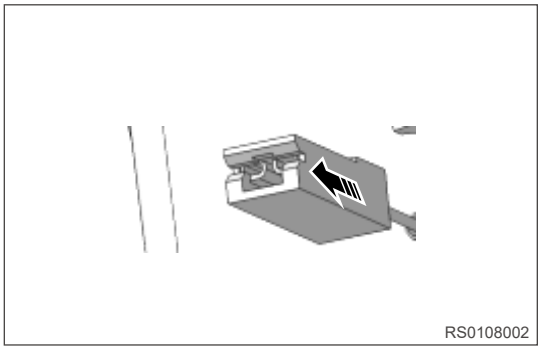
   c. Press the airbag connector on clock spring side to the connector on generator in direction of arrow to flatten them.



2. Connect horn connector on clock spring to horn metal plate on DAB side in direction as required.
   a. Connect horn connector on clock spring to horn metal plate on DAB side in direction as required.



b. Insert the horn connector into horn metal plate on DAB side in direction of arrow.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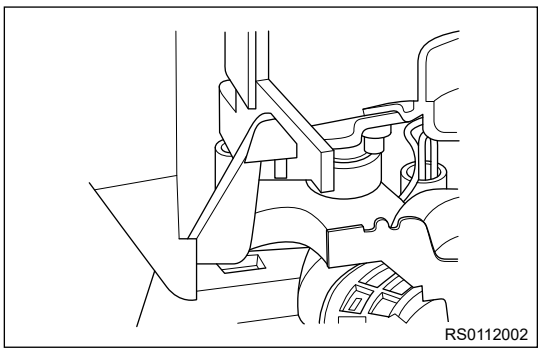
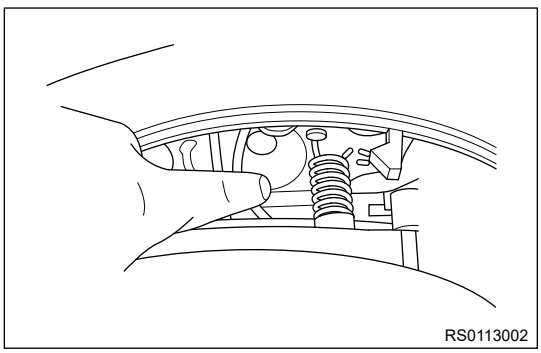
3. DAB on this model uses press-in type installation structure without using any installation tool.

a. DAB on this model uses press-in type installation structure without using any installation tool. Place DAB on steering wheel and toggle horn wire harness to the center of steering wheel in direction as indicated in illustration. After confirming that locating pillar aligns with steering wheel, press center part of airbag trim cover with palms of both hands until a “click” sound is heard, which means that the airbag and steering wheel have been fixed and installation is completed.


RS0114002


RS0112002

b. Press the center part of steering wheel by hand in direction of arrow until a “click” sound is heard, indicating that the installation is completed.

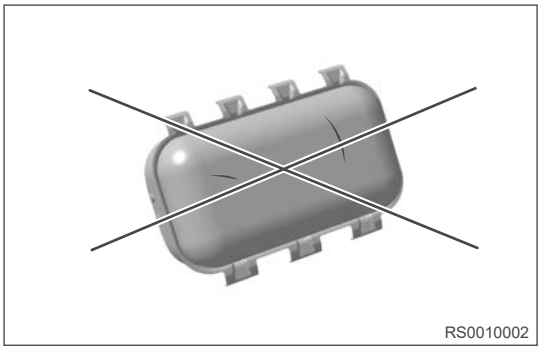

RS0113002

Front Passenger Airbag Assembly (PAB)

On-Vehicle Inspection

Warning
• Be sure to follow correct procedures to remove and install front passenger airbag assembly.

1. Check the front passenger airbag assembly (vehicle is involved in a collision, but airbag is not deployed).
   a. Perform the diagnosis system inspection.



   b. Perform visual inspection with front passenger airbag assembly removed from vehicle. Check for cuts, cracks or wear on front passenger airbag assembly. Check for cracks or other damage on connector. Check instrument panel or instrument panel crossmember assembly for deformation or damage. If any defect above is found, replace front passenger airbag assembly with a new one.

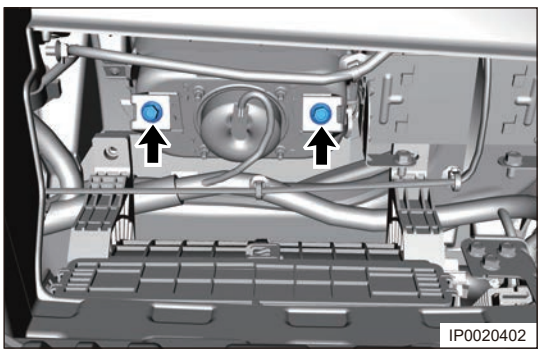
Removal

Warning
• Handle airbag assembly and airbag control module assembly carefully, and never tap or strike them fiercely. • Removal, inspection and installation of airbag system must meet relevant requirements and specifications, and never perform operation casually. • Removed airbag should be kept properly with face up. Store the airbag in a place with enough spare space to prevent accidental airbag deployment.

Caution
• Wait at least 90 seconds after disconnecting the negative battery cable to disable supplementary restraint system.

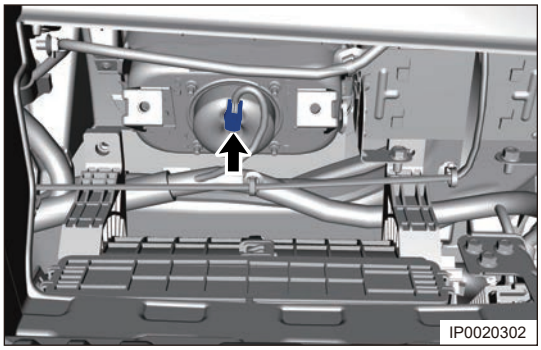
1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the glove box assembly.
4. Remove 2 fixing bolts of PAB with a tool.
   a. Remove 2 fixing bolts of PAB with a tool.

      Tightening torque: 23 ± 2 N m



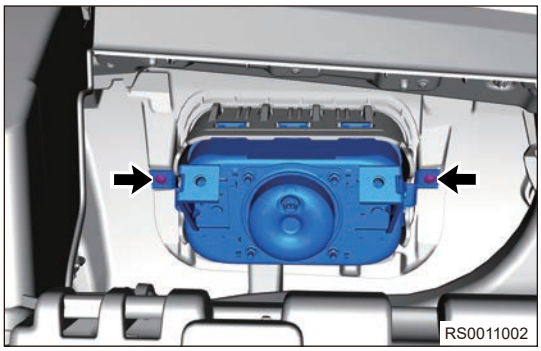
5. Remove the instrument panel upper body from vehicle (refer to instrument panel section).

6. Remove the front passenger airbag assembly.
   a. First remove the short circuit protection device according to the requirements of "Remove position and direction", and then remove the wire harness connector (arrow).

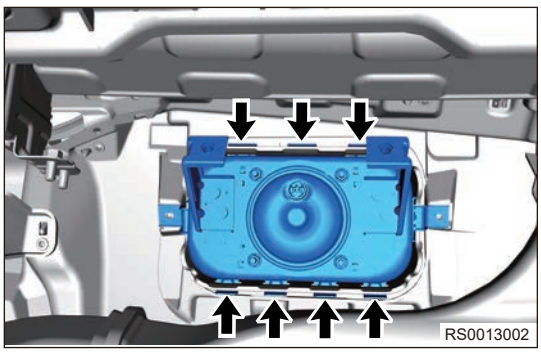


   b. Remove two fixing screws (arrow) between PAB and instrument panel with tools, and remove PAB from airbag bracket inside of instrument panel upper body.

   Tightening torque: 2.5 ± 0.5 N•m



7. Remove the front passenger airbag assembly.
   a. Using a flat tip screwdriver wrapped with protective tape, slightly pry fixing claws (arrow) around front passenger airbag assembly mounting bracket to separate it from instrument panel body assembly. Remove 4 hooks and then remove other 3 hooks.

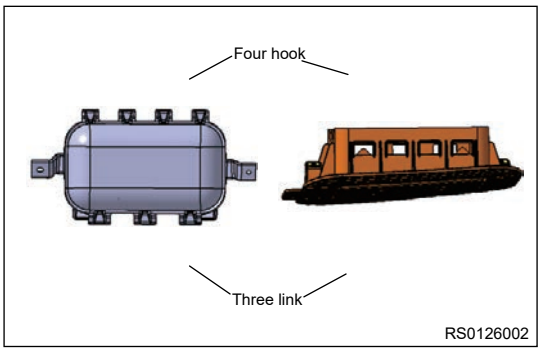


   b. Remove the front passenger airbag assembly.

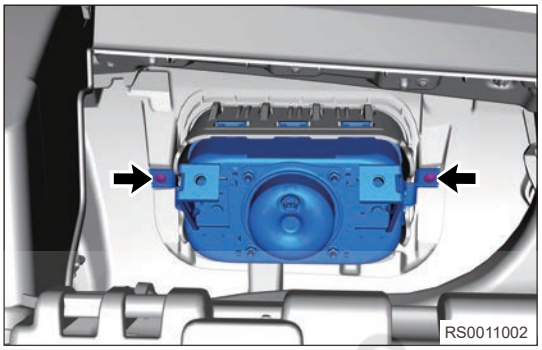
Installation

Caution
• Before installing tightening bolts, always make sure that airbag wire harness is not held down or stuck. Adjust if necessary and install it in place. • Make sure to tighten fixing bolts to specified torque during installation. • When installing front passenger airbag assembly, first slide the hook on one side into locating hole in airbag box, and then press in hook on the other side firmly, making sure that hooks on both sides enter the corresponding locating holes correctly. • Always keep vehicle power off during installation. It is forbidden to install the front passenger airbag assembly with vehicle power on. • Check ACU warning light after installation, and make sure that supplemental restraint system operates normally. • Wire harness assembly: Arrange the wire harness without any torsion and wrinkles, etc. Never make it with metal or non-metal sharp edge. It should be connected with ACU, SIS and each airbag module firmly without any looseness.

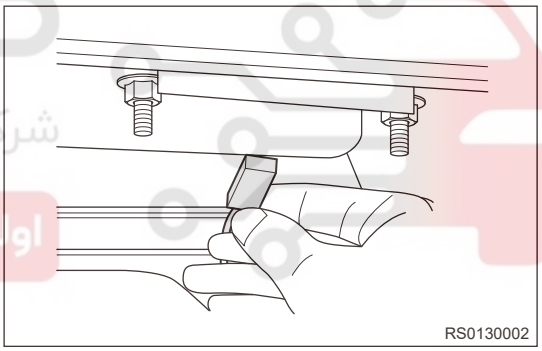
1. Detailed description and technology requirements during assembly.
   a. Inspect and confirm that parts surface should be free of chips and damages and labels and bar codes should be intact and clear before assembly; Peel off one bar code after inspection and attach it to record card in vehicle.
   b. PAB should be installed firstly to instrument panel upper body. Place PAB entirely into airbag bracket on back side of instrument panel upper body. First hang 4 hooks into fixing holes in airbag frame, then press 3 hooks on the other side firmly into bracket holes and make sure that hooks on both sides have been put into the corresponding fixing holes.

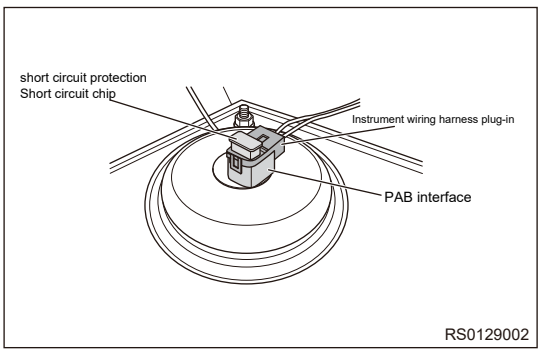


   c. Using cross-recessed button head self-tapping screws, tighten front passenger airbag assembly to instrument panel airbag frame. First tighten point on right side, then tighten point on left side and finally tighten fixing bolts with installing tools according to set torque value.



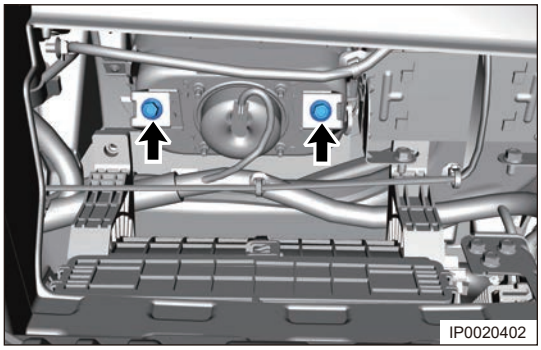
   d. After putting instrument panel body into packing machine, insert instrument cluster wire harness connector into PAB generator port while keeping the connector fitting flatly with the generator. And press down short-circuit plate to keep its upper surface be flush with connector surface on wire harness end, which indicates that it is installed in place. PAB port has failure-proof function and it’ s forbidden to connect forcibly.





e. After installing instrument panel body, fix the PAB bolts to instrument panel crossmember bracket with installer through glove box port.

Tightening torque: 23 ± 2N·m



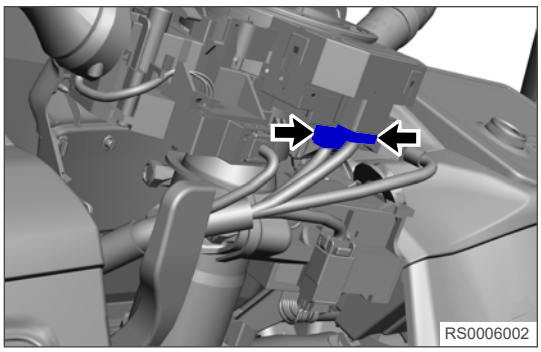
Spiral Cable

Removal

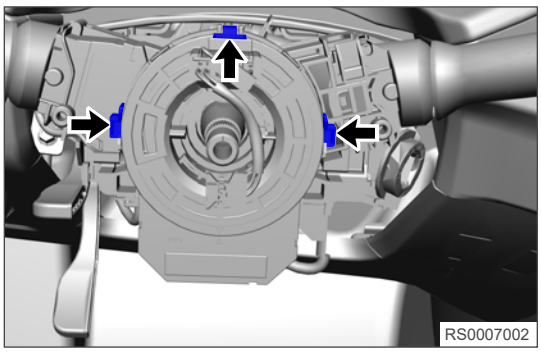
Caution
• Wait at least 90 seconds after disconnecting the negative battery cable to disable supplementary restraint system.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Position the front wheels straight ahead.
4. Remove the steering wheel assembly.
5. Remove the combination switch cover assembly.
6. Remove the spiral cable.

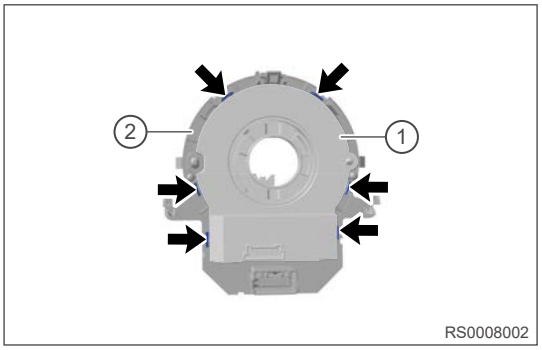
a. Disconnect the spiral cable wire harness connector (-arrow) and angle sensor connector (arrow).



b. Detach the fixing claws (arrow) between spiral cable and combination switch assembly.



c. Detach the angle sensor fixing claws and separate the angle sensor (1) and spiral cable (2).

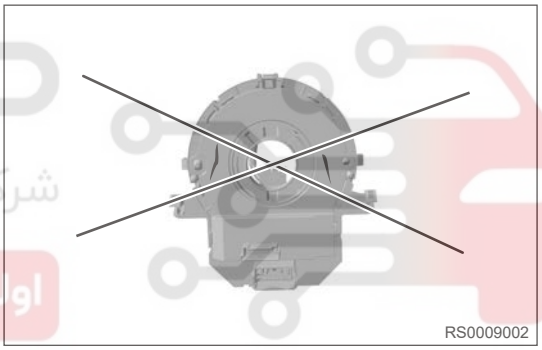


Inspection

Hint:

- An activation prevention mechanism is built in airbag system connector. When connector is disconnected, this mechanism cuts off circuit by bringing short spring plate into contact with terminals, thus insulating the circuit from external power sources to prevent accidental airbag activation.
- To release activation prevention mechanism, insert a piece of paper with the same thickness as male terminal between terminals and short spring plate to disconnect the connection.

1. Check the spiral cable.
   a. Check that there are no scratches or cracks on connectors, or no cracks, dents or chipping on the cable.



   b. If there are scratches, cracks, dents or cuts on connectors or spiral cable, replace the spiral cable with a new one.
2. Remove spiral cable and measure pin 1 and pin 2

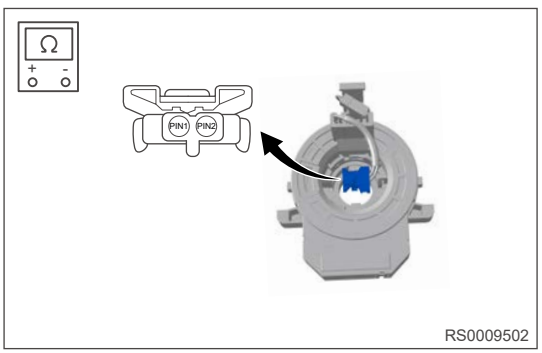
Use circuit diagram as a guide to perform the following inspection procedures:

   a. Turn ENGINE START STOP switch to “OFF”, disconnect the negative battery cable and wait for at least 90 seconds.
   b. Remove the single piece of spiral cable.
   c. Using ohm band of multimeter, measure resistance between 2 pins of spiral cable.

Specified Condition

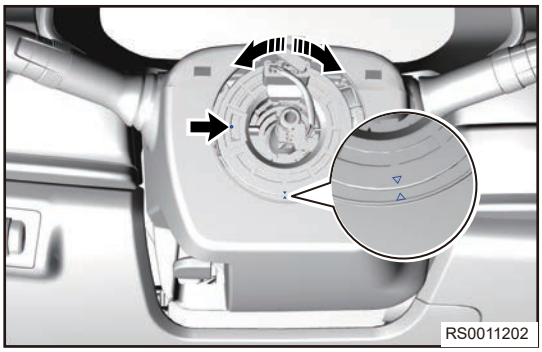
Multimeter Connection	Condition	Specified Condition
PIN1 - PIN2	ENGINE START STOP switch “OFF”	⩽ 1 Ω

If result is not as specified, replace spiral cable assembly.



Installation

Hint:
Always install spiral cable correctly according to matchmarks on spiral cable and steering column (fully turn spiral cable in a direction slowly, then turn it in the opposite direction until yellow ball appears in transparent neutral window and arrow marks align with each other), otherwise the spiral cable may be damaged.



Caution
• Always install spiral cable correctly according to specified operating instructions. • DO NOT rotate the spiral cable over specified turns to prevent it from breaking. • Be sure to install fixing claws in place when installing spiral cable. • Check that horn operates normally after installation. • Check ACU warning light after installation, and make sure that supplemental restraint system operates normally.

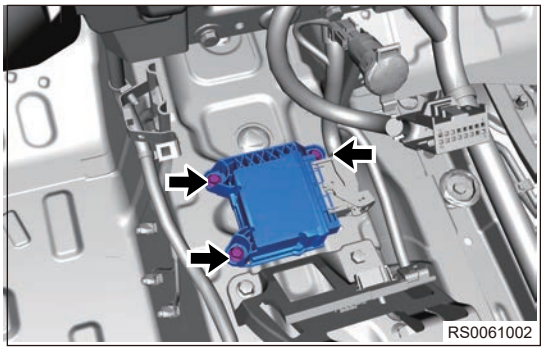
1. Installation is in the reverse order of removal.

Airbag System Controller

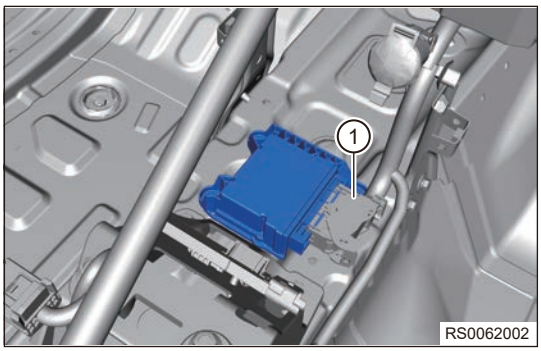
Removal

Caution
• Be sure to follow correct procedures to remove and install airbag system controller. • Inspect and confirm that part number in ACU label matches with configuration card part number in vehicle; parts surface should be free of chips and labels and bar codes should be intact and clear before assembly; Peel off one bar code after inspection and attach it to record card in vehicle; • Place ACU module on passage bottom panel in body with arrow direction in label facing vehicle head while aligning 3 installation holes of ACU with vehicle body projection welding nut hole. Pre-tighten the bolts and tighten 3 bolts to specified torque with a tool; • Insert wire harness connector into ACU port: Rotate fuse clip from initial position to final lock position following installation rotation direction and make sure that fuse clip goes over stop block. Generally a “click” sound will be heard, which indicates that fuse clip has been clamped into place. Make sure that fuse clip is in initial position before installation. ACU port has failure-proof function, which causes impossible inserting with incorrect configuration, so never assemble it forcibly. • Peel off the entire bar code and attach it to record card in vehicle for relevant information tracing. • ACU ignition circuits are divided into 2 circuits and 4 circuits separately and first confirm the vehicle configuration information during installation. • Handle ACU carefully and it’s strictly forbidden to tap and crash it fiercely. • There should be no other objects between ACU installation plane and ACU and ACU must be installed directly on body panel. • When installing and tightening bolts of ACU, make sure that start button is in OFF and it’s forbidden to install it with power on. • Reconfirm the installation direction of airbag controller assembly after installation and make sure that label arrow direction is facing vehicle head. If fitted reversely, airbag controller assembly will not operate normally.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable and wait for 90 seconds.
3. Remove the auxiliary fascia console assembly.
4. Remove the airbag controller assembly.
   a. Remove 3 fixing bolts (arrow) from airbag controller.
      Tightening torque: 9 ± 1 N•m



   b. Press lower limit clamp to separate it from wire harness connector and remove airbag controller assembly (1).



Installation

Warning
• Before installing tightening bolts, always make sure that airbag wire harness is not held down or stuck. Adjust if necessary and install it in place. • Make sure to tighten fixing bolts to specified torque during installation. • Always keep vehicle power off during installation. It is forbidden to install the airbag controller assembly with vehicle power on. • Check ACU warning light after installation, and make sure that supplemental restraint system operates normally.

1. Inspect and confirm that part number in ACU label matches with configuration card part number in vehicle; parts surface should be free of chips and labels and bar codes should be intact and clear before assembly;
2. Place ACU module on passage bottom panel in body with arrow direction in label facing vehicle head while aligning 3 installation holes of ACU with vehicle body projection welding nut hole. Pre-tighten the bolts separately and tighten 3 bolts to specified torque with a tool.
3. Insert wire harness connector into ACU port: Single chamber connector. Rotate fuse clip from initial position to final lock position following installation rotation direction separately and make sure that fuse clip goes over stop block. Generally a “click” sound will be heard, which indicates that fuse clip has been clamped into place. Make sure that fuse clip is in initial position before installation. ACU port has failure-proof function, which causes impossible inserting with incorrect configuration, so never assemble it forcibly.

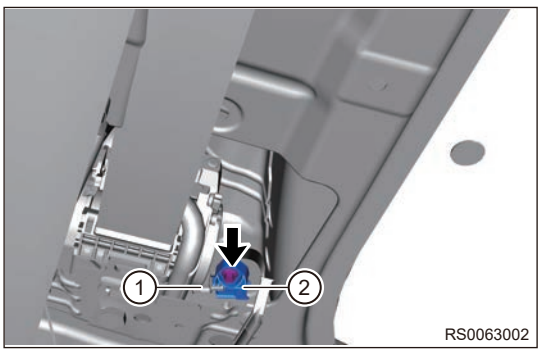
Caution
• ACU is divided into high configuration and low configuration (179AA is low configuration, 180AA is high configuration). Confirm the vehicle configuration information during installation firstly. • Handle ACU carefully and it’ s strictly forbidden to tap and crash it fiercely. • There should be no other objects between ACU installation plane and ACU module, and ACU must be installed directly on body panel. • Make sure that the ignition key cylinder is in OFF state during installation and removal of ACU, and never install or remove it with power on. • Reconfirm the installation direction of ACU after installation and make sure that label arrow direction is facing vehicle head. If fitted reversely, airbag controller assembly will not operate normally. • ACU is not configured or during in configuration (when airbag light is flashing), ACU does not have the function of deployment, vehicle can not operate normally.

Removal and Installation of Side Impact Sensor (SIS) (Use same installation procedures for left and right sides)

Removal (Take left side as an example)

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable and wait for 90 seconds.
3. Remove front left doorsill pressure plate, rear left doorsill pressure plate and left B-pillar lower protector.
4. Remove the seat belt retractor.
5. Remove the side collision sensor.
   a. Loosen and unscrew fixing bolt (arrow) and unplug connector (1) and remove sensor assembly (2).

      Tightening torque: 9 ± 1 N•m



Installation

Caution
• Before installing tightening bolts, always make sure that airbag wire harness is not held down or stuck. Adjust if necessary and install it in place. • Make sure to tighten fixing bolts to specified torque during installation. • Always keep vehicle power off during installation. It is forbidden to install the airbag controller assembly with vehicle power on. • Check ACU warning light after installation, and make sure that supplemental restraint system operates normally. • During assembly, insert locating pin of the sensor into waist-shaped locating hole. • Be sure to follow correct procedures to remove and install side collision sensor. • Install SIS waist-shaped pin into waist-shaped hole of B pillar reinforcing plate and bolt installation hole of SIS and bolt installation hole on B pillar reinforcing plate are aligned basically. • Insert wire harness connector into side collision sensor port and generally a “click” sound will be heard after pushing into connector end to lock, which indicates that it is clamped into place; Connector port has failure-proof function. If it cannot be inserted, adjust and insert it again and do not insert it forcibly.

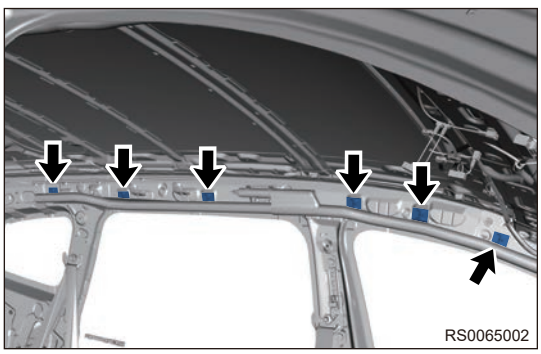
1. Installation is in the reverse order of removal.

Removal and Installation of Side Curtain Shield Airbag (CAB) (Take left side as an example)

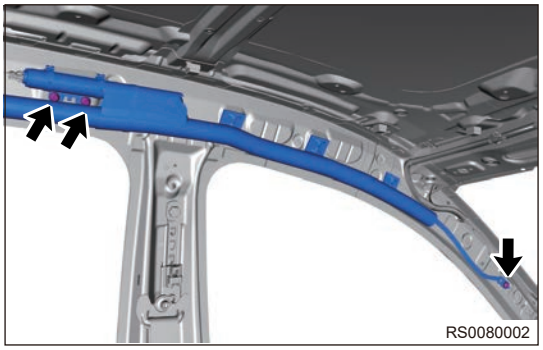
Removal

Warning
• Be sure to wear safety equipment to prevent accidents, when removing side curtain shield airbag assembly. • Appropriate force should be applied, when removing side curtain shield airbag assembly. Be careful not to operate roughly. • DO NOT scratch interior, when removing side curtain shield airbag assembly.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the roof and protector assembly (See Interior Assembly).
4. Remove the curtain shield airbag.
   a. Use special tool (needle nose pliers) to remove the air bag clips that fix CAB in turn.

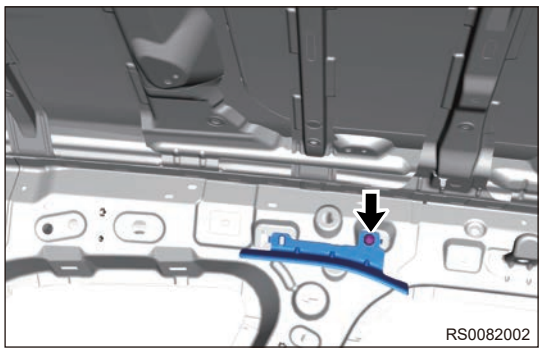


b. Remove 3 fixing bolts of CAB with a tool.



c. Remove wire harness connector: Pinch the connector spring by hand according to “pressing position” to remove the connector.

d. Remove 1 fixing bolt from C-pillar airbag guide bracket, and remove it from body.



Installation

1. Installation is in the reverse order of removal.

Front Seat Belt Assembly

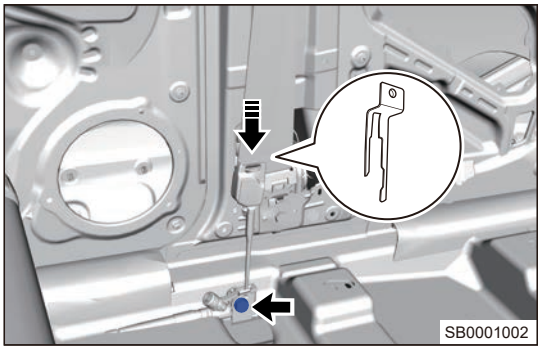
Removal

Warning
• Be sure to wear safety equipment to prevent accidents, when removing front seat belt assembly. • Appropriate force should be applied, when removing front seat belt assembly. Be careful not to operate roughly. • Try to prevent interior from being scratched, when removing front seat belt assembly.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the left B-pillar lower protector assembly.
4. Remove the front left seat belt assembly.

a. Using special tool, insert pretensioner end plate in direction of arrow to disengage front seat belt and remove fixing bolts (arrow) from pretensioner end plate.

Tightening torque: 50 ± 5 N•m

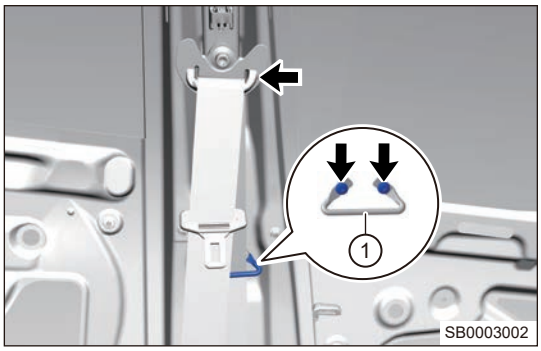


b. Remove the left B-pillar upper protector assembly.

c. Remove 1 fixing bolt (arrow) from upper part of front seat belt assembly and 2 fixing screws from seat belt assembly fork bracket.

Tightening torque: 50 ± 5 N•m

Tightening torque: 2.5 ± 0.5 N•m

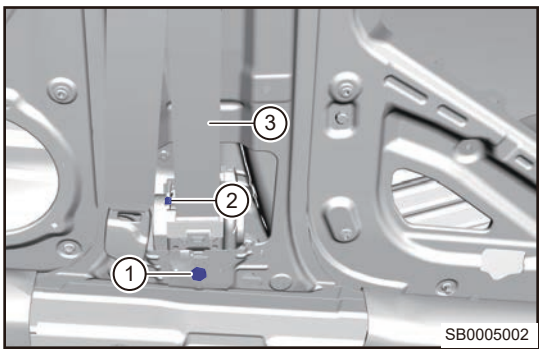


d. Remove front seat belt retractor fixing bolt (1).

Tightening torque: 50 ± 5 N•m

e. Remove front seat belt retractor connector (2). (Seat belt with high configuration)

f. Remove the front left seat belt assembly (3).



Inspection

Hint:

- DO NOT disassemble the front seat belt retractor.
- For the range of locking angle, the retractor should be extended and retracted freely within 15° to each side. When the angle is between 15° and 27°, either locking or unlocking is OK, but when the angle is more than 27°, it must be locked.
- If result is not as specified, replace front seat belt assembly.

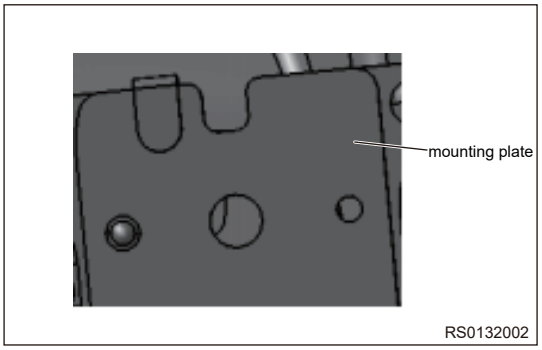
Installation (Limiting Type Belt)

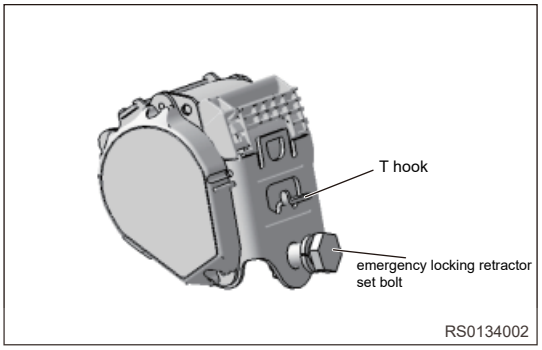
Caution
• Keep seat belt assembly clean without oil attached and check seat belt assembly for damage, when installing front seat belt assembly. • Be sure to tighten all fixing bolts and fixing screws according to specified torque, when installing front seat belt assembly.

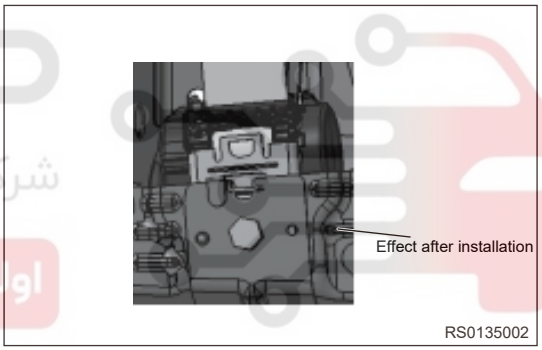
1. Install the limiting type belt assembly.

a. Take the front left seat belt assembly that is in good condition, first remove fixing bolt from retractor; Secondly install the T-type hook of retractor to the retractor mounting board slot of B-pillar sheet metal; Then pre-tighten the bolt removed from retractor to the retractor; Finally tighten the bolt.

Tightening torque: 50 ± 5 N m

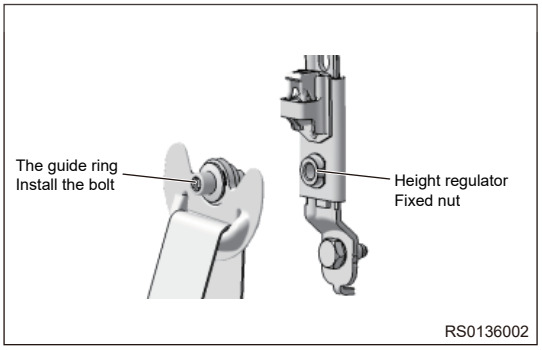






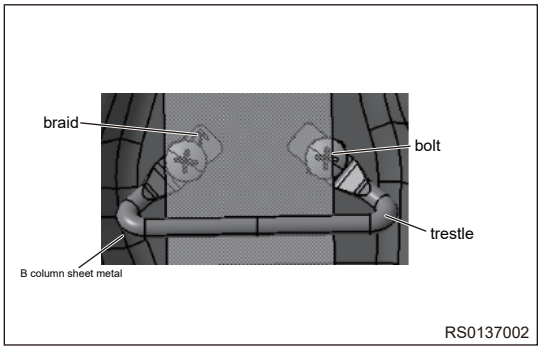
b. After the retractor is installed, pre-tighten the guide ring mounting bolt to the fixing nut of height adjuster assembly, and finally tighten the bolt. (The webbing between retractor and guide ring should be smooth without any breakage and twist)

Tightening torque: 50 ± 5 N m



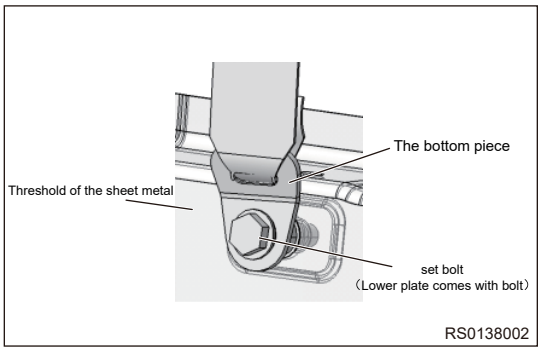
c. Take the fork bracket that is in good condition, pass the webbing through the fork bracket. The fork bracket mounting hole should be aligned with B-pillar sheet metal hole (pay attention to the mounting direction of fork bracket that the arrow marked on fork bracket should face toward the roof), tighten the cross recess pan head screw.

   Tightening torque: 2.5 ± 0.5 N m



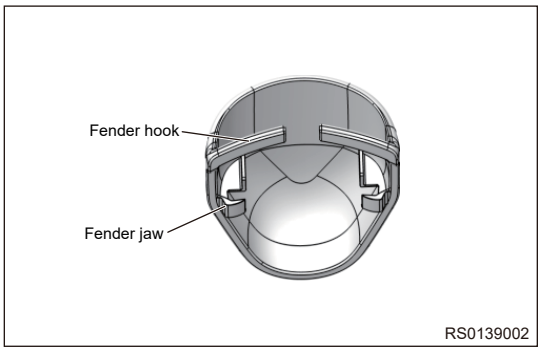
d. After completing the above procedures, pass the seat belt lower fixing end plate, locking tab and webbing through the hole of B-pillar upper protector; Pre-tighten the seat belt lower end plate fixing bolt to the corresponding mounting hole on doorsill sheet metal after assembling the B-pillar protector, and finally tighten the bolt (The webbing between lower end plate and guide ring should be smooth without any breakage and twist).

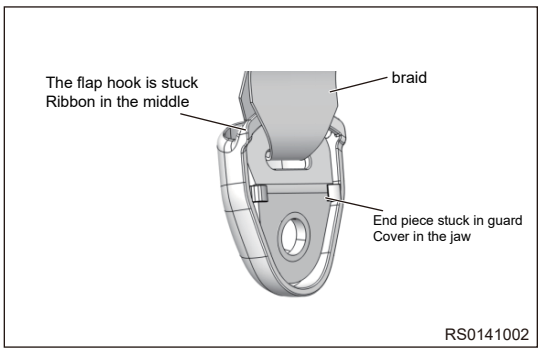
   Tightening torque: 50 ± 5 N m



e. After assembling the seat belt lower end plate, install the seat belt cover to the end plate. Assembling effect is as shown in illustration. The bar code on front left seat belt assembly should be peeled off after installation and attach it to the corresponding position on record card in vehicle.

Tightening torque: 50 ± 5 N m





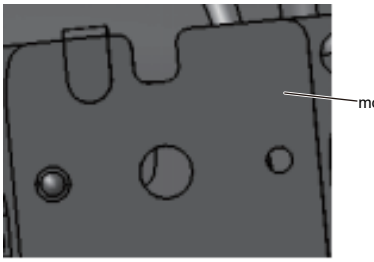
Installation (Limiting Type Belt with Pretensioner)

Caution
• Keep seat belt assembly clean without oil attached and check seat belt assembly for damage, when installing front seat belt assembly. • Be sure to tighten all fixing bolts and fixing screws according to specified torque, when installing front seat belt assembly.

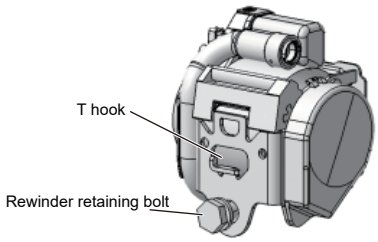
1. Install the limiting type belt assembly with pretensioner.

a. Take the front left seat belt assembly that is in good condition, first insert the seat belt pretensioner connector of interior wire harness into the gas generator connector of retractor and press the lock button, ensure that the connector is connected properly and clamped in place (connecting angle is 45); Secondly remove fixing bolt from retractor; Thirdly install the T-type hook of retractor to the retractor mounting board slot of B-pillar sheet metal; Then pre-tighten the bolt removed from retractor to the retractor; Finally tighten the bolt. If the connector wire harness is too long or interferes with the webbing, it is necessary to insert the wire harness into B-pillar to increase the gap between wire harness and webbing).

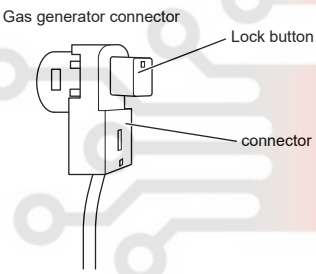
Tightening torque: 50 ± 5 N m



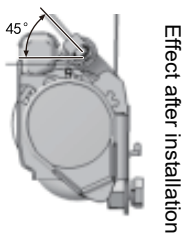
RS0132002



RS0142002



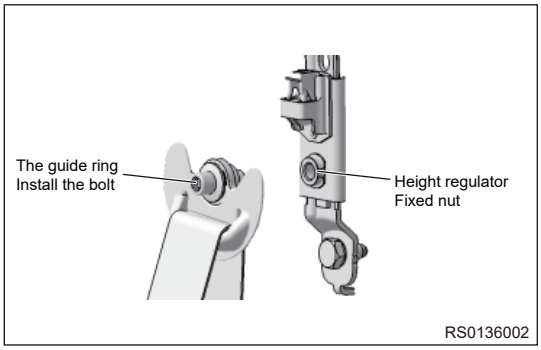
RS0143002



RS0144002

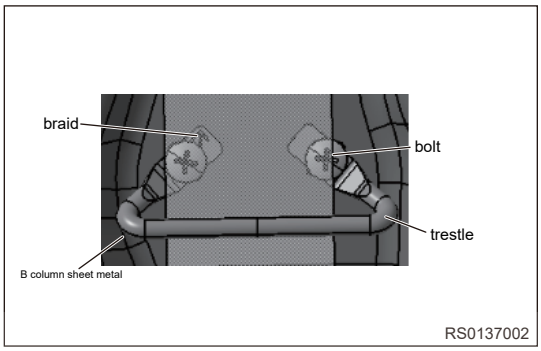
b. After the retractor is installed, pre-tighten the guide ring mounting bolt to the fixing nut of height adjuster assembly, and finally tighten the bolt. (The webbing between retractor and guide ring should be smooth without any breakage and twist).

Tightening torque: 50 ± 5 N m



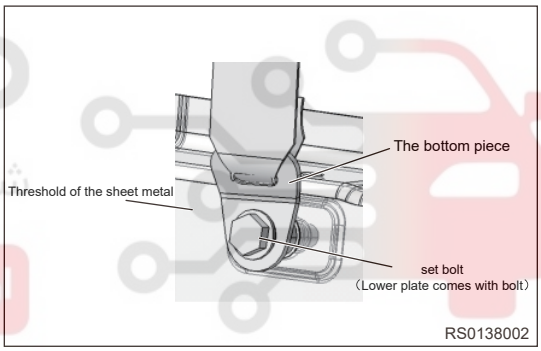
c. Take the fork bracket that is in good condition, pass the webbing through the fork bracket. The fork bracket mounting hole should be aligned with B-pillar sheet metal hole (pay attention to the mounting direction of fork bracket that the arrow marked on fork bracket should face toward the roof), tighten the cross recess pan head screw.

Tightening torque: 2.5 ± 0.5 N m

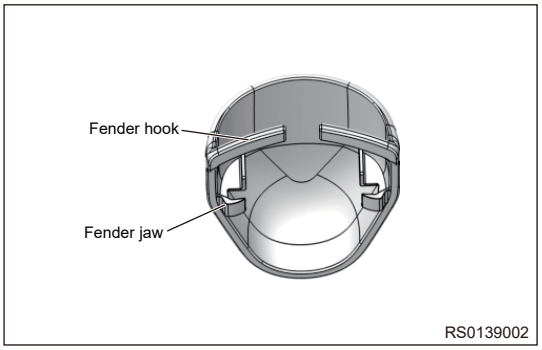


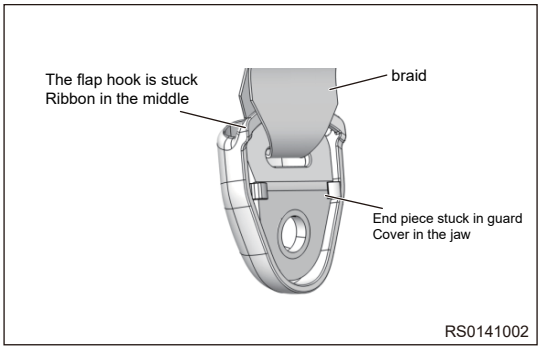
d. After completing the above procedures, pass the seat belt lower fixing end plate, locking tab and webbing through the hole of B-pillar upper protector; Pre-tighten the seat belt lower end plate fixing bolt to the corresponding mounting hole on doorsill sheet metal after assembling the B-pillar protector, and finally tighten the bolt. (The webbing between lower end plate and guide ring should be smooth without any breakage and twist.)

Tightening torque: 50 ± 5 N m



e. After assembling the seat belt lower end plate, install the seat belt cover to the end plate. Assembling effect is as shown in illustration. The bar code on front left seat belt assembly should be peeled off after installation and attach it to the corresponding position on record card in vehicle.



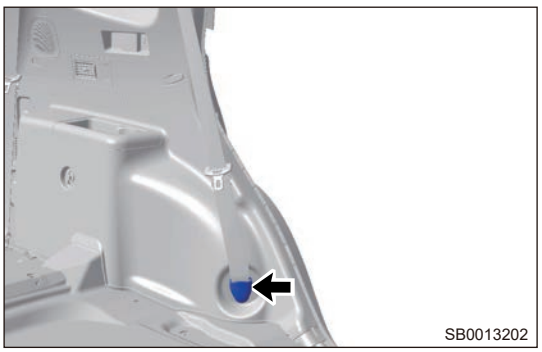


Second Row Seat Belt Assembly (Take left side as an example)

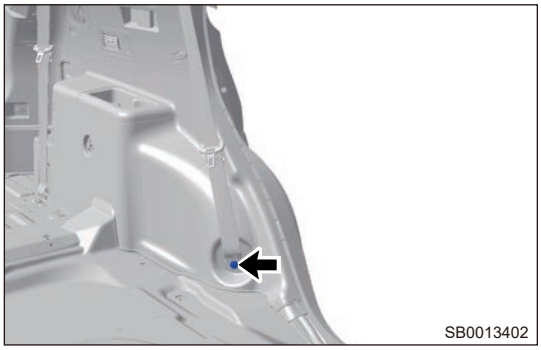
Removal

Warning
• Be sure to wear safety equipment to prevent accidents, when removing the second row seat belt assembly. • Appropriate force should be applied, when removing the second row seat belt assembly. Be careful not to operate roughly. • DO NOT scratch interior when removing the second row seat belt assembly.

1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the second row seat belt assembly.
   a. Remove the second row seat belt lower end plate protective cover. (Arrow)

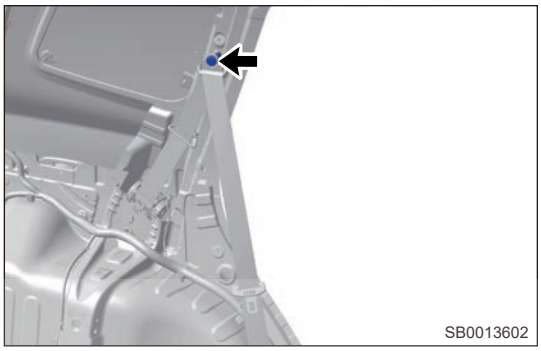


b. Remove the second row seat belt lower fixing bolt. (Arrow)

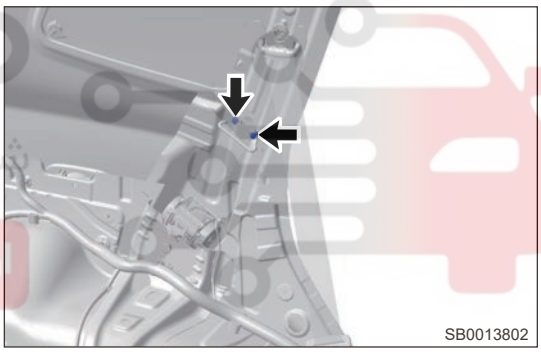


c. Remove the C-pillar upper and lower protector assembly.

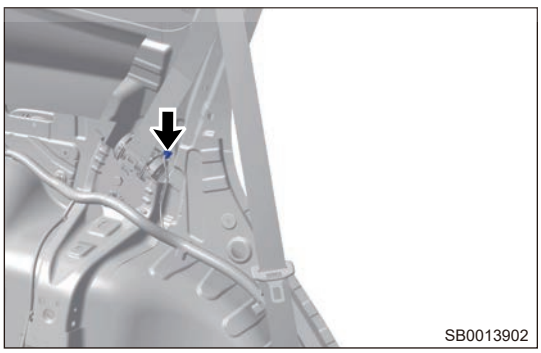
d. Remove 1 fixing bolt (arrow) from guide ring and move away guide ring.



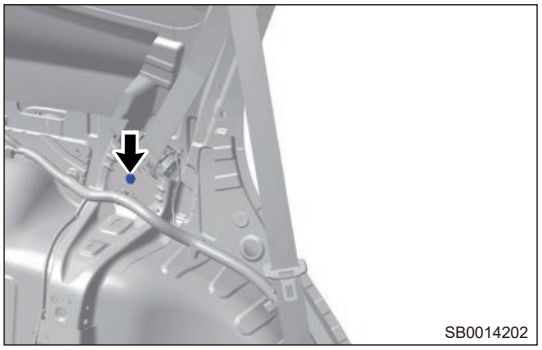
e. Remove 2 fixing screws (arrows) from fork bracket and move away fork bracket.



f. Disconnect gas generator connector (arrow) from retractor.



g. Remove 1 fixing bolt (arrow) from retractor assembly and remove T-type hook of retractor assembly from mounting board.



Installation

Caution

- Keep seat belt assembly clean without oil attached and check seat belt assembly for damage, when installing the second row seat belt assembly.
- Be sure to tighten all fixing bolts and fixing screws according to specified torque, when installing the second row seat belt assembly.
- Be sure to perform assembly of vehicle in accordance with BOM strictly. It is not allowed to replace the parts assembly without permission.
- During assembly of vehicle, tighten parts with specified torque in list strictly.
- It is not allowed to replace the components of parts assembly without permission, such as bolt, washer etc.
- If the parts assembly is accidentally dropped during handling and installation, please check the plastic parts of parts assembly (such as retractor) for cracks. If there is crack, insulate and dispose it after packaging and marking to prevent accidental injury.
- It is necessary to check whether the seat belt is in good condition before installing it; Pull the webbing and lock the buckle after assembling to ensure that the webbing can be extended and retracted smoothly, the buckle can be locked and unlocked normally. Make sure that there are no objects (such as tools, etc.) can scratch the webbing during assembling the seat belt.

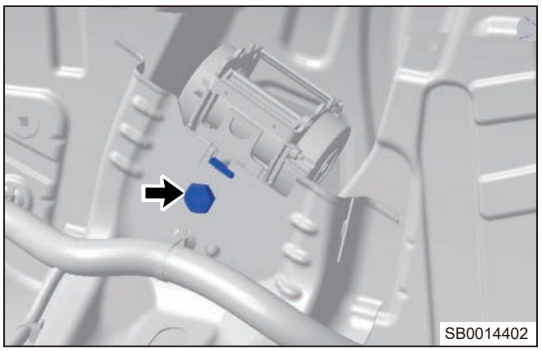
Warning

- The webbing between lower end plate and retractor should be smooth without any breakage and twist.
- If the webbings on both sides of rear seat cannot be pulled out, it is necessary to make a preliminary judgment on the seat belt. If the seat belt is locked due to the sensitivity function of seat belt.
- Judgment method: Slowly contract the webbing for 10-15 mm, and then pull out it slowly. If the seat belt can be pulled out normally and there are no other problems, the seat belt is normal. If the webbing can not be pulled out, further testing of seat belt is required.

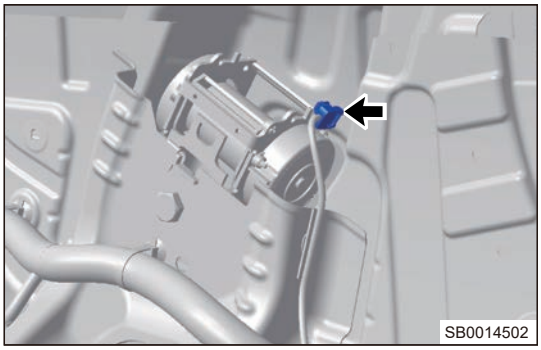
1. Install the second row seat belt assembly.

a. Take the second row left seat belt assembly that is in good condition, first remove fixing bolt from retractor; Secondly install the T-type hook of retractor to the retractor mounting board slot of C-pillar sheet metal; Then pre-tighten the bolt removed from retractor to the retractor; Finally tighten the bolt.

Tightening torque: 50 ± 5 N•m

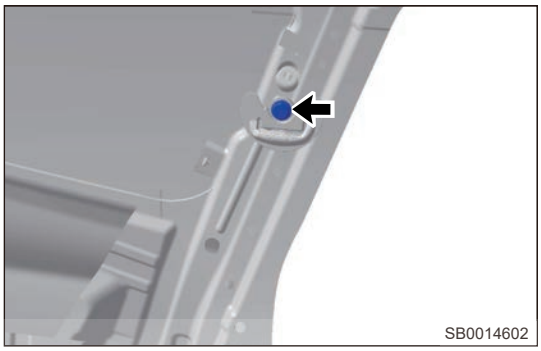


b. Insert the seat belt pretensioner connector of interior wire harness into the gas generator connector of retractor and press the lock button, ensure that the connector is connected properly and clamped in place. (Seat belt with high configuration)



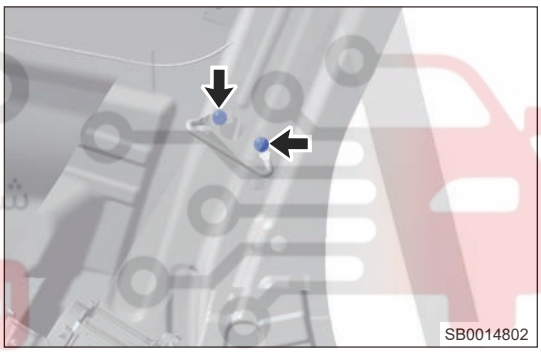
c. After the retractor is installed, pre-tighten the guide ring mounting bolt to the fixing hole of C-pillar, and finally tighten the bolt.

Tightening torque: 50 ± 5 N•m



d. Take a fork bracket that is in good condition, pass the webbing of seat belt through the fork bracket. The fork bracket mounting hole should be aligned with C-pillar sheet metal hole, install and tighten fixing screw.

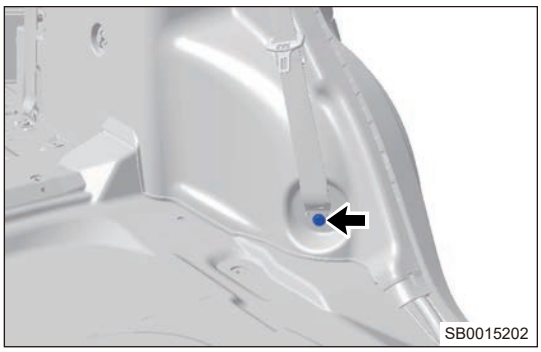
Tightening torque: 2.5 ± 0.5 N m



e. Install the C-pillar upper and lower protector assemblies.

f. After completing the above procedures, pass the seat belt lower fixing end plate, locking tab and webbing through the hole of C-pillar upper protector; Pre-tighten the seat belt lower end plate fixing bolt to the corresponding mounting hole on wheel house sheet metal after assembling the C-pillar protector, and finally tighten the bolt. (Arrow)

Tightening torque: 50 ± 5 N m

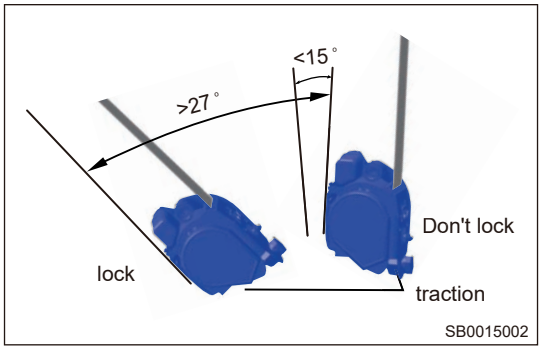


g. After assembling the seat belt lower end plate, install the seat belt cover to the end plate (arrow). The bar code on second row left seat belt assembly should be peeled off after installation and attach it to the corresponding position on record card in vehicle.

2. Connect the negative battery cable.

Caution

- DO NOT disassemble the second row seat belt retractor.
  a. For the range of locking angle, the retractor should be extended and retracted freely within 15° to each side. When the angle is between 15° and 27°, either locking or unlocking is OK, but when the angle is more than 27°, it must be locked.
  b. If result is not as specified, replace the second row seat belt assembly.
  c. When connecting gas generator connector, if the pin inside of gas generator is deflective, please pack it properly and dispose it.



- When connecting gas generator connector, if the pin inside of gas generator is deflective, please pack it properly and dispose it.

Second Row Middle Seat Belt Assembly

Removal

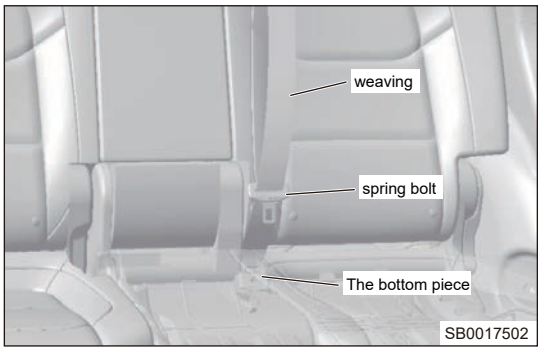
Warning

- Be sure to wear safety equipment to prevent accidents, when removing the second row middle belt assembly.
- Appropriate force should be applied, when removing the second row middle belt assembly. Be careful not to operate roughly.
- DO NOT scratch interior when removing the second row middle belt assembly.

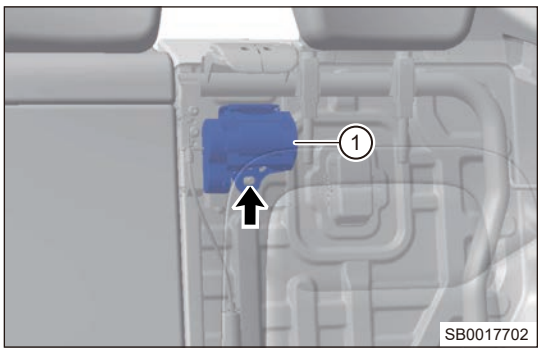
1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the center seat belt assembly.

a. Remove the center seat belt installation bolt. (Arrow)

b. Insert the webbing, locking tab and lower end plate of the center seat belt assembly.



c. Remove bolt (arrow) between retractor and seat frame, and take retractor (1) out of limit hook of seat frame and move it away.



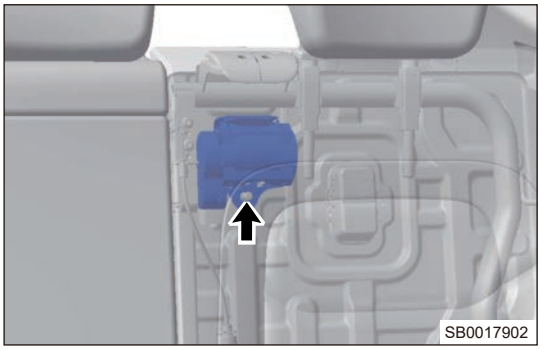
Installation

Caution
• Pass the webbing, locking tab and lower end plate through the seat frame hole and prevent scratches. • The above assembling operation should be carried out in seat factory. The bar code on second row middle seat belt assembly should be peeled off after installing the second row left seat and attach it to the corresponding position on vehicle. • The seat factory should test the above installation torque by a ratio of 100%.

1. Install the second row middle seat belt assembly.

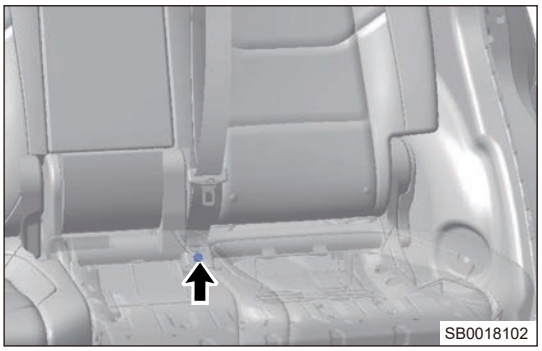
a. First take out the second row middle seat belt assembly that is in good condition, hook the retractor mounting hole onto the seat frame mounting bolt, and align the retractor limit hook with seat frame limit hook, then pre-tighten the mounting nut (arrow) and tighten it (supplied by the seat supplier).

   Tightening torque: 50 ± 5 N m



b. After above procedures are completed, pass the webbing, locking tab and lower end plate of second row middle seat belt assembly through the seat hole. Tighten the mounting bolt (arrow) of lower end plate 1 to the bolt frame after passing through the webbing.

   Tightening torque: 50 ± 5 N m



2. Connect the negative battery cable.

Inspection

Hint:

- DO NOT disassemble the second row seat belt retractor.
- Second row middle seat belt is adaptive type and the angle is 45 ° backward and 35 ° forward, which is not locked.

Third Row Seat Belt Assembly (Take left side as an example)

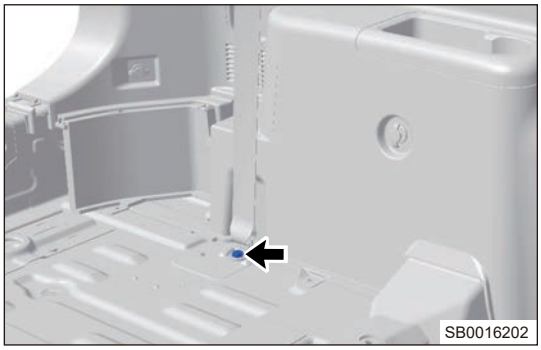
Removal

Warning
• Be sure to wear safety equipment to prevent accidents, when removing the third row seat belt assembly. • Appropriate force should be applied, when removing the third row seat belt assembly. Be careful not to operate roughly. • DO NOT scratch interior when removing the third row seat belt assembly.

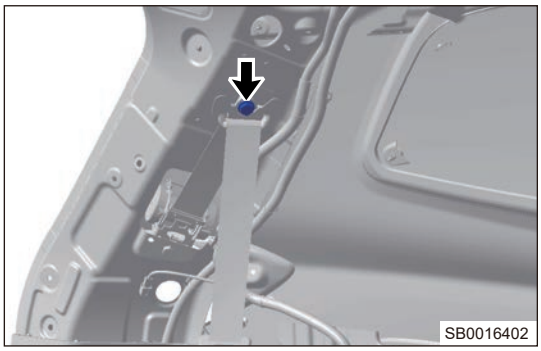
1. Turn off all electrical equipment and ENGINE START STOP switch.
2. Disconnect the negative battery cable.
3. Remove the third row seat belt assembly.

a. Remove the third row seat belt lower fixing bolt (Arrow)

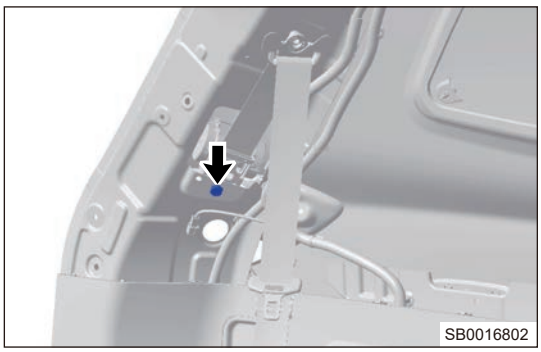
b. Remove the C-pillar upper and lower protector assembly.



c. Remove 1 fixing bolt (arrow) from guide ring and move away guide ring.



d. Remove 1 fixing bolt (arrow) from retractor assembly and remove T-type hook of retractor assembly (1) from mounting board.



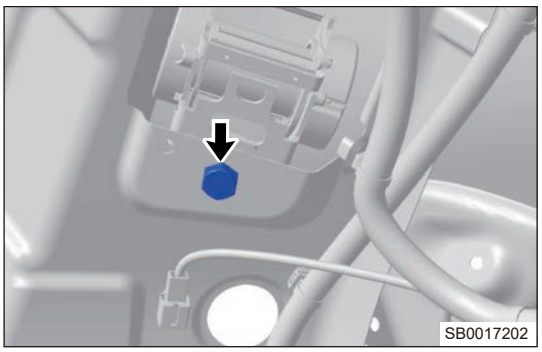
Installation

Caution

- Keep seat belt assembly clean without oil attached and check seat belt assembly for damage, when installing the third row seat belt assembly.
- Be sure to tighten all fixing bolts and fixing screws according to specified torque, when installing the third row seat belt assembly.
- Be sure to perform assembly of vehicle in accordance with BOM strictly. It is not allowed to replace the parts assembly without permission.
- During assembly of vehicle, tighten parts with specified torque in list strictly.
- It is not allowed to replace the components of parts assembly without permission, such as bolt, washer etc.
- If the parts assembly is accidentally dropped during handling and installation, please check the plastic parts of parts assembly (such as retractor) for cracks. If there is crack, insulate and dispose it after packaging and marking to prevent accidental injury.
- It is necessary to check whether the seat belt is in good condition before installing it; Pull the webbing and lock the buckle after assembling to ensure that the webbing can be extended and retracted smoothly, the buckle can be locked and unlocked normally. Make sure that there are no objects (such as tools, etc.) can scratch the webbing during assembling the seat belt.

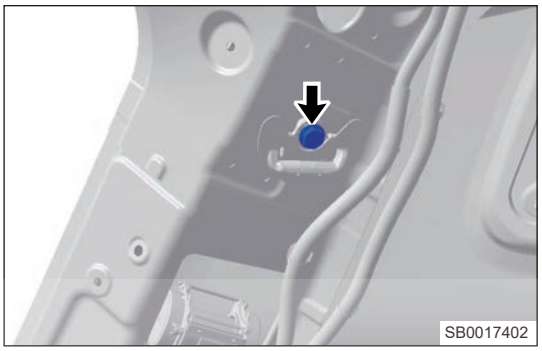
1. Install the third row seat belt assembly.
   a. (1) Take the third row left seat belt assembly that is in good condition, first remove fixing bolt from retractor; Secondly install the T-type hook of retractor to the retractor mounting board slot of C-pillar sheet metal; Then pre-tighten the bolt removed from retractor to the retractor; Finally tighten the bolt.

Tightening torque: 50 ± 5 N m



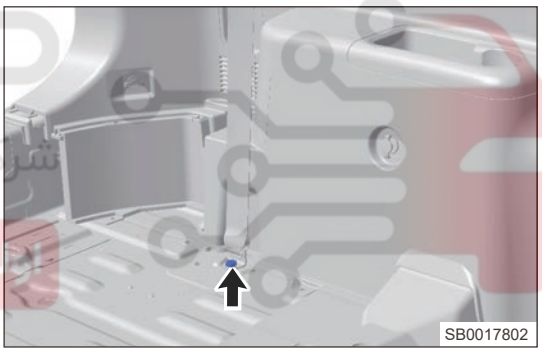
   b. After the retractor is installed, pre-tighten the guide ring mounting bolt to the fixing hole of C-pillar, and finally tighten the bolt.

Tightening torque: 50 ± 5 N m



   c. After completing the above procedures, pass the seat belt lower fixing end plate, locking tab and webbing through the hole of C-pillar upper protector; Pre-tighten the seat belt lower end plate fixing bolt to the corresponding mounting hole on wheel house sheet metal after assembling the C-pillar protector, and finally tighten the bolt.

Tightening torque: 50 ± 5 N m

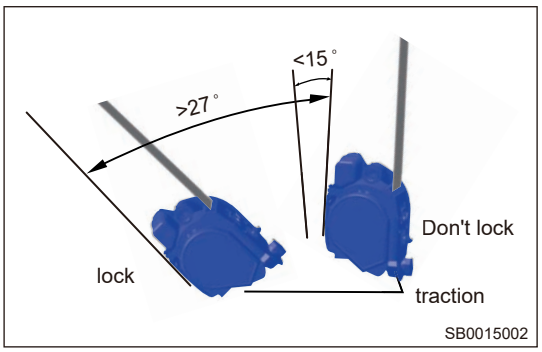


2. Connect the negative battery cable.

Inspection

Hint:

- DO NOT disassemble the third row seat belt retractor.
- The retractor should be extended and retracted freely within 15° to each side. When the angle is more than 15° or less than 27°, either locking or unlocking is OK, but when the angle is more than 27°, it must be locked.
- If result is not as specified, replace the third row seat belt assembly.

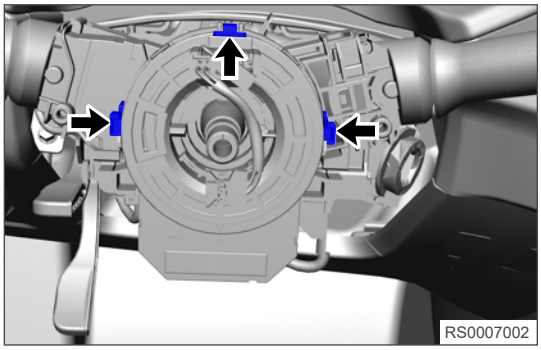


Front Seat Belt Buckle Assembly

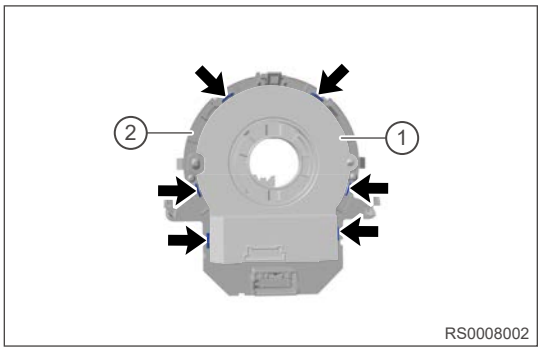
On-Vehicle Inspection

1. Inspect the front seat belt buckle assembly.

a. Disconnect the front seat belt buckle connector (arrow).



b. Using a digital multimeter, measure resistance between terminals 1 and 2 of front seat belt buckle assembly connector.Under normal condition, the measured resistance should be ∞ Ω (no continuity) when front seat belt assembly is fastened; The measured resistance should be less than 1 Ω (-continuity) when front seat belt assembly is unfastened. If result is not as specified, replace front seat belt buckle assembly.



Removal

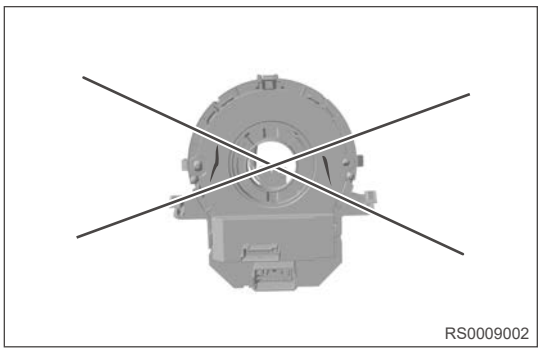
Hint:

- Use same procedures for front passenger seat belt buckle assembly and driver seat belt buckle assembly.
- Procedures listed below are for driver seat belt buckle assembly.

Caution
• Be sure to wear safety equipment to prevent accidents, when removing front seat belt buckle assembly. • DO NOT scratch interior, when removing the front seat belt buckle assembly. • DO NOT damage wire harness and connector, when removing the front seat belt buckle assembly.

1. Turn off all electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the front seat assembly.
4. Remove the driver seat belt buckle assembly.

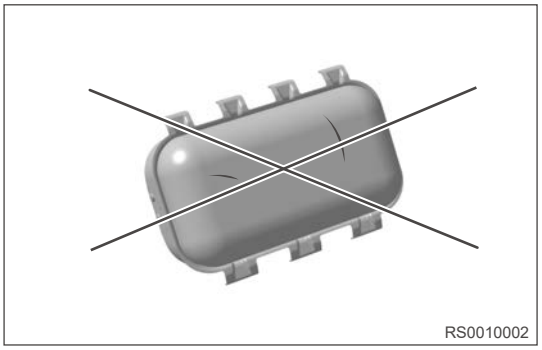
a. Disengage the seat belt buckle wire harness connector clip (arrow) from bottom part of seat.



b. Disengage the left side seat belt buckle wire harness connector clip (arrow) from bottom part of seat.

c. Remove fixing nut (1) from seat belt buckle assembly, and remove driver seat belt with buckle assembly (2).

Tightening torque: 50 ± 5 N•m

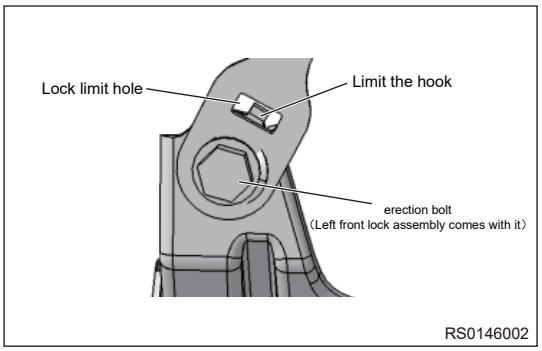


Installation

Caution
• Be sure to tighten all fixing bolts according to specified torque, when installing front seat belt buckle assembly. • Install connectors in place, when installing front seat belt buckle assembly.

1. Installation
   a. First take out the front left buckle assembly that is in good condition, pre-tighten the buckle mounting bolt, align the buckle limit hook with seat frame limit hook and tighten the mounting bolt.

Tightening torque: 50 ± 5 N m



   b. Wire harness clips of front left buckle are secured on the specified location.
   c. Front left buckle assembly is installed on the seat and supplied with seat assembly. Connect the wire harness connector of front left buckle assembly with the interior wire harness connector and ensure that the connector is connected properly and clamped in place.

Second Row Left Buckle Assembly

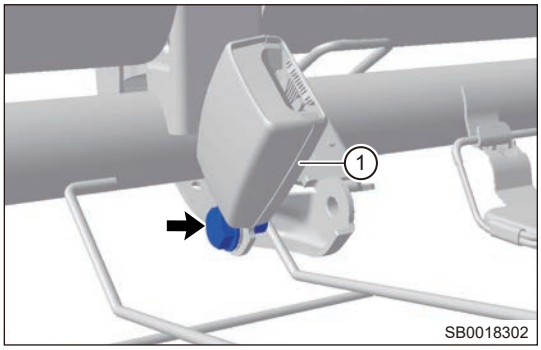
On-vehicle Inspection

Warning
• Be sure to wear safety equipment to prevent accidents, when removing the second row left buckle assembly. • DO NOT scratch interior when removing the second row left buckle assembly.

1. Turn off all electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the second row left buckle assembly.

a. Remove mounting bolt (arrow) and second row left buckle assembly (1).

Tightening torque: 50 ± 5 N m



Installation

Caution
• Be sure to tighten the fixing nut to specified torque when installing second row left buckle assembly. • The assembly should be carried out in the seat factory and supplied with the seat assembly. • The seat factory should test the installation torque by a ratio of 100%.

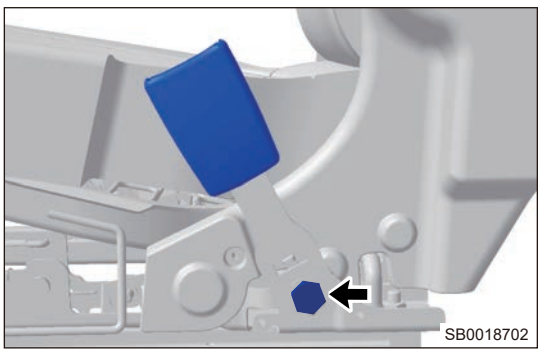
1. Installation is in the reverse order of removal.

Second Row Right Buckle Assembly

On-vehicle Inspection

Warning
• Be sure to wear necessary safety equipment to prevent accidents, when removing second row right buckle assembly. • Try to prevent interior from being scratched, when removing second row right buckle assembly.

1. Turn off all electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the second row right buckle assembly.
   a. Remove mounting bolt (arrow) and second row right buckle assembly.



Installation

Caution
• Be sure to tighten the fixing nut to specified torque when installing rear center seat belt buckle assembly. • The assembly should be carried out in the seat factory and supplied with the seat assembly. • The seat factory should test the installation torque by a ratio of 100%.

1. Remove the second row right buckle assembly.

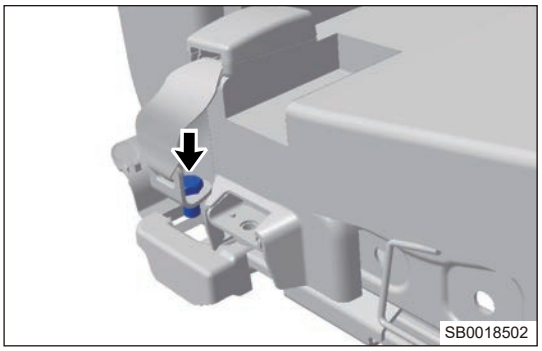
Second Row Middle Buckle Assembly

On-vehicle Inspection

Warning
• Be sure to wear necessary safety equipment to prevent accidents, when removing second row middle buckle assembly. • Try to prevent interior from being scratched, when removing second row middle buckle assembly.

1. Turn off all electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the second row middle buckle assembly.
   a. Remove mounting bolt (arrow) and second row middle buckle assembly.

Tightening torque: 50 ± 5 N m



Installation

Caution
• Be sure to tighten the fixing nut to specified torque when installing rear center seat belt buckle assembly. • The assembly should be carried out in the seat factory and supplied with the seat assembly. • The seat factory should test the installation torque by a ratio of 100%.

1. Installation is in the reverse order of removal.

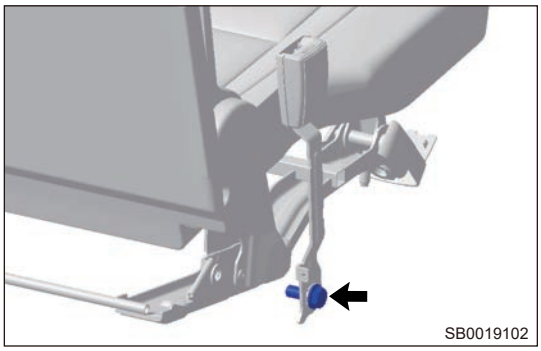
Third Row Left / Right Buckle Assembly

Removal

Caution
• Be sure to wear necessary safety equipment to prevent accidents, when removing third row left / right buckle assembly. • Try to prevent interior from being scratched, when removing third row left / right buckle assembly.

1. Turn off all electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the third row left / right buckle assembly.
   a. Remove mounting bolt (arrow) and third row left / right buckle assembly.

Tightening torque: 50 ± 5 N m



Installation

Caution
• Be sure to tighten the fixing nut to specified torque when installing rear right seat belt buckle assembly. • The assembly should be carried out in the seat factory and supplied with the seat assembly. • The seat factory should test the installation torque by a ratio of 100%.

Installation is in the reverse order of removal.

Height Adjuster Assembly

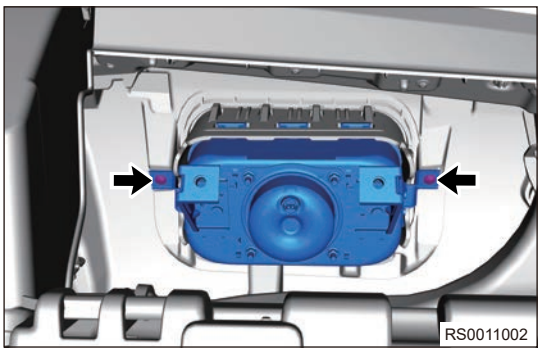
Removal

Hint:

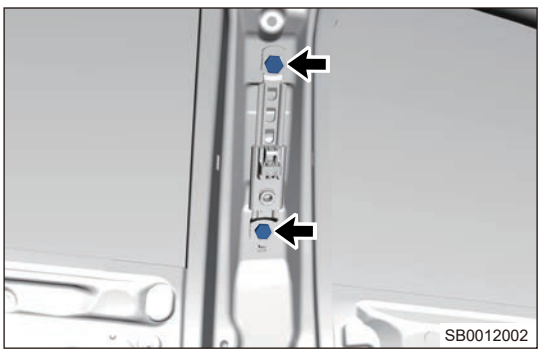
- Use same procedures for right and left sides.
- Procedures listed below are for left side.

Caution
• Be sure to wear safety equipment to prevent accidents, when removing height adjuster assembly. • Appropriate force should be applied, when removing the height adjuster assembly. Be careful not to operate roughly. • Try to prevent interior from being scratched, when removing height adjuster assembly. • Take the height adjuster assembly that is in good condition, first align the mounting bolts of height adjuster assembly with the upper and lower mounting nuts at fixing points of height adjuster for body B-pillar respectively and pre-tighten them. After that, the limit hook of height adjuster assembly should be engaged with the body limit hook; Finally tighten the mounting bolts. • It is necessary to press the unlock button all the time when the height adjuster assembly of seat belt is adjusted up and down. DO NOT push up directly or forcefully or quickly downward to unlock. Adjust the height adjuster to highest position after assembling.

1. Turn off all electrical equipment and ignition switch.
2. Disconnect the negative battery cable.
3. Remove the left B-pillar lower protector assembly.
4. Remove the left B-pillar upper protector assembly.
5. Remove the height adjuster assembly.
   a. Remove the front seat belt assembly upper fixing bolt (arrow).



   b. Remove 2 fixing bolts (arrow) from height adjuster assembly.



   c. Remove the height adjuster assembly.

Installation

Caution
• Be sure to tighten the fixing bolts to specified torque when installing height adjuster assembly.

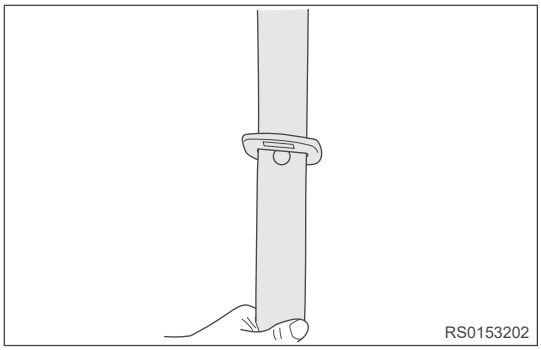
1. Installation is in the reverse order of removal.

Locking Tab Reversing

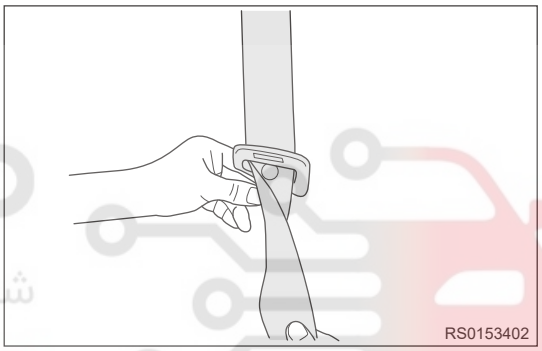
Hint:

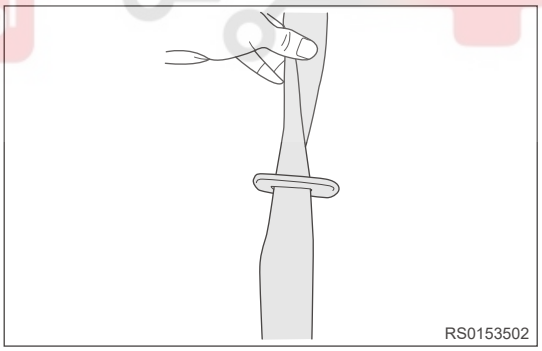
When the seat belt is recycled, safety webbing contacts with the seat side shoulder, which may cause the safety webbing to be reversed by 180 degrees with the locking tab. When pulling the locking tab (inside opening clearance is larger than the thickness of webbing) at the next time of usage, the locking tab may be reversed occasionally. In this case, recover it according to the instructions (without removing seat belt), and the webbing is not damaged and without replacing.

1. Figure after the locking tab is reversed.



2. Fold the webbing in any direction and pull it downward forcefully to make the reversed webbing be pulled into the locking tab.





3. Complete the lock tab reversing.