# SUPPLEMENTAL RESTRAINT SYSTEM

# GENERAL INFORMATION

## Description

This vehicle adopts the occupant restraint system, which includes active and supplemental types. Active restraint system requires occupants to take some actions, such as fastening seat belt; while supplemental restraint system requires no actions from occupants.

Active Restraint system:

- Driver seat belt and front passenger seat belt
- Rear seat belt

Supplemental Restraint System:

- Airbag system
- Driver seat belt pretensioner and front passenger seat belt pretensioner

  Airbag system consists of the following components:
- Driver airbag

  Driver airbag is installed in the steering wheel, which will inflate to protect the driver in the event of a severe collision.
- Front passenger airbag

  Front passenger airbag is installed in the upper right side of instrument panel, which will inflate to protect the front passenger in the event of a severe collision.
- SRS control module assembly

  SRS control module assembly has a built-in collision sensor which is installed on the body floor of auxiliary fascia console body assembly. It controls the inflation of airbag so as to protect driver and front passenger in the event of a severe collision.
- Spiral cable

  It is used to connect the driver airbag while ensuring that steering wheel has enough steering angle.
- Airbag malfunction indicator

  After ignition switch is turned to ON, if the malfunction indicator goes off after coming on for approximately 3 seconds, it means the supplemental restraint system operates normally. If the malfunction indicator does not come on, remains on or flashes, it means the supplemental restraint system has a problem and it is necessary to perform tests and repairs.
- Wire harness

  Generally, it is yellow and used to connect the elements of supplemental restraint system. The connector has a safety mechanism.

Airbag system function:

- Airbag must work together with the seat belt, and it is not a substitute for the seat belt. Driver and passengers should always fasten their seat belts when driving, and adjust the belts to the proper position according to their size.
- Minor collision will not activate the airbag system. The airbags will quickly inflate to protect the driver and front passenger only when severe frontal collision occurs.

Seat belt pretensioner consists of the following components:

- Driver seat belt pretensioner

  Driver seat belt pretensioner is located on the driver seat belt retractor, which will retract the driver seat belt to protect the driver in the event of a severe collision.
- Front passenger seat belt pretensioner

  Front passenger seat belt pretensioner is located on the front passenger seat belt retractor, which will retract the front passenger seat belt to protect the front passenger in the event of a severe collision.

Seat belt pretensioner function:

- At the moment of collision, the pretensioner retracts the seat belt before occupant moves forward, and restraints occupant onto the seat, then locks the seat belt to prevent occupant from leaning forward, thus protecting occupant safety.
- Seat belt pretensioner works with airbag. Once frontal collision impact is detected higher than specified valve, the seat belt with pretensioner will work together with the airbag system to protect occupant safety.

## Operation

Supplemental restraint system can improve the safety of occupants only when used in combination with the seat belts. Occupants must fasten their seat belts in order to gain full protection from the supplemental restraint system.

Supplemental restraint system circuit is continuously monitored and controlled by the SRS control module assembly. The airbag indicator on instrument cluster illuminates for approximately 3 seconds for a test each time ignition switch is turned ON. The airbag indicator goes off after the test is completed. If the indicator comes on at any time other than the test time, it indicates that there is a problem in the supplemental restraint system circuit.

Whether the airbag deploys or not depends on the angle and severity of the impact. When vehicle is subjected to severe collision, the microprocessor in supplemental restraint system sends signals to the corresponding inflator units of airbag to deploy the airbags quickly , thus protecting occupants.

**CAUTION**

- Before removing airbag system components, disconnect the negative battery cable at least 90 seconds. Before servicing steering system, remove the driver airbag and spiral cable for safekeeping.
- If vehicle has been involved in a minor collision but the airbags do not deploy, always inspect the airbag components.
- If airbag may be touched during servicing, remove the airbag as necessary for safekeeping before servicing.
- Never use airbag components from another vehicle. When replacing the airbag components, replace with new ones.
- If an airbag component is dropped or if there are any cracks, dents or other defects in the case, bracket or connector, replace the airbag component with a new one.
- Information labels are attached to the periphery of airbag components. Always follow the cautions and instructions on labels.



**WARNING**

- Never expose airbag components directly to hot air or open flames.
- Never attempt to disassemble or repair airbag components.
- The removed airbag should be kept properly. Never put other objects on it. If triggered accidentally, the airbag may cause personal injury.
- As a disposable component, the airbag must be replaced after deployment and avoid reusing it.
- Always dispose of vehicle together with airbag, or the airbag may be triggered accidentally to cause personal injury.

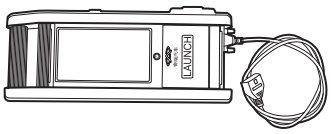
# Specifications

## Torque Specifications

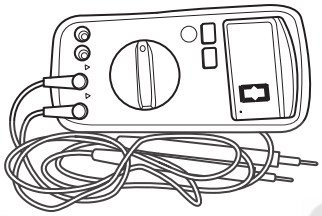
| Description | Torque (N·m) |
|---|---|
| Coupling Bolt Between Front Passenger Airbag and Instrument Panel Crossmember Assembly | 10 ± 1 |
| Coupling Nut Between SRS Control Module Assembly and Body | 10 ± 1 |

# Tools

## Special Tool

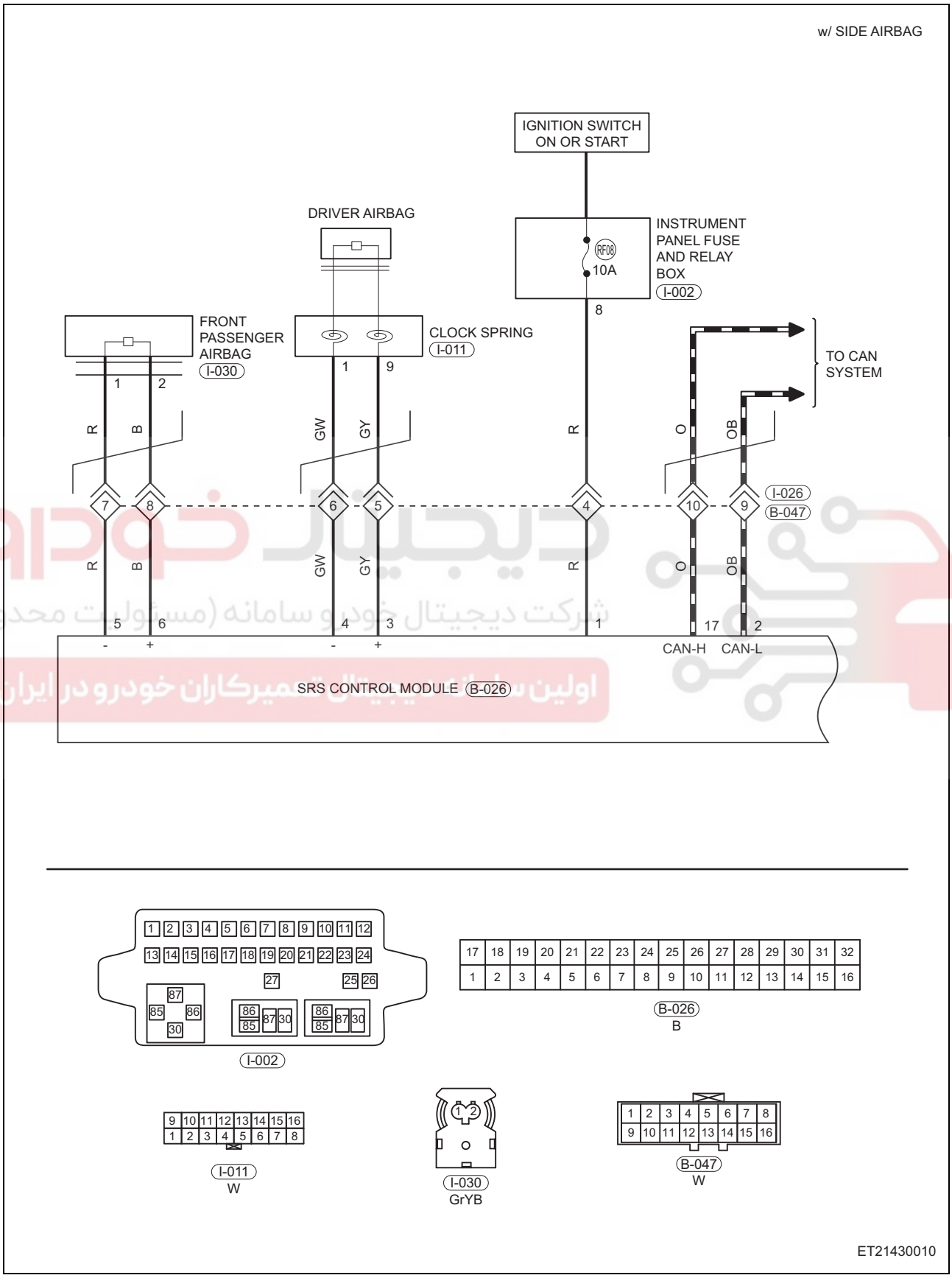
| | |
|---|---|
| X-431 3G Diagnostic Tester |  RCH0000001 |

## General Tool

| | |
|---|---|
| Digital Multimeter |  RCH0000002 |

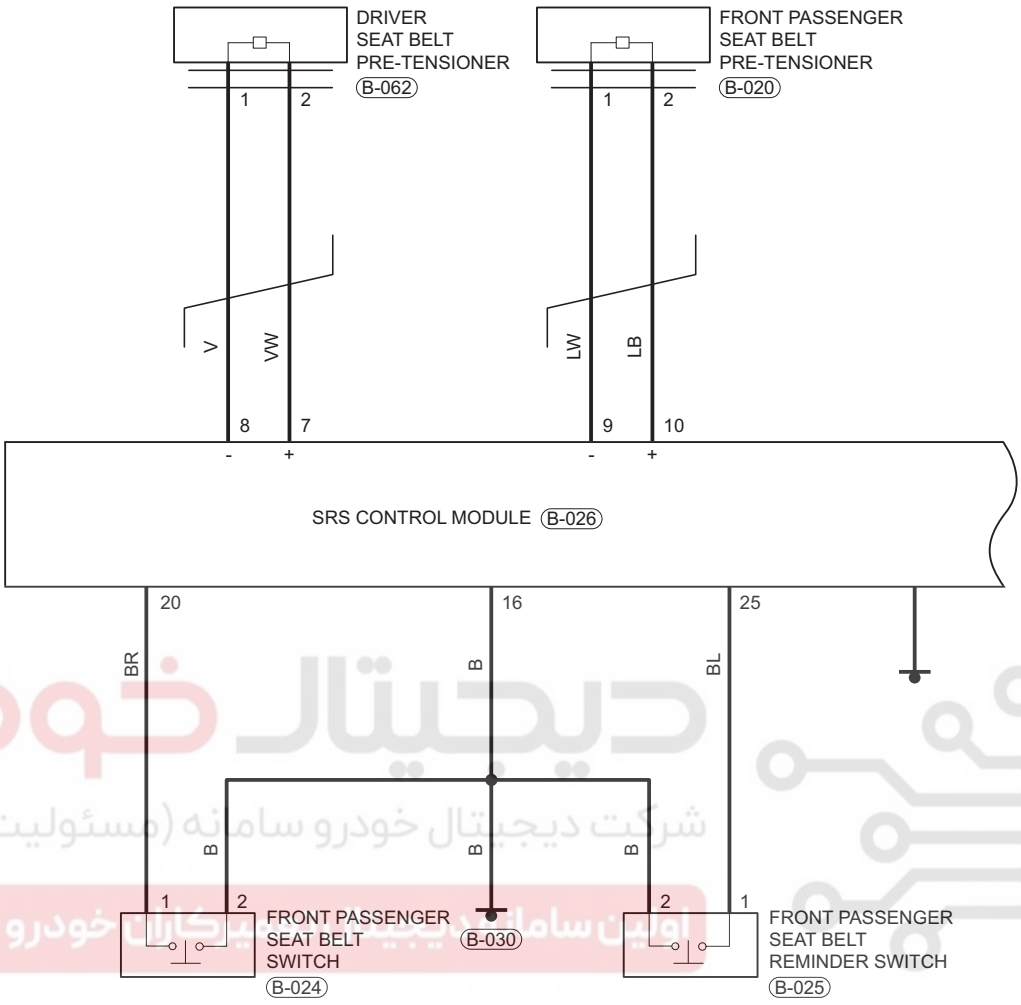
# Circuit Diagram

## Supplemental Restraint System (Page 1 of 5)



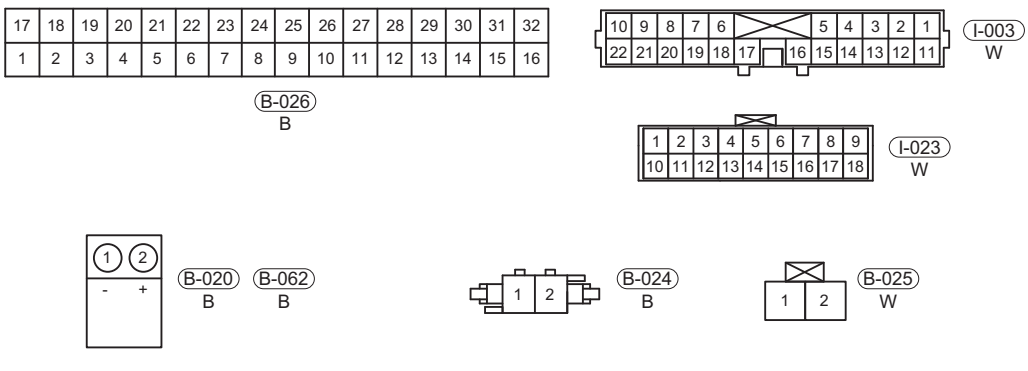
## Supplemental Restraint System (Page 2 of 5)

w/ SIDE AIRBAG





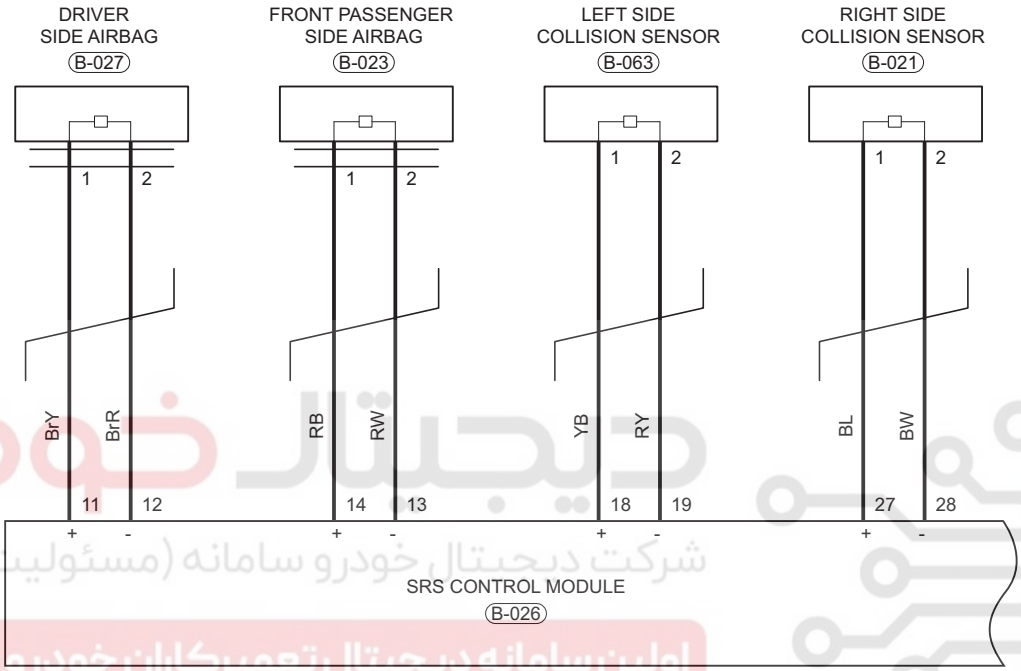

43




ET21430020

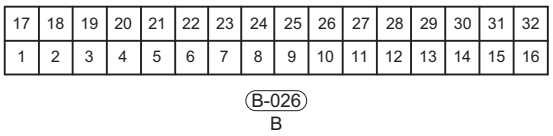
## Supplemental Restraint System (Page 3 of 5)

w/ SIDE AIRBAG







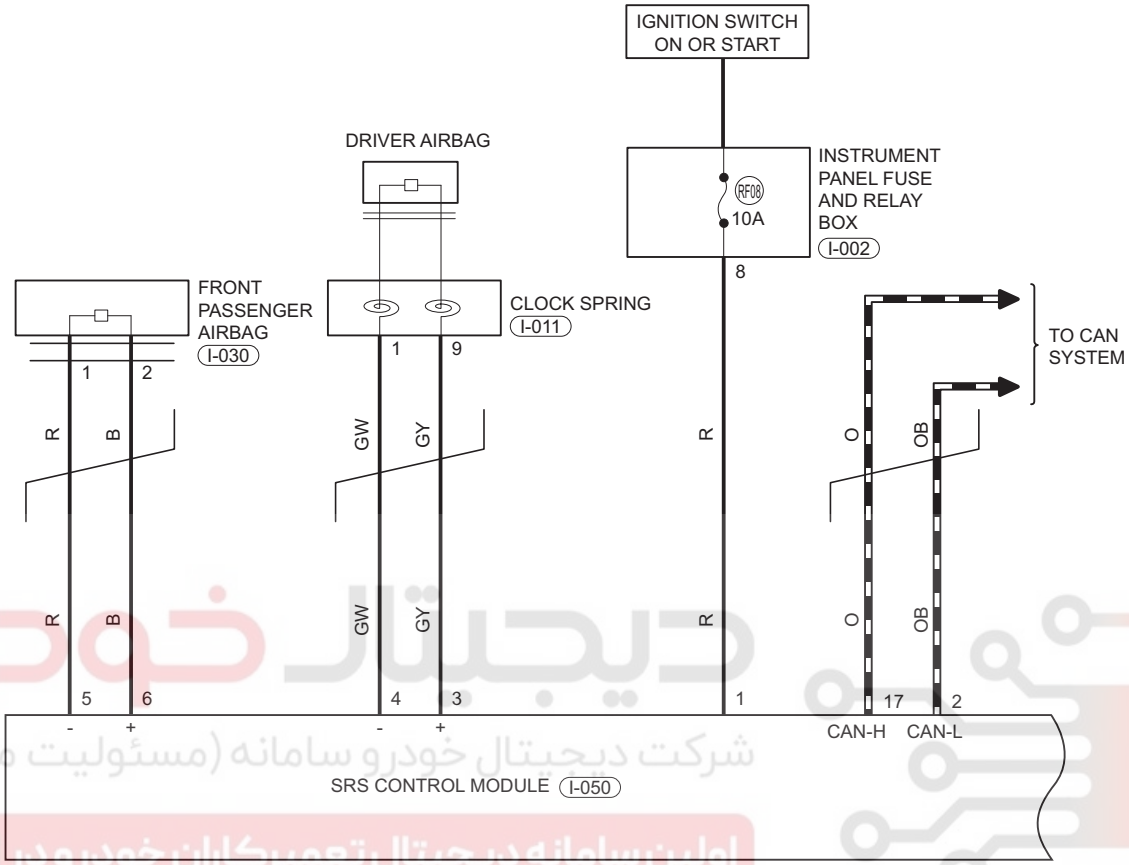



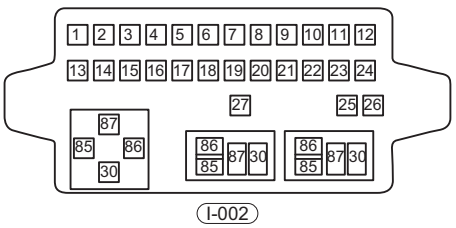


ET21430030

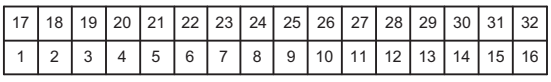
## Supplemental Restraint System (Page 4 of 5)

w/o SIDE AIRBAG

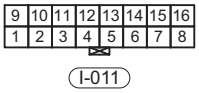


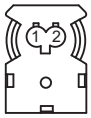

I-002




I-050
Gr




I-011
W

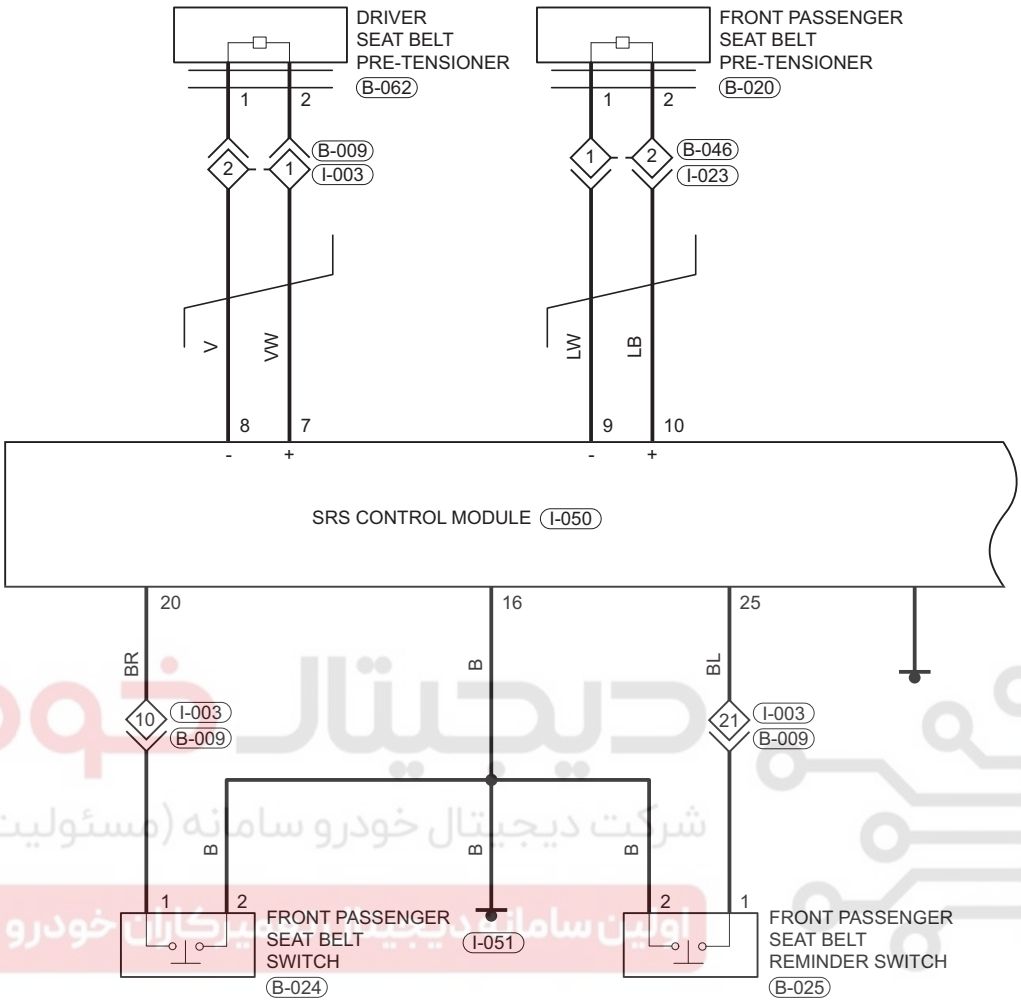


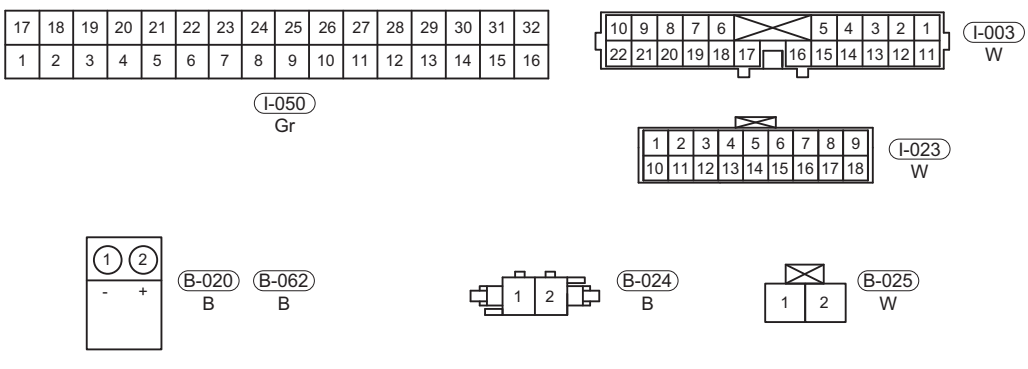

I-030
GrYB

ET21430040

## Supplemental Restraint System (Page 5 of 5)

w/o SIDE AIRBAG




ET21430050

# DIAGNOSIS & TESTING

## SRS Control Module Terminal Definition

| Terminal No. | Description | Terminal No. | Description |
|---|---|---|---|
| 1 | Power Supply | 17 | CAN-H1 |
| 2 | CAN-L1 | 18 | Left Side Collision Sensor (+) |
| 3 | Driver Airbag Positive | 19 | Left Side Collision Sensor (-) |
| 4 | Driver Airbag Negative | 20 | Front Passenger Seat Belt Switch |
| 5 | Front Passenger Airbag Negative | 21 | - |
| 6 | Front Passenger Airbag Positive | 22 | - |
| 7 | Driver Seat Belt Pre-tensioner Positive | 23 | - |
| 8 | Driver Seat Belt Pre-tensioner Negative | 24 | - |
| 9 | Front Passenger Seat Belt Pretensioner Negative | 25 | Seat Belt Reminder |
| 10 | Front Passenger Seat Belt Pretensioner Positive | 26 | - |
| 11 | Driver Side Airbag (+) | 27 | Right Side Collision Sensor (+) |
| 12 | Driver Side Airbag (-) | 28 | Right Side Collision Sensor (-) |
| 13 | Front Passenger Side Airbag (-) | 29 | - |
| 14 | Front Passenger Side Airbag (+) | 30 | - |
| 15 | - | 31 | - |
| 16 | Ground | 32 | - |



## DTC Confirmation Procedure

Confirm that battery voltage is over 12 V before performing the following procedures.

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch ON.
- Use X-431 3G diagnostic tester to record and clear the DTCs stored in the supplemental restraint system.
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch ON, and then select "Read Code".
- If DTC is detected, the malfunction indicated by the DTC is current. Go to the diagnosis procedure - Step 1.
- If DTC is not detected, the malfunction indicated by the DTC is intermittent. Please refer to Intermittent DTC Troubleshooting.

## Intermittent DTC Troubleshooting

If malfunction is intermittent, perform the followings:

- Check if connectors are loose.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Monitor X-431 3G 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 the related circuit.
- If possible, try to duplicate the conditions under which the DTC was set.
- Look for the data that has changed or the DTC to be reset during the wiggle test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect the airbag components and mounting areas for damage, foreign matter, etc. that will cause incorrect signals.
- Check and clean all wire harness connectors and grounding parts related to the current DTC.
- Remove the SRS control module assembly from the malfunctioning vehicle and install it to a new vehicle and perform a test. If DTC cannot be cleared, the SRS control module assembly is malfunctioning. If DTC can be cleared, reinstall the SRS control module assembly to original vehicle.
- If multiple trouble codes were set, refer to the circuit diagrams to look for any common ground circuit or power supply circuit applied to the DTC.
- Refer to Technical Bulletin that is applied to the malfunction.

## Ground Inspection

Groundings are very important to the entire circuit system, which are normal or not can seriously affect the entire circuit system. Groundings are often exposed to moisture, dirt and corrosive elements. Corrosion (rust) can increase resistance which will change the way in which a circuit works.

Electronically controlled circuits are very sensitive to proper grounding. A loose or corroded ground can affect the electronically controlled circuit. Perform the following operations when checking the ground points:

1. Remove the ground nut.
2. Check all contact surfaces for tarnish, dirt, rust, etc.
3. Clean as necessary to ensure that contacting is in a good condition.
4. Reinstall the ground nut securely.
5. Check if add-on accessories interfere with the ground circuit.
6. If several wire harnesses are crimped into one ground eyelet terminal, check if the wire harnesses are installed correctly. Make sure all wire harnesses are clean, securely fastened and providing a good ground path.



## Diagnosis Procedure



**HINT:**
Use following procedures to troubleshoot the Supplemental Restraint System (SRS).

| | |
|---|---|
| **1** | **Vehicle brought to workshop** |

NEXT

| | |
|---|---|
| **2** | **Check battery voltage** |

**Standard voltage: 11 to 14 V**

If voltage is below 11 V, recharge or replace the battery before proceeding to next step.

NEXT

| | |
|---|---|
| 3 | Check SRS warning light |

NEXT

| | |
|---|---|
| 4 | Check for DTCs (current DTC and history DTC) |

| | |
|---|---|
| DTC occurs | For current DTC, go to step 5 |
| No DTC | For history DTC, go to step 6 |

| | |
|---|---|
| 5 | Diagnostic Trouble Code (DTC) chart |

NEXT

| | |
|---|---|
| 6 | Circuit inspection |

**HINT:**

An activation prevention mechanism is built in the airbag system connector. When the connector is disconnected, this mechanism cuts off the circuit by bringing the short spring plate into contact with the terminals, thus insulating the circuit from external power sources to prevent accidental airbag activation.

To release the activation prevention mechanism, insert a piece of paper with the same thickness as the male terminal between terminals and short spring plate to disconnect the connection.

**⚠ WARNING**

- DO NOT release the activation prevention mechanism unless specially directed by the troubleshooting procedure.

During circuit troubleshooting for the airbag system, make sure to cut off the battery power source, and wait for at least 90 seconds to discharge the system condenser.

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

NEXT

| | |
|---|---|
| 7 | Repair |

NEXT

| | |
|---|---|
| 8 | Clear DTCs (current DTC and history DTC) |

NEXT

| | |
|---|---|
| 9 | Check for DTCs (current DTC and history DTC) |

| | |
|---|---|
| DTC output | Go to step 5 |
| No DTC output | Go to next step |

NEXT

| | |
|---|---|
| 10 | Confirmation test |

NEXT

| | |
|---|---|
| 11 | End |

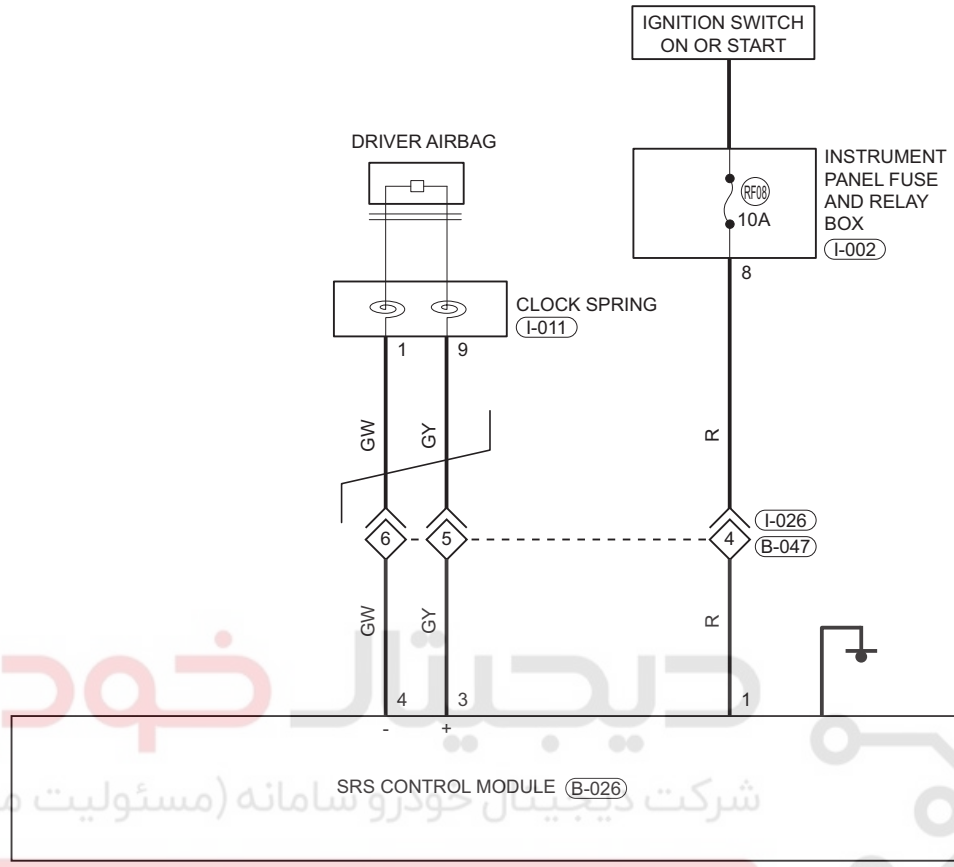
# Diagnostic Trouble Code (DTC) Chart

| DTC Code | DTC Definition |
|---|---|
| B0001 11 | Front Airbag Driver Loop Circuit Short to Ground |
| B0001 12 | Front Airbag Driver Loop Circuit Short to Battery |
| B0001 1A | Front Airbag Driver Loop Circuit Resistance Below Threshold |
| B0001 1B | Front Airbag Driver Loop Circuit Resistance Above Threshold |
| B0001 1C | Front Airbag Driver Loop Circuit Voltage Out of Range |
| B0010 11 | Front Airbag Passenger Loop Circuit Short to Ground |
| B0010 12 | Front Airbag Passenger Loop Circuit Short to Battery |
| B0010 1A | Front Airbag Passenger Loop Circuit Resistance Below Threshold |
| B0010 1B | Front Airbag Passenger Loop Circuit Resistance Above Threshold |
| B0010 1C | Front Airbag Passenger Loop Circuit Voltage Out of Range |
| B0070 11 | Belt Pretensioner Front Driver Loop Circuit Short to Ground |
| B0070 12 | Belt Pretensioner Front Driver Loop Circuit Short to Battery |
| B0070 1A | Belt Pretensioner Front Driver Loop Circuit Resistance Below Threshold |
| B0070 1B | Belt Pretensioner Front Driver Loop Circuit Resistance Above Threshold |
| B0070 1C | Belt Pretensioner Front Driver Loop Circuit Voltage Out of Range |
| B0072 11 | Belt Pretensioner Front Passenger Loop Circuit Short to Ground |
| B0072 12 | Belt Pretensioner Front Passenger Loop Circuit Short to Battery |
| B0072 1A | Belt Pretensioner Front Passenger Loop Circuit Resistance Below Threshold |
| B0072 1B | Belt Pretensioner Front Passenger Loop Circuit Resistance Above Threshold |
| B0072 1C | Belt Pretensioner Front Passenger Loop Circuit Voltage Out of Range |
| B1231 12 | Buckle Switch Front Passenger (BLFP) Circuit Short to Battery |
| B1231 1C | Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range |
| B1232 12 | PDM (Passenger Detection Mat) Switch Circuit Short to Battery |
| B1232 1C | PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range |
| B1210 00 | Front Deployment |
| B1211 00 | BT Deployment |
| B125A 00 | Crash Counter Reached Max |
| B1240 96 | ICM Airbag Lamp Failed |
| B1251 49 | Electronic Control Unit (ECU), Internal Electronic Failure |
| B1250 16 | Battery Voltage Circuit Voltage Below Threshold |
| B1250 17 | Battery Voltage Circuit Voltage Above Threshold |
| U1300 55 | Software Configuration Error |
| B0020 11 | Side Airbag Front Driver Loop Circuit Short to Ground |
| B0020 12 | Side Airbag Front Driver Loop Circuit Short to Battery |
| B0020 1A | Side Airbag Front Driver Loop Circuit Resistance Below Threshold |
| B0020 1B | Side Airbag Front Driver Loop Circuit Resistance Above Threshold |

| DTC Code | DTC Definition |
|---|---|
| B0020 1C | Side Airbag Front Driver Loop Circuit Voltage Out of Range |
| B0028 11 | Side Airbag Front Passenger Loop Circuit Short to Ground |
| B0028 12 | Side Airbag Front Passenger Loop Circuit Short to Battery |
| B0028 1A | Side Airbag Front Passenger Loop Circuit Resistance Below Threshold |
| B0028 1B | Side Airbag Front Passenger Loop Circuit Resistance Above Threshold |
| B0028 1C | Side Airbag Front Passenger Loop Circuit Voltage Out of Range |
| B1231 12 | Buckle Switch Front Passenger (BLFP) Circuit Short to Battery |
| B1231 1C | Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range |
| B1232 12 | PDM (Passenger Detection Mat) Switch Circuit Short to Battery |
| B1232 1C | PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range |
| B1250 16 | Power Supply Circuit Voltage Below Threshold |
| B1250 17 | Power Supply Circuit Voltage Above Threshold |
| B1211 00 | BT Deployment |

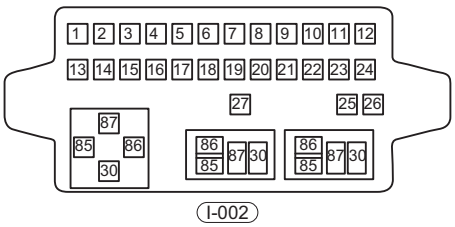
| | | |
|---|---|---|
| DTC | B0001 11 | Front Airbag Driver Loop Circuit Short to Ground |
| DTC | B0001 12 | Front Airbag Driver Loop Circuit Short to Battery |
| DTC | B0001 1A | Front Airbag Driver Loop Circuit Resistance Below Threshold |
| DTC | B0001 1B | Front Airbag Driver Loop Circuit Resistance Above Threshold |
| DTC | B0001 1C | Front Airbag Driver Loop Circuit Voltage Out of Range |

w/ SIDE AIRBAG

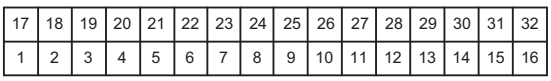




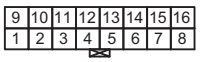


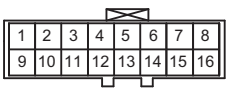

I-002




B-026
B



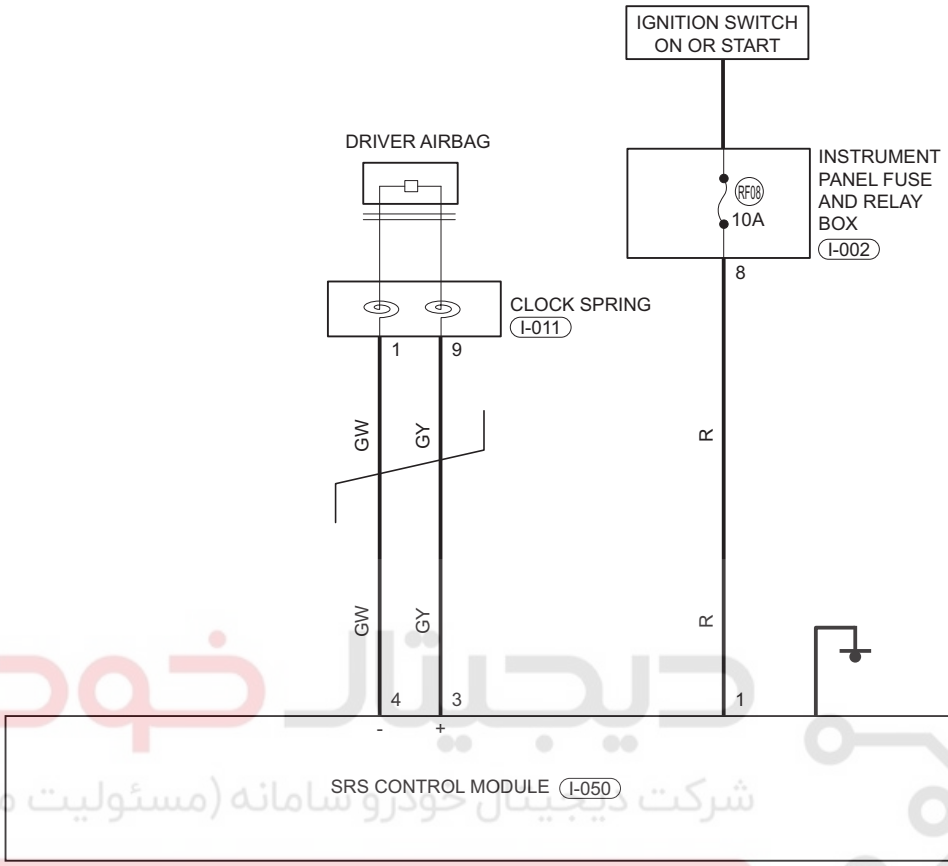

I-011
W




B-047
W

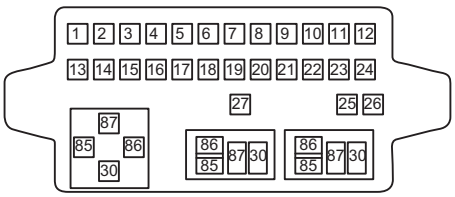
ET21430510

w/o SIDE AIRBAG

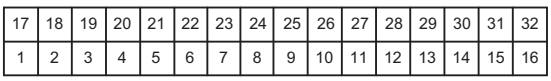







I-002




I-050
Gr


I-011
W

ET21430511

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B0001 11 | Front Airbag Driver Loop Circuit Short to Ground | Ignition switch ON | ON | • Driver airbag<br>• Spiral cable<br>• Wire harness and connector<br>• SRS control module assembly |
| B0001 12 | Front Airbag Driver Loop Circuit Short to Battery | | | |
| B0001 1A | Front Airbag Driver Loop Circuit Resistance Below Threshold | | | |
| B0001 1B | Front Airbag Driver Loop Circuit Resistance Above Threshold | | | |
| B0001 1C | Front Airbag Driver Loop Circuit Voltage Out of Range | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| | |
|---|---|
| **1** | **Check driver airbag** |

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect driver airbag connector, and connect the new driver airbag to connector I-055.

43

**⚠ WARNING**

- Never measure the driver airbag directly, otherwise, it may cause serious personal injury due to accidental deployment of the airbag.

c. Reconnect the negative battery cable and wait for a few seconds.
d. Turn ignition switch ON and wait for at least 90 seconds.
e. Use X-431 3G diagnostic tester to clear the DTCs.
f. Turn ignition switch to LOCK.
g. Turn ignition switch ON and wait for at least 90 seconds.
h. Use X-431 3G diagnostic tester to check if the DTCs are still output.

**NO** → **Replace driver airbag**

**YES**

| 2 | Check wire harness and connector |
|---|---|

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

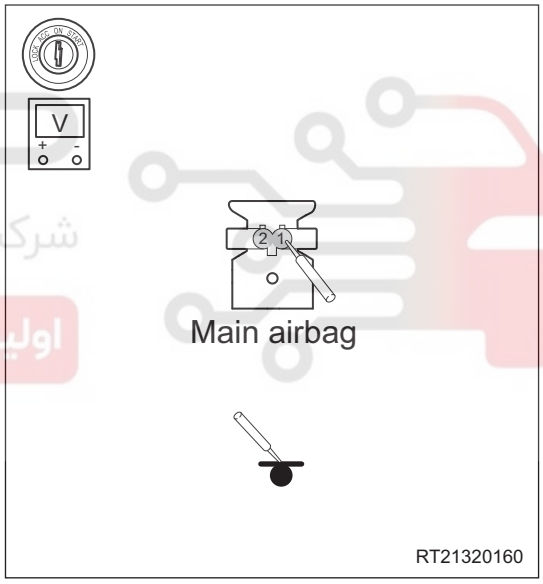
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the driver main airbag connector and SRS control module assembly connector I-050/B-026.
c. Disconnect the spiral cable connector I-026 and instrument panel wire harness connector B-047 W/SIDE AIRBAG.
d. Check if wire harnesses are worn, pierced, pinched or partially broken.
e. Check for broken, bent, protruded or corroded terminals.
f. Check if related connector terminal contact pins are in good condition.

NG → **Repair or replace instrument panel/body/ spiral cable wire harness and connector**

OK

| 3 | Check driver airbag control circuit |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-050/B-026.
c. Disconnect the driver main airbag connector.
d. Connect the negative battery cable and wait for a few seconds.
e. Turn ignition switch ON.
f. Using a digital multimeter, measure the voltage between driver main airbag connector and body ground to check for a short circuit to power supply according to the table below.




**Standard Voltage**

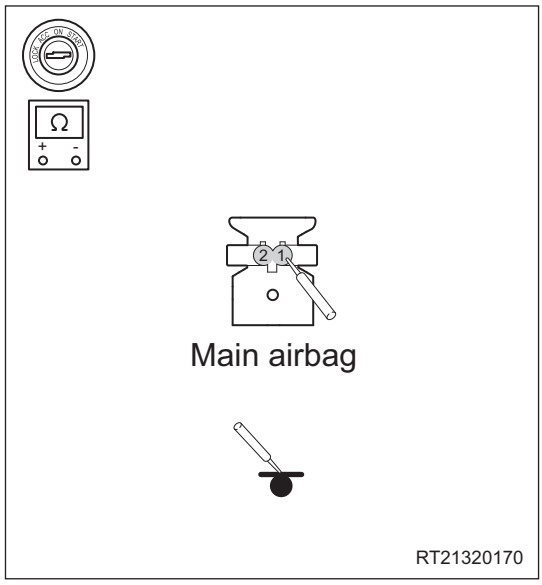
| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| Main airbag (1) - Body ground | Ignition switch ON | Below 1 V |
| Main airbag (2) - Body ground | Ignition switch ON | Below 1 V |

g. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

h. Using a digital multimeter, check for continuity between driver main airbag connector and body ground to check for a short circuit to ground according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| Main airbag (1) - Body ground | Always | No continuity |
| Main airbag (2) - Body ground | Always | No continuity |

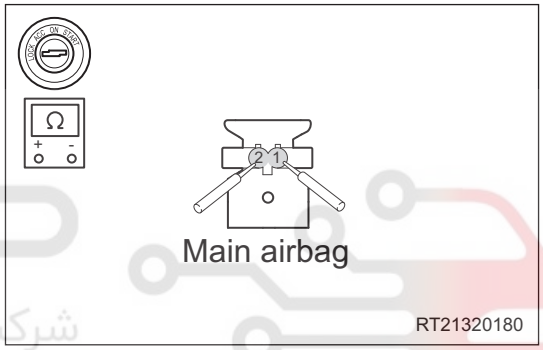



i. Release the activation prevention mechanism built into the SRS control module assembly connector I-050/B-026.

j. Using a digital multimeter, check for continuity between the terminals of driver main airbag connector according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| Main airbag (1) - Main airbag (2) | Always | No continuity |




**OK** → **Replace SRS control module assembly**

**NG**

| 4 | Check airbag wire harness and connector (SRS control module assembly - body wire harness connector) |
|---|---|

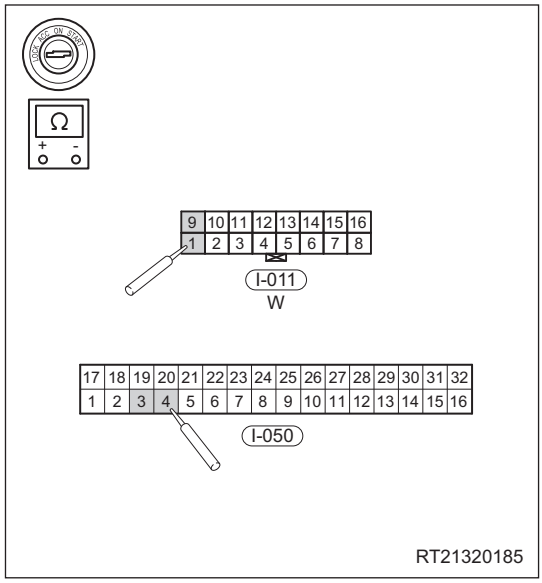
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
Using a ohmmeter, check for continuity between clock spring I-011 (1) and airbag module I-050 (4).
Using a ohmmeter, check for continuity between clock spring I-011 (9) and airbag module I-050 (3).
(W/O SIDE AIRBAG)

b. Disconnect body wire harness connector B-047 and SRS control module assembly connector B-026.
(W/SIDE AIRBAG)

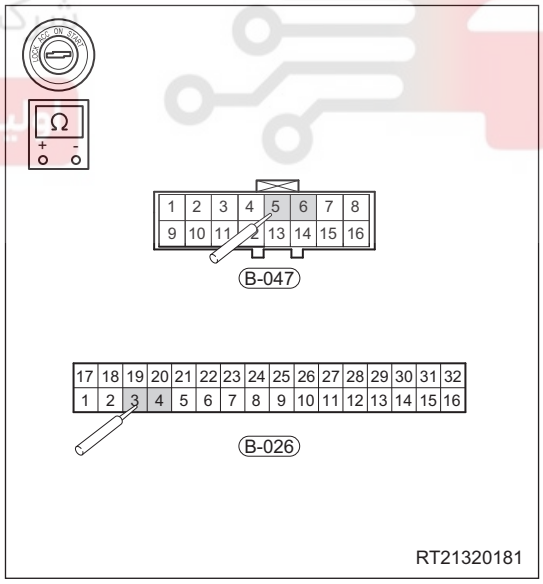
c. Using a digital multimeter, check for continuity between the terminals of connector B-047 and connector B-026 according to the table below.
(W/SIDE AIRBAG)

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-011 (1) - I-050 (4) | Always | Continuity |
| I-011 (9) - I-050 (3) | Always | Continuity |




| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-047 (5) - B-026 (3) | Always | Continuity |
| B-047 (6) - B-026(4) | Always | Continuity |




**NG** → **Replace instrument panel wire harness and connector**

**OK**

| 5 | Check airbag wire harness and connector (SRS control module assembly - spiral cable connector) |
|---|---|

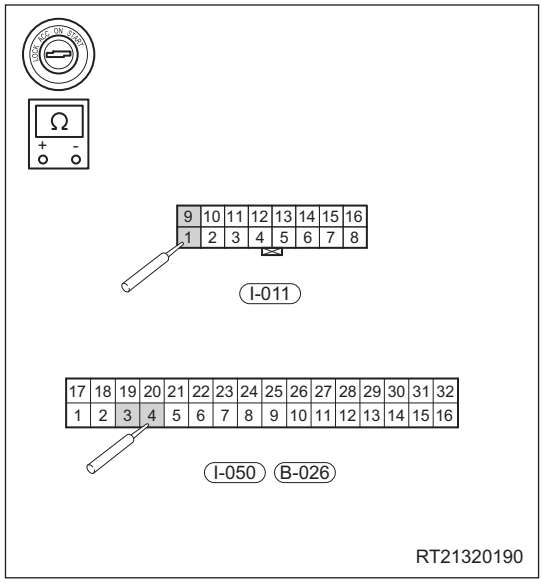
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect the instrument panel wire harness connector I-011 and SRS control module assembly connector I-050/B-026.

c. Using a digital multimeter, check for continuity between the terminals of connector I-011 and connector B-026 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-011 (1) - I-050/B-026 (4) | Always | Continuity |
| I-011 (9) - I-050/B-026 (3) | Always | Continuity |



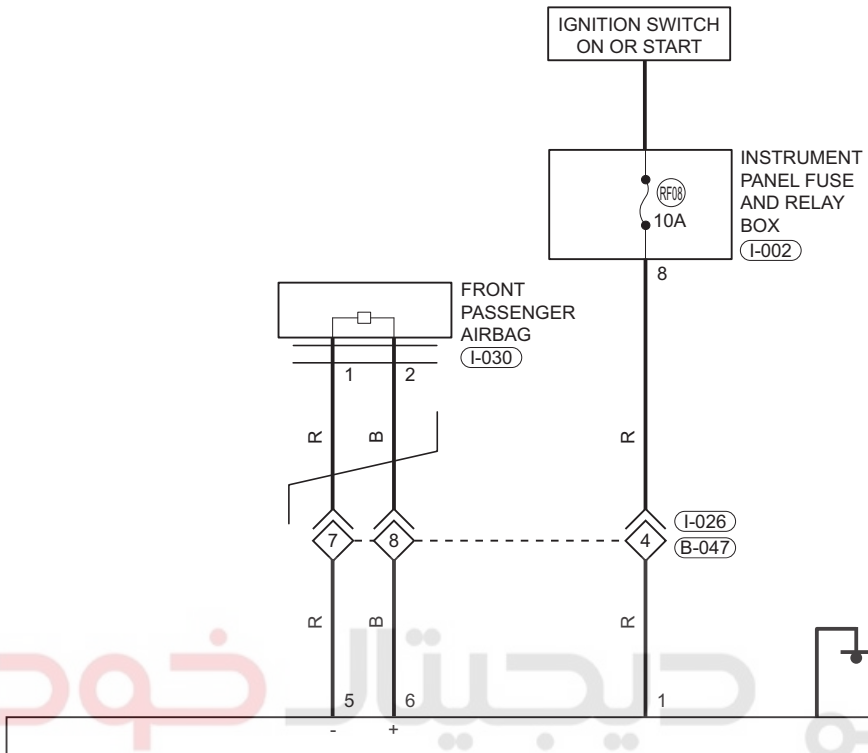

NG → **Replace instrument panel wire harness and connector**

OK →

**Replace spiral cable**

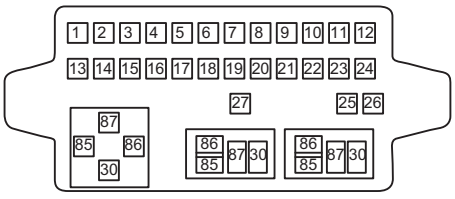
| | | |
|---|---|---|
| DTC | B0010 11 | Front Airbag Passenger Loop Circuit Short to Ground |
| DTC | B0010 12 | Front Airbag Passenger Loop Circuit Short to Battery |
| DTC | B0010 1A | Front Airbag Passenger Loop Circuit Resistance Below Threshold |
| DTC | B0010 1B | Front Airbag Passenger Loop Circuit Resistance Above Threshold |
| DTC | B0010 1C | Front Airbag Passenger Loop Circuit Voltage Out of Range |

w/ SIDE AIRBAG

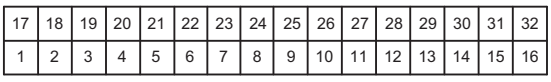




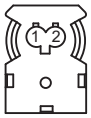


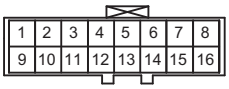

I-002




B-026
B



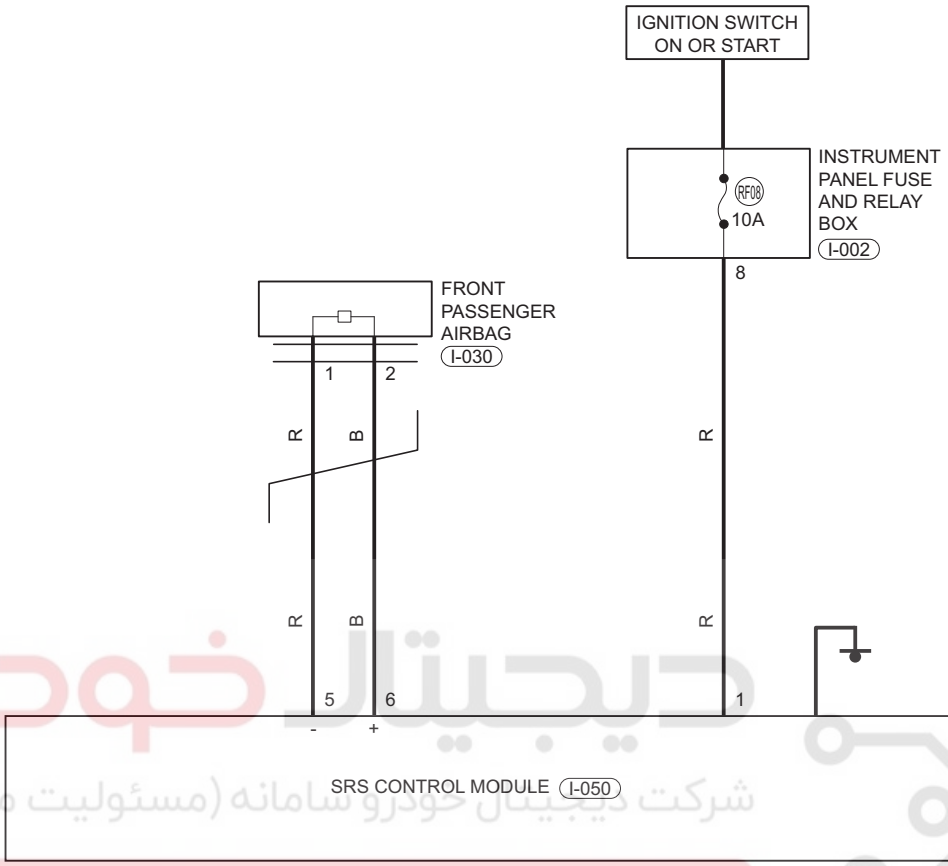

I-030
GrYB




B-047
W

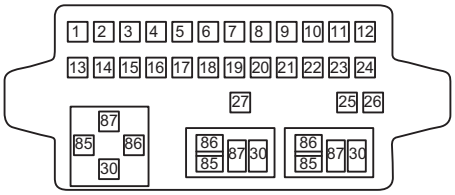
ET21430520

w/o SIDE AIRBAG





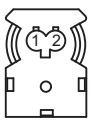



I-002

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

I-050
Gr




I-030
GrYB

ET21430521

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B0010 11 | Front Airbag Passenger Loop Circuit Short to Ground | Ignition switch ON | ON | • Front passenger airbag<br>• Wire harness and connector<br>• SRS control module assembly |
| B0010 12 | Front Airbag Passenger Loop Circuit Short to Battery | | | |
| B0010 1A | Front Airbag Passenger Loop Circuit Resistance Below Threshold | | | |
| B0010 1B | Front Airbag Passenger Loop Circuit Resistance Above Threshold | | | |
| B0010 1C | Front Airbag Passenger Loop Circuit Voltage Out of Range | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| | |
|---|---|
| 1 | **Check front passenger airbag** |

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect front passenger airbag connector, and connect the new front passenger airbag to connector I-030.

**⚠ WARNING**

- Never measure the front passenger airbag directly, otherwise, it may cause serious personal injury due to accidental deployment of the airbag.

c. Reconnect the negative battery cable and wait for a few seconds.
d. Turn ignition switch ON and wait for at least 90 seconds.
e. Use X-431 3G diagnostic tester to clear the DTCs.
f. Turn ignition switch to LOCK.
g. Turn ignition switch ON and wait for at least 90 seconds.
h. Use X-431 3G diagnostic tester to check if the DTCs are still output.

NO → **Replace front passenger airbag**

YES

| 2 | Check wire harness and connector |
|---|---|

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

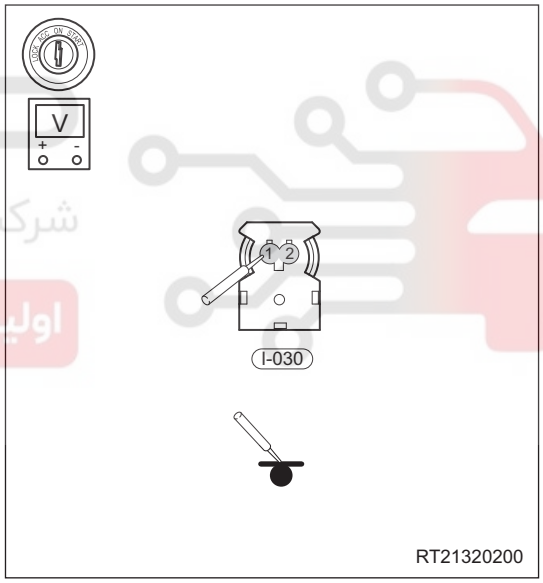
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the front passenger airbag connector I-030 and SRS control module assembly connector I-050/B-026.
c. Disconnect the body wire harness connector B-047 and instrument panel wire harness connector I-026.
d. Check if wire harnesses are worn, pierced, pinched or partially broken.
e. Check for broken, bent, protruded or corroded terminals.
f. Check if related connector terminal contact pins are in good condition.

NG → **Repair or replace instrument panel/body wire harness and connector**

OK

| 3 | Check front passenger airbag control circuit |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-050/B-026.
c. Disconnect the front passenger airbag connector I-030.
d. Connect the negative battery cable and wait for a few seconds.
e. Turn ignition switch ON.
f. Using a digital multimeter, measure the voltage between front passenger airbag connector I-030 and body ground to check for a short circuit to power supply according to the table below.




**Standard Voltage**

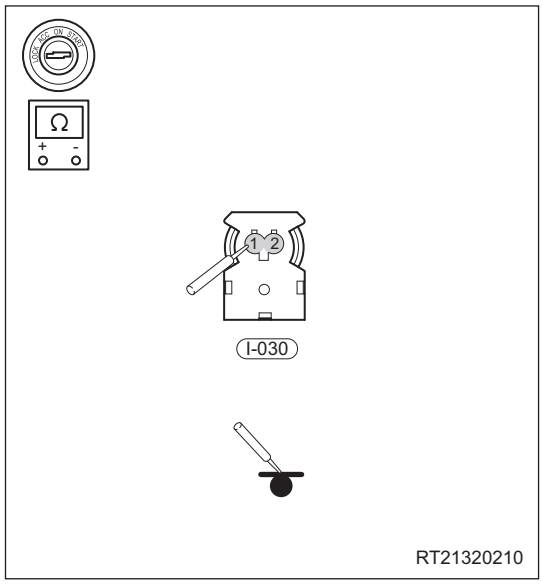
| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-030 (1) - Body ground | Ignition switch ON | Below 1 V |
| I-030 (2) - Body ground | Ignition switch ON | Below 1 V |

g. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

h. Using a digital multimeter, check for continuity between front passenger airbag connector I-030 and body ground to check for a short circuit to ground according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-030 (1) - Body | Always | No continuity |
| I-030 (2) - Body ground | Always | No continuity |

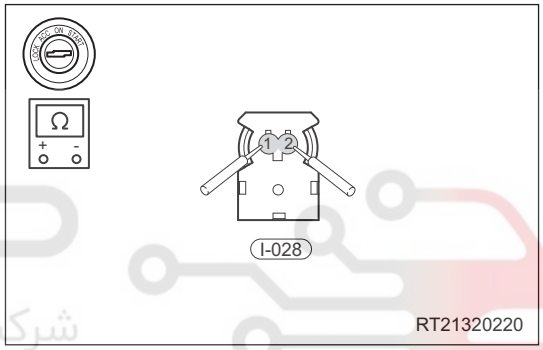



i. Release the activation prevention mechanism built into the SRS control module assembly connector I-050/B-026.

j. Using a digital multimeter, check for continuity between the terminals of front passenger airbag connector I-030 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-030 (1) - I-030 (2) | Always | No continuity |




**OK** → **Replace SRS control module assembly**

**NG**

| 4 | Check airbag wire harness and connector (SRS control module assembly - body wire harness connector) |
|---|---|

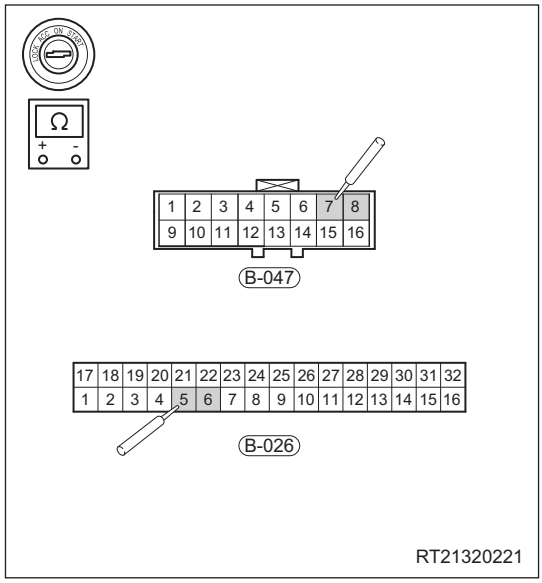
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect body wire harness connector B-047 and SRS control module assembly connector I-050-B-026.

c. Using a digital multimeter, check for continuity between the terminals of connector B-047 and connector B-026 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-047 (7) - B-026 (5) | Always | Continuity |
| B-047 (8) - B-026 (6) | Always | Continuity |




NG → **Replace body wire harness and connector**

OK

| 5 | Check airbag wire harness and connector (SRS control module assembly - front passenger airbag) |
|---|---|

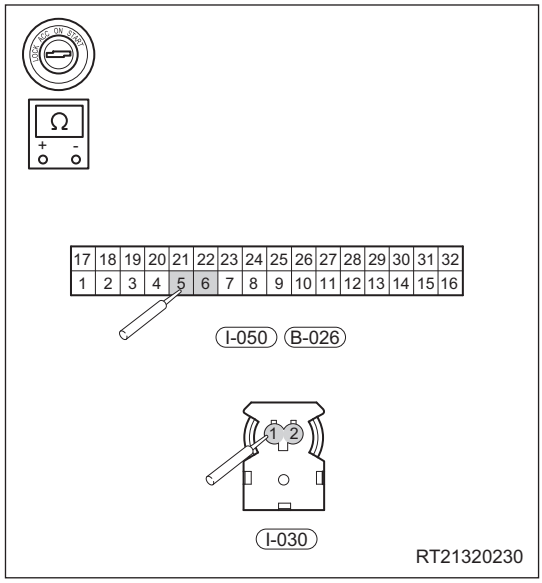
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect the SRS control module assembly connector I-050/B-026 and front passenger airbag connector I-030.

c. Using a digital multimeter, check for continuity between the terminals of connector I-050/B-026 and connector I-030 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-050/B-026 - I-030 (1) | Always | Continuity |
| I-050/B-026 - I-030 (2) | Always | Continuity |
| I-050/B-026 (5) - I-050/B-026 (6) | Always | NO Continuity |
| I-030 (1) - I-030 (2) | Always | NO Continuity |

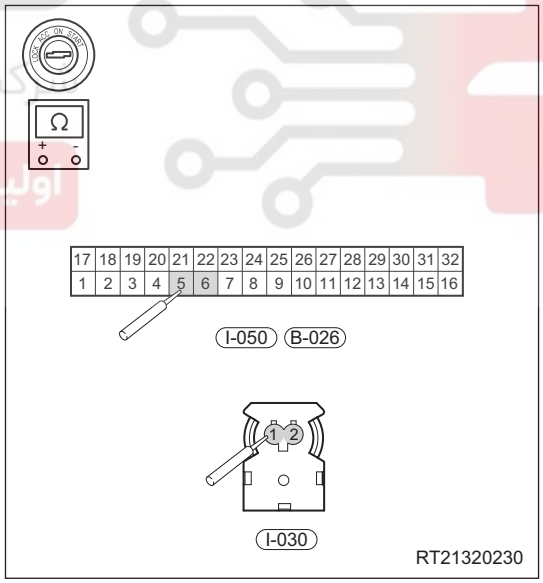



d. Release the activation prevention mechanism built into the SRS control module assembly connector I-050/B-026.

e. Using a digital multimeter, check for continuity between the terminals of connector I-050/B-026 and connector I-030 according to the table below.

**Standard Condition**

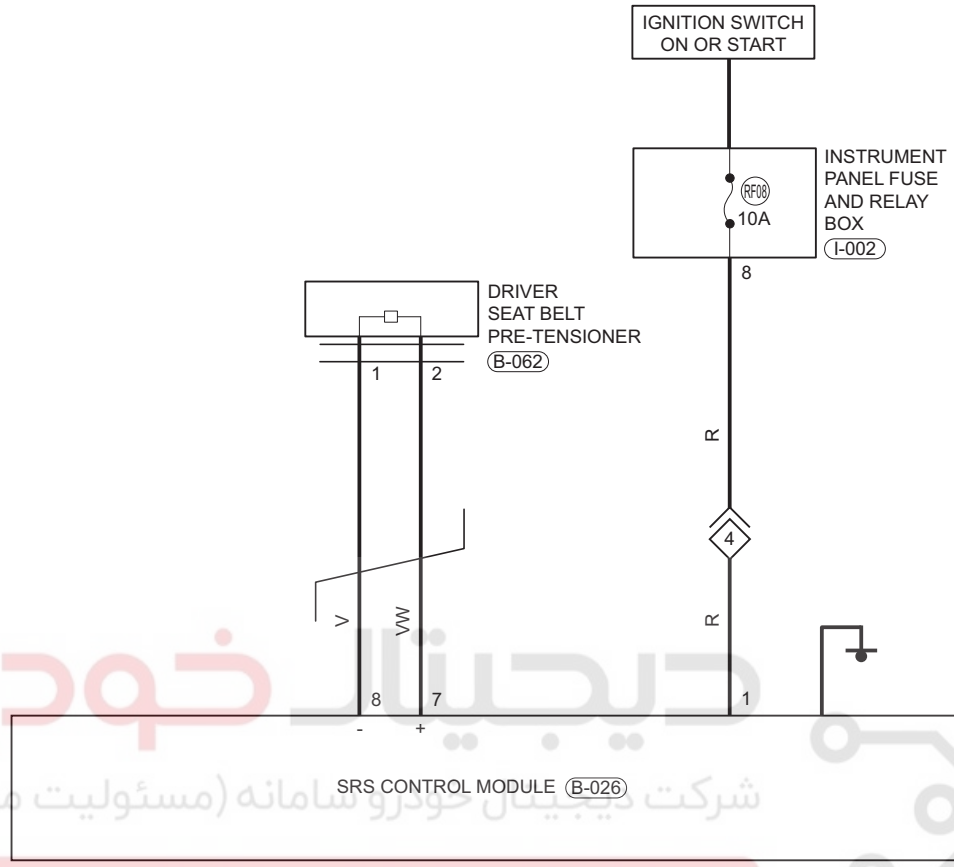
| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-050/B-026 (5) - I-030 (1) | Always | Continuity |
| I-050/B-026 (6) - I-030 (2) | Always | Continuity |
| I-050/B-026 (5) - I-030 (2) | Always | No continuity |
| I-050/B-026 (6) - I-030 (1) | Always | No continuity |
| I-050/B-026 (5) - I-050/B-026 (6) | Always | No continuity |
| I-030 (1) - I-030 (2) | Always | No continuity |




| NG | Replace instrument panel wire harness and connector |
|---|---|

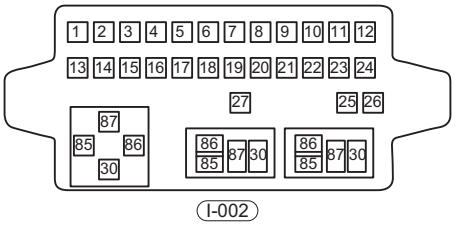
| | | |
|---|---|---|
| DTC | B0070 11 | Belt Pretensioner Front Driver Loop Circuit Short to Ground |
| DTC | B0070 12 | Belt Pretensioner Front Driver Loop Circuit Short to Battery |
| DTC | B0070 1A | Belt Pretensioner Front Driver Loop Circuit Resistance Below Threshold |
| DTC | B0070 1B | Belt Pretensioner Front Driver Loop Circuit Resistance Above Threshold |
| DTC | B0070 1C | Belt Pretensioner Front Driver Loop Circuit Voltage Out of Range |

w/ SIDE AIRBAG





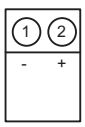



I-002

| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

B-026
B

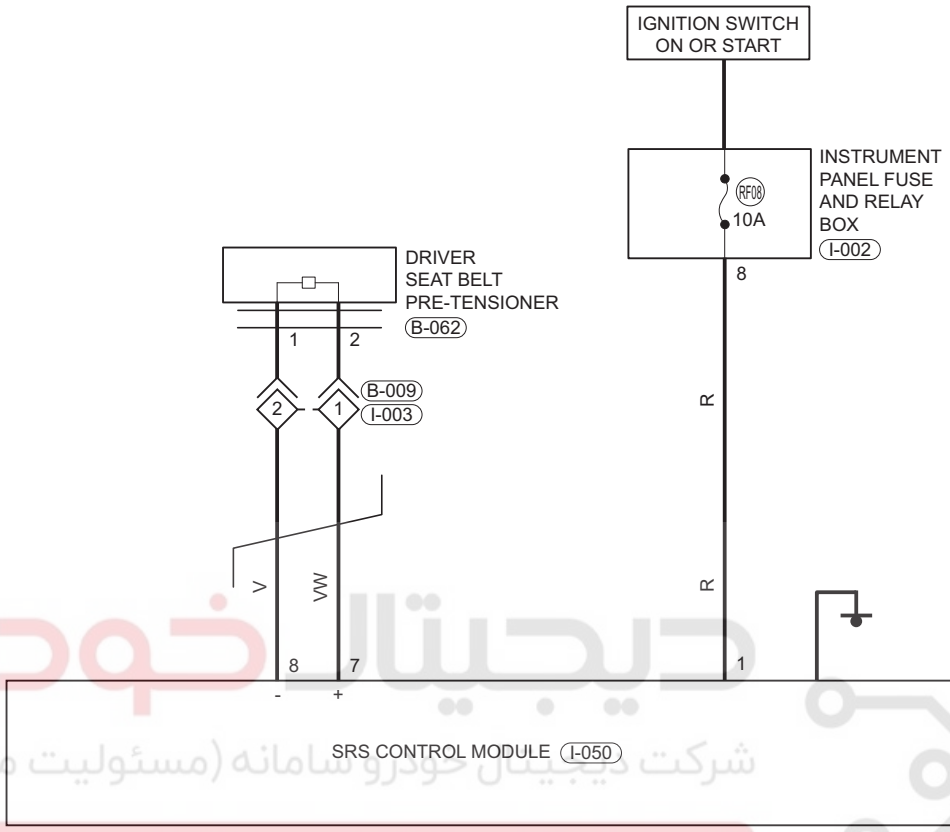



B-020
B

B-062
B

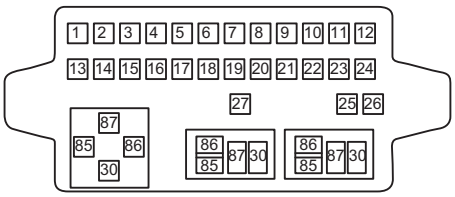
ET21430530

w/o SIDE AIRBAG

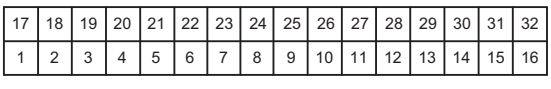




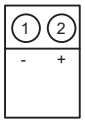



I-002

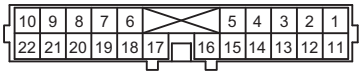



I-050
Gr




B-020
B

B-062
B




I-003
W

ET21430531

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B0070 11 | Belt Pretensioner Front Driver Loop Circuit Short to Ground | Ignition switch ON | ON | • Driver seat belt pretensioner<br>• Wire harness and connector<br>• SRS control module assembly |
| B0070 12 | Belt Pretensioner Front Driver Loop Circuit Short to Battery | | | |
| B0070 1A | Belt Pretensioner Front Driver Loop Circuit Resistance Below Threshold | | | |
| B0070 1B | Belt Pretensioner Front Driver Loop Circuit Resistance Above Threshold | | | |
| B0070 1C | Belt Pretensioner Front Driver Loop Circuit Voltage Out of Range | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| | |
|---|---|
| 1 | **Check driver seat belt pretensioner** |

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect driver seat belt pretensioner connector, and connect the new driver seat belt pretensioner connector to connector B-020.

**⚠ WARNING**

- Never measure the driver seat belt pretensioner directly, otherwise, it may cause serious personal injury due to accidental deployment of the airbag.

c. Reconnect the negative battery cable and wait for a few seconds.

d. Turn ignition switch ON and wait for at least 90 seconds.

e. Use X-431 3G diagnostic tester to clear the DTCs.

f. Turn ignition switch to LOCK.

g. Turn ignition switch ON and wait for at least 90 seconds.

h. Use X-431 3G diagnostic tester to check if the DTCs are still output.

NG → **Replace driver seat belt pretensioner**

OK

| 2 | Check wire harness and connector |
|---|---|

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

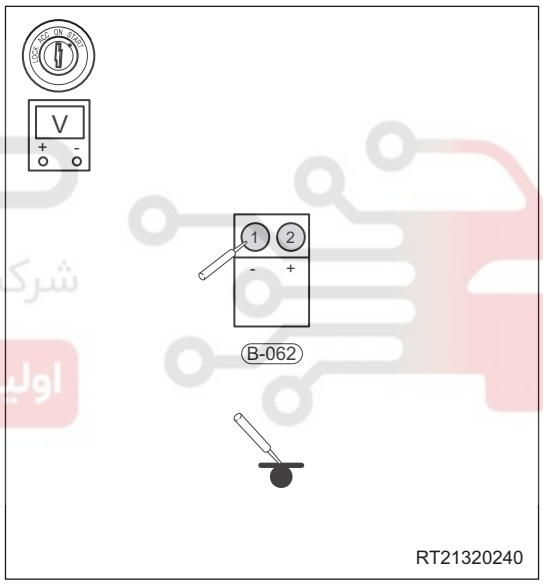
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the driver seat belt pretensioner connector B-062 and SRS control module assembly connector I-050/B-026.
c. Check if wire harnesses are worn, pierced, pinched or partially broken.
d. Check for broken, bent, protruded or corroded terminals.
e. Check if related connector terminal contact pins are in good condition.

NG → **Repair or replace instrument panel/body wire harness and connector**

OK

| 3 | Check driver seat belt pretensioner control circuit |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-050/B-026.
c. Disconnect the driver seat belt pretensioner connector B-062.
d. Connect the negative battery cable and wait for a few seconds.
e. Turn ignition switch ON.
f. Using a digital multimeter, measure the voltage between driver seat belt pretensioner connector B-062 and body ground to check for a short circuit to power supply according to the table below.




**Standard Voltage**

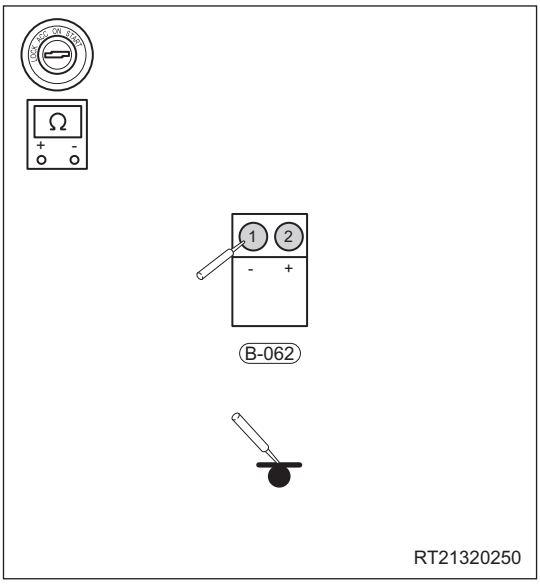
| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-062 (1) - Body ground | Ignition switch ON | Below 1 V |
| B-062 (2) - Body ground | Ignition switch ON | Below 1 V |

g. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

h. Using a digital multimeter, check for continuity between driver seat belt pretensioner connector B-062 and body ground to check for a short circuit to ground according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-062 (1) - Body | Always | No continuity |
| B-062 (2) - Body ground | Always | No continuity |

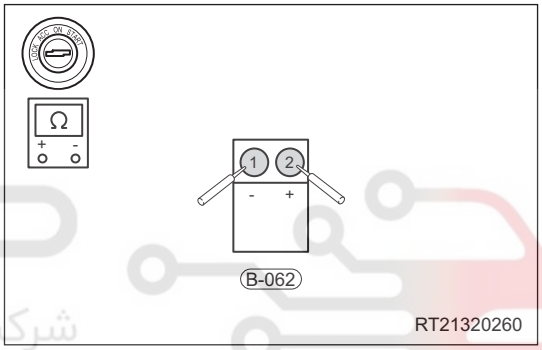



i. Release the activation prevention mechanism built into the SRS control module assembly connector I-050/B-026.

j. Using a digital multimeter, check for continuity between the terminals of driver seat belt pretensioner connector B-034 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-062 (1) - B-062 (2) | Always | No continuity |




**OK** → **Replace SRS control module assembly**

**NG**

| 4 | Check driver seat belt pretensioner wire harness and connector (SRS control module assembly - instrument panel wire harness connector) |
|---|---|

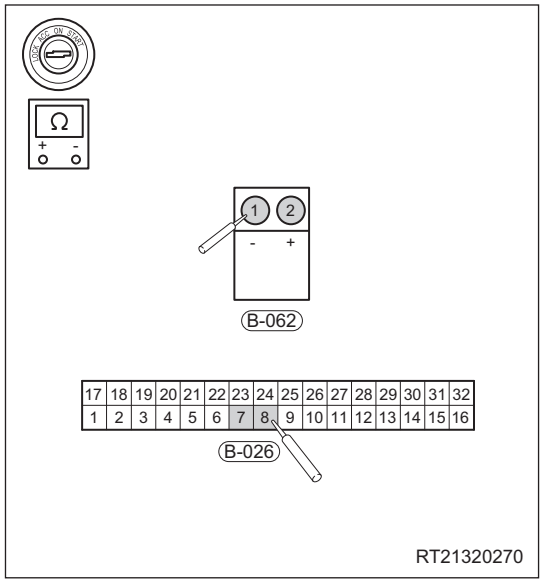
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect the instrument panel wire harness connector B-026 and SRS control module assembly connector B-026.

c. Using a digital multimeter, check for continuity between the terminals of connector B-062 and connector B-026 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-026 (8) - B-062 (1) | Always | Continuity |
| B-026 (7) - B-062 (2) | Always | Continuity |

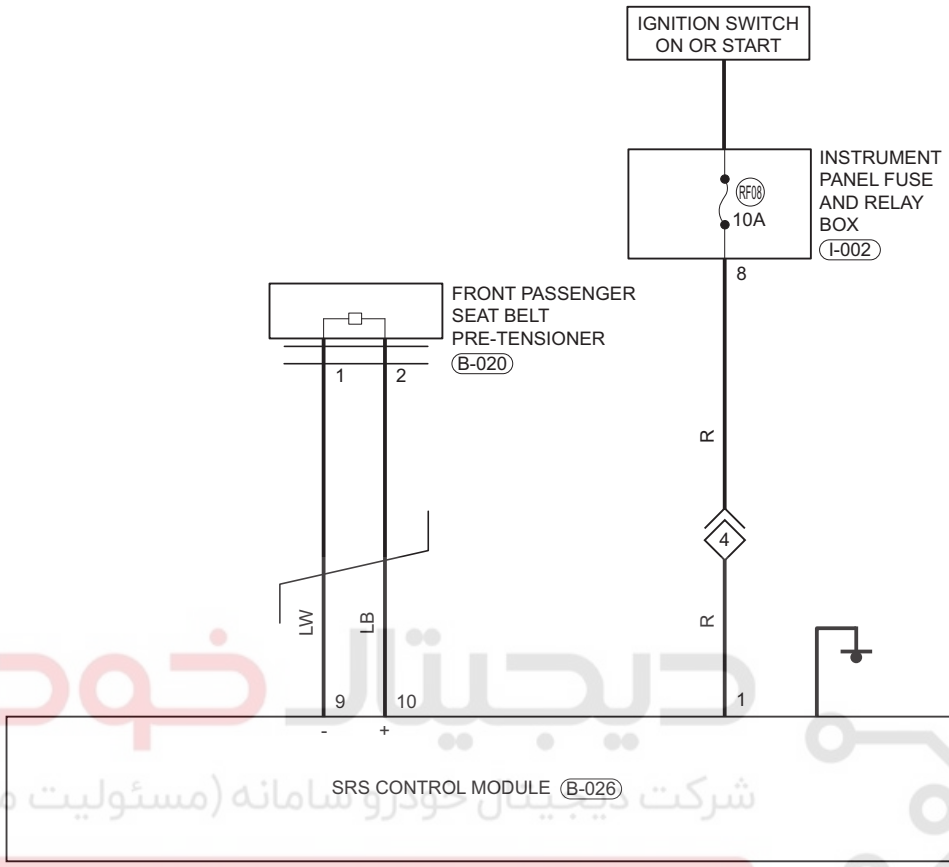



NG → **Replace instrument panel wire harness and connector**

OK

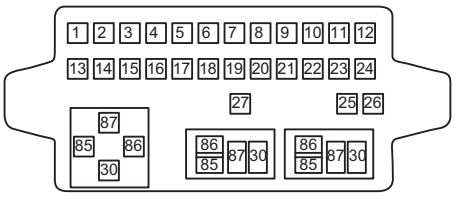
| | | |
|---|---|---|
| DTC | B0072 11 | Belt Pretensioner Front Passenger Loop Circuit Short to Ground |
| DTC | B0072 12 | Belt Pretensioner Front Passenger Loop Circuit Short to Battery |
| DTC | B0072 1A | Belt Pretensioner Front Passenger Loop Circuit Resistance Below Threshold |
| DTC | B0072 1B | Belt Pretensioner Front Passenger Loop Circuit Resistance Above Threshold |
| DTC | B0072 1C | Belt Pretensioner Front Passenger Loop Circuit Voltage Out of Range |

w/ SIDE AIRBAG

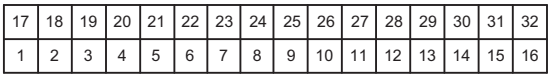




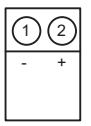



I-002



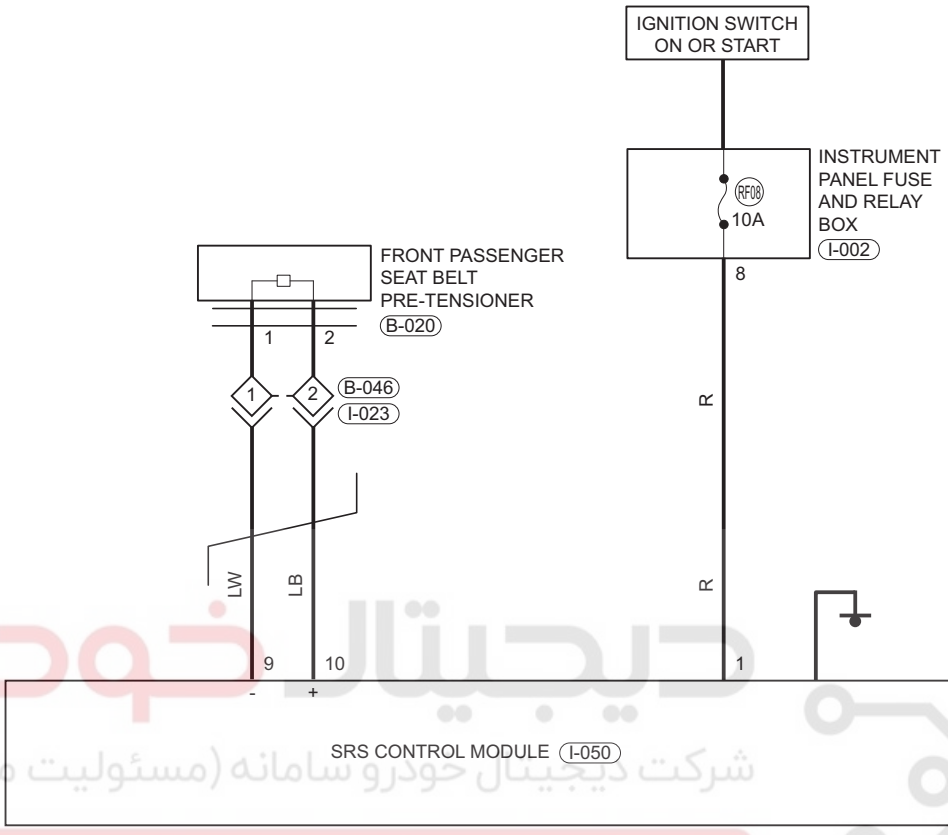

B-026
B




B-020
B

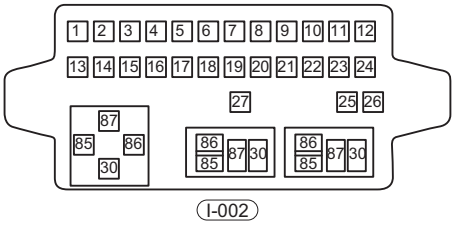
ET21430540

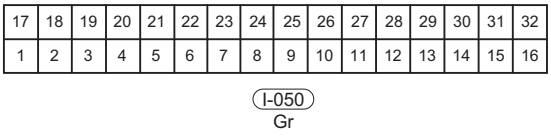
w/o SIDE AIRBAG

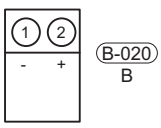


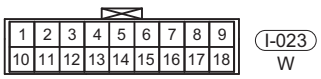



43




ET21430541

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B0072 11 | Belt Pretensioner Front Passenger Loop Circuit Short to Ground | Ignition switch ON | ON | • Front passenger seat belt pretensioner<br>• Wire harness and connector<br>• SRS control module assembly |
| B0072 12 | Belt Pretensioner Front Passenger Loop Circuit Short to Battery | | | |
| B0072 1A | Belt Pretensioner Front Passenger Loop Circuit Resistance Below Threshold | | | |
| B0072 1B | Belt Pretensioner Front Passenger Loop Circuit Resistance Above Threshold | | | |
| B0072 1C | Belt Pretensioner Front Passenger Loop Circuit Voltage Out of Range | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| | |
|---|---|
| 1 | **Check front passenger seat belt pretensioner** |

43

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect front passenger seat belt pretensioner connector, and connect the new front passenger seat belt pretensioner connector to connector B-020.

**⚠ WARNING**

- Never measure the front passenger seat belt pretensioner directly, otherwise, it may cause serious personal injury due to accidental deployment of the airbag.

c. Reconnect the negative battery cable and wait for a few seconds.

d. Turn ignition switch ON and wait for at least 90 seconds.

e. Use X-431 3G diagnostic tester to clear the DTCs.

f. Turn ignition switch to LOCK.

g. Turn ignition switch ON and wait for at least 90 seconds.

h. Use X-431 3G diagnostic tester to check if the DTCs are still output.

| | |
|---|---|
| NG | **Replace front passenger seat belt pretensioner** |

OK

| 2 | Check wire harness and connector |
|---|---|

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

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the front passenger seat belt pretensioner connector B-020 and SRS control module assembly connector I-050/B-026.
c. Check if wire harnesses are worn, pierced, pinched or partially broken.
d. Check for broken, bent, protruded or corroded terminals.
e. Check if related connector terminal contact pins are in good condition.

NG → **Repair or replace instrument panel/body wire harness and connector**

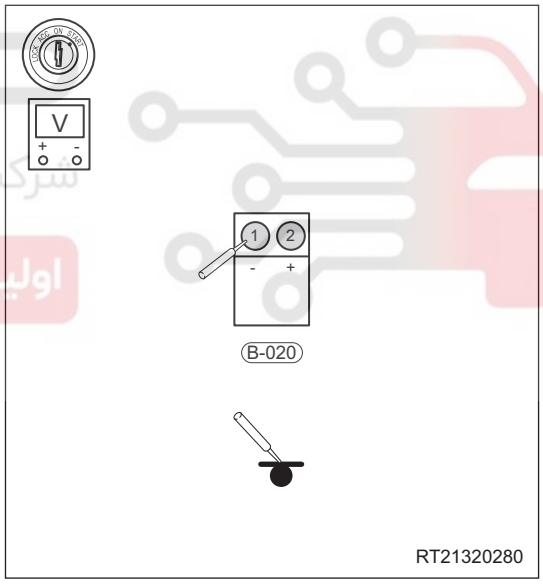
OK

| 3 | Check front passenger seat belt pretensioner control circuit |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-050/B-026.
c. Disconnect the front passenger seat belt pretensioner connector B-020.
d. Connect the negative battery cable and wait for a few seconds.
e. Turn ignition switch ON.
f. Using a digital multimeter, measure the voltage between front passenger seat belt pretensioner connector B-020 and body ground to check for a short circuit to power supply according to the table below.

**Standard Voltage**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-020 (1) - Body ground | Ignition switch ON | Below 1 V |
| B-020 (2) - Body ground | Ignition switch ON | Below 1 V |

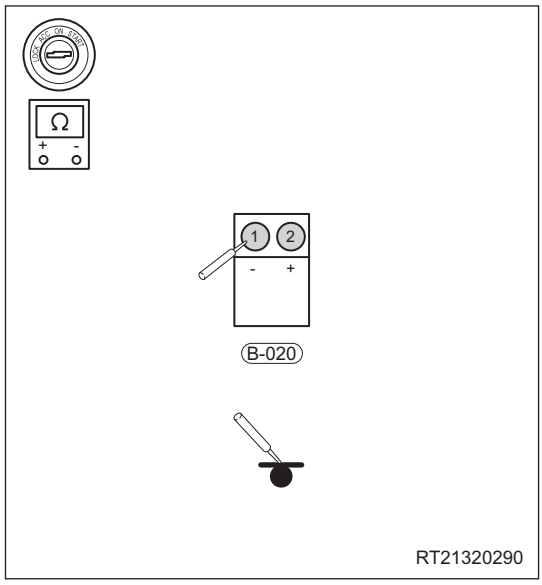


g. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

h. Using a digital multimeter, check for continuity between front passenger seat belt pretensioner connector B-020 and body ground to check for a short circuit to ground according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-020 (1) - Body ground | Always | No continuity |
| B-020 (2) - Body ground | Always | No continuity |

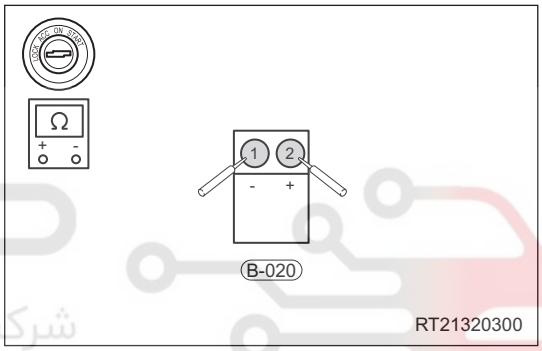



i. Release the activation prevention mechanism built into the SRS control module assembly connector I-050/B-026.

j. Using a digital multimeter, check for continuity between the terminals of front passenger seat belt pretensioner connector B-026 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-020 (1)- B-020 (2) | Always | No continuity |




**OK** → **Replace SRS control module assembly**

**NG**

OK

| 4 | Check wire harness and connector (SRS control module assembly - front passenger seat belt pretensioner) |
|---|---|

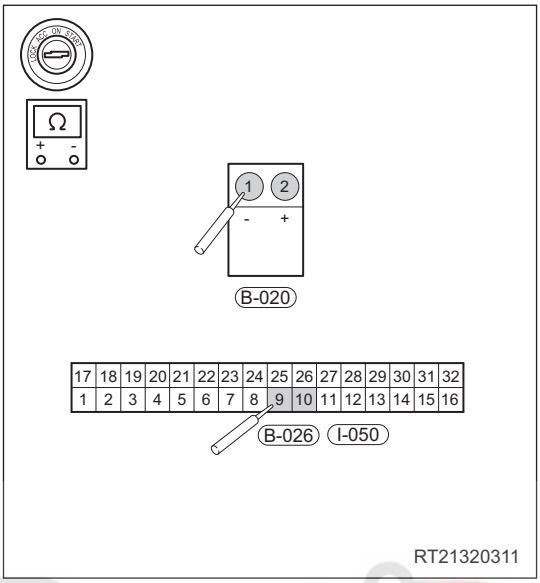
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect front passenger seat belt pretensioner connector B-020 and SRS control module assembly connector I-050/B-026.

c. Using a digital multimeter, check for continuity between the terminals of connector B-020 and connector I-050/B-026 according to the table below.

**Standard Condition**

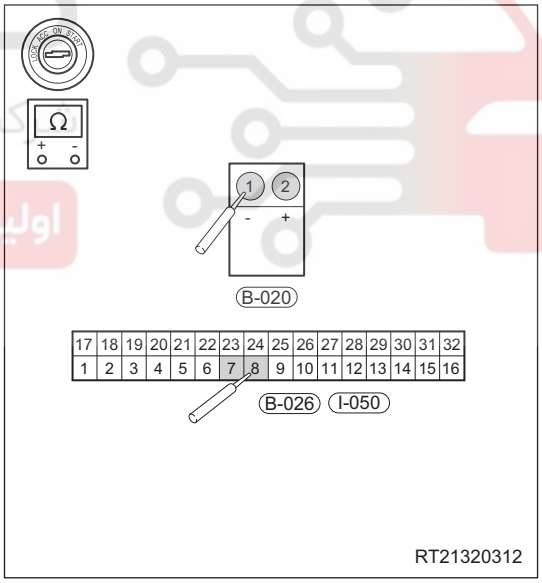
| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-020 (1)-I-050/B-026 (9) | Always | Continuity |
| B-020 (2)-I-050/B-026 (10) | Always | Continuity |




d. Release the activation prevention mechanism built into the SRS control module assembly connector I-050/B-026.

e. Using a digital multimeter, check for continuity between the terminals of connector B-020 and connector I-050/B-026 according to the table below.

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-020 (1)-I-050/B-026 (8) | Always | Continuity |
| B-020 (2)-I-050/B-026 (7) | Always | Continuity |
| B-020 (1)-I-050/B-026 (7) | Always | No continuity |
| B-020 (2)-I-050/B-026 (8) | Always | No continuity |
| B-020 (1)-I-050/B-026 (2) | Always | No continuity |
| B-026 (7)-I-050/B-026 (8) | Always | No continuity |

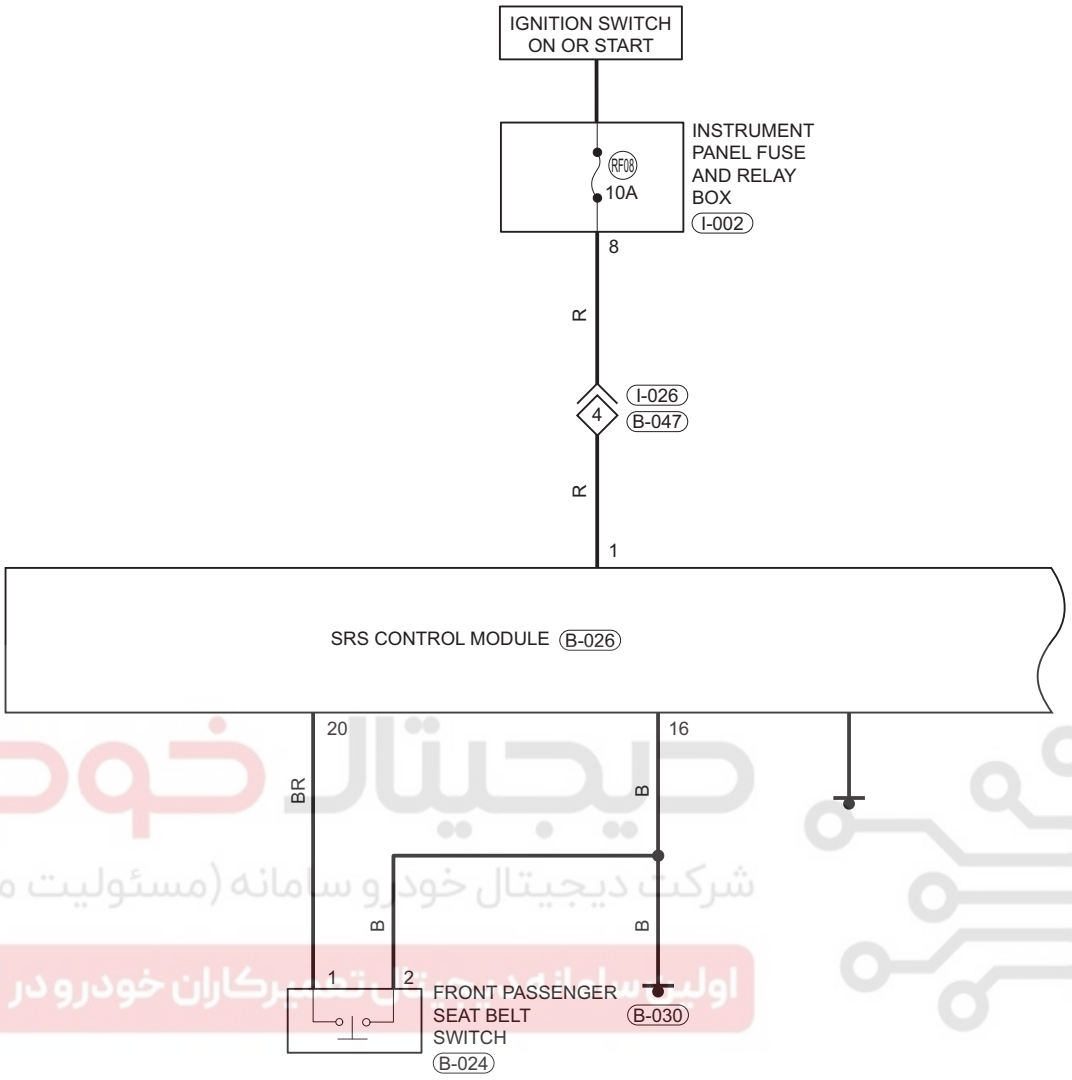


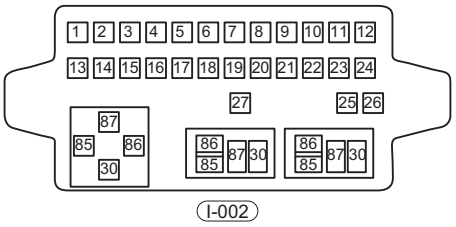

NG → Replace body wire harness and connector

| | | |
|---|---|---|
| DTC | B1231 12 | Buckle Switch Front Passenger (BLFP) Circuit Short to Battery |

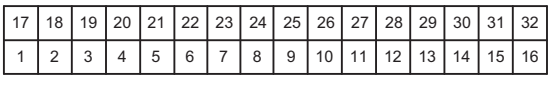
| | | |
|---|---|---|
| DTC | B1231 1C | Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range |

w/ SIDE AIRBAG

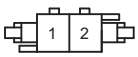


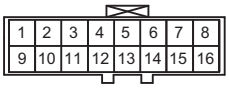

I-002




B-026
B



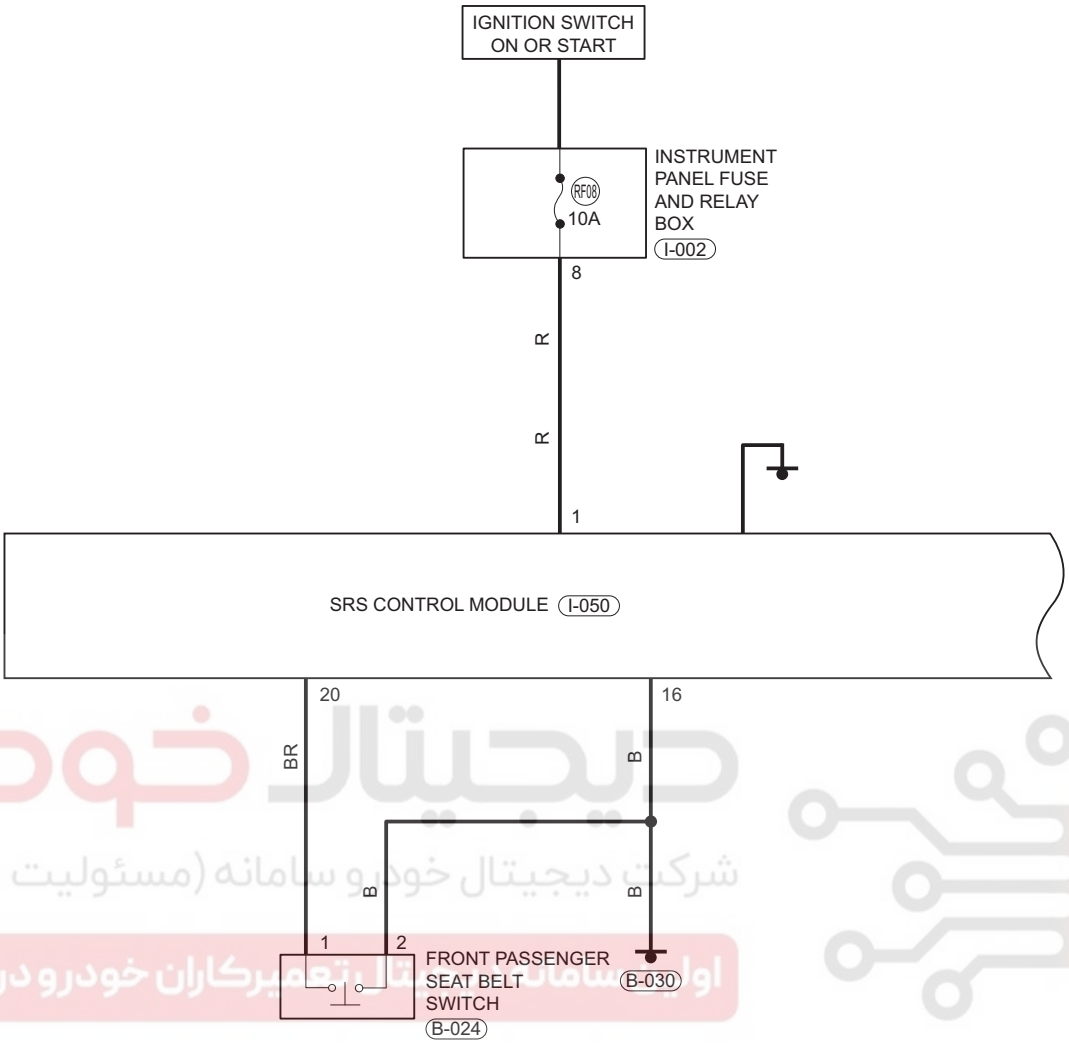

B-024
B




B-047
W

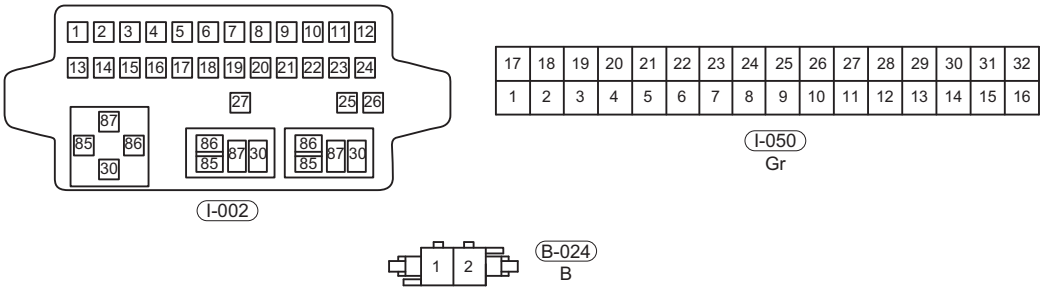
ET21430542

w/o SIDE AIRBAG








ET21430543

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B1231 12 | Buckle Switch Front Passenger (BLFP) Circuit Short to Battery | Ignition switch ON | ON | • Front passenger seat belt switch<br>• Wire harness and connector<br>• SRS control module assembly |
| B1231 1C | Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| 1 | Check front passenger seat belt switch |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect front passenger seat belt switch connector, and connect the new front passenger seat belt switch connector to connector B-050.
c. Reconnect the negative battery cable and wait for a few seconds.
d. Turn ignition switch ON and wait for at least 90 seconds.
e. Use X-431 3G diagnostic tester to clear the DTCs.
f. Turn ignition switch to LOCK.
g. Turn ignition switch ON and wait for at least 90 seconds.
h. Use X-431 3G diagnostic tester to check if the DTCs are still output.

NO → **Replace front passenger seat belt switch**

YES

| 2 | Check wire harness and connector |
|---|---|

Use circuit diagram as a guide to perform the following procedures:
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the front passenger seat belt switch connector B-024 and SRS control module assembly connector I-050/B-026.
c. Check if wire harnesses are worn, pierced, pinched or partially broken.
d. Check for broken, bent, protruded or corroded terminals.
e. Check if related connector terminal contact pins are in good condition.

NG → **Repair or replace instrument panel/body wire harness and connector**

OK

| 3 | Check front passenger seat belt switch control circuit |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect the front passenger seat belt switch connector B-050 and SRS control module assembly connector I-050/B-026.

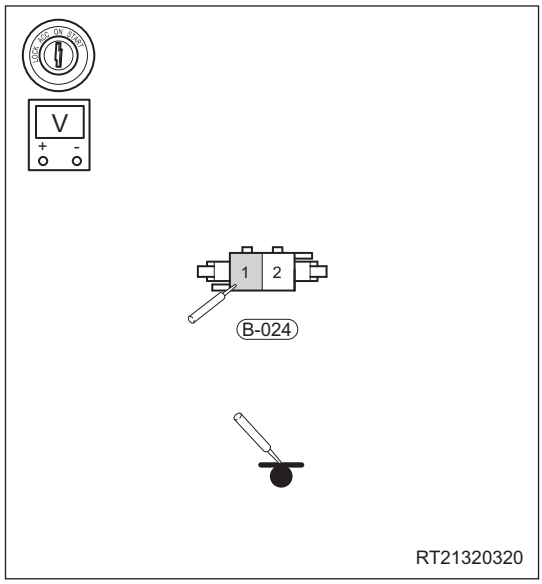
c. Connect the negative battery cable and wait for a few seconds.

d. Turn ignition switch ON.

e. Using a digital multimeter, measure the voltage between front passenger seat belt switch connector B-024 and body ground to check for a short circuit to power supply according to the table below.

**Standard Voltage**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-024 (1) - Body ground | Ignition switch ON | Below 1 V |

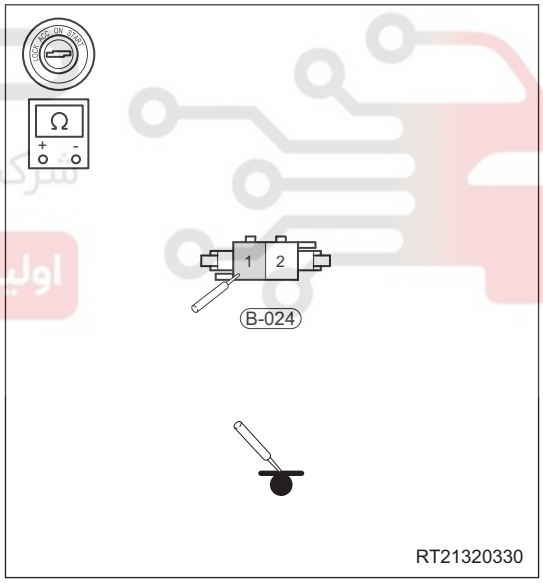



f. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

g. Using a digital multimeter, check for continuity between front passenger seat belt switch connector B-024 and body ground to check for a short circuit to ground according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-024 (1) - Body ground | Always | No continuity |




**OK** → **Replace SRS control module assembly**

**NG**

| | |
|---|---|
| **4** | **Check front passenger seat belt switch wire harness and connector (SRS control module assembly - instrument panel wire harness connector)** |

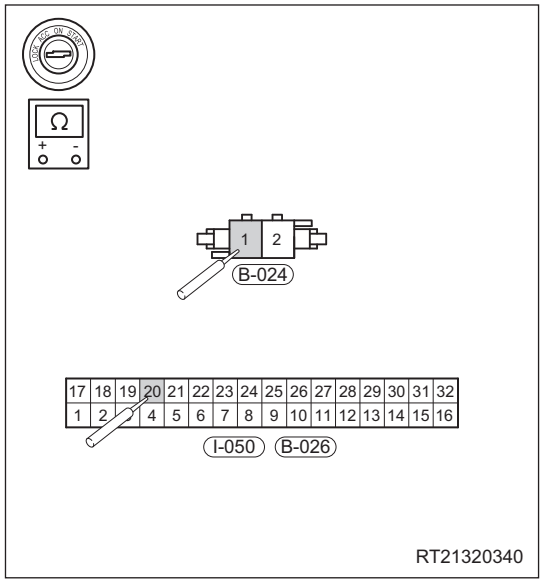
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect the instrument panel wire harness connector B-024 and SRS control module assembly connector I-050/B-026.

c. Using a digital multimeter, check for continuity between the terminals of connector B-024 and connector I-050/B-026 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-024 (1)-I-050/B-026 (20) | Always | Continuity |



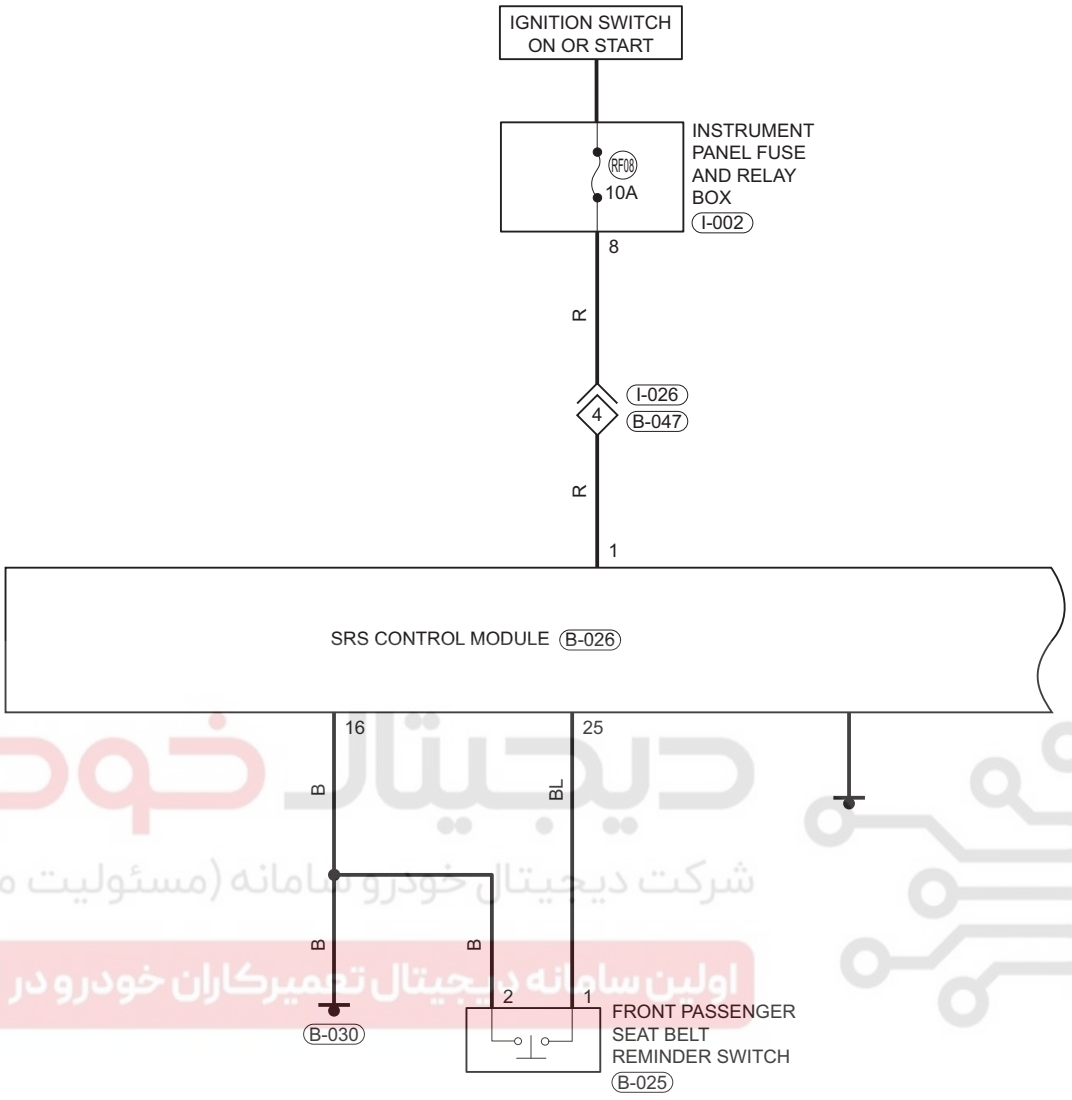

**NG** → **Replace instrument panel wire harness and connector**

**OK**

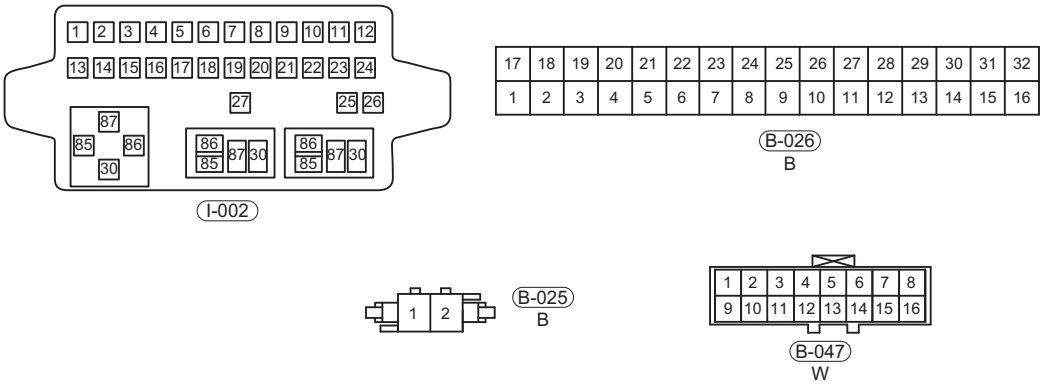
| | | |
|---|---|---|
| DTC | B1232 12 | PDM (Passenger Detection Mat) Switch Circuit Short to Battery |

| | | |
|---|---|---|
| DTC | B1232 1C | PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range |

w/ SIDE AIRBAG

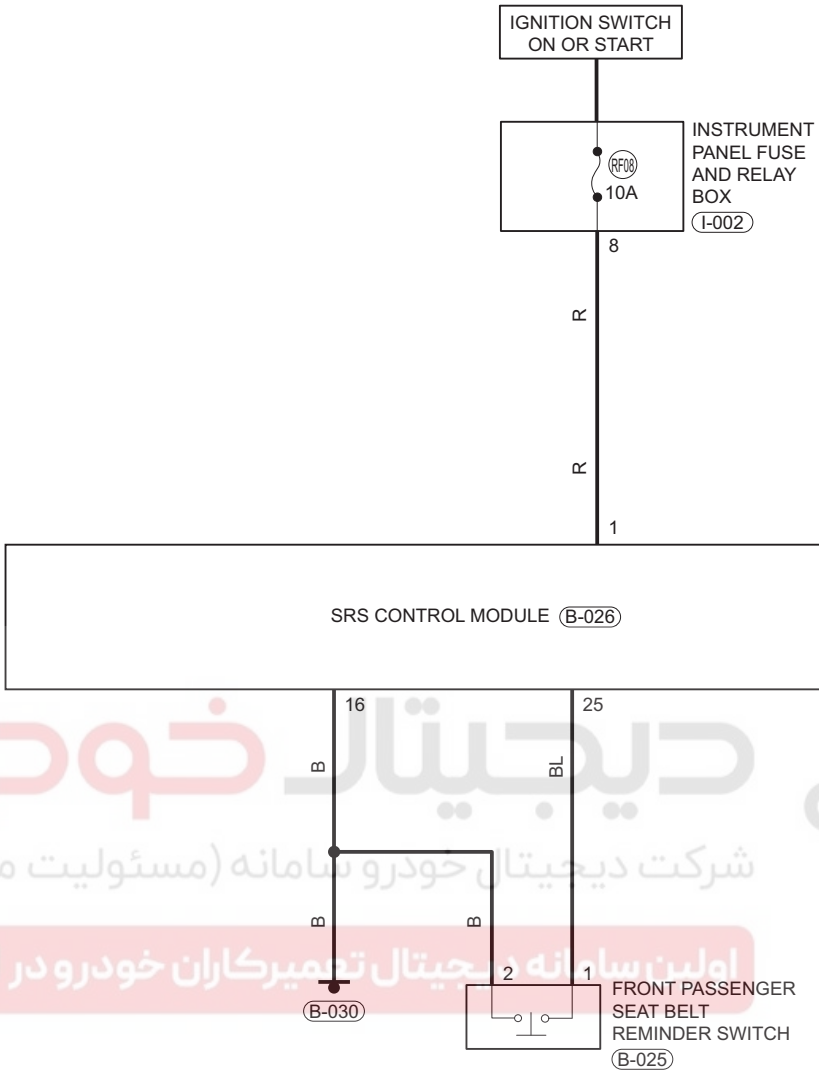


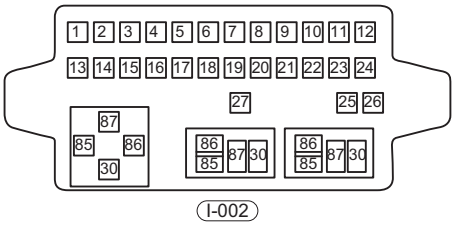


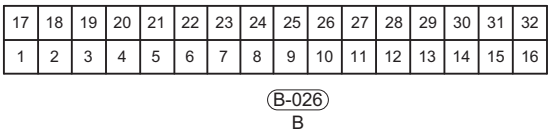



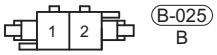

ET21430550

w/ SIDE AIRBAG




ET21430551

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B1232 12 | PDM (Passenger Detection Mat) Switch Circuit Short to Battery | Ignition switch ON | ON | • Front passenger seat belt reminder switch<br>• Wire harness and connector<br>• SRS control module assembly |
| B1232 1C | PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| 1 | Check front passenger seat belt reminder switch |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect front passenger seat belt reminder switch connector, and connect the new front passenger seat belt reminder switch connector to connector B-025.
c. Reconnect the negative battery cable and wait for a few seconds.
d. Turn ignition switch ON and wait for at least 90 seconds.
e. Use X-431 3G diagnostic tester to clear the DTCs.
f. Turn ignition switch to LOCK.
g. Turn ignition switch ON and wait for at least 90 seconds.
h. Use X-431 3G diagnostic tester to check if the DTCs are still output.

NO → **Replace front passenger seat belt reminder switch**

YES

| 2 | Check wire harness and connector |
|---|---|

Use circuit diagram as a guide to perform the following procedures:
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the front passenger seat belt reminder switch connector B-025 and SRS control module assembly connector I-050/B-026.
c. Check if wire harnesses are worn, pierced, pinched or partially broken.
d. Check for broken, bent, protruded or corroded terminals.
e. Check if related connector terminal contact pins are in good condition.

NG → **Repair or replace instrument panel/body wire harness and connector**

OK

| 3 | Check front passenger seat belt reminder switch control circuit |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect the front passenger seat belt reminder switch connector B-025 and SRS control module assembly connector I-050/B-026.

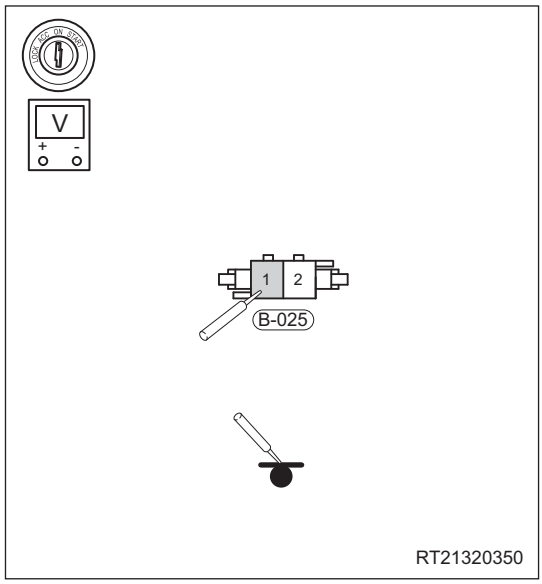
c. Connect the negative battery cable and wait for a few seconds.

d. Turn ignition switch ON.

e. Using a digital multimeter, measure the voltage between front passenger seat belt reminder switch connector B-025 and body ground to check for a short circuit to power supply according to the table below.

**Standard Voltage**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-025 (1) - Body ground | Ignition switch ON | Below 1 V |

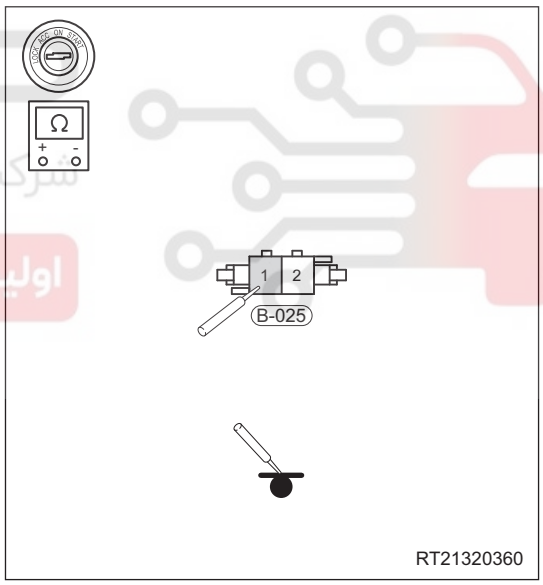



f. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

g. Using a digital multimeter, check for continuity between front passenger seat belt reminder switch connector B-025 and body ground to check for a short circuit to ground according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-025 (1) - Body ground | Always | No continuity |




**OK** → **Replace SRS control module assembly**

**NG**

OK

| | |
|---|---|
| 4 | **Check wire harness and connector (SRS control module assembly - front passenger seat belt reminder switch)** |

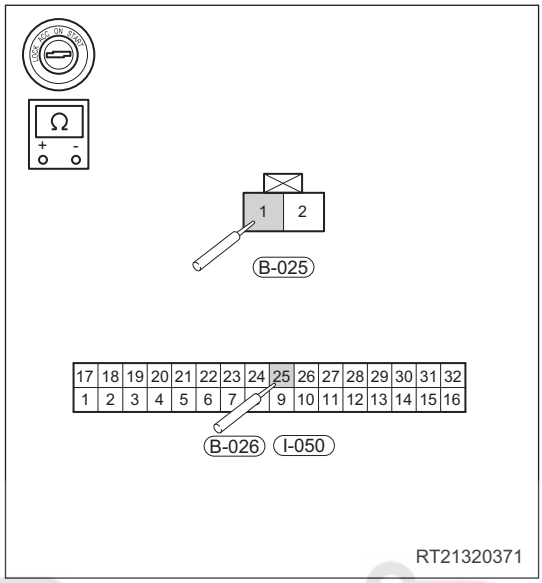
a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.

b. Disconnect front passenger seat belt reminder switch connector B-025 and SRS control module assembly connector I-050/B-026.

c. Using a digital multimeter, check for continuity between the terminals of connector B-025 and connector I-050/B-026 according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-025 (1)-I-050/B-026 (25) | Always | Continuity |




NG → **Replace body wire harness and connector**

| DTC | B1210 00 | Front Deployment |
|---|---|---|

| DTC | B1211 00 | BT Deployment |
|---|---|---|

| DTC | B125A 00 | Crash Counter Reached Max |
|---|---|---|

| DTC | B1240 96 | ICM Airbag Lamp Failed |
|---|---|---|

| DTC | B1251 49 | Electronic Control Unit (ECU), Internal Electronic Failure |
|---|---|---|

### Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B1210 00 | Front Deployment | Ignition switch ON | ON | • SRS control module assembly |
| B1211 00 | BT Deployment | | | |
| B125A 00 | Crash Counter Reached Max | | | |
| B1240 96 | ICM Airbag Lamp Failed | | | |
| B1251 49 | Electronic Control Unit (ECU), Internal Electronic Failure | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

43

### Diagnosis Procedure

| 1 | Check SRS control module assembly |
|---|---|

a. Turn ignition switch to LOCK.
b. Disconnect the negative battery cable and wait for at least 90 seconds.
c. Connect the negative battery cable.
d. Turn ignition switch ON.
e. Use X-431 3G diagnostic tester (the latest software) to record and clear the DTCs stored in the supplemental restraint system.
f. Turn ignition switch to LOCK and wait for a few seconds.
g. Turn ignition switch ON, and then select "Read Code".

NG → Replace SRS control module assembly

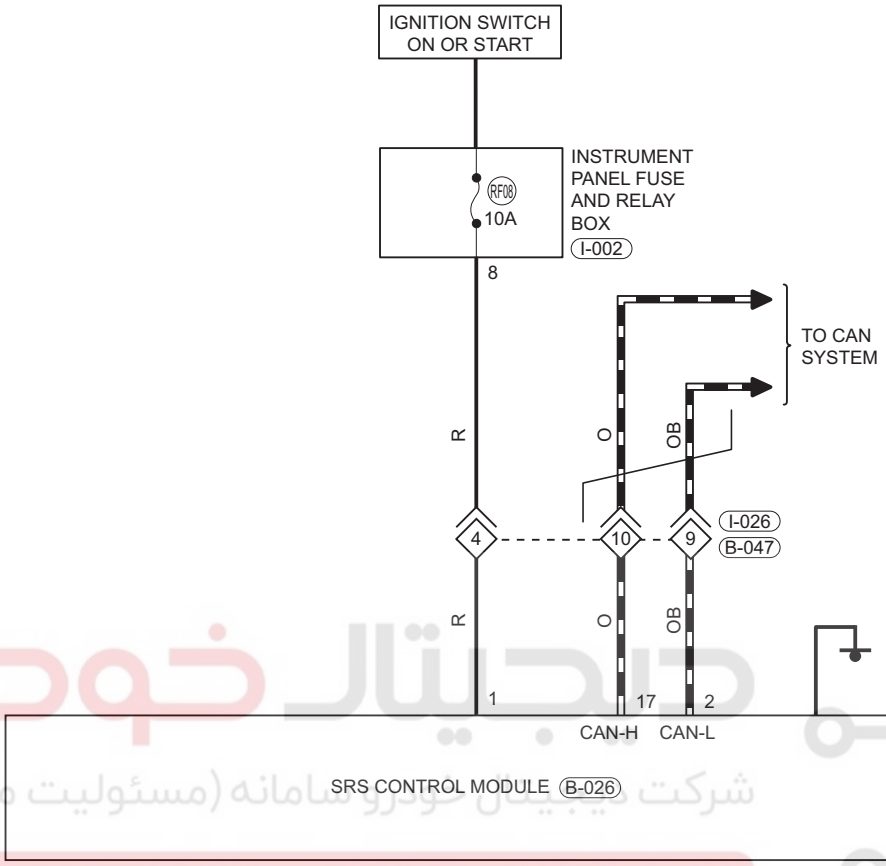
OK

| Malfunction has been solved and system operates normally |
|---|

| DTC | B1250 16 | Battery Voltage Circuit Voltage Below Threshold |
|---|---|---|

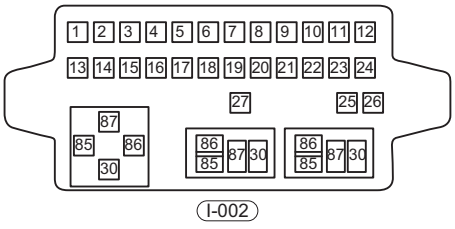
| DTC | B1250 17 | Battery Voltage Circuit Voltage Above Threshold |
|---|---|---|

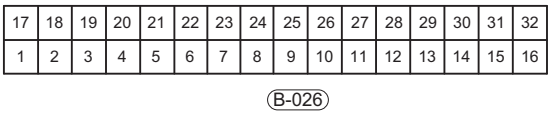
w/ SIDE AIRBAG

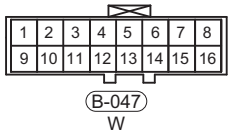






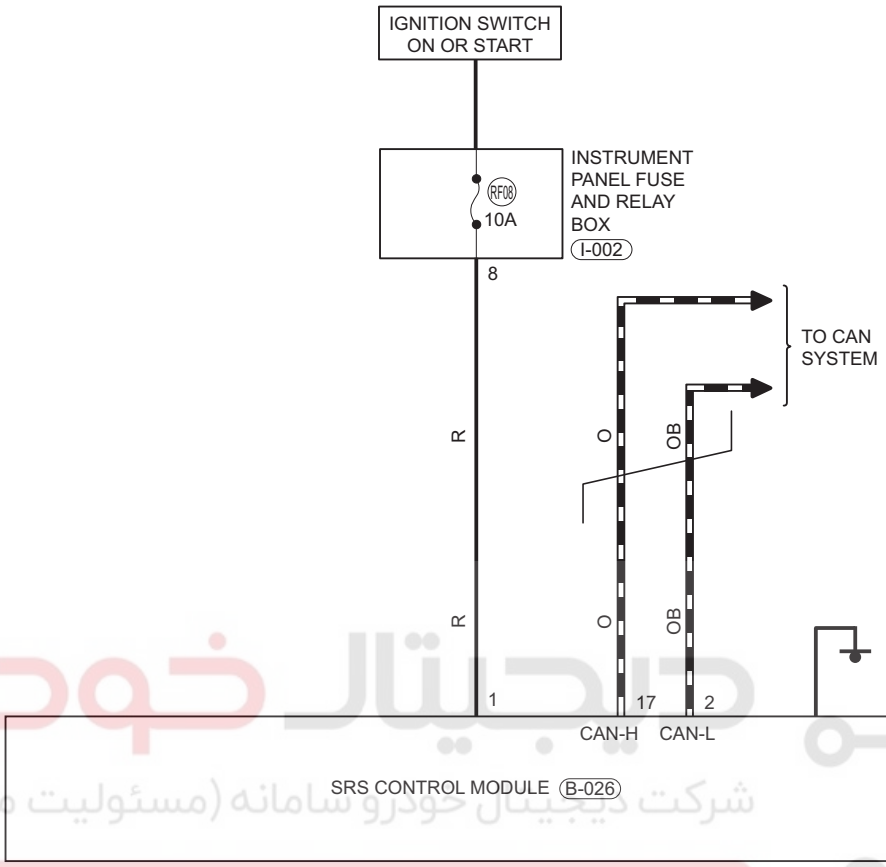



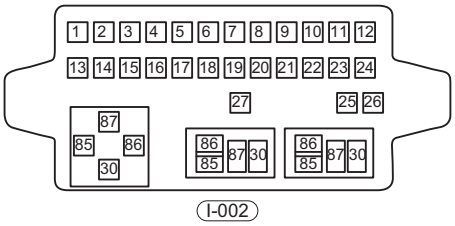

ET21430560

w/ SIDE AIRBAG








I-002

| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

B-026
B

ET21430561

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B1250 16 | Battery Voltage Circuit Voltage Below Threshold | Ignition switch ON | ON | • Battery<br>• Charging system<br>• Wire harness and connector<br>• SRS control module assembly |
| B1250 17 | Battery Voltage Circuit Voltage Above Threshold | | | |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| | |
|---|---|
| **1** | **Check battery** |

a. Using a digital multimeter, check the battery voltage.
Standard voltage: 11 to 14 V

**NG** → **Check charging system (See page 24-8)**

**OK**

| | |
|---|---|
| **2** | **Check wire harness and connector (SRS control module assembly - instrument panel fuse and relay box)** |

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

43

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-050/B-026 and instrument panel fuse and relay box wire harness connector I-002.
c. Disconnect the body wire harness connector B-047 and instrument panel wire harness connector I-050/B-026.
d. Check if wire harnesses are worn, pierced, pinched or partially broken.
e. Check for broken, bent, protruded or corroded terminals.
f. Check if related connector terminal contact pins are in good condition.

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

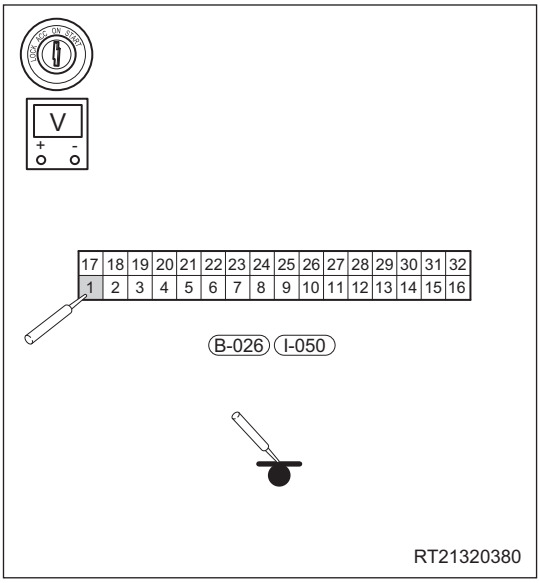
**OK**

| 3 | Check wire harness and connector (SRS control module assembly - battery) |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-050/B-026.
c. Connect the negative battery cable and wait for a few seconds.
d. Turn ignition switch ON.
e. Using a digital multimeter, measure the power supply voltage of SRS control module assembly connector I-050/B-026 to check if the system power supply is normal according to the table below.

**Standard Voltage**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-050/B-026 (1) - Body ground | Ignition switch ON | 11 V to 14 V |




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

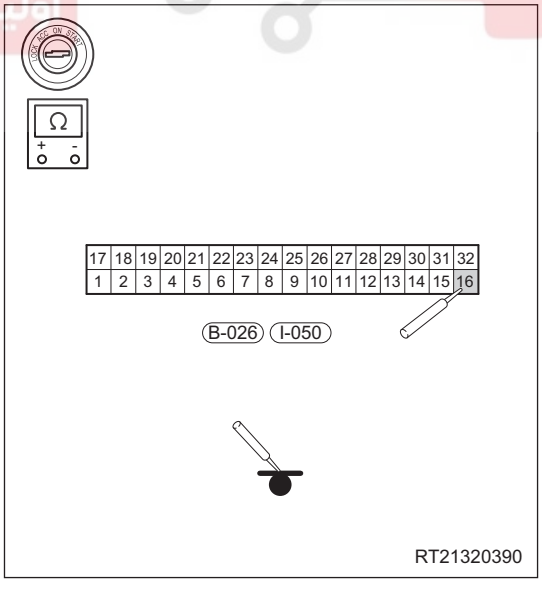
OK

| 4 | Check wire harness and connector (SRS control module assembly - body ground) |
|---|---|

a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector I-050/B-026.
c. Using a digital multimeter, measure the ground circuit of SRS control module assembly connector I-050/B-026 to check if the system ground is normal according to the table below.

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| I-050/B-026 (16) - Body ground | Always | Continuity |




OK → **Repair or replace instrument panel wire harness and connector**

NG

| 5 | Reconfirm DTCs |
|---|---|

a. Reconnect the SRS control module assembly connector I-050/B-026 securely.
b. Reconnect the instrument panel fuse and relay box wire harness connector I-002 securely.
c. Connect the negative battery cable.
d. Turn ignition switch ON.
e. Use X-431 3G diagnostic tester (the latest software) to record and clear the DTCs stored in the supplemental restraint system.
f. Turn ignition switch to LOCK and wait for a few seconds.
g. Turn ignition switch ON.
h. Use X-431 3G diagnostic tester to read the DTCs stored in the supplemental restraint system again.
i. Check if the same DTCs are still output.

NO → **System operates normally**

YES ↓

**Replace SRS control module assembly**

| DTC | U1300 55 | Software Configuration Error |
|---|---|---|

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| U1300 55 | Software Configuration Error | Ignition switch ON | ON | • Peripherals configuration error<br>• SRS control module assembly |

**HINT:**
When performing electrical diagnosis and test, always refer to the relevant circuit diagram for the special circuit and component information.

## Diagnosis Procedure

| 1 | Check DTCs |
|---|---|

a. Use X-431 3G diagnostic tester (the latest software) to record and clear the DTCs stored in the supplemental restraint system.
b. Refer to DTC Confirmation Procedure.
c. Check if the same DTC is output.

NO → **Malfunction indicated by DTC is intermittent**

YES

| 2 | Check SRS control module assembly configuration |
|---|---|

a. Turn ignition switch ON.
b. Use X-431 3G diagnostic tester (the latest software) to check if SRS control module assembly setting matches actual vehicle configuration.

NO → **Reset SRS control module assembly**

YES

| 3 | Reconfirm DTCs |
|---|---|

a. Turn ignition switch to LOCK.
b. Disconnect the negative battery cable and wait for at least 90 seconds.
c. Connect the negative battery cable.
d. Turn ignition switch ON.
e. Use X-431 3G diagnostic tester (the latest software) to record and clear the DTCs stored in the supplemental restraint system.
f. Turn ignition switch to LOCK and wait for a few seconds.

g. Turn ignition switch ON, and then select "Read Code".

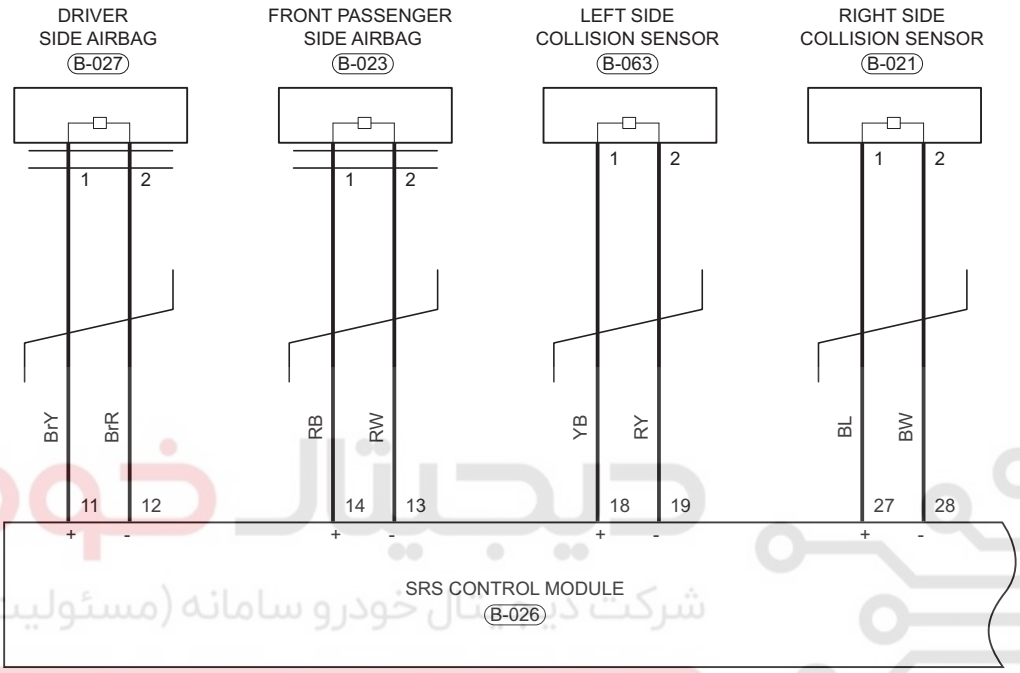
NG → **Replace SRS control module assembly**

OK

**Malfunction has been solved and system operates normally**

| | | |
|---|---|---|
| DTC | B0020 11 | Side Airbag Front Driver Loop Circuit Short to Ground |
| DTC | B0020 12 | Side Airbag Front Driver Loop Circuit Short to Battery |
| DTC | B0020 1A | Side Airbag Front Driver Loop Circuit resistance below threshold |
| DTC | B0020 1B | Side Airbag Front Driver Loop Circuit Resistance Above Threshold |
| DTC | B0020 1C | Side Airbag Front Driver Loop Circuit Voltage Out of Range |
| DTC | B0028 11 | Side Airbag Front Passenger Loop Circuit Short to Ground |
| DTC | B0028 12 | Side Airbag Front Passenger Loop Circuit Short to Battery |
| DTC | B0028 1A | Side Airbag Front Passenger Loop Circuit Resistance Below Threshold |
| DTC | B0028 1B | Side Airbag Front Passenger Loop Circuit Resistance Above Threshold |
| DTC | B0028 1C | Side Airbag Front Passenger Loop Circuit Voltage Out of Range |
| DTC | B1231 12 | Buckle Switch Front Passenger (BLFP) Circuit Short to Battery |
| DTC | B1231 1C | Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range |
| DTC | B1232 12 | PDM (Passenger Detection Mat) Switch Circuit Short to Battery |
| DTC | B1232 1C | PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range |

w/ SIDE AIRBAG

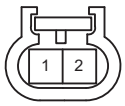







| 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 |

B-026
B




B-027 B-023
B B


B-063 B-021

ET21430030

## Self-diagnosis Detection Logic

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B0020 11 | Side Airbag Front Driver Loop Circuit Short to Ground | Ignition switch ON | ON | • Driver side airbag<br>• Passenger side airbag<br>• Driver side airbag buckle<br>• Passenger side airbag buckle<br>• SRS control set<br>• Wire harness and connector<br>• Passenger side seat cushion detection switch |
| B0020 12 | Side Airbag Front Driver Loop Circuit Short to Battery | | | |
| B0020 1A | Side Airbag Front Driver Loop Circuit resistance below threshold | | | |
| B0020 1B | Side Airbag Front Driver Loop Circuit Resistance Above Threshold | | | |
| B0020 1C | Side Airbag Front Driver Loop Circuit Voltage Out of Range | | | |
| B0028 11 | Side Airbag Front Passenger Loop Circuit Short to Ground | | | |
| B0028 12 | Side Airbag Front Passenger Loop Circuit Short to Battery | | | |
| B0028 1A | Side Airbag Front Passenger Loop Circuit Resistance Below Threshold | | | |
| B0028 1B | Side Airbag Front Passenger Loop Circuit Resistance Above Threshold | | | |
| B0028 1C | Side Airbag Front Passenger Loop Circuit Voltage Out of Range | | | |

| DTC Code | DTC Definition | DTC Detection Condition | Warning Light Condition | Possible Cause |
|---|---|---|---|---|
| B1231 12 | Buckle Switch Front Passenger (BLFP) Circuit Short to Battery | Ignition switch ON | ON | • Driver side airbag<br>• Passenger side airbag<br>• Driver side airbag buckle<br>• Passenger side airbag buckle<br>• SRS control set<br>• Wire harness and connector<br>• Passenger side seat cushion detection switch |
| B1231 1C | Buckle Switch Front Passenger (BLFP) Circuit Voltage Out of Range | | | |
| B1232 12 | PDM (Passenger Detection Mat) Switch Circuit Short to Battery | | | |
| B1232 1C | PDM (Passenger Detection Mat) Switch Circuit Voltage Out of Range | | | |

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

## Diagnosis Procedure

| 1 | Check DTCs |
|---|---|

a. Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in supplemental restraint system.
b. Refer to DTC Confirmation Procedure.
c. Check if the same DTC is output.

NO → **Malfunction indicated by DTC is intermittent**



| 2 | Check SRS control module assembly configuration |
|---|---|

a. Turn ignition switch to ON.
b. Use X-431 3G diagnostic tester (the latest software) to check if SRS control module assembly setting matches actual vehicle configuration.

NO → **Reset SRS control module assembly**

| 3 | Reconfirm DTCs |
|---|---|

a. Turn ignition switch to LOCK.
b. Disconnect the negative battery cable and wait for at least 90 seconds.
c. Connect the negative battery cable.
d. Turn ignition switch to ON.
e. Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in supplemental restraint system.
f. Turn ignition switch to LOCK and wait for a few seconds.

g. Turn ignition switch ON, and then select "Read Code".

NO → **Replace SRS control module assembly**

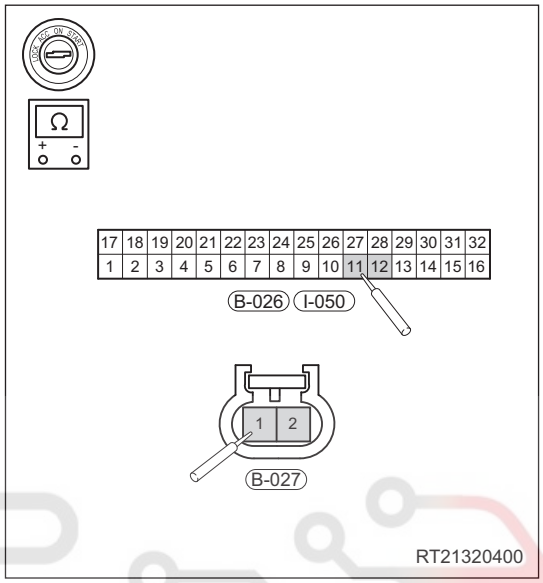
OK

| 4 | Check driver side airbag |
|---|---|

a. Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector B-026/I-050.
c. Disconnect the driver side airbag connector B-027.
d. Connect negative battery cable and wait for a few seconds.
e. Turn ignition switch to ON.
f. Using ohm band of multimeter, check for continuity between B-027 (1) and B-026/I-050 (11), and continuity between B-027 (2) and B-026/I-050 (12).

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-027 (1) - B-026/I-050 (11) | Always | Continuity |
| B-027 (2) - B-026/I-050 (12) | Always | Continuity |



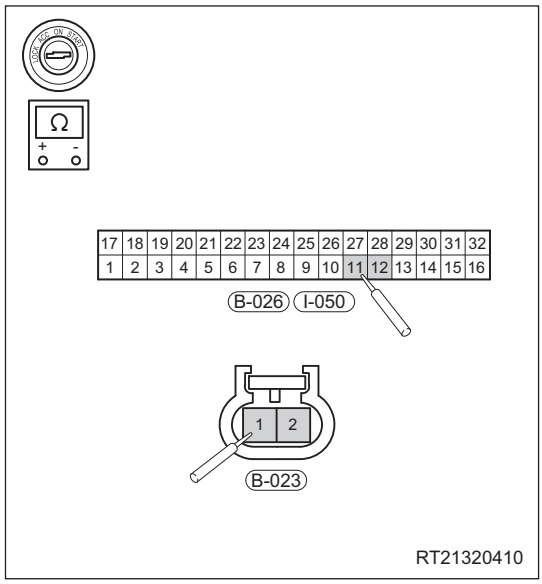

OK → **Replace driver side airbag**

| 5 | Check passenger side airbag |
|---|---|

a. Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector B-026/I-050.
c. Disconnect the passenger side airbag connector B-023.
d. Connect negative battery cable and wait for a few seconds.
e. Turn ignition switch ON.
f. Using ohm band of multimeter, check for continuity between B-023 (1) and B-026/I-050 (11), and continuity between B-023 (2) and B-026/I-050 (12).

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-023 (1) - B-026/I-050 (11) | Always | Continuity |

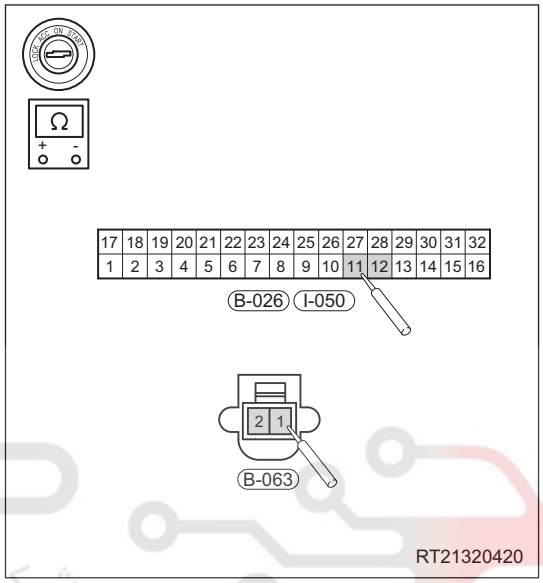


| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-023 (2) - B-026/ I-050 (12) | Always | Continuity |

OK → Replace passenger side airbag

**6 Check left side collision sensor**

a. Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.
b. Disconnect the SRS control module assembly connector B-026/I-050.
c. Disconnect the left side collision sensor connector B-063.
d. Connect negative battery cable and wait for a few seconds.
e. Turn ignition switch to ON.
f. Using ohm band of multimeter, check for continuity between B-063 (1) and B-026/I-050 (11), and continuity between B-063 (2) and B-026/I-050 (12).




**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-063 (1) - B-026/ I-050 (11) | Always | Continuity |
| B-063 (2) - B-026/ I-050 (12) | Always | Continuity |

OK → Replace left side collision sensor

| 7 | Check right side collision sensor |
|---|---|

a. Turn ignition switch to LOCK, disconnect negative battery cable and wait for at least 90 seconds.

b. Disconnect the SRS control module assembly connectorB-026/I-050.

c. Disconnect the right side collision connector B-021.

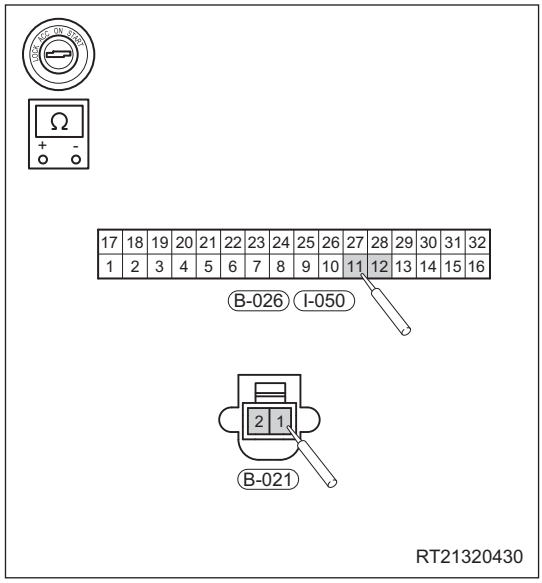
d. Connect negative battery cable and wait for a few seconds.

e. Turn ignition switch to ON.

f. Using ohm band of multimeter, check for continuity between B-021 (1) and B-026/I-050 (11), and continuity between B-021 (2) and B-026/I-050 (12).

**Standard Condition**

| Multimeter Connection | Condition | Specified Condition |
|---|---|---|
| B-021 (1) - B-026/ I-050 (11) | Always | Continuity |
| B-021 (2) - B-026/ I-050 (12) | Always | Continuity |



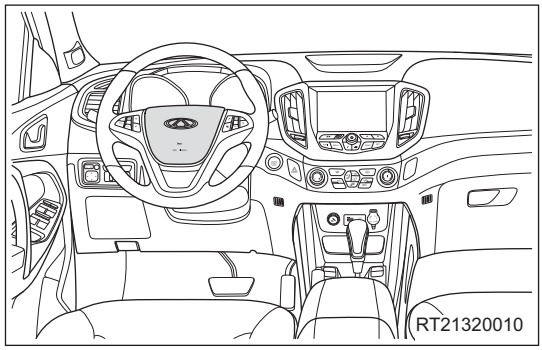

OK → Replace right side collision sensor

# ON-VEHICLE SERVICE

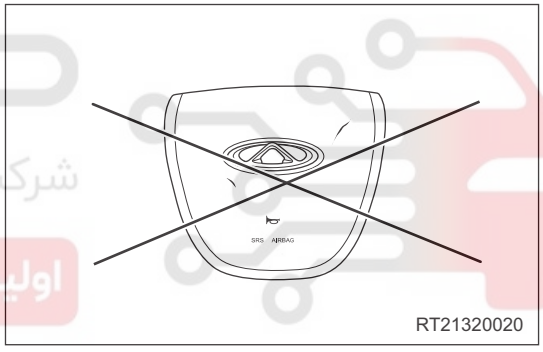
## Driver Airbag

### On-vehicle Inspection

1. Check the driver airbag (vehicle is not involved in a collision and airbag is not deployed).
   a. Perform a diagnosis system inspection.
   b. Perform visual inspection with the driver airbag on vehicle:
      - Check for cuts, cracks or discoloration on the outer surface of driver airbag and in the grooved portion.
      - If any defect above is found, replace the driver airbag with a new one.




2. Check the driver airbag (vehicle is involved in a collision but airbag is not deployed).
   a. Perform a diagnosis system inspection.
   b. Perform visual inspection with the driver airbag removed from vehicle:
      - Check for cuts, cracks or discoloration on the outer surface of driver airbag and in the grooved portion.
      - Check wire harnesses for cuts and cracks, and if connectors are chipped.
      - Check steering wheel for deformation.





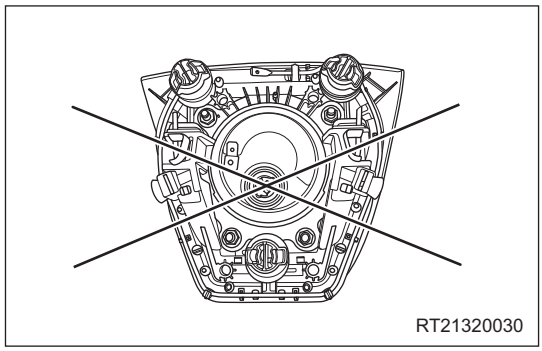



**⚠ WARNING**

- Be sure to follow the correct procedures to remove and install driver airbag.

**HINT:**

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



## Removal

**CAUTION**

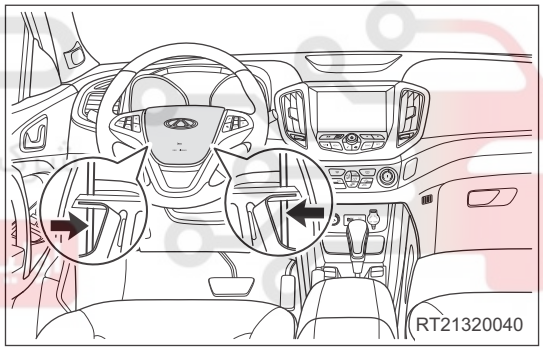
- Handle the airbag and airbag control module assembly carefully, and never tap or strike them fiercely.
- Removal, inspection and installation of airbag system must meet the relevant requirements and specifications, and never perform operation casually.
- The removed airbag should be kept properly with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

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.

**WARNING**

- Wait at least 90 seconds after disconnecting negative battery cable to disable supplemental restraint system.

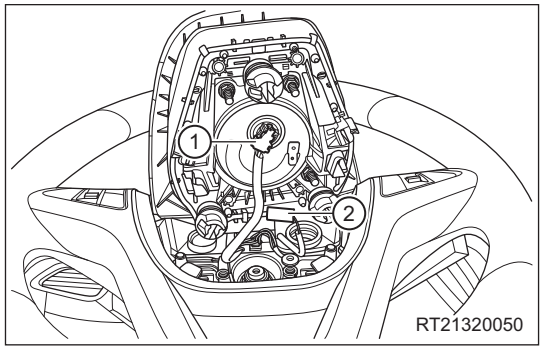
3. Remove the driver airbag.
   a. Position the front wheels straight ahead.
   b. Using a flat tip screwdriver wrapped with protective tape, push the driver airbag snap springs (arrow) from the service hole.








   c. Disengage the driver airbag from the steering wheel, and support the driver airbag smoothly by hand.
   d. Disconnect the driver airbag wire harness connector (1) and horn wire harness connector (2).




**CAUTION**

- DO NOT pull the airbag wire harness when removing driver airbag.

**⚠ WARNING**

- DO NOT damage the airbag wire harness when handling airbag wire harness connector.

e. Remove the driver airbag.

## Installation

Installation is in the reverse order of removal.

**CAUTION**

- Be sure to install the snap springs in place during installation.
- Check that horn operates normally after installation.
- Check the SRS warning light after installation, and make sure that supplemental restraint system operates normally.

## Disposal

Always dispose of the airbag together with the vehicle which is equipped with supplemental restraint system. Otherwise, the airbag will be in chemical and physical dangerous state. Failure to handle it properly will cause personal injury. Do not dispose of airbag by oneself, and always contact the professional service department to perform the disposal.

# Spiral Cable

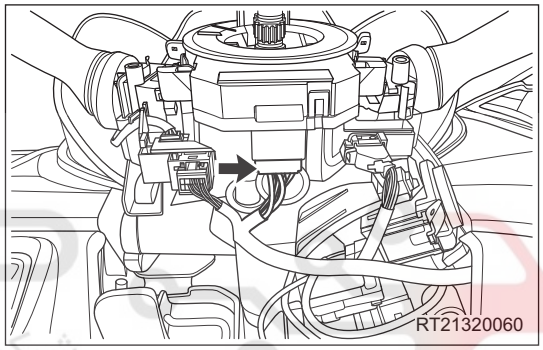
## Removal

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.

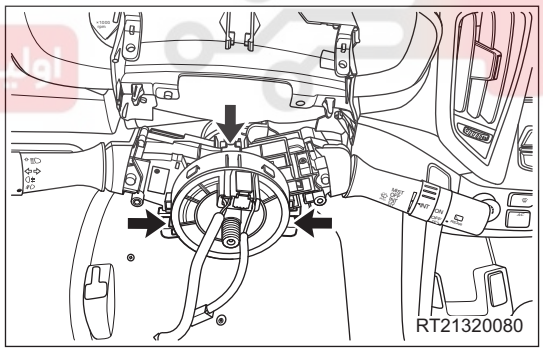
**⚠ WARNING**

- Wait at least 90 seconds after disconnecting negative battery cable to disable supplemental restraint system.

3. Position the front wheels straight ahead.
4. Remove the steering wheel assembly (See page 39-10).
5. Remove the combination switch cover (See page 39-13).
6. Remove the spiral cable.
   a. Disconnect the spiral cable wire harness connector (arrow).




   b. Detach the fixing claws (arrow) between spiral cable and steering column.

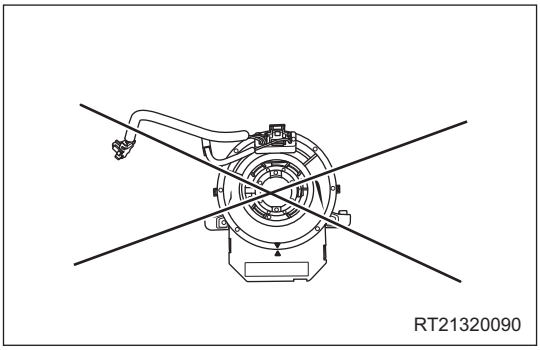



   c. Remove the spiral cable.

## Inspection

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

b. If there are scratches, cracks, dents or cuts on the connectors or the spiral cable, replace the spiral cable with a new one.

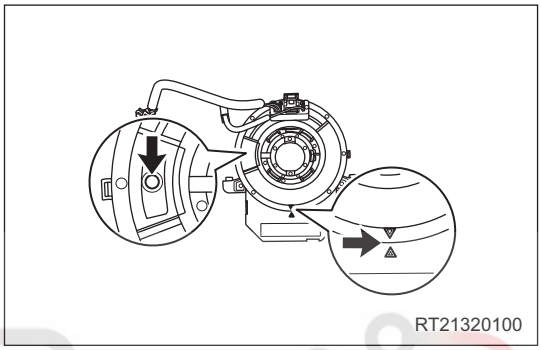

RT21320090

## Installation

Installation is in the reverse order of removal.

**HINT:**

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


RT21320100

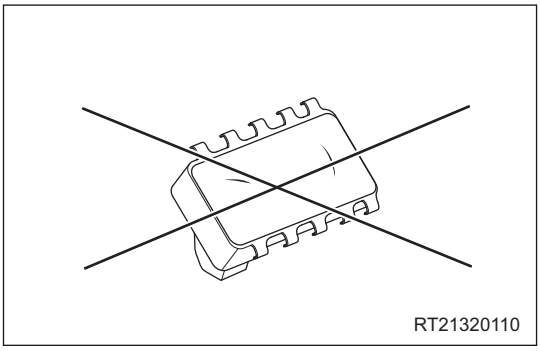
**CAUTION**

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

# Front Passenger Airbag

## On-vehicle Inspection

1. Check the front passenger airbag (vehicle is involved in a collision but airbag is not deployed).
   a. Perform a diagnosis system inspection.
   b. Perform visual inspection with the front passenger airbag removed from vehicle.
   - Check for cuts, cracks or discoloration on the front passenger airbag.
   - Check for cracks or other damage on the connector.
   - Check instrument panel or instrument panel crossmember assembly for deformation or break. If any defect above is found, replace the front passenger airbag with a new one.


RT21320110

**⚠ WARNING**

- Be sure to follow the correct procedures to remove and install front passenger airbag.

## Removal

**CAUTION**

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



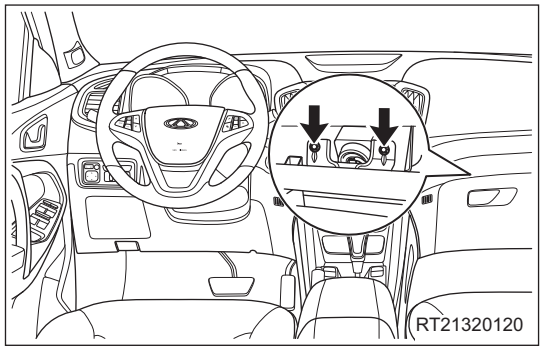
1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.

**⚠ WARNING**

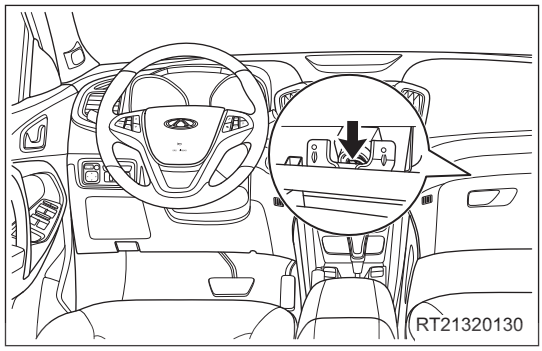
- Wait at least 90 seconds after disconnecting negative battery cable to disable supplemental restraint system.

3. Remove the glove box assembly (See page 59-17).
4. Remove the front passenger airbag.

a. Remove 2 coupling bolts (arrow) between front passenger airbag and instrument panel crossmember assembly.
(Tightening torque: 10 ± 1 N·m)




b. Disconnect the front passenger airbag wire harness connector (arrow).



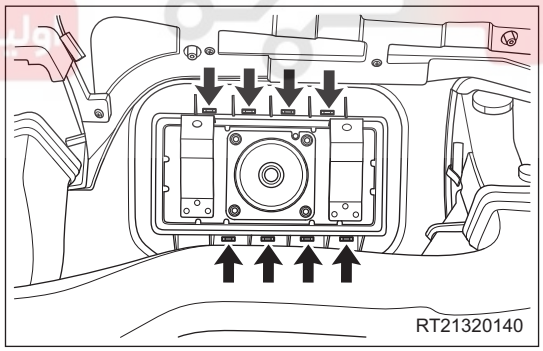

**⚠ WARNING**

- DO NOT damage the airbag wire harness when handling airbag wire harness connector.



c. Remove the instrument panel body assembly (See page 59-17).

d. Using a flat tip screwdriver wrapped with protective tape, slightly pry the fixing claws (arrow) around the front passenger airbag mounting bracket to separate it from the instrument panel body assembly.




e. Remove the front passenger airbag.

## Installation

Installation is in the reverse order of removal.

**CAUTION**

- Before installing the tightening bolts, always make sure that the airbag wire harness is not hold down or stuck. Adjust if necessary and install it in place.
- Be sure to tighten fixing bolts to the specified torque during installation.
- When installing front passenger airbag, first slide the hook on one side into the locating hole in airbag box, and then press in the hook on the other side firmly, making sure that hooks on both sides enter the corresponding locating holes correctly.
- Always keep the vehicle power off during installation, and never install the front passenger airbag when vehicle is powered on.
- During the installation of instrument panel body assembly, if installation cannot proceed due to contact of front passenger airbag bracket and instrument panel crossmember assembly, hold the airbag slightly at the opening of glove box assembly to install it in place.
- Check the SRS warning light after installation, and make sure that supplemental restraint system operates normally.

## Disposal

Always dispose of the airbag together with the vehicle which is equipped with supplemental restraint system. Otherwise, the airbag will be in chemical and physical dangerous state. Failure to handle it properly will cause personal injury. Do not dispose of airbag by oneself, and always contact the professional service department to perform the disposal.

# SRS Control Module Assembly

## Removal

1. Turn off all the electrical equipment and ignition switch.
2. Disconnect the negative battery cable.

**⚠ WARNING**

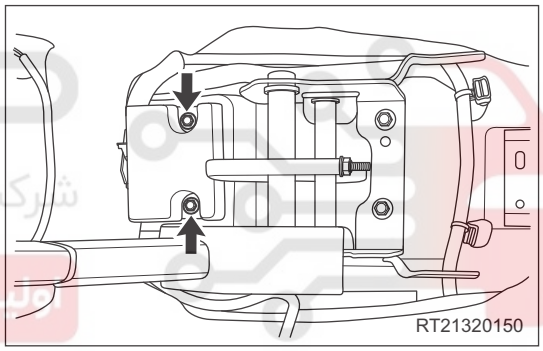
- Wait at least 90 seconds after disconnecting negative battery cable to disable supplemental restraint system.

3. Remove the auxiliary fascia console body assembly (See page 59-9).
4. Remove the SRS control module assembly.
   a. Disconnect the SRS control module assembly wire harness connector (1).

**⚠ WARNING**

- DO NOT damage the airbag wire harness when handling airbag wire harness connector.

   b. Remove 2 fixing nuts (arrow) between SRS control module assembly and body.
   (Tightening torque: 10 ± 1 N·m)








   c. Remove the SRS control module assembly.

## Installation

Installation is in the reverse order of removal.

**CAUTION**

- Be sure to tighten fixing nuts to the specified torque during installation.
- Always install the SRS control module assembly correctly in the direction of arrow on the SRS control module assembly.
- DO NOT put any object between SRS control module assembly and installation surface.
- Always keep the vehicle power off during installation.
- Check the SRS warning light after installation, and make sure that supplemental restraint system operates normally.