

SUPPLEMENTAL RESTRAINT SYSTEM

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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 assembly
Driver airbag assembly is installed in the steering wheel, which will inflate to protect driver in the event of a severe collision.
- Front passenger airbag assembly
Front passenger airbag assembly is installed in the upper right side of instrument panel, which will inflate to protect front passenger in the event of a severe collision.
- Driver side airbag assembly (if equipped)
Driver side airbag assembly is installed in the driver seat, which will inflate to protect driver in the event of a severe collision.
- Front passenger side airbag assembly (if equipped)
Front passenger side airbag assembly is installed in the front passenger seat, which will inflate to protect front passenger in the event of a severe collision.
- Curtain shield airbag assembly (if equipped)
Curtain shield airbag assembly is installed in both sides of roof, which will inflate to protect occupants in the event of a severe collision.
- Side collision sensor (if equipped)
Side collision sensor is installed in the body at B-pillar lower end, which will detect the strength of side collision and send this signal to SRS control module assembly in the event of a severe side 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 assembly. It controls the inflation of airbag so as to protect driver and other occupants in the event of a severe collision.
- Spiral cable
It is used to connect driver airbag while ensuring that steering wheel has enough steering angle.
- Airbag malfunction indicator
After ignition switch is turned to ON, if malfunction indicator goes off after coming on for approximately 6 seconds, it means that supplemental restraint system operates normally. If malfunction indicator does not come on, remains on or flashes, it means that supplemental restraint system has a problem and it is necessary to perform tests and repairs.
- Wire harness
It is yellow and used to connect elements of supplemental restraint system. The connector has a safety mechanism.

Airbag system function:

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

Seat belt pretensioner consists of following components:

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

Seat belt pretensioner function:

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

Operation

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

Supplemental restraint system circuit is continuously monitored and controlled by SRS control module assembly. Airbag indicator on instrument cluster illuminates for approximately 6 seconds for a test each time ignition switch is turned ON. Airbag indicator goes off after the test is completed. If indicator comes on at any time other than test time, it indicates that there is a problem in supplemental restraint system circuit.

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

WARNING

- Never expose airbag components directly to hot air or open flames.
- Never attempt to disassemble or repair airbag components.
- Removed airbags should be kept properly. Never put other objects on them. If triggered accidentally, the airbags 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 airbags, or the airbags may be triggered accidentally to cause personal injury.

 CAUTION

- Before removing airbag system components, disconnect the negative battery cable and wait for 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 airbag components.
- If airbags may be touched during servicing, remove the airbags 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.

Specifications

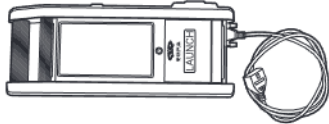
Torque Specifications

Description	Torque (N·m)
Coupling Bolt Between Front Passenger Airbag Assembly and Instrument Panel Crossmember Assembly	10 ± 1
Coupling Bolt Between Curtain Shield Airbag Assembly and Body	10 ± 1
Coupling Bolt Between Side Collision Sensor and Body	10 ± 1
Coupling Bolt Between SRS Control Module Assembly and Body	10 ± 1

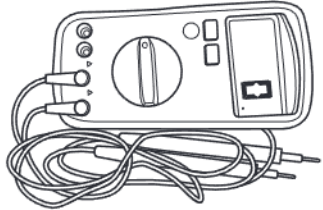
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Tools

Special Tool

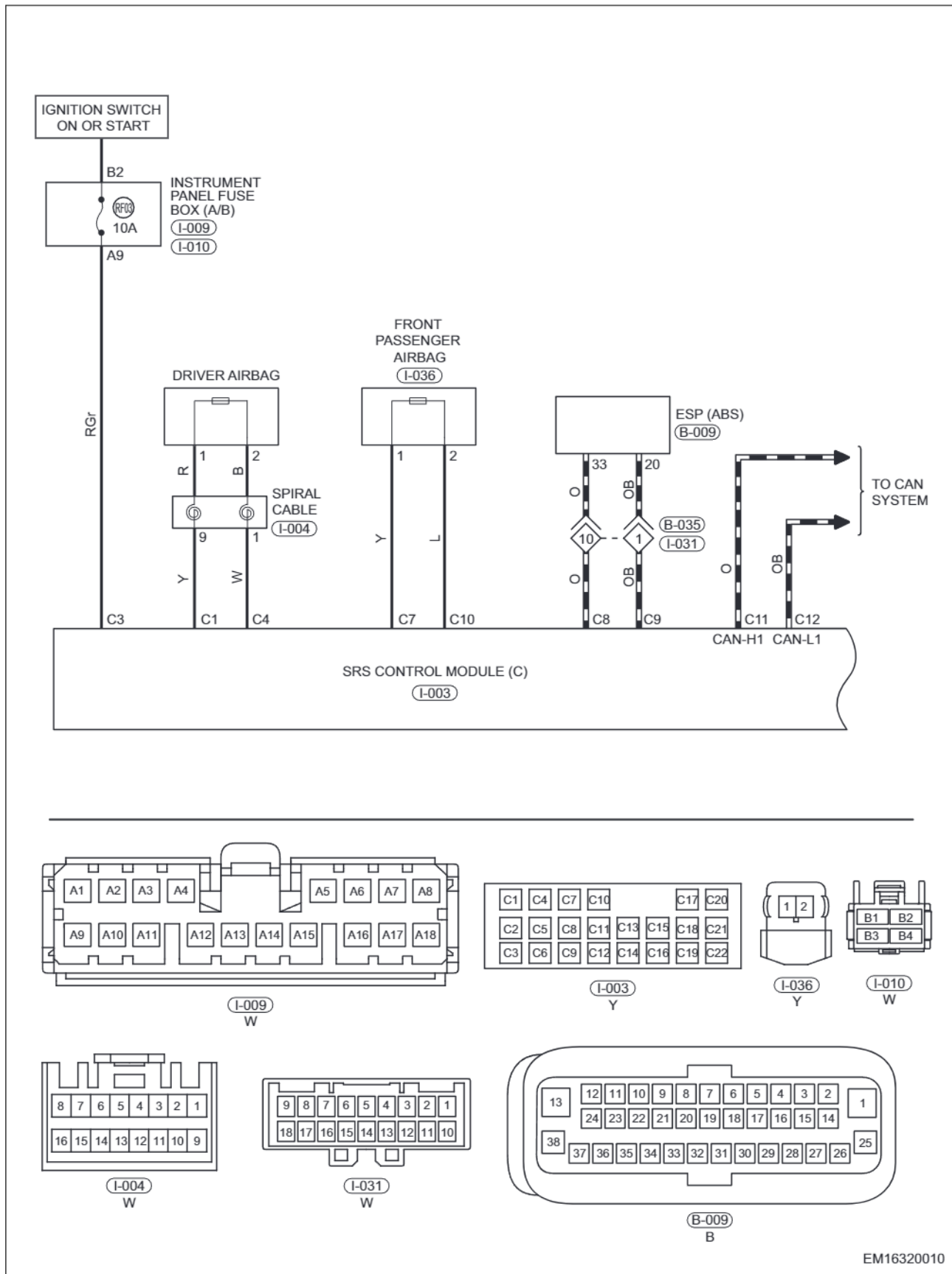
X-431 3G Diagnostic Tester	 RCH0000001
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General Tool

Digital Multimeter	 RCH0000002
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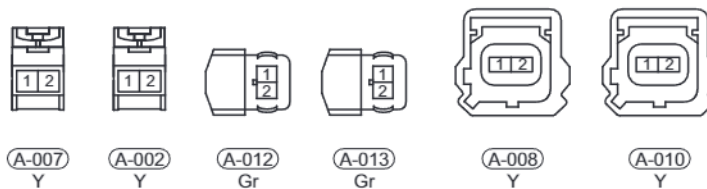
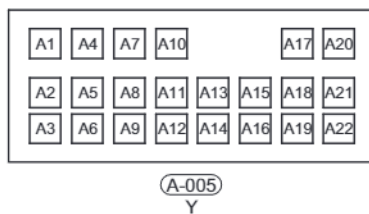
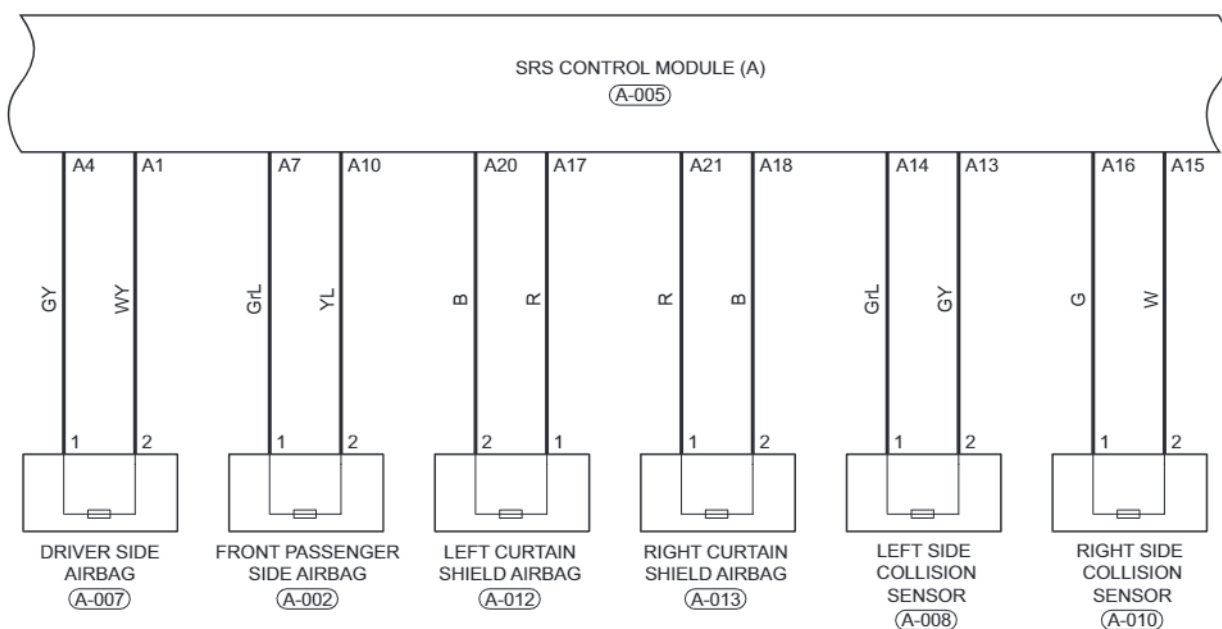
Circuit Diagram

Supplemental Restraint System (Page 1 of 3)



Supplemental Restraint System (Page 2 of 3)

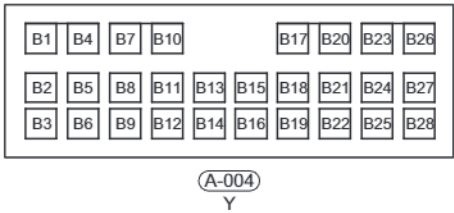
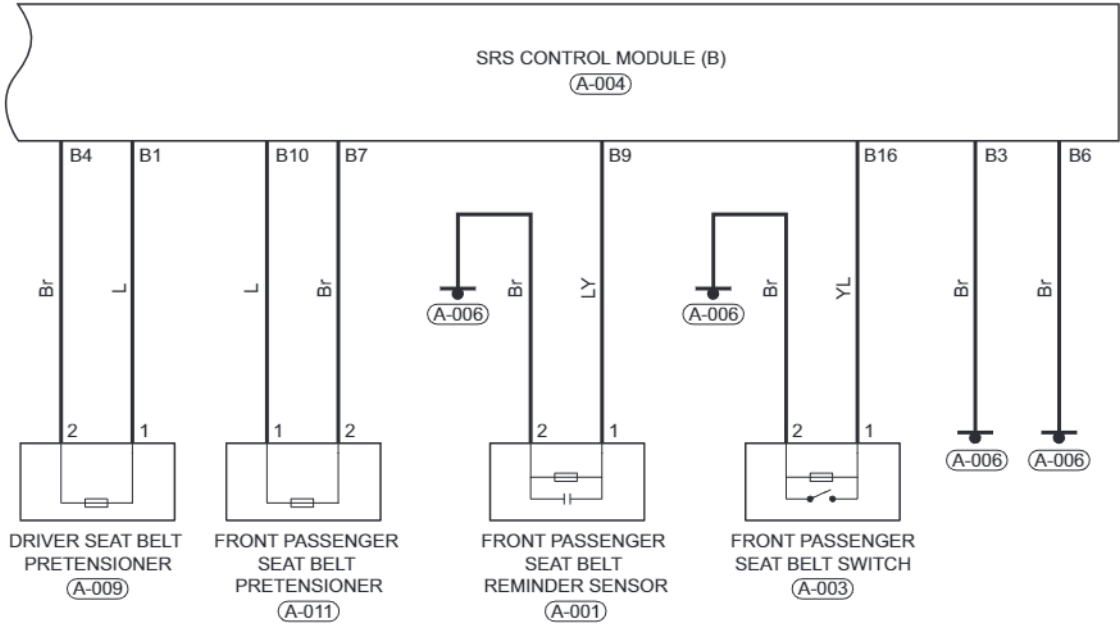
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Supplemental Restraint System (Page 3 of 3)

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EM16320030



DIAGNOSIS & TESTING

SRS Control Module Assembly Terminal List

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
A1	Driver Side Airbag Assembly	A12	-
A2	-	A13	Left Side Collision Sensor
A3	-	A14	Left Side Collision Sensor
A4	Driver Side Airbag Assembly	A15	Right Side Collision Sensor
A5	-	A16	Right Side Collision Sensor
A6	-	A17	Left Curtain Shield Airbag Assembly
A7	Front Passenger Side Airbag Assembly	A18	Right Curtain Shield Airbag Assembly
A8	-	A19	-
A9	-	A20	Left Curtain Shield Airbag Assembly
A10	Front Passenger Side Airbag Assembly	A21	Right Curtain Shield Airbag Assembly
A11	-	A22	-
B1	Driver Seat Belt Pretensioner	B15	-
B2	-	B16	Front Passenger Seat Belt Switch
B3	Ground	B17	-
B4	Driver Seat Belt Pretensioner	B18	-
B5	-	B19	-
B6	Ground	B20	-
B7	Front Passenger Seat Belt Pretensioner	B21	-
B8	-	B22	-
B9	Front Passenger Seat Belt Reminder Sensor	B23	-
B10	Front Passenger Seat Belt Pretensioner	B24	-
B11	-	B25	-
B12	-	B26	-
B13	-	B27	-
B14	-	B28	-
C1	Driver Airbag Assembly	C12	CAN-L1
C2	-	C13	-
C3	Power Supply (Ignition Switch)	C14	-
C4	Driver Airbag Assembly	C15	-
C5	-	C16	-

Terminal No.	Terminal Definition	Terminal No.	Terminal Definition
C6	-	C17	-
C7	Front Passenger Airbag Assembly	C18	-
C8	CAN Communication	C19	-
C9	CAN Communication	C20	-
C10	Front Passenger Airbag Assembly	C21	-
C11	CAN-H1	C22	-

DTC Confirmation Procedure

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

- Turn ignition switch to LOCK.
- Connect X-431 3G diagnostic tester (the latest software) to Data Link Connector (DLC).
- Turn ignition switch to ON.
- Use X-431 3G diagnostic tester to record and clear DTCs stored in supplemental restraint system.
- Turn ignition switch to LOCK and wait for a few seconds.
- Turn ignition switch to ON, and then select Read Code.
- If DTC is detected, malfunction indicated by DTC is current. Go to the diagnosis procedure - Step 1.
- If no DTC is detected, malfunction indicated by DTC is intermittent.

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 related circuit.
- If possible, try to duplicate the conditions under which DTC was set.
- Look for the data that has changed or DTC to reset during wiggle test.
- Look for broken, bent, protruded or corroded terminals.
- Inspect airbag components and mounting areas for damage, foreign matter, etc. that will cause incorrect signals.
- Check and clean all wire harness connectors and grounding parts related to current DTC.
- Remove the SRS control module assembly from malfunctioning vehicle and install it to a new vehicle and perform a test. If DTC cannot be cleared, 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 circuit diagrams to look for any common ground circuit or power supply circuit applied to DTC.
- Refer to any Technical Bulletin that may apply to the malfunction.

Ground Inspection

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

Electrical control circuits are very sensitive to proper grounding. A loose or corroded ground can affect the control circuit. Operations to check the ground points are as follows:

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

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Diagnosis Procedure

HINT:

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

1	Vehicle brought to workshop
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NEXT

2	Check battery voltage
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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)
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DTC occurs

For current DTC, go to step 5

No DTC

For history DTC, go to step 6

5	Diagnostic Trouble Code (DTC) chart
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NEXT

6 Circuit inspection**HINT:**

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

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

⚠ WARNING

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

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

When performing circuit diagnosis and test, always refer to the circuit diagram for specific 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 occurs**

Go to step 5

No DTC

Go to next step

NEXT**10** Confirmation test**NEXT**

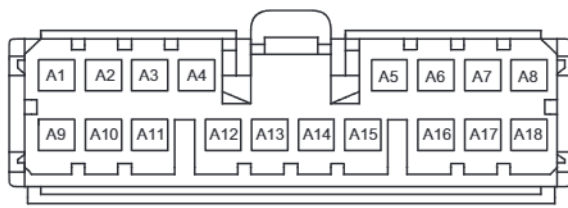
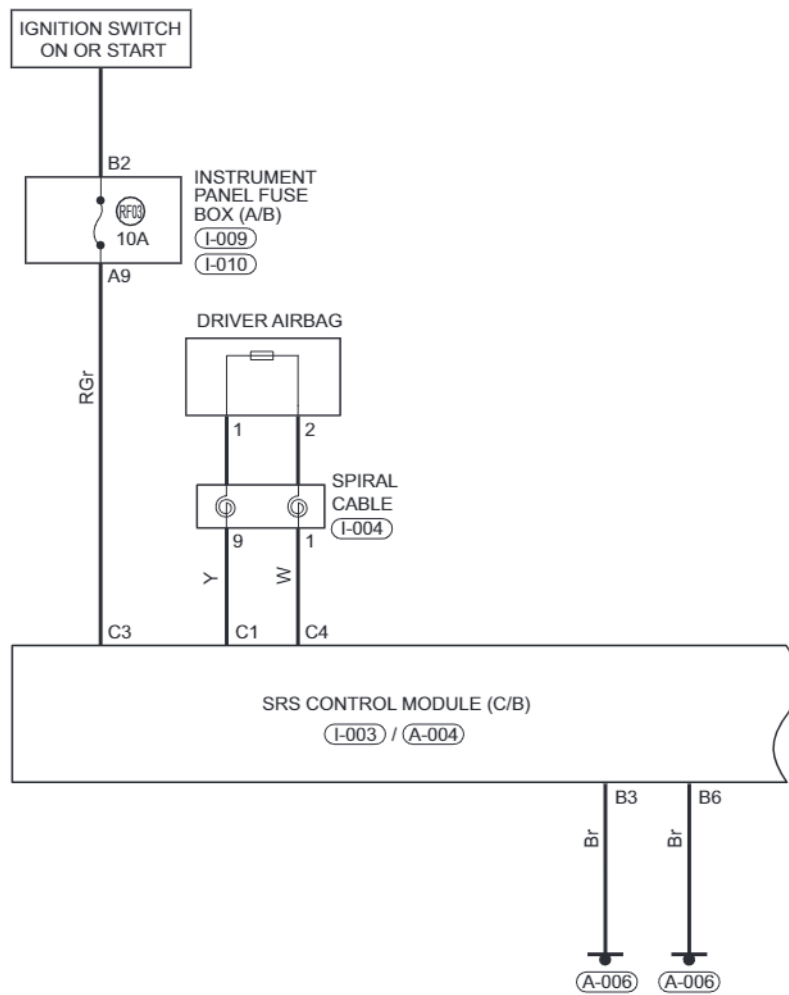
11	End
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Diagnostic Trouble Code (DTC) Chart

DTC Code	DTC Definition
B0001-11	Driver Frontal Airbag Deployment Control Circuit Short to Ground
B0001-12	Driver Frontal Airbag Deployment Control Circuit Short to Battery
B0001-1A	Driver Frontal Airbag Deployment Control Circuit Resistance Below Threshold
B0001-1B	Driver Frontal Airbag Deployment Control Circuit Resistance Above Threshold
B0010-11	Passenger Frontal Airbag Deployment Control Circuit Short to Ground
B0010-12	Passenger Frontal Airbag Deployment Control Circuit Short to Battery
B0010-1A	Passenger Frontal Airbag Deployment Control Circuit Resistance Below Threshold
B0010-1B	Passenger Frontal Airbag Deployment Control Circuit Resistance Above Threshold
B0020-11	Left Side Airbag Deployment Control Circuit Short to Ground
B0020-12	Left Side Airbag Deployment Control Circuit Short to Battery
B0020-1A	Left Side Airbag Deployment Control Circuit Resistance Below Threshold
B0020-1B	Left Side Airbag Deployment Control Circuit Resistance Above Threshold
B0021-11	Left Curtain Deployment Control Circuit Short to Ground
B0021-12	Left Curtain Deployment Control Circuit Short to Battery
B0021-1A	Left Curtain Deployment Control Circuit Resistance Below Threshold
B0021-1B	Left Curtain Deployment Control Circuit Resistance Above Threshold
B0028-11	Right Side Airbag Deployment Control Circuit Short to Ground
B0028-12	Right Side Airbag Deployment Control Circuit Short to Battery
B0028-1A	Right Side Airbag Deployment Control Circuit Resistance Below Threshold
B0028-1B	Right Side Airbag Deployment Control Circuit Resistance Above Threshold
B0029-11	Right Curtain Deployment Control Circuit Short to Ground
B0029-12	Right Curtain Deployment Control Circuit Short to Battery
B0029-1A	Right Curtain Deployment Control Circuit Resistance Below Threshold
B0029-1B	Right Curtain Deployment Control Circuit Resistance Above Threshold
B0070-11	Driver Seatbelt Pretensioner Deployment Control Circuit Short to Ground
B0070-12	Driver Seatbelt Pretensioner Deployment Control Circuit Short to Battery
B0070-1A	Driver Seatbelt Pretensioner Deployment Control Circuit Resistance Below Threshold
B0070-1B	Driver Seatbelt Pretensioner Deployment Control Circuit Resistance Above Threshold
B0072-11	Passenger Seatbelt Pretensioner Deployment Control Circuit Short to Ground
B0072-12	Passenger Seatbelt Pretensioner Deployment Control Circuit Short to Battery

DTC Code	DTC Definition
B0072-1A	Passenger Seatbelt Pretensioner Deployment Control Circuit Resistance Below Threshold
B0072-1B	Passenger Seatbelt Pretensioner Deployment Control Circuit Resistance Above Threshold
B0091-15	Left Side Restraints Sensor Circuit Short to Battery or Open
B0091-16	Left Side Restraints Sensor Circuit Voltage Below Threshold
B0091-29	Left Side Restraints Sensor Signal Invalid
B0091-55	Left Side Restraints Sensor Not Configured
B0091-96	Left Side Restraints Sensor Component Internal Failure
B0096-15	Right Side Restraints Sensor Circuit Short to Battery or Open
B0096-16	Right Side Restraints Sensor Circuit Voltage Below Threshold
B0096-29	Right Side Restraints Sensor Signal Invalid
B0096-55	Right Side Restraints Sensor Not Configured
B0096-96	Right Side Restraints Sensor Component Internal Failure
B1212-00	Driver Side Airbag and Curtain Deployed
B1213-00	Passenger Side Airbag and Curtain Deployed
B1215-00	Squib CrossCoupling Error
B1216-00	Frontal Airbag Deployed
B1240-00	ICM Airbag lamp Failed
B1250-16	Power Supply Circuit Voltage Below Threshold
B1250-17	Power Supply Circuit Voltage Above Threshold
B1251-00	ECU Internal Error
B1253-00	Disposal Command Record Performed Scrap Deployment
U0073-88	Control Module Communication Bus Off
U0100-87	Lost Communication with ECM
U0129-87	Lost Communication with BSM
U0140-87	Lost Communication with BCM
U1000-88	Control Module Channel 1 Communication Bus Off
U1300-55	Software Configuration Error

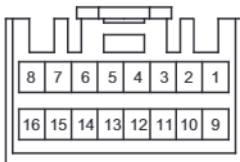
DTC	B0001-11	Driver Frontal Airbag Deployment Control Circuit Short to Ground
DTC	B0001-12	Driver Frontal Airbag Deployment Control Circuit Short to Battery
DTC	B0001-1A	Driver Frontal Airbag Deployment Control Circuit Resistance Below Threshold
DTC	B0001-1B	Driver Frontal Airbag Deployment Control Circuit Resistance Above Threshold



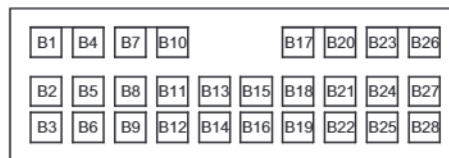
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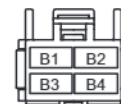
I-003
Y



I-004
W



A-004
Y



I-010
W

EM16320040

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0001-11	Driver Frontal Airbag Deployment Control Circuit Short to Ground	Ignition switch ON	ON	• Driver airbag assembly • Spiral cable • Wire harness and connector • SRS control module assembly
B0001-12	Driver Frontal Airbag Deployment Control Circuit Short to Battery			
B0001-1A	Driver Frontal Airbag Deployment Control Circuit Resistance Below Threshold			
B0001-1B	Driver Frontal Airbag Deployment Control Circuit Resistance Above Threshold			

HINT:

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

Diagnosis Procedure

1 Check driver airbag assembly

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

⚠ WARNING

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

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

NO

Replace driver airbag assembly

YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Disconnect the spiral cable connector.
- Disconnect the instrument panel wire harness connector I-004.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

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Repair or replace instrument panel/spiral cable wire harness and connector

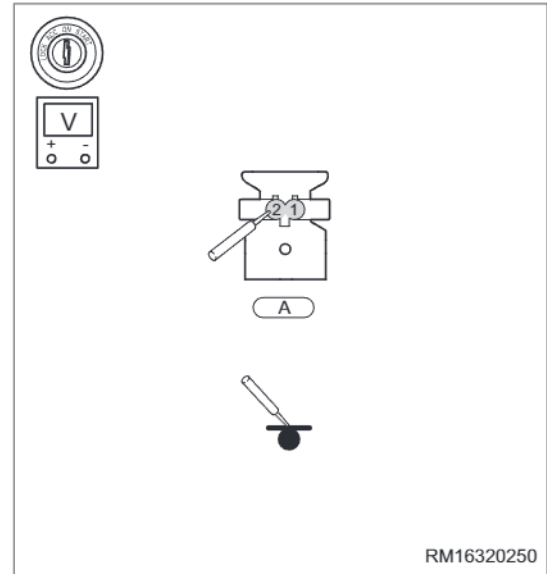
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3 Check driver airbag assembly control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Disconnect the driver airbag assembly connector A.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between driver airbag assembly connector A and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

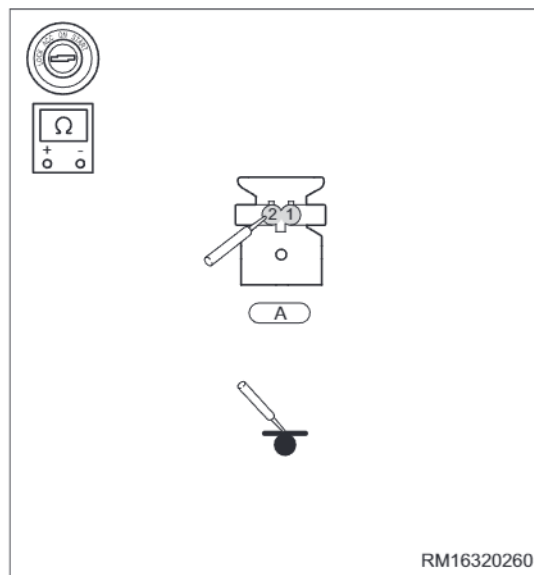
Multimeter Connection	Condition	Specified Condition
A (1) - Body ground	Ignition switch ON	Below 1 V
A (2) - Body ground	Ignition switch ON	Below 1 V



- 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 airbag assembly connector A and body ground to check for a short circuit to ground according to the table below.

Standard Condition

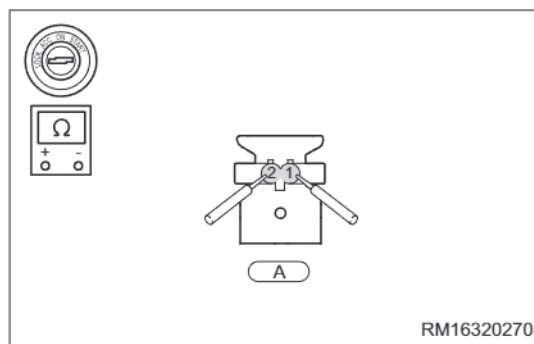
Multimeter Connection	Condition	Specified Condition
A (1) - A (2)	Always	Continuity
A (1) - Body ground	Always	No continuity
A (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector I-003.
- j. Using a digital multimeter, check for continuity between the terminals of driver airbag assembly connector A according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A (1) - A (2)	Always	No continuity



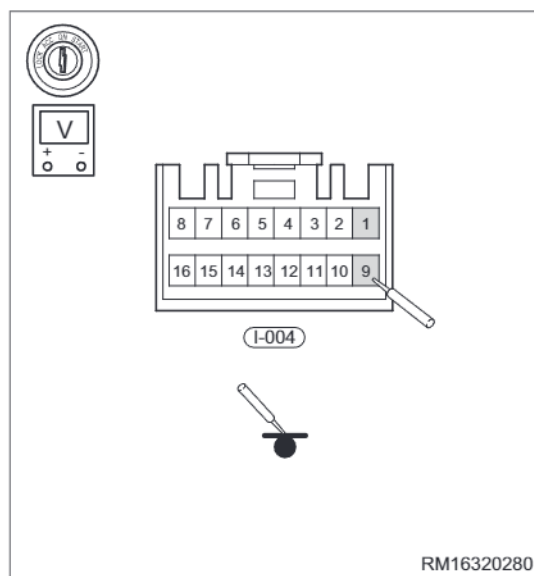
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Replace SRS control module assembly

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4**Check airbag 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 SRS control module assembly connector I-003.
- c. Disconnect the instrument panel wire harness connector I-004.
- d. Connect the negative battery cable and wait for a few seconds.
- e. Turn ignition switch to ON.
- f. Using a digital multimeter, measure the voltage between instrument panel wire harness connector I-004 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-004 (1) - Body ground	Ignition switch ON	Below 1 V
I-004 (9) - 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 instrument panel wire harness connector I-004 and body ground to check for a short circuit to ground according to the table below.

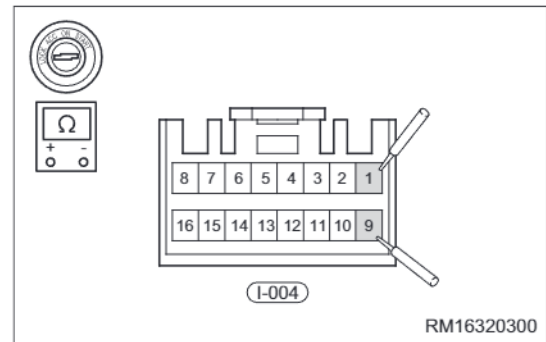
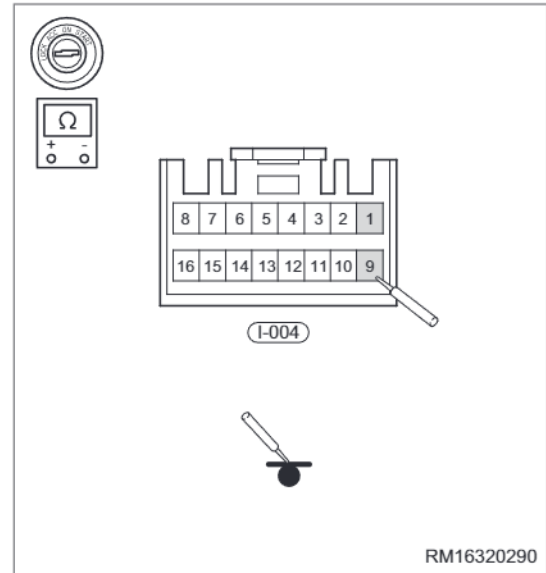
Standard Condition

Multimeter Connection	Condition	Specified Condition
I-004 (1) - I-004 (9)	Always	Continuity
I-004 (1) - Body ground	Always	No continuity
I-004 (9) - Body ground	Always	No continuity

- i. Release the activation prevention mechanism built into the SRS control module assembly connector I-003.
- j. Using a digital multimeter, check for continuity between the terminals of instrument panel wire harness connector I-004 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-004 (1) - I-004 (9)	Always	No continuity



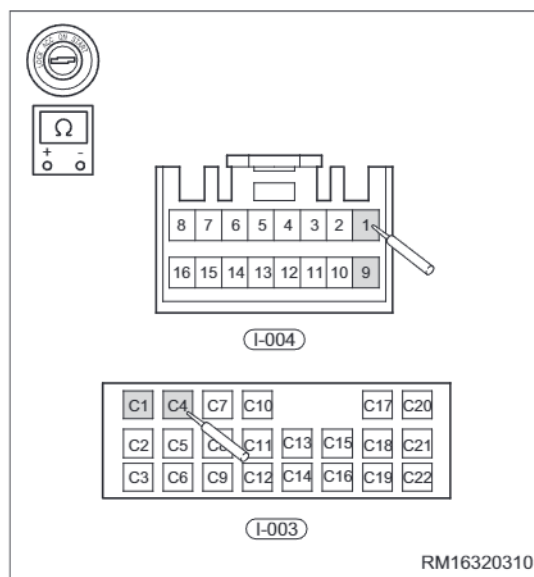
- k. Using a digital multimeter, check for continuity between the terminals of connectors I-004 and I-003 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-004 (1) - I-003 (C4)	Always	Continuity
I-004 (9) - I-003 (C1)	Always	Continuity

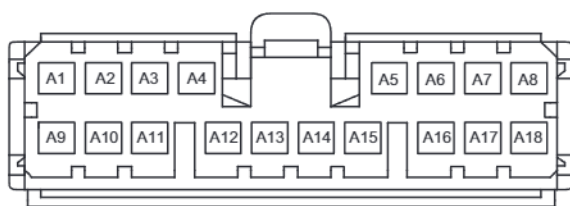
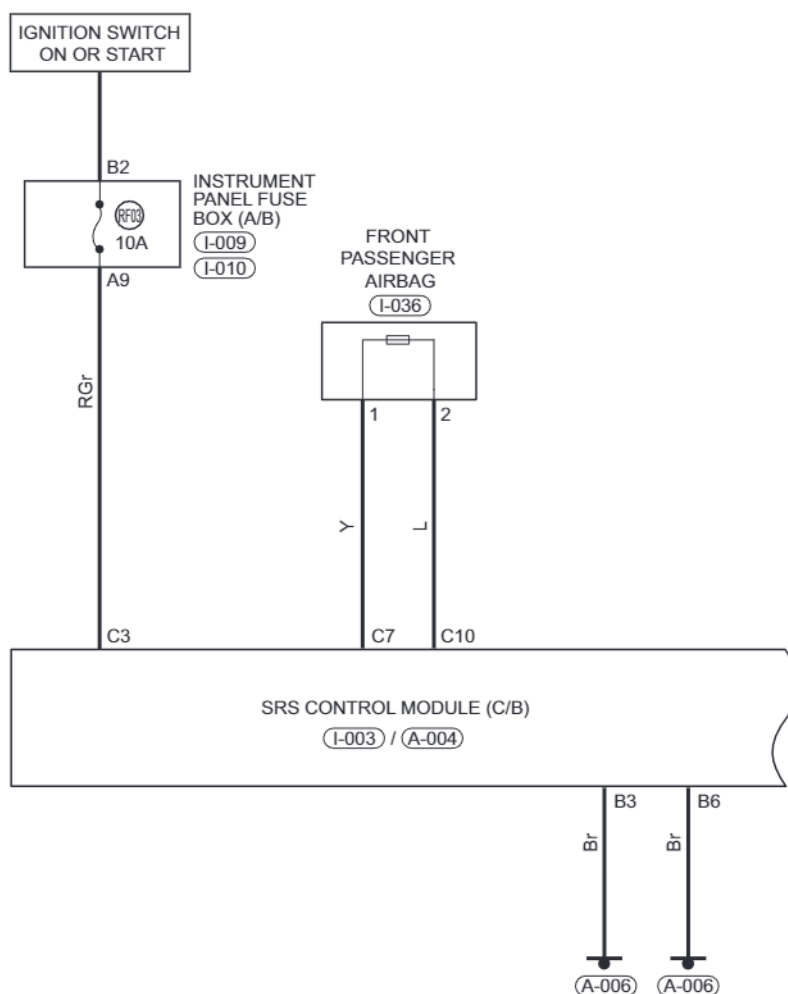
32**NG**

Replace instrument panel wire harness and connector

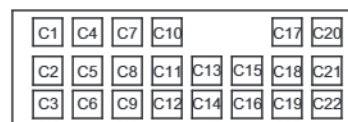
**OK**

Replace spiral cable

DTC	B0010-11	Passenger Frontal Airbag Deployment Control Circuit Short to Ground
DTC	B0010-12	Passenger Frontal Airbag Deployment Control Circuit Short to Battery
DTC	B0010-1A	Passenger Frontal Airbag Deployment Control Circuit Resistance Below Threshold
DTC	B0010-1B	Passenger Frontal Airbag Deployment Control Circuit Resistance Above Threshold



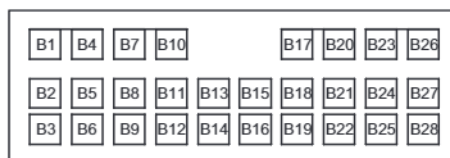
I-009
W



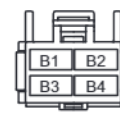
I-003
Y



I-036
Y



A-004
Y



I-010
W

EM16320050

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0010-11	Passenger Frontal Airbag Deployment Control Circuit Short to Ground	Ignition switch ON	ON	• Front passenger airbag assembly • Wire harness and connector • SRS control module assembly
B0010-12	Passenger Frontal Airbag Deployment Control Circuit Short to Battery			
B0010-1A	Passenger Frontal Airbag Deployment Control Circuit Resistance Below Threshold			
B0010-1B	Passenger Frontal Airbag Deployment Control Circuit Resistance Above Threshold			

HINT:

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

Diagnosis Procedure

1 Check front passenger airbag assembly

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the front passenger airbag assembly connector, and connect new front passenger airbag assembly to connector I-036.

⚠ WARNING

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

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

NO**Replace front passenger airbag assembly****YES**

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the front passenger airbag assembly connector I-036 and SRS control module assembly connector I-003.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace instrument panel wire harness and connector

32

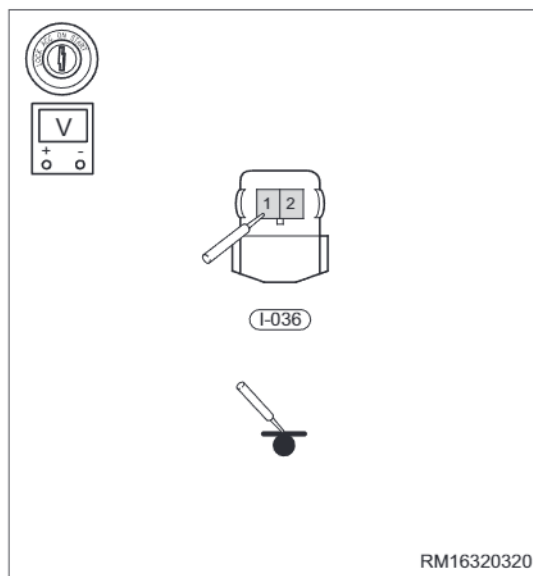
OK

3 Check front passenger airbag assembly control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Disconnect the front passenger airbag assembly connector I-036.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between front passenger airbag assembly connector I-036 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

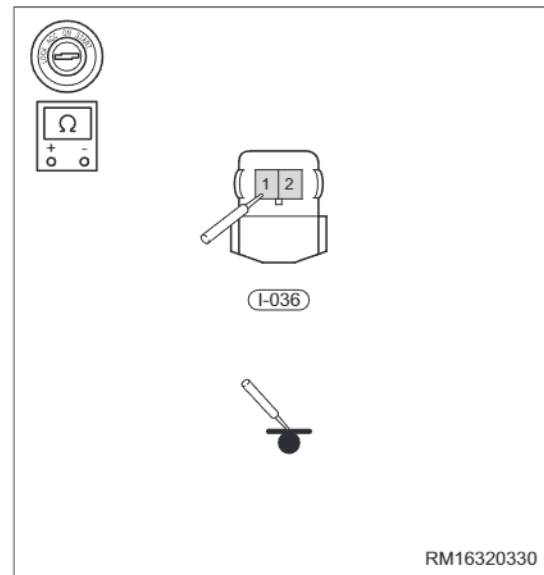
Multimeter Connection	Condition	Specified Condition
I-036 (1) - Body ground	Ignition switch ON	Below 1 V
I-036 (2) - Body ground	Ignition switch ON	Below 1 V



- 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 assembly connector I-036 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

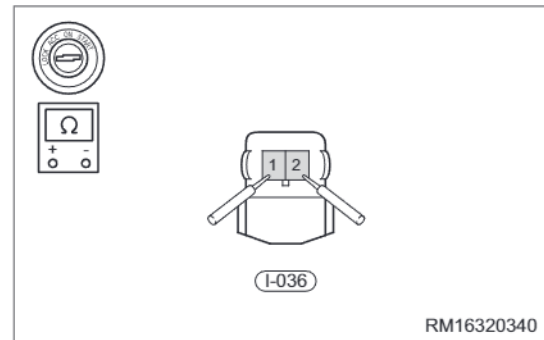
Multimeter Connection	Condition	Specified Condition
I-036 (1) - I-036 (2)	Always	Continuity
I-036 (1) - Body ground	Always	No continuity
I-036 (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector I-003.
- j. Using a digital multimeter, check for continuity between the terminals of front passenger airbag assembly connector I-036 according to the table below.

Standard Condition

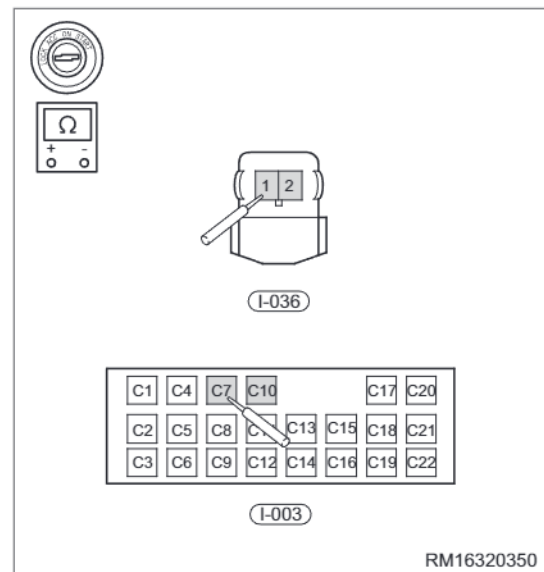
Multimeter Connection	Condition	Specified Condition
I-036 (1) - I-036 (2)	Always	No continuity



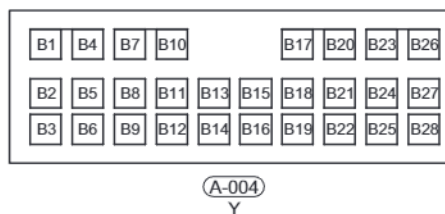
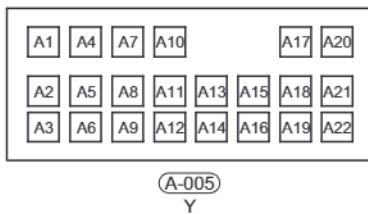
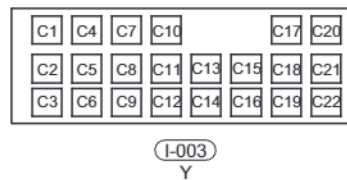
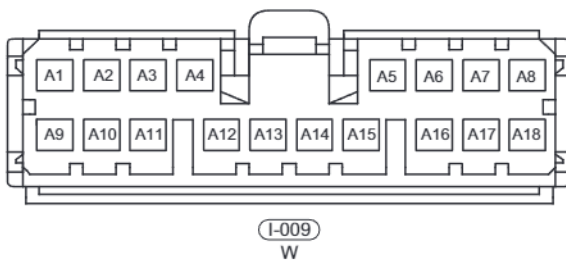
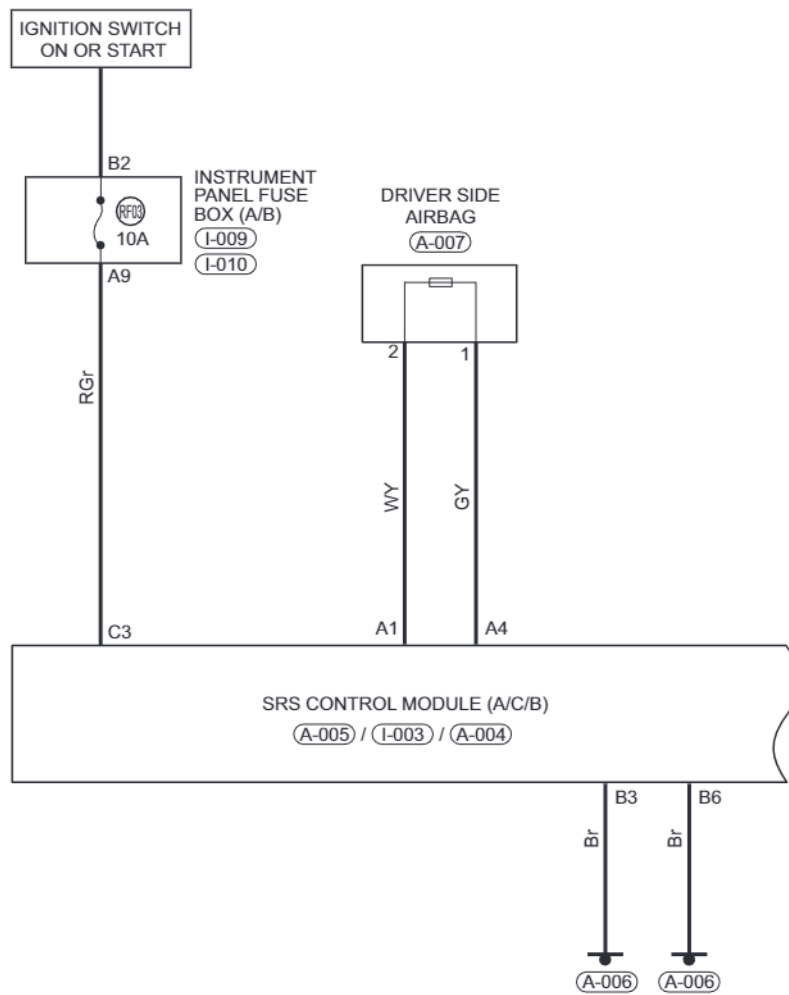
- k. Using a digital multimeter, check for continuity between the terminals of connectors I-036 and I-003 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-036 (1) - I-003 (C7)	Always	Continuity
I-036 (2) - I-003 (C10)	Always	Continuity

OK**Replace SRS control module assembly****NG****Replace instrument panel wire harness and connector**

DTC	B0020-11	Left Side Airbag Deployment Control Circuit Short to Ground
DTC	B0020-12	Left Side Airbag Deployment Control Circuit Short to Battery
DTC	B0020-1A	Left Side Airbag Deployment Control Circuit Resistance Below Threshold
DTC	B0020-1B	Left Side Airbag Deployment Control Circuit Resistance Above Threshold



EM16320060

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0020-11	Left Side Airbag Deployment Control Circuit Short to Ground	Ignition switch ON	ON	- Driver side airbag assembly - Wire harness and connector - SRS control module assembly
B0020-12	Left Side Airbag Deployment Control Circuit Short to Battery			
B0020-1A	Left Side Airbag Deployment Control Circuit Resistance Below Threshold			
B0020-1B	Left Side Airbag Deployment Control Circuit Resistance Above Threshold			

HINT:

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

Diagnosis Procedure

1 Check driver side airbag assembly

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the driver side airbag assembly connector, and connect new driver side airbag assembly to connector A-007.

⚠ WARNING

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

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

NO**Replace driver side airbag assembly****YES**

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the driver side airbag assembly connector A-007 and SRS control module assembly connector A-005.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace airbag wire harness and connector

OK

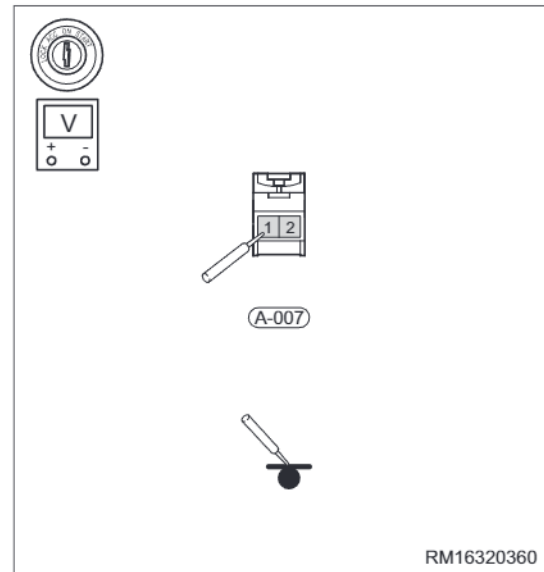
32

3 Check driver side airbag assembly control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-005.
- Disconnect the driver side airbag assembly connector A-007.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between driver side airbag assembly connector A-007 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

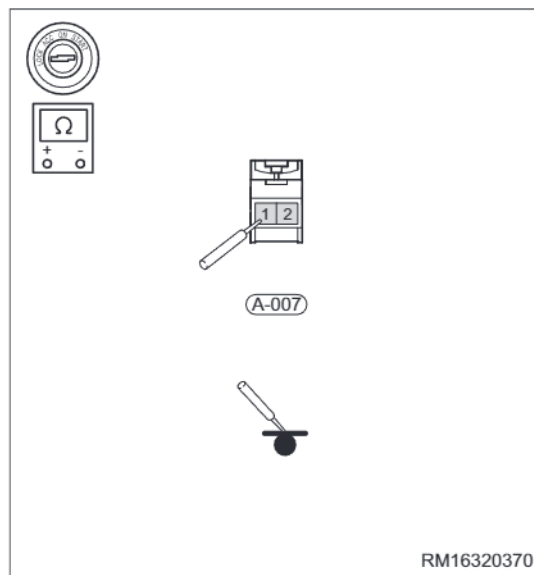
Multimeter Connection	Condition	Specified Condition
A-007 (1) - Body ground	Ignition switch ON	Below 1 V
A-007 (2) - Body ground	Ignition switch ON	Below 1 V



- 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 side airbag assembly connector A-007 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

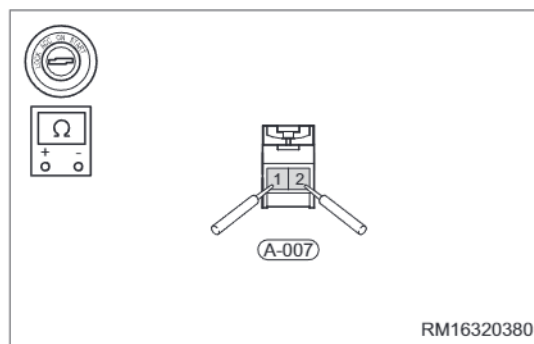
Multimeter Connection	Condition	Specified Condition
A-007 (1) - A-007 (2)	Always	Continuity
A-007 (1) - Body ground	Always	No continuity
A-007 (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-005.
- j. Using a digital multimeter, check for continuity between the terminals of driver side airbag assembly connector A-007 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-007 (1) - A-007 (2)	Always	No continuity



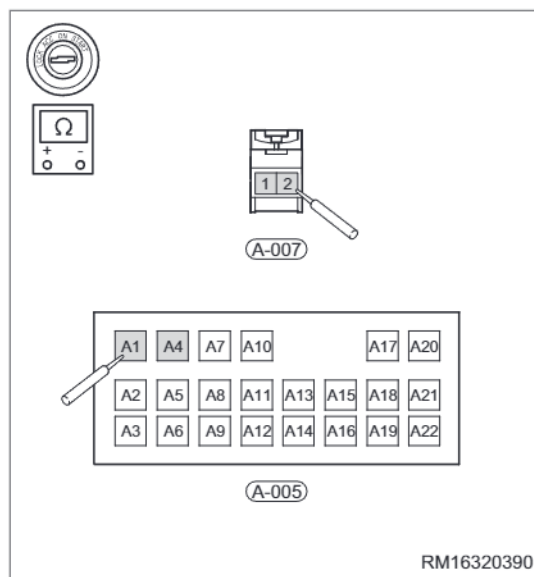
- k. Using a digital multimeter, check for continuity between the terminals of connectors A-007 and A-005 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-007 (1) - A-005 (A4)	Always	Continuity
A-007 (2) - A-005 (A1)	Always	Continuity

OK

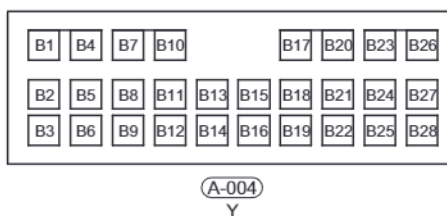
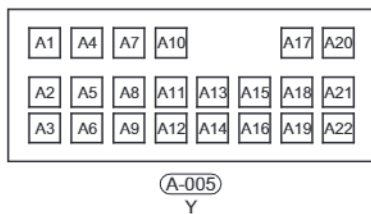
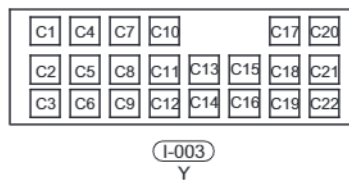
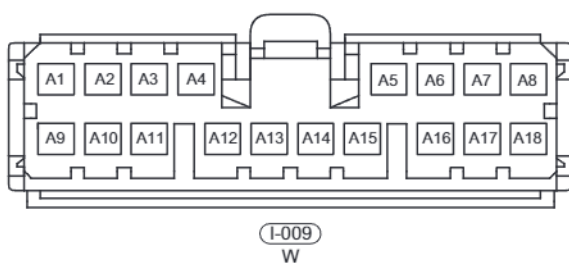
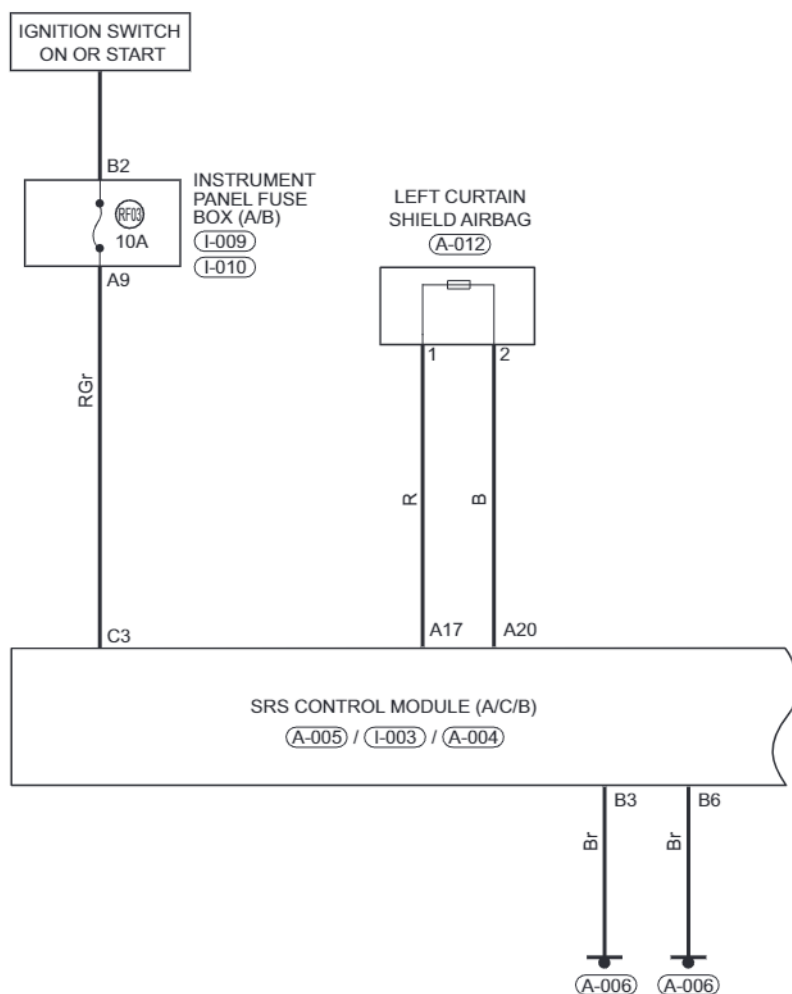
Replace SRS control module assembly



NG

Replace airbag wire harness and connector

DTC	B0021-11	Left Curtain Deployment Control Circuit Short to Ground
DTC	B0021-12	Left Curtain Deployment Control Circuit Short to Battery
DTC	B0021-1A	Left Curtain Deployment Control Circuit Resistance Below Threshold
DTC	B0021-1B	Left Curtain Deployment Control Circuit Resistance Above Threshold



EM16320070

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0021-11	Left Curtain Deployment Control Circuit Short to Ground	Ignition switch ON	ON	- Left curtain shield airbag assembly - Wire harness and connector - SRS control module assembly
B0021-12	Left Curtain Deployment Control Circuit Short to Battery			
B0021-1A	Left Curtain Deployment Control Circuit Resistance Below Threshold			
B0021-1B	Left Curtain Deployment Control Circuit Resistance Above Threshold			

32

HINT:

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

Diagnosis Procedure

1	Check left curtain shield airbag assembly
----------	--

- a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- b. Disconnect the left curtain shield airbag assembly connector, and connect new left curtain shield airbag assembly to connector A-012.

	WARNING
---	----------------

- Never measure left curtain shield airbag assembly directly, otherwise it may cause serious personal injury due to accidental deployment of 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 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 DTCs are still output.

NO

Replace left curtain shield airbag assembly

YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the left curtain shield airbag assembly connector A-012 and SRS control module assembly connector A-005.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace airbag wire harness and connector

32

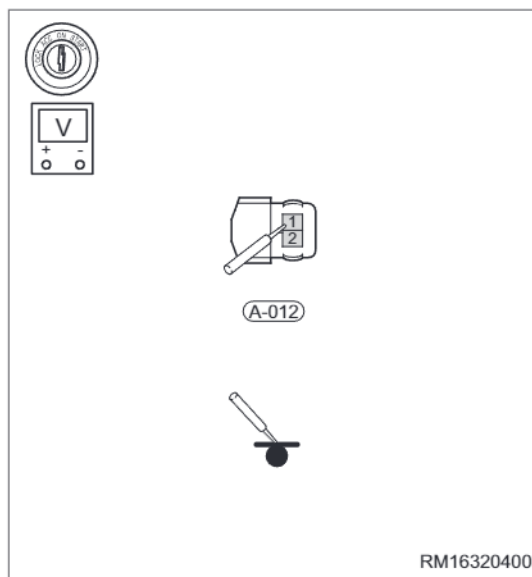
OK

3 Check left curtain shield airbag assembly control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-005.
- Disconnect the left curtain shield airbag assembly connector A-012.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between left curtain shield airbag assembly connector A-012 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

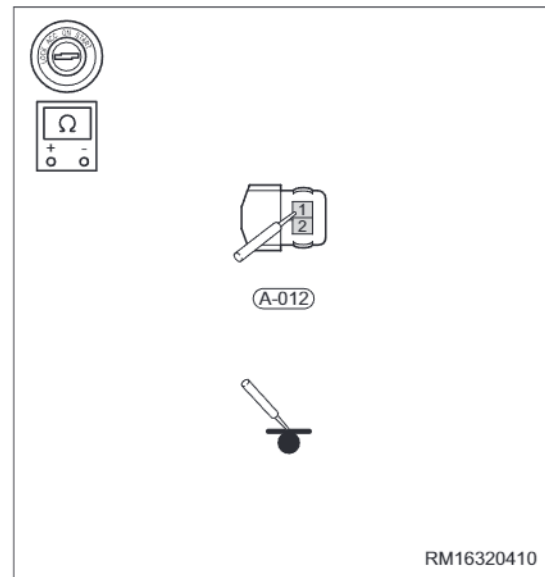
Multimeter Connection	Condition	Specified Condition
A-012 (1) - Body ground	Ignition switch ON	Below 1 V
A-012 (2) - Body ground	Ignition switch ON	Below 1 V



- 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 left curtain shield airbag assembly connector A-012 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-012 (1) - A-012 (2)	Always	Continuity
A-012 (1) - Body ground	Always	No continuity
A-012 (2) - Body ground	Always	No continuity

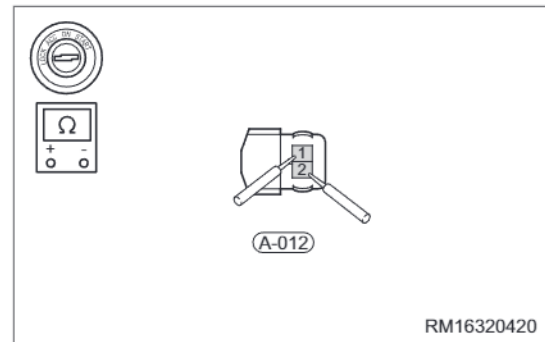


32

- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-005.
- j. Using a digital multimeter, check for continuity between the terminals of left curtain shield airbag assembly connector A-012 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-012 (1) - A-012 (2)	Always	No continuity



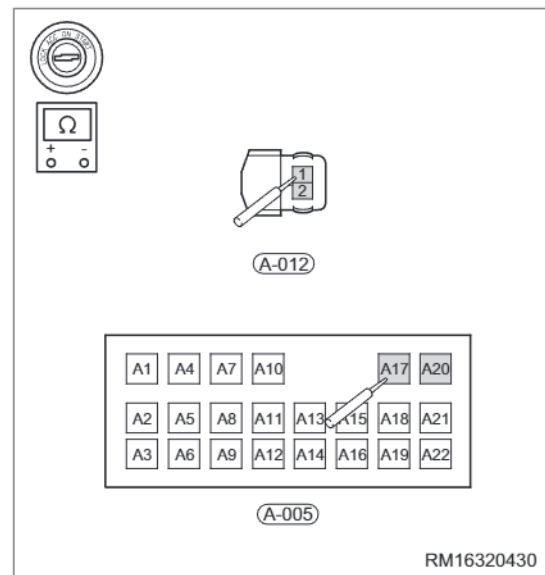
- k. Using a digital multimeter, check for continuity between the terminals of connectors A-012 and A-005 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-012 (1) - A-005 (A17)	Always	No continuity
A-012 (2) - A-005 (A20)	Always	No continuity

OK

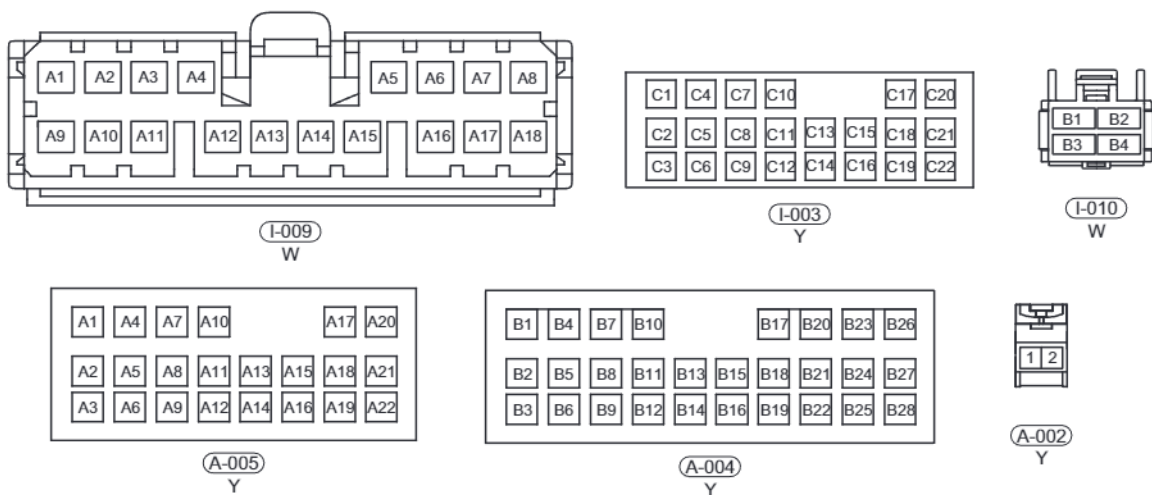
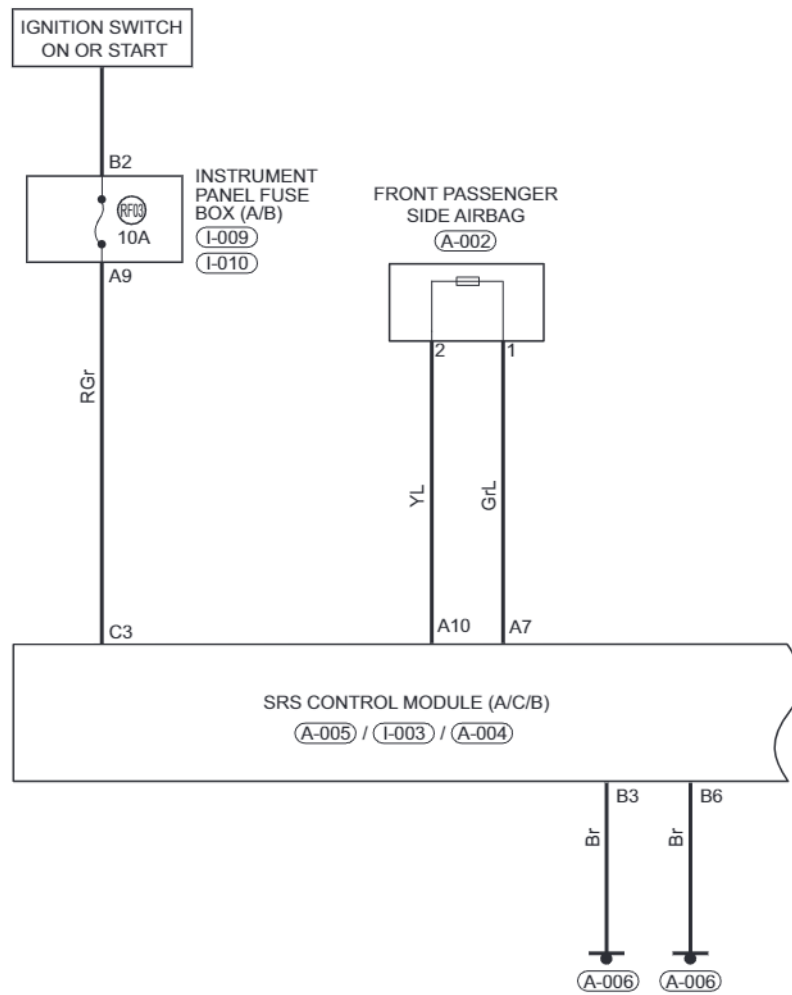
Replace SRS control module assembly



NG

Replace airbag wire harness and connector

DTC	B0028-11	Right Side Airbag Deployment Control Circuit Short to Ground
DTC	B0028-12	Right Side Airbag Deployment Control Circuit Short to Battery
DTC	B0028-1A	Right Side Airbag Deployment Control Circuit Resistance Below Threshold
DTC	B0028-1B	Right Side Airbag Deployment Control Circuit Resistance Above Threshold



EM16320080

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0028-11	Right Side Airbag Deployment Control Circuit Short to Ground	Ignition switch ON	ON	- Front passenger side airbag assembly - Wire harness and connector - SRS control module assembly
B0028-12	Right Side Airbag Deployment Control Circuit Short to Battery			
B0028-1A	Right Side Airbag Deployment Control Circuit Resistance Below Threshold			
B0028-1B	Right Side Airbag Deployment Control Circuit Resistance Above Threshold			

HINT:

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

Diagnosis Procedure

1	Check front passenger side airbag assembly
----------	---

- a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- b. Disconnect the front passenger side airbag assembly connector, and connect new front passenger side airbag assembly to connector A-002.

WARNING

- Never measure front passenger side airbag assembly directly, otherwise it may cause serious personal injury due to accidental deployment of 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 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 DTCs are still output.

NO

Replace front passenger side airbag assembly

YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the front passenger side airbag assembly connector A-002 and SRS control module assembly connector A-005.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace airbag wire harness and connector

OK

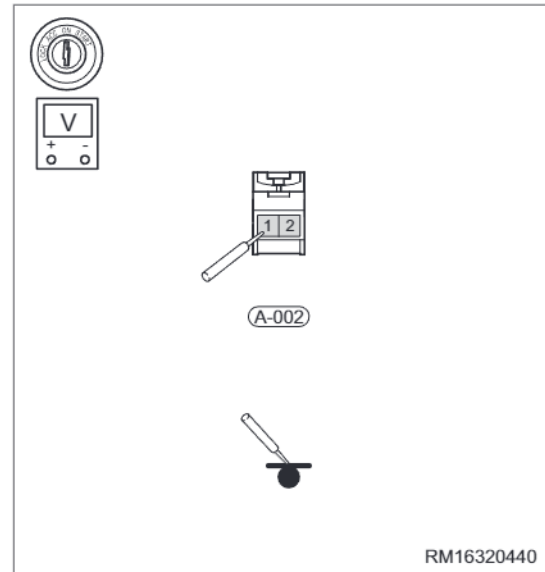
32

3 Check front passenger side airbag assembly control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-005.
- Disconnect the front passenger side airbag assembly connector A-002.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between front passenger side airbag assembly connector A-002 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

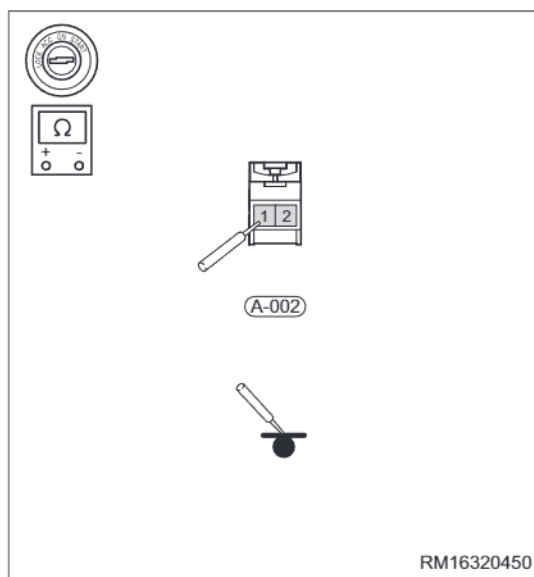
Multimeter Connection	Condition	Specified Condition
A-002 (1) - Body ground	Ignition switch ON	Below 1 V
A-002 (2) - Body ground	Ignition switch ON	Below 1 V



- 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 side airbag assembly connector A-002 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

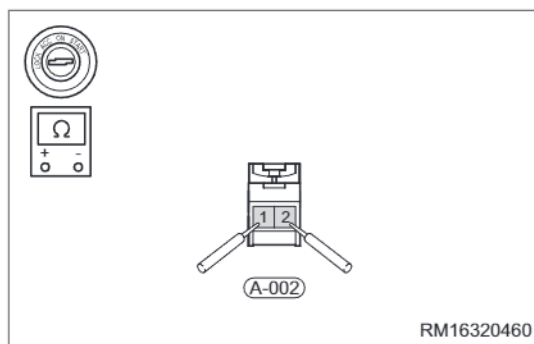
Multimeter Connection	Condition	Specified Condition
A-002 (1) - A-002 (2)	Always	Continuity
A-002 (1) - Body ground	Always	No continuity
A-002 (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-005.
- j. Using a digital multimeter, check for continuity between the terminals of front passenger side airbag assembly connector A-002 according to the table below.

Standard Condition

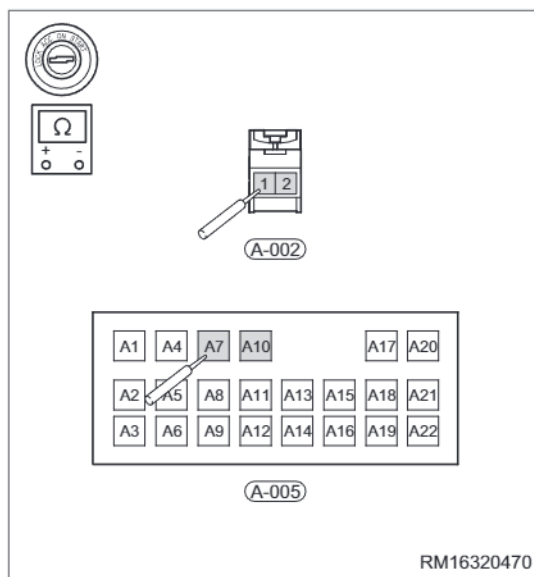
Multimeter Connection	Condition	Specified Condition
A-002 (1) - A-002 (2)	Always	No continuity



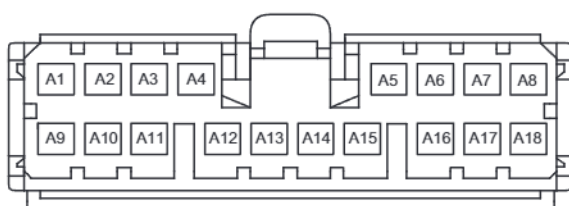
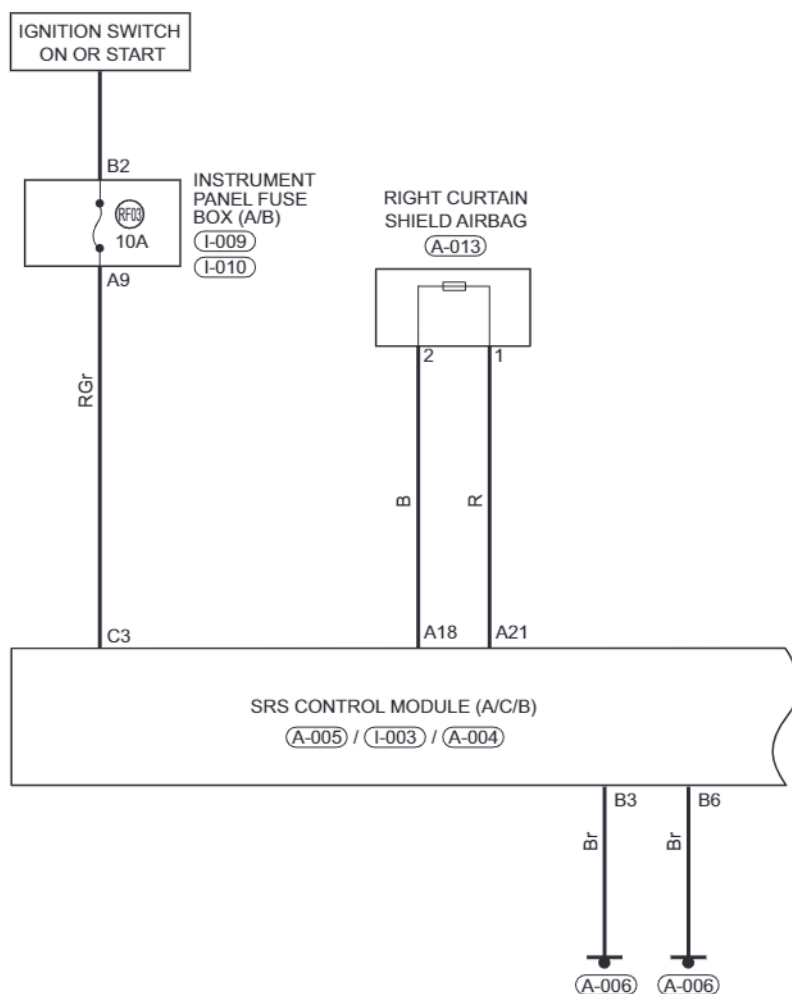
- k. Using a digital multimeter, check for continuity between the terminals of connectors A-002 and A-005 according to the table below.

Standard Condition

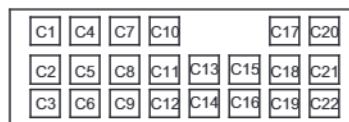
Multimeter Connection	Condition	Specified Condition
A-002 (1) - A-005 (A7)	Always	No continuity
A-002 (2) - A-005 (A10)	Always	No continuity

OK**Replace SRS control module assembly****NG****Replace airbag wire harness and connector**

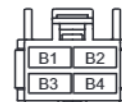
DTC	B0029-11	Right Curtain Deployment Control Circuit Short to Ground
DTC	B0029-12	Right Curtain Deployment Control Circuit Short to Battery
DTC	B0029-1A	Right Curtain Deployment Control Circuit Resistance Below Threshold
DTC	B0029-1B	Right Curtain Deployment Control Circuit Resistance Above Threshold



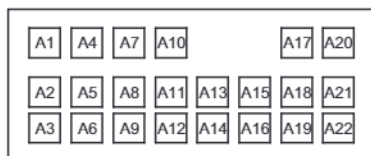
I-009
W



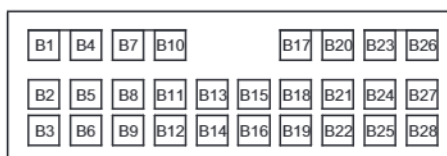
I-003
Y



I-010
W



A-005
Y



A-004
Y



A-013
Gr

EM16320090

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0029-11	Right Curtain Deployment Control Circuit Short to Ground	Ignition switch ON	ON	- Right curtain shield airbag assembly - Wire harness and connector - SRS control module assembly
B0029-12	Right Curtain Deployment Control Circuit Short to Battery			
B0029-1A	Right Curtain Deployment Control Circuit Resistance Below Threshold			
B0029-1B	Right Curtain Deployment Control Circuit Resistance Above Threshold			

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HINT:

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

Diagnosis Procedure

1	Check right curtain shield airbag assembly
----------	---

- a. Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- b. Disconnect the right curtain shield airbag assembly connector, and connect new right curtain shield airbag assembly to connector A-013.

	WARNING
---	----------------

- Never measure right curtain shield airbag assembly directly, otherwise it may cause serious personal injury due to accidental deployment of 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 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 DTCs are still output.

NO	Replace right curtain shield airbag assembly
-----------	---

YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the right curtain shield airbag assembly connector A-013 and SRS control module assembly connector A-005.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace airbag wire harness and connector

32

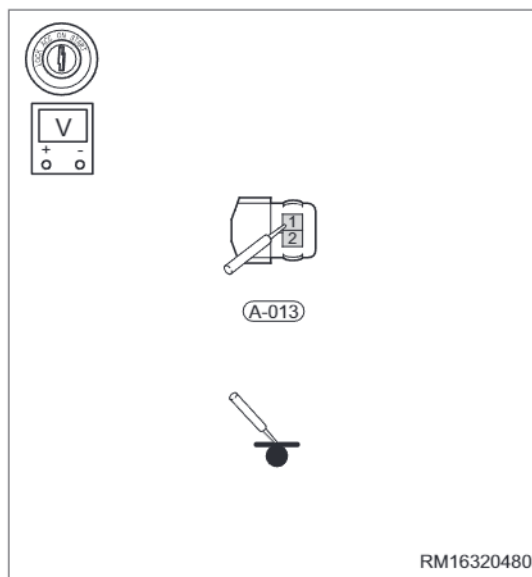
OK

3 Check right curtain shield airbag assembly control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-005.
- Disconnect the right curtain shield airbag assembly connector A-013.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between right curtain shield airbag assembly connector A-013 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

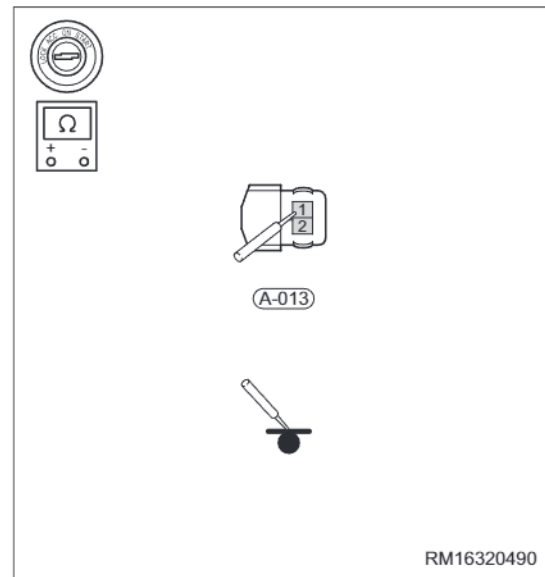
Multimeter Connection	Condition	Specified Condition
A-013 (1) - Body ground	Ignition switch ON	Below 1 V
A-013 (2) - Body ground	Ignition switch ON	Below 1 V



- 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 right curtain shield airbag assembly connector A-013 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-013 (1) - A-013 (2)	Always	Continuity
A-013 (1) - Body ground	Always	No continuity
A-013 (2) - Body ground	Always	No continuity

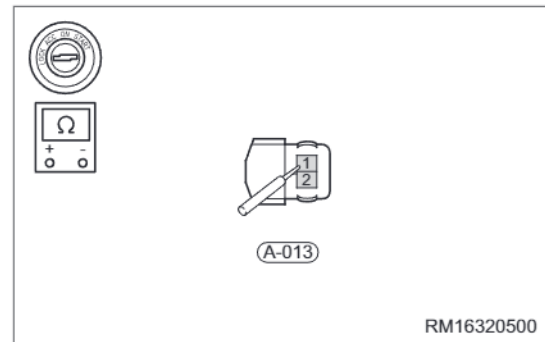


32

- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-005.
- j. Using a digital multimeter, check for continuity between the terminals of right curtain shield airbag assembly connector A-013 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-013 (1) - A-013 (2)	Always	No continuity



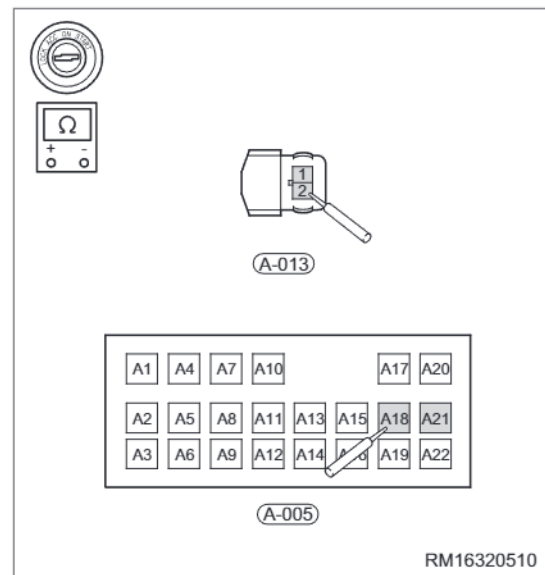
- k. Using a digital multimeter, check for continuity between the terminals of connectors A-013 and A-005 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-013 (1) - A-005 (A21)	Always	Continuity
A-013 (2) - A-005 (A18)	Always	Continuity

OK

Replace SRS control module assembly



NG

Replace airbag wire harness and connector



DTC	B0070-11	Driver Seatbelt Pretensioner Deployment Control Circuit Short to Ground
DTC	B0070-12	Driver Seatbelt Pretensioner Deployment Control Circuit Short to Battery
DTC	B0070-1A	Driver Seatbelt Pretensioner Deployment Control Circuit Resistance Below Threshold
DTC	B0070-1B	Driver Seatbelt Pretensioner Deployment Control Circuit Resistance Above Threshold

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0070-11	Driver Seatbelt Pretensioner Deployment Control Circuit Short to Ground	Ignition switch ON	ON	- Driver seat belt pretensioner - Wire harness and connector - SRS control module assembly
B0070-12	Driver Seatbelt Pretensioner Deployment Control Circuit Short to Battery			
B0070-1A	Driver Seatbelt Pretensioner Deployment Control Circuit Resistance Below Threshold			
B0070-1B	Driver Seatbelt Pretensioner Deployment Control Circuit Resistance Above Threshold			

HINT:

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

Diagnosis Procedure

1 Check driver seat belt pretensioner

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the driver seat belt pretensioner connector, and connect new driver seat belt pretensioner to connector A-009.

⚠ WARNING

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

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

NO

Replace driver seat belt pretensioner

YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the driver seat belt pretensioner connector A-009 and SRS control module assembly connector A-004.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace airbag wire harness and connector

OK

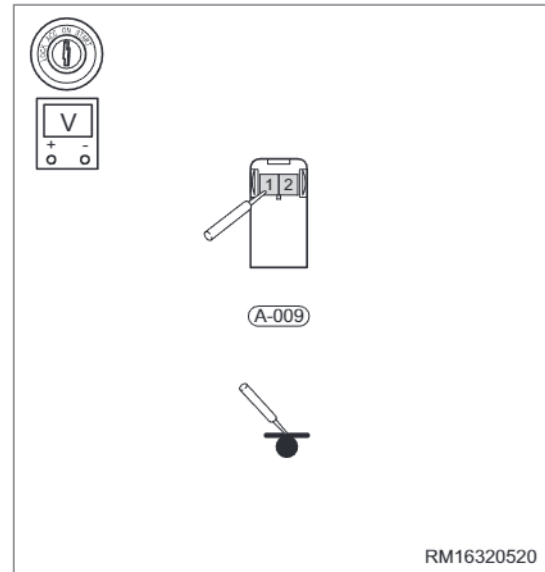
32

3 Check driver seat belt pretensioner control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-004.
- Disconnect the driver seat belt pretensioner connector A-009.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between driver seat belt pretensioner connector A-009 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

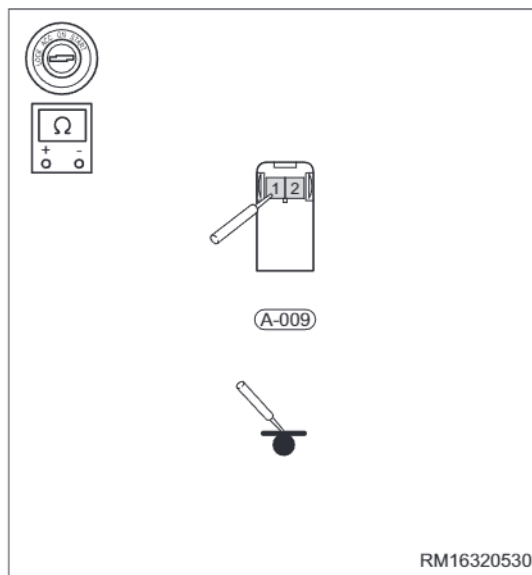
Multimeter Connection	Condition	Specified Condition
A-009 (1) - Body ground	Ignition switch ON	Below 1 V
A-009 (2) - Body ground	Ignition switch ON	Below 1 V



- 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 A-009 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

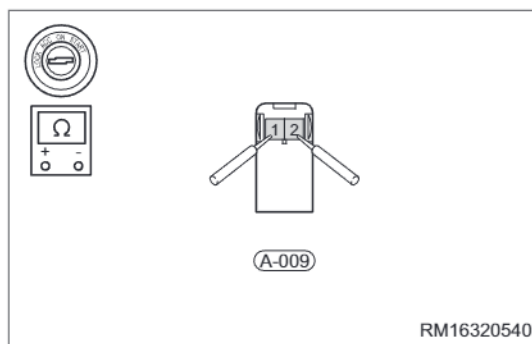
Multimeter Connection	Condition	Specified Condition
A-009 (1) - Body ground	Always	No continuity
A-009 (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-004.
- j. Using a digital multimeter, check for continuity between the terminals of driver seat belt pretensioner connector A-009 according to the table below.

Standard Condition

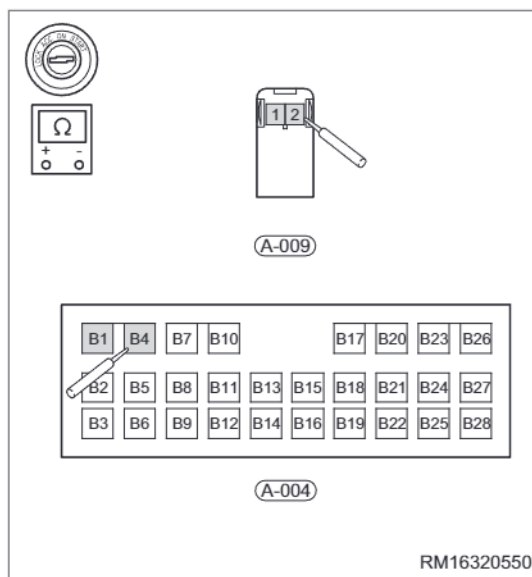
Multimeter Connection	Condition	Specified Condition
A-009 (1) - A-009 (2)	Always	No continuity



- k. Using a digital multimeter, check for continuity between the terminals of connectors A-009 and A-004 according to the table below.

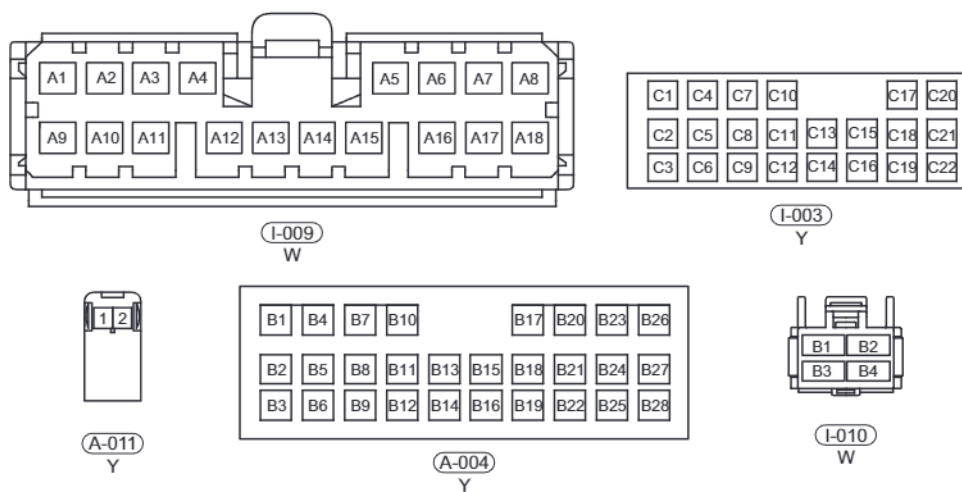
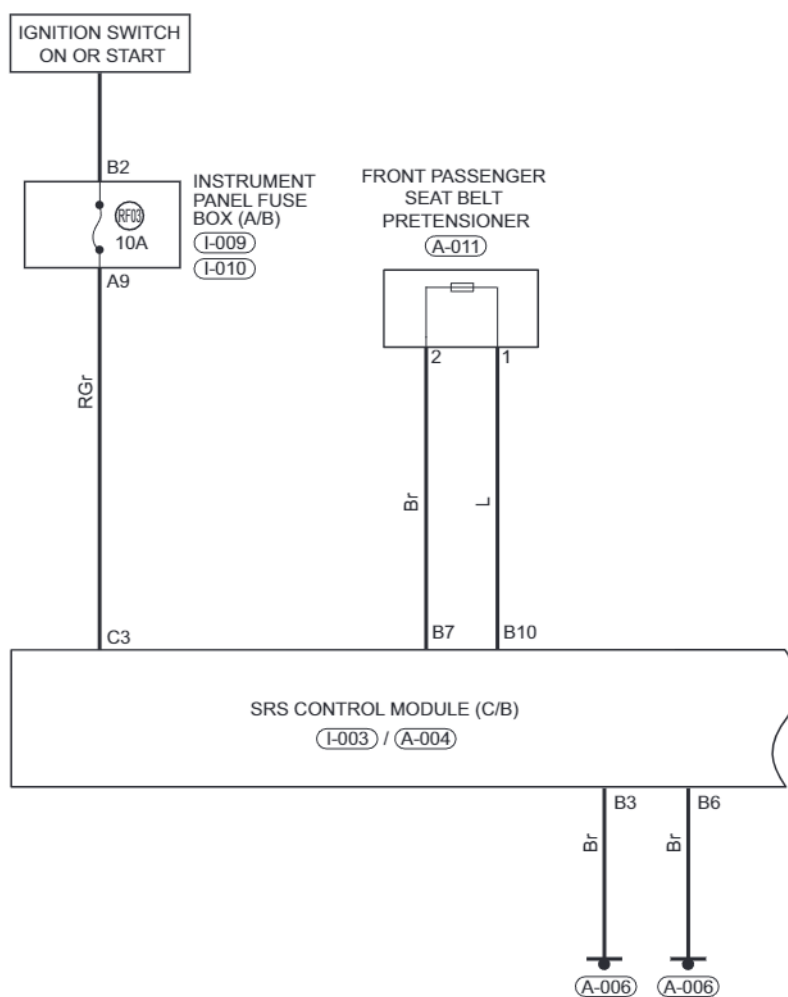
Standard Condition

Multimeter Connection	Condition	Specified Condition
A-009 (1) - A-004 (B1)	Always	Continuity
A-009 (2) - A-004 (B4)	Always	Continuity

OK**Replace SRS control module assembly****NG****Replace airbag wire harness and connector**

DTC	B0072-11	Passenger Seatbelt Pretensioner Deployment Control Circuit Short to Ground
DTC	B0072-12	Passenger Seatbelt Pretensioner Deployment Control Circuit Short to Battery
DTC	B0072-1A	Passenger Seatbelt Pretensioner Deployment Control Circuit Resistance Below Threshold
DTC	B0072-1B	Passenger Seatbelt Pretensioner Deployment Control Circuit Resistance Above Threshold

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EM16320110

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0072-11	Passenger Seatbelt Pretensioner Deployment Control Circuit Short to Ground	Ignition switch ON	ON	• Front passenger seat belt pretensioner • Wire harness and connector • SRS control module assembly
B0072-12	Passenger Seatbelt Pretensioner Deployment Control Circuit Short to Battery			
B0072-1A	Passenger Seatbelt Pretensioner Deployment Control Circuit Resistance Below Threshold			
B0072-1B	Passenger Seatbelt Pretensioner Deployment Control Circuit Resistance Above Threshold			

HINT:

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

Diagnosis Procedure

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the front passenger seat belt pretensioner connector, and connect new front passenger seat belt pretensioner to connector A-011.

⚠ WARNING

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

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

NO

Replace front passenger seat belt pretensioner



YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the front passenger seat belt pretensioner connector A-011 and SRS control module assembly connector A-004.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

32

NG

Repair or replace airbag wire harness and connector

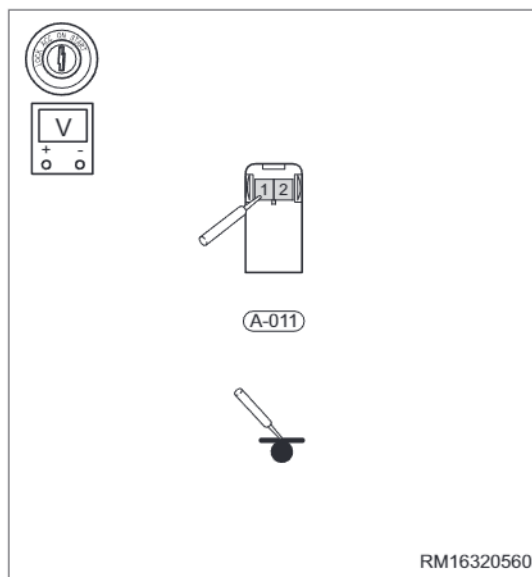
OK

3 Check front passenger seat belt pretensioner control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-004.
- Disconnect the front passenger seat belt pretensioner connector A-011.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between front passenger seat belt pretensioner connector A-011 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

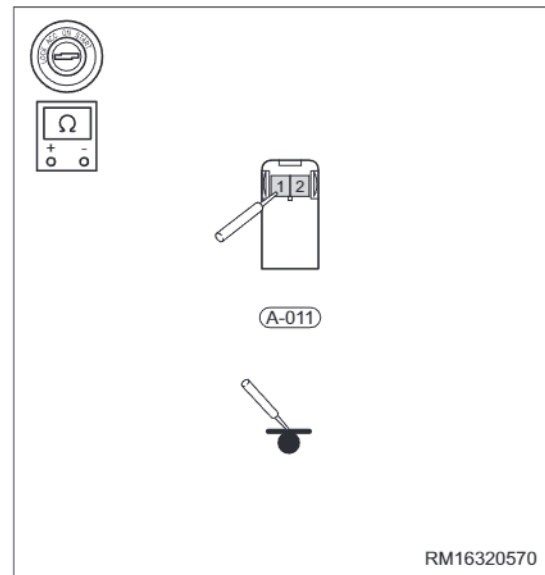
Multimeter Connection	Condition	Specified Condition
A-011 (1) - Body ground	Ignition switch ON	Below 1 V
A-011 (2) - Body ground	Ignition switch ON	Below 1 V



- 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 A-011 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

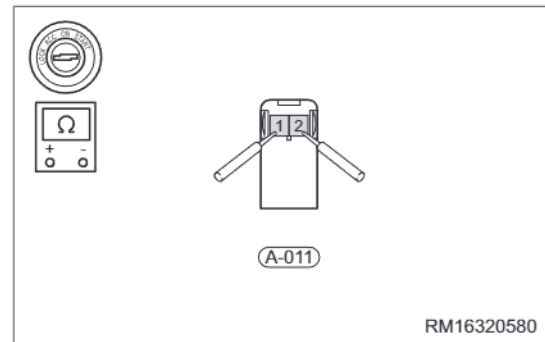
Multimeter Connection	Condition	Specified Condition
A-011 (1) - Body ground	Always	No continuity
A-011 (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-004.
- j. Using a digital multimeter, check for continuity between the terminals of front passenger seat belt pretensioner connector A-011 according to the table below.

Standard Condition

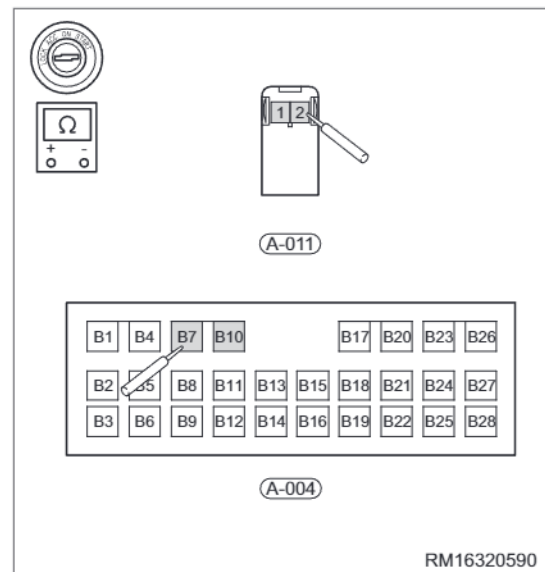
Multimeter Connection	Condition	Specified Condition
A-011 (1) - A-011 (2)	Always	No continuity



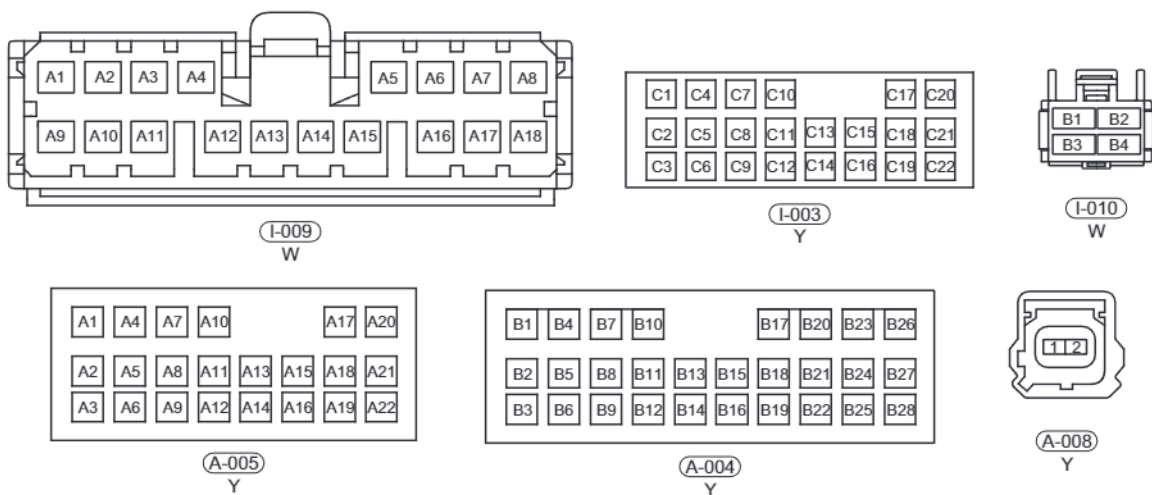
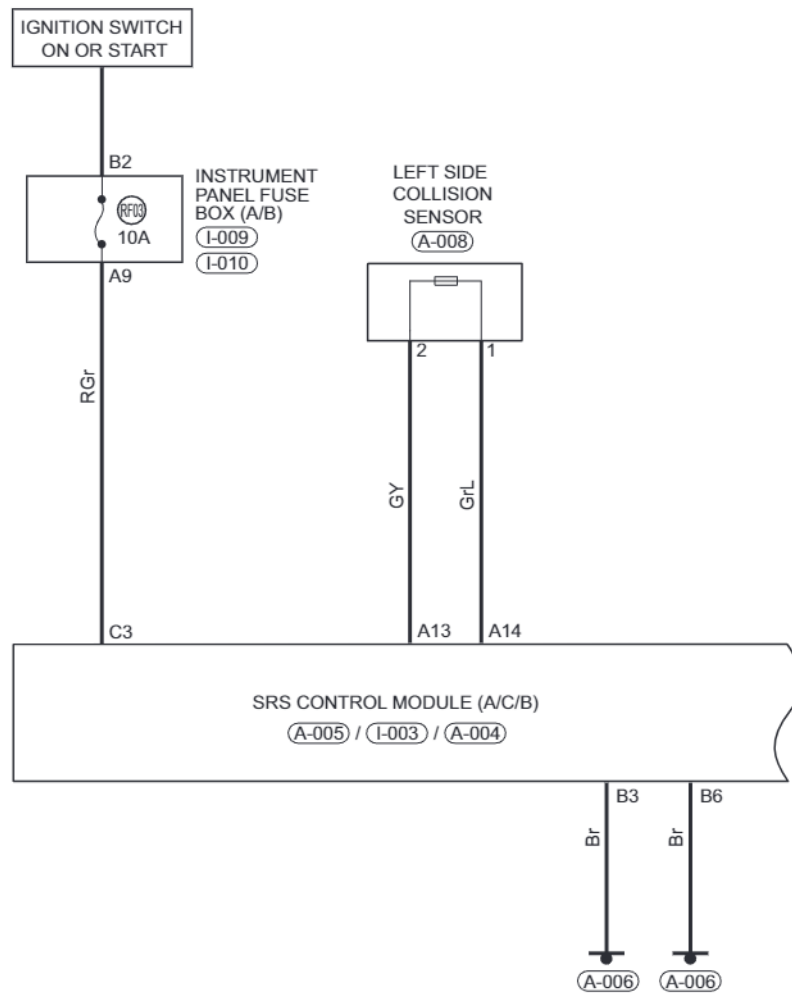
- k. Using a digital multimeter, check for continuity between the terminals of connectors A-011 and A-004 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-011 (1) - A-004 (B10)	Always	Continuity
A-011 (2) - A-004 (B7)	Always	Continuity

OK**Replace SRS control module assembly****NG****Replace airbag wire harness and connector**

DTC	B0091-15	Left Side Restraints Sensor Circuit Short to Battery or Open
DTC	B0091-16	Left Side Restraints Sensor Circuit Voltage Below Threshold
DTC	B0091-29	Left Side Restraints Sensor Signal Invalid
DTC	B0091-55	Left Side Restraints Sensor Not Configured
DTC	B0091-96	Left Side Restraints Sensor Component Internal Failure



EM16320120

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0091-15	Left Side Restraints Sensor Circuit Short to Battery or Open	Ignition switch ON	ON	- Left side collision sensor - Wire harness and connector - SRS control module assembly
B0091-16	Left Side Restraints Sensor Circuit Voltage Below Threshold			
B0091-29	Left Side Restraints Sensor Signal Invalid			
B0091-55	Left Side Restraints Sensor Not Configured			
B0091-96	Left Side Restraints Sensor Component Internal Failure			

HINT:

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

Diagnosis Procedure

1 Check left side collision sensor

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the left side collision sensor connector, and connect new left side collision sensor to connector A-008.
- Reconnect the negative battery cable and wait for a few seconds.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to clear DTCs.
- Turn ignition switch to LOCK.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to check if DTCs are still output.

NO

Replace left side collision sensor

YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the left side collision sensor connector A-008 and SRS control module assembly connector A-005.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace airbag wire harness and connector

OK

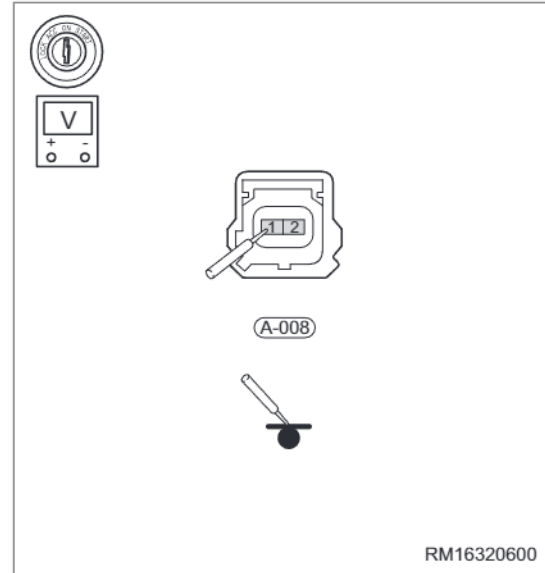
3

Check left side collision sensor control circuit

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-005.
- Disconnect the left side collision sensor connector A-008.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between left side collision sensor connector A-008 and body ground to check for a short circuit to power supply according to the table below.

Standard Voltage

Multimeter Connection	Condition	Specified Condition
A-008 (1) - Body ground	Ignition switch ON	Below 1 V
A-008 (2) - Body ground	Ignition switch ON	Below 1 V

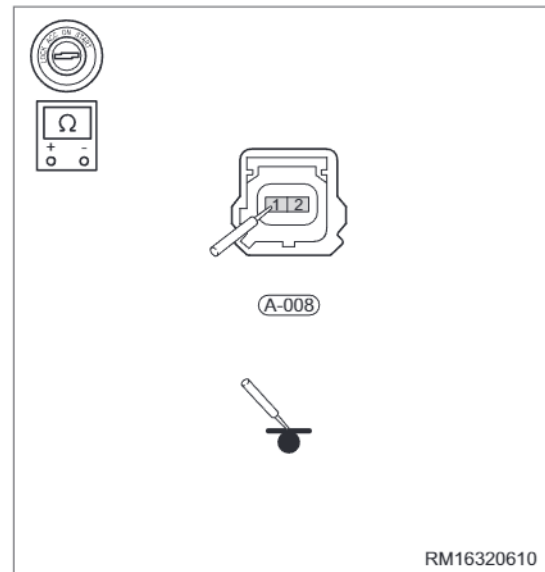


32

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Using a digital multimeter, check for continuity between left side collision sensor connector A-008 and body ground to check for a short circuit to ground according to the table below.

Standard Condition

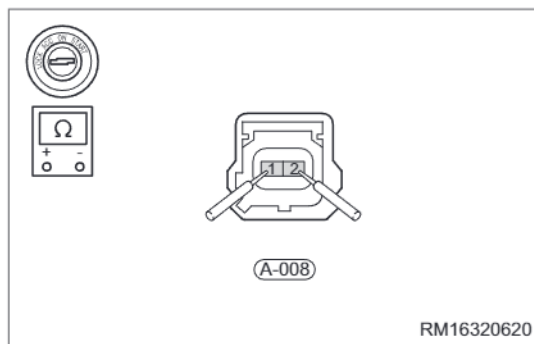
Multimeter Connection	Condition	Specified Condition
A-008 (1) - Body ground	Always	No continuity
A-008 (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-005.
- j. Using a digital multimeter, check for continuity between the terminals of left side collision sensor connector A-008 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-008 (1) - A-008 (2)	Always	No continuity



32

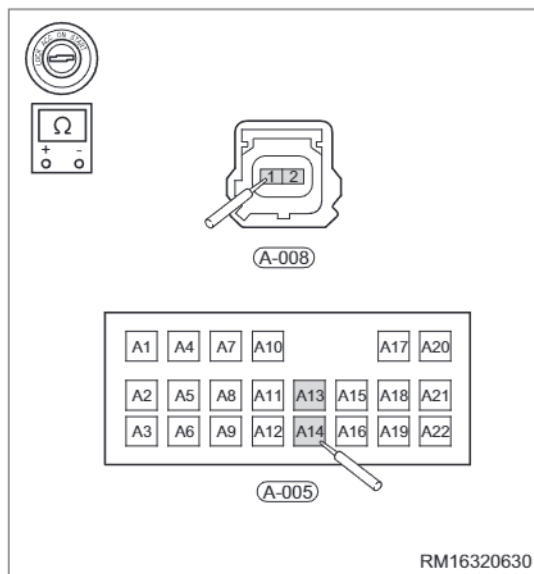
- k. Using a digital multimeter, check for continuity between the terminals of connectors A-008 and A-005 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-008 (1) - A-005 (A14)	Always	Continuity
A-008 (2) - A-005 (A13)	Always	Continuity

OK

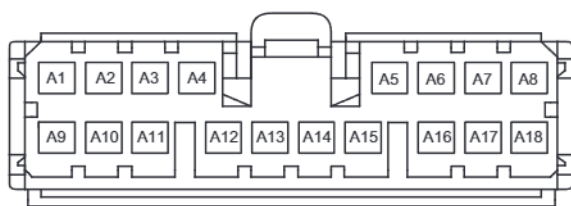
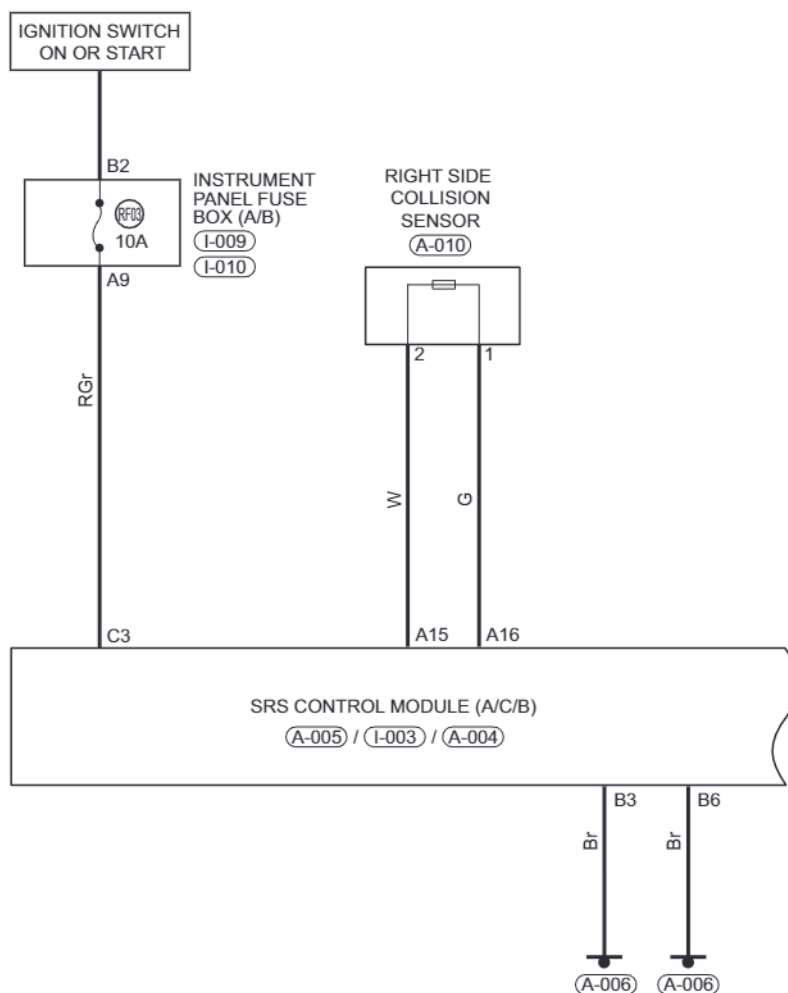
Replace SRS control module assembly



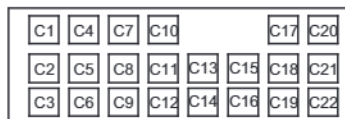
NG

Replace airbag wire harness and connector

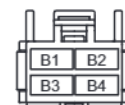
DTC	B0096-15	Right Side Restraints Sensor Circuit Short to Battery or Open
DTC	B0096-16	Right Side Restraints Sensor Circuit Voltage Below Threshold
DTC	B0096-29	Right Side Restraints Sensor Signal Invalid
DTC	B0096-55	Right Side Restraints Sensor Not Configured
DTC	B0096-96	Right Side Restraints Sensor Component Internal Failure



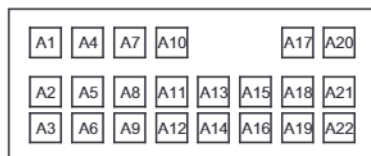
I-009
W



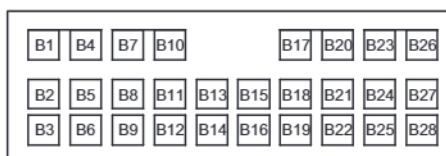
I-003
Y



I-010
W



A-005
Y



A-004
Y



A-010
Y

EM16320130

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B0096-15	Right Side Restraints Sensor Circuit Short to Battery or Open	Ignition switch ON	ON	- Right side collision sensor - Wire harness and connector - SRS control module assembly
B0096-16	Right Side Restraints Sensor Circuit Voltage Below Threshold			
B0096-29	Right Side Restraints Sensor Signal Invalid			
B0096-55	Right Side Restraints Sensor Not Configured			
B0096-96	Right Side Restraints Sensor Component Internal Failure			

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HINT:

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

Diagnosis Procedure**1 Check right side collision sensor**

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the right side collision sensor connector, and connect new right side collision sensor to connector A-010.
- Reconnect the negative battery cable and wait for a few seconds.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to clear DTCs.
- Turn ignition switch to LOCK.
- Turn ignition switch ON and wait for at least 90 seconds.
- Use X-431 3G diagnostic tester to check if DTCs are still output.

NO

Replace right side collision sensor

YES

2 Check wire harness and connector

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the right side collision sensor connector A-010 and SRS control module assembly connector A-005.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.



NG

Repair or replace airbag wire harness and connector

OK

3 Check right side collision sensor control circuit

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- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-005.
- Disconnect the right side collision sensor connector A-010.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the voltage between right side collision sensor connector A-010 and body ground to check for a short circuit to power supply according to the table below.

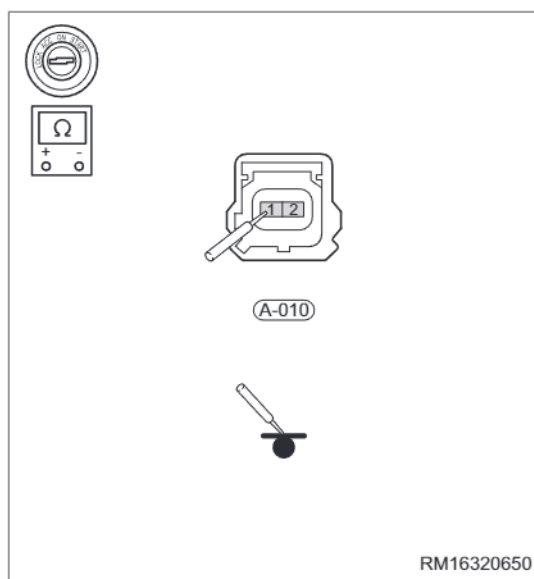
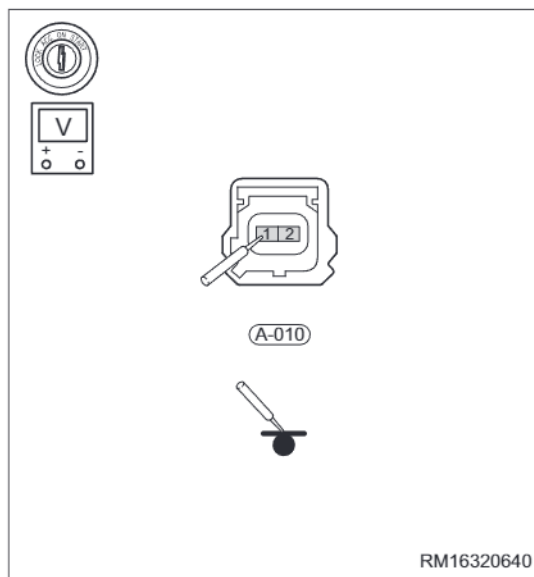
Standard Voltage

Multimeter Connection	Condition	Specified Condition
A-010 (1) - Body ground	Ignition switch ON	Below 1 V
A-010 (2) - Body ground	Ignition switch ON	Below 1 V

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Using a digital multimeter, check for continuity between right side collision sensor connector A-010 and body ground to check for a short circuit to ground according to the table below.

Standard Voltage

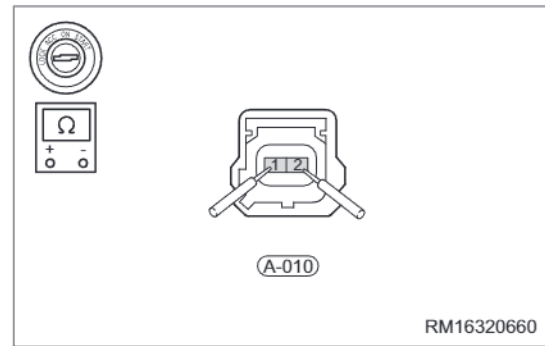
Multimeter Connection	Condition	Specified Condition
A-010 (1) - Body ground	Always	No continuity
A-010 (2) - Body ground	Always	No continuity



- i. Release the activation prevention mechanism built into the SRS control module assembly connector A-005.
- j. Using a digital multimeter, check for continuity between the terminals of right side collision sensor connector A-010 according to the table below.

Standard Condition

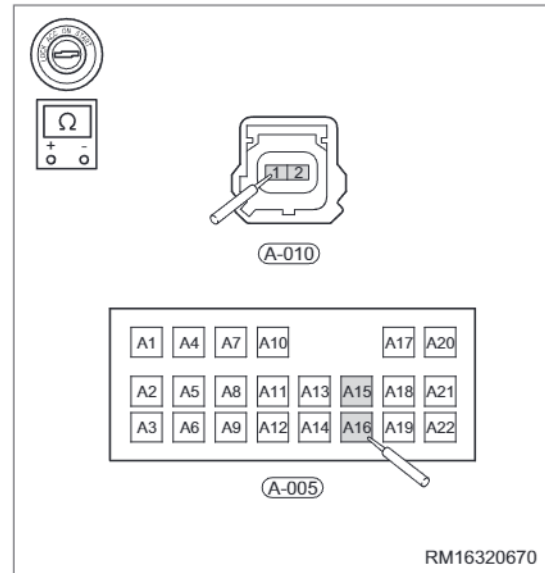
Multimeter Connection	Condition	Specified Condition
A-010 (1) - A-010 (2)	Always	No continuity



- k. Using a digital multimeter, check for continuity between the terminals of connectors A-010 and A-005 according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
A-010 (1) - A-005 (A16)	Always	continuity
A-010 (2) - A-005 (A15)	Always	continuity

OK**Replace SRS control module assembly****NG****Replace airbag wire harness and connector****32**

DTC	B1212-00	Driver Side Airbag and Curtain Deployed
DTC	B1213-00	Passenger Side Airbag and Curtain Deployed
DTC	B1215-00	Squib Cross Coupling Error
DTC	B1216-00	Frontal Airbag Deployed
DTC	B1240-00	ICM Airbag lamp Failed
DTC	B1251-00	ECU Internal Error
DTC	B1253-00	Disposal Command Record Performed Scrap Deployment

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
B1212-00	Driver Side Airbag and Curtain Deployed	Ignition switch ON	ON	SRS control module assembly
B1213-00	Passenger Side Airbag and Curtain Deployed			
B1215-00	Squib CrossCoupling Error			
B1216-00	Frontal Airbag Deployed			
B1240-00	ICM Airbag lamp Failed			
B1251-00	ECU Internal Error			
B1253-00	Disposal Command Record Performed Scrap Deployment			

HINT:

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

Diagnosis Procedure**1****Check SRS control module assembly**

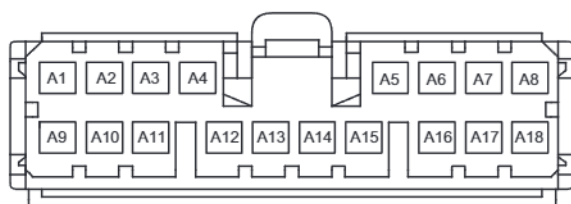
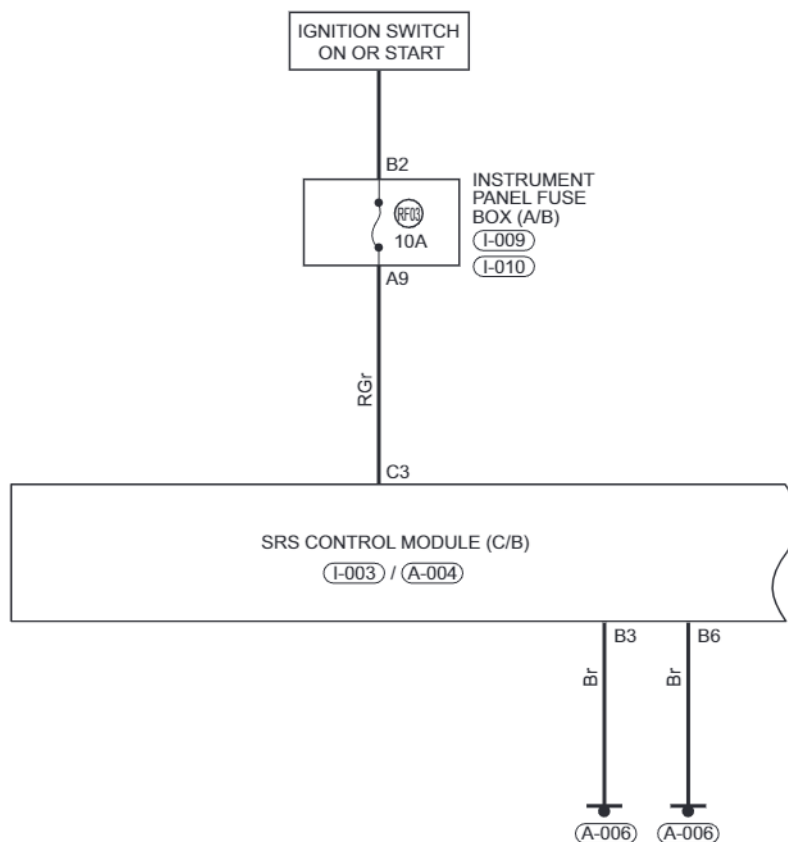
- a. Turn ignition switch to LOCK.
- b. Disconnect the negative battery cable and wait for at least 90 seconds.
- c. Connect the negative battery cable.
- d. Turn ignition switch to ON.
- e. Use X-431 3G diagnostic tester (the latest software) to record and clear DTCs stored in supplemental restraint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

NG**Replace SRS control module assembly****OK****32****Malfunction has been repaired and system operates normally**

DTC	B1250-16	Power Supply Circuit Voltage Below Threshold
-----	----------	--

DTC	B1250-17	Power Supply Circuit Voltage Above Threshold
-----	----------	--

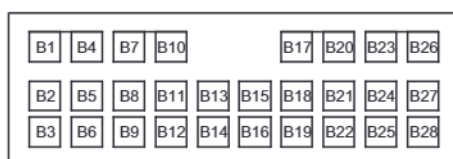
32



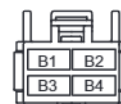
I-009
W



I-003
Y



A-004
Y



I-010
W

EM16320140

Self-diagnosis Detection Logic

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

HINT:

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

32

Diagnosis Procedure

1	Check battery voltage
----------	------------------------------

- a. Using a digital multimeter, check the battery voltage.

Standard voltage: 11 to 14 V

NG

Check charging system (See page 16-6)

OK

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

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connectors I-003 and A-004.
- Disconnect the instrument panel fuse box wire harness connectors I-009 and I-010.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- 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)

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Connect the negative battery cable and wait for a few seconds.
- Turn ignition switch to ON.
- Using a digital multimeter, measure the power supply voltage of SRS control module assembly connector I-003 to check if the system power supply is normal according to the table below.

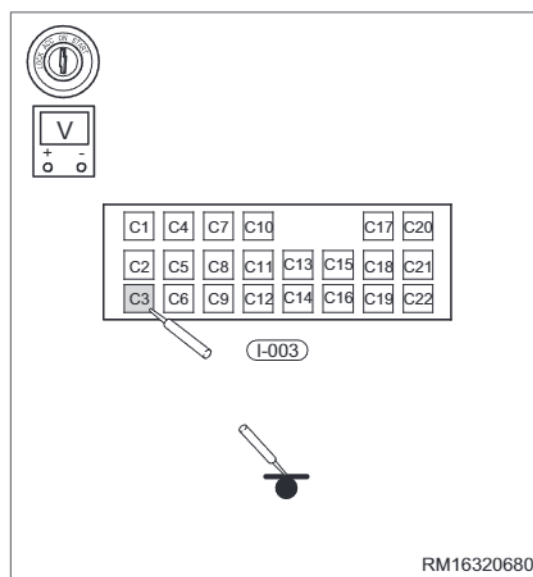
Standard Voltage

Multimeter Connection	Condition	Specified Condition
I-003 (C3) - Body ground	Ignition switch ON	11 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)

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector A-004.
- Using a digital multimeter, measure the ground circuit of SRS control module assembly connector A-004 to check if the system ground is normal according to the table below.

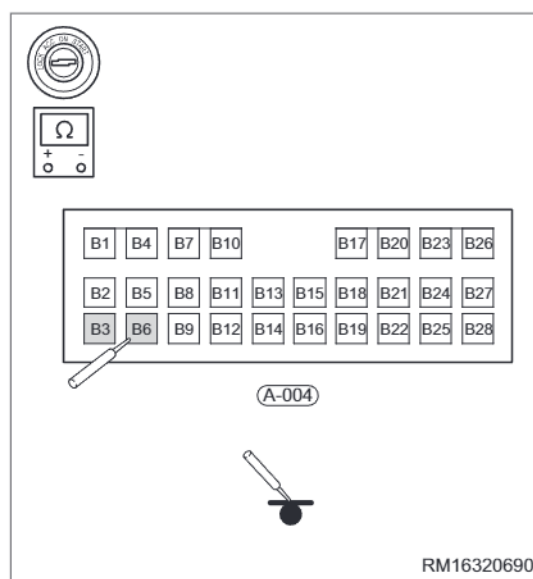
Standard Condition

Multimeter Connection	Condition	Specified Condition
A-004 (B3) - Body ground	Always	Continuity
A-004 (B6) - Body ground	Always	Continuity

NG

Repair or replace airbag wire harness and connector

OK

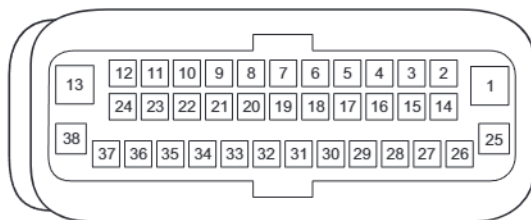
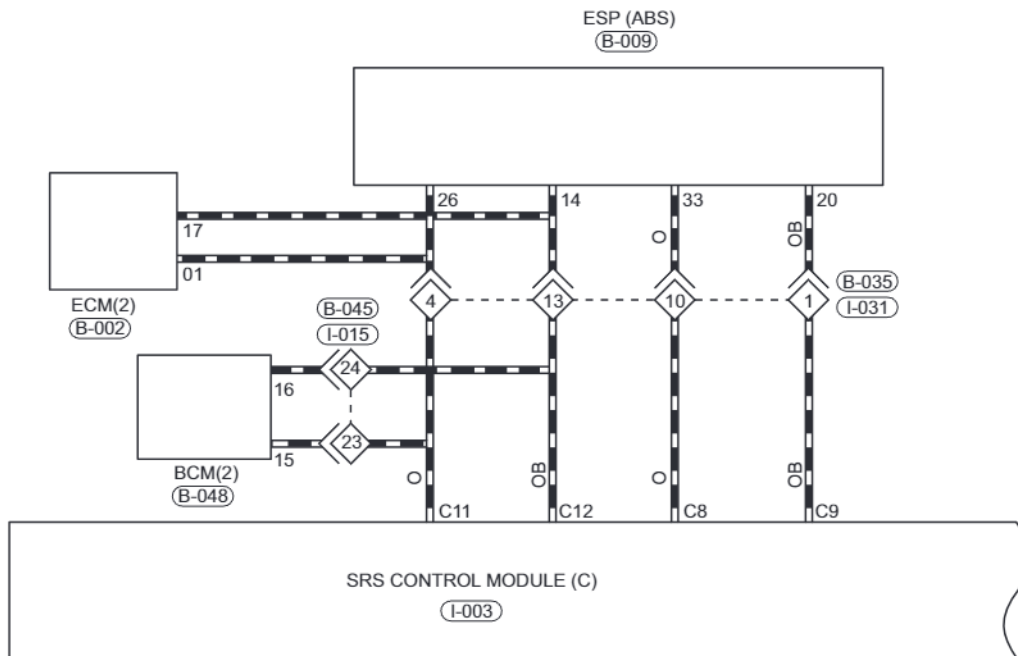


5**Reconfirm DTCs**

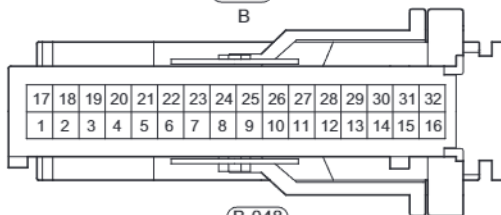
- a. Reconnect the SRS control module assembly connectors I-003 and A-004 securely.
- b. Reconnect the instrument panel fuse box wire harness connectors I-009 and I-010 securely.
- c. Connect the negative battery cable.
- d. Turn ignition switch to ON.
- e. Use X-431 3G diagnostic tester (the latest 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 to ON.
- h. Use X-431 3G diagnostic tester to read DTCs in supplemental restraint system again.
- i. Check if the same DTCs are still output.

NO**System operates normally****YES****Replace SRS control module assembly****32**

DTC	U0073-88	Control Module Communication Bus Off
DTC	U0100-87	Lost Communication with ECM
DTC	U0129-87	Lost Communication with BSM
DTC	U0140-87	Lost Communication with BCM
DTC	U1000-88	Control Module Channel 1 Communication Bus Off



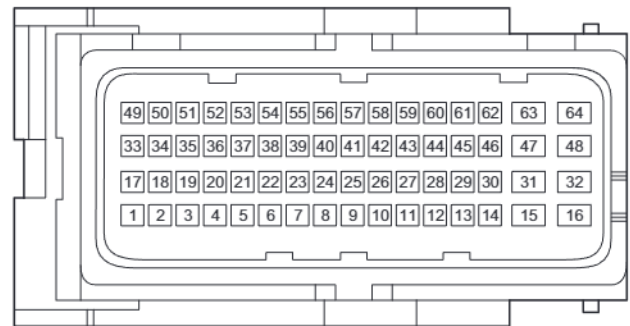
(B-009)
B



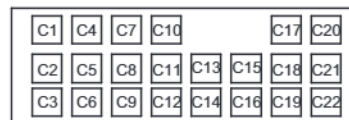
(B-048)
L



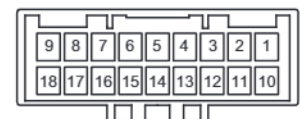
(I-015)
B



(B-002)
B



(I-003)
Y



(I-031)
W

EM16320150

Self-diagnosis Detection Logic

DTC Code	DTC Definition	DTC Detection Condition	Warning Light Condition	Possible Cause
U0073-88	Control Module Communication Bus Off	Ignition switch ON	ON	• Engine Control Module (ECM) • ESP (ABS) • Body Control Module (BCM) • Wire harness and connector • SRS control module assembly
U0100-87	Lost Communication with ECM			
U0129-87	Lost Communication with BSM			
U0140-87	Lost Communication with BCM			
U1000-88	Control Module Channel 1 Communication Bus off			

HINT:

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

Diagnosis Procedure

1	Check wire harness and connector
----------	---

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

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Disconnect the Engine Control Module (ECM) connector B-002.
- Disconnect the ESP (ABS) connector B-009.
- Disconnect the Body Control Module (BCM) connector B-048.
- Check if wire harnesses are worn, pierced, pinched or partially broken.
- Look for broken, bent, protruded or corroded terminals.
- Check if related connector terminal contact pins are in good condition.

NG

Repair or replace instrument panel/body wire harness and connector

OK

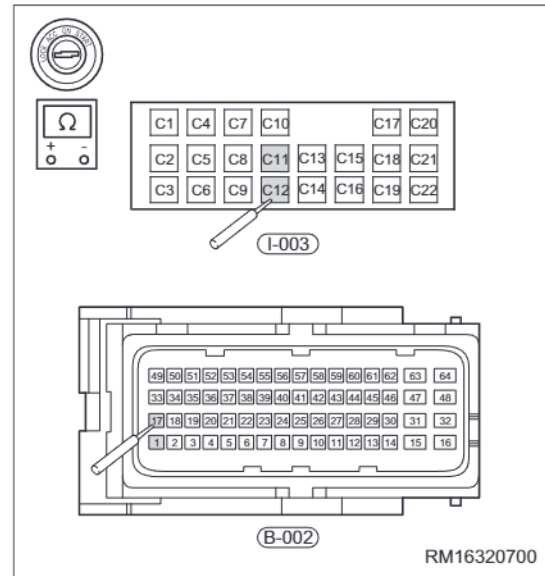
2

Check CAN communication control circuit (SRS control module assembly - Engine Control Module (ECM))

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Disconnect the Engine Control Module (ECM) connector B-002.
- Using a digital multimeter, check for continuity between the terminals of connectors I-003 and B-002 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-003 (C11) - B-002 (1)	Always	Continuity
I-003 (C12) - B-002 (17)	Always	Continuity

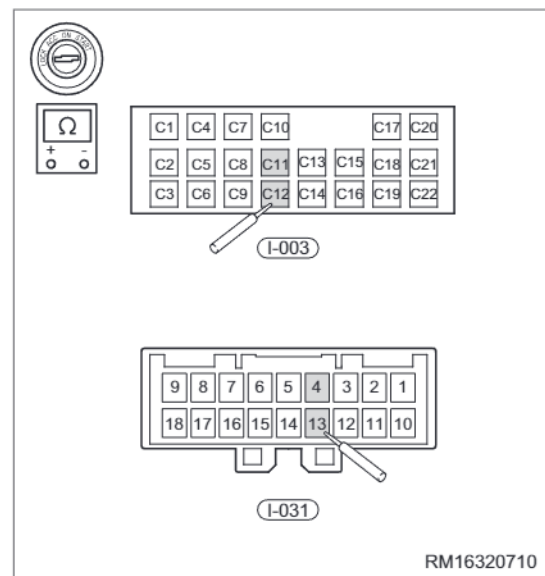


32

- Disconnect the body wire harness connector B-035 and instrument panel wire harness connector I-031.
- Using a digital multimeter, check for continuity between the terminals of connectors I-003 and I-031 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-003 (C11) - I-031 (4)	Always	Continuity
I-003 (C12) - I-031 (13)	Always	Continuity



- g. Using a digital multimeter, check for continuity between the terminals of connectors B-035 and B-002 to check if there is an open in CAN communication circuit according to the table below.

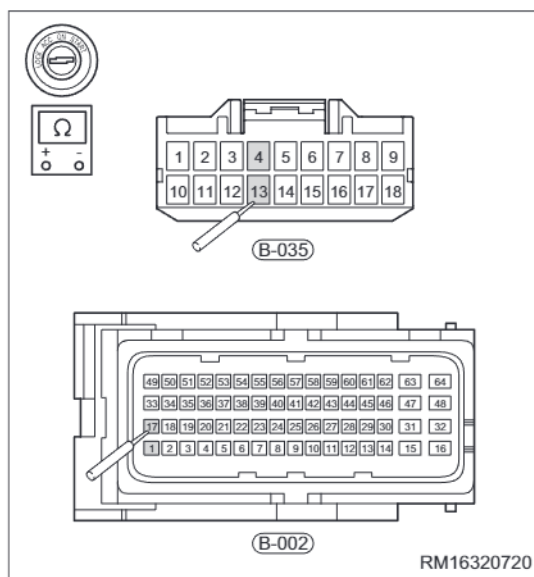
Standard Condition

Multimeter Connection	Condition	Specified Condition
B-035 (4) - B-002 (1)	Always	Continuity
B-035 (13) - B-002 (17)	Always	Continuity

32

NG

Repair or replace instrument panel/body wire harness and connector



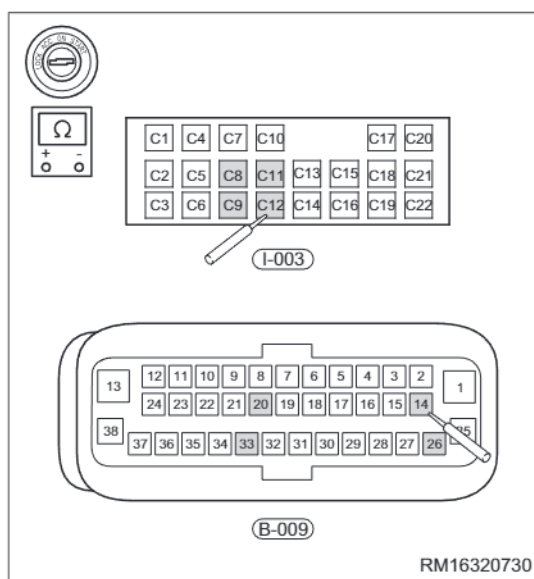
OK

3**Check CAN communication control circuit (SRS control module assembly - ESP (ABS))**

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Disconnect the ESP (ABS) connector B-009.
- Using a digital multimeter, check for continuity between the terminals of connectors I-003 and B-009 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

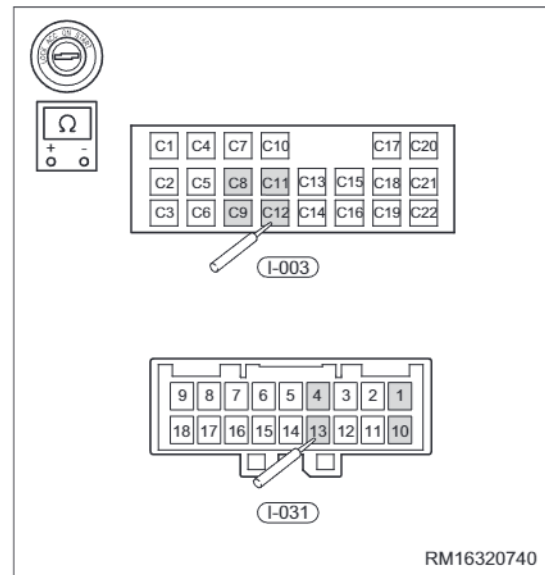
Multimeter Connection Terminal	Condition	Specified Condition
I-003 (C8) - B-009 (33)	Always	Continuity
I-003 (C9) - B-009 (20)	Always	Continuity
I-003 (C11) - B-009 (26)	Always	Continuity
I-003 (C12) - B-009 (14)	Always	Continuity



- e. Disconnect the body wire harness connector B-035 and instrument panel wire harness connector I-031.
- f. Using a digital multimeter, check for continuity between the terminals of connectors I-003 and I-031 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

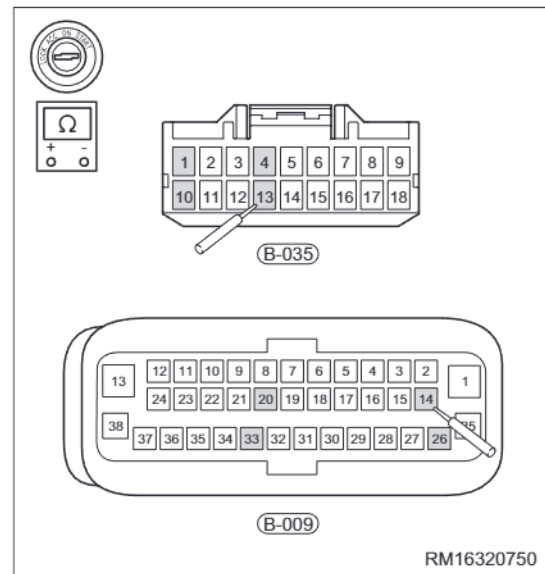
Multimeter Connection	Condition	Specified Condition
I-003 (C8) - I-031 (10)	Always	Continuity
I-003 (C9) - I-031 (1)	Always	Continuity
I-003 (C11) - I-031 (4)	Always	Continuity
I-003 (C12) - I-031 (13)	Always	Continuity



- g. Using a digital multimeter, check for continuity between the terminals of connectors B-035 and B-009 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
B-035 (1) - B-009 (20)	Always	Continuity
B-035 (4) - B-009 (26)	Always	Continuity
B-035 (10) - B-009 (33)	Always	Continuity
B-035 (13) - B-009 (14)	Always	Continuity

**NG**

Repair or replace instrument panel/body wire harness and connector

OK

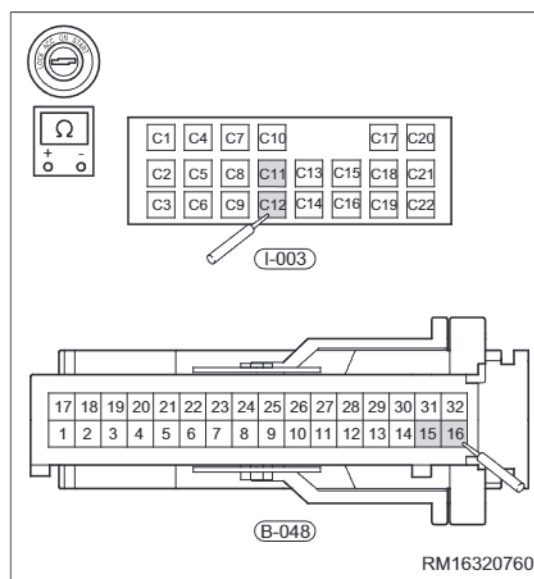
4

Check CAN communication control circuit (SRS control module assembly - Body Control Module (BCM))

- Turn ignition switch to LOCK, disconnect the negative battery cable and wait for at least 90 seconds.
- Disconnect the SRS control module assembly connector I-003.
- Disconnect the Body Control Module (BCM) connector B-048.
- Using a digital multimeter, check for continuity between the terminals of connectors I-003 and B-048 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

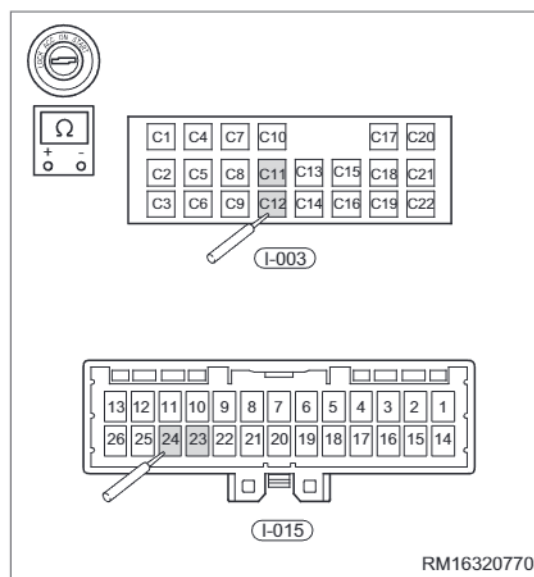
Multimeter Connection Terminal	Condition	Specified Condition
I-003 (C11) - B-048 (15)	Always	Continuity
I-003 (C12) - B-048 (16)	Always	Continuity



- Disconnect the body wire harness connector B-045 and instrument panel wire harness connector I-015.
- Using a digital multimeter, check for continuity between the terminals of connectors I-003 and I-015 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
I-003 (C11) - I-015 (23)	Always	Continuity
I-003 (C12) - I-015 (24)	Always	Continuity



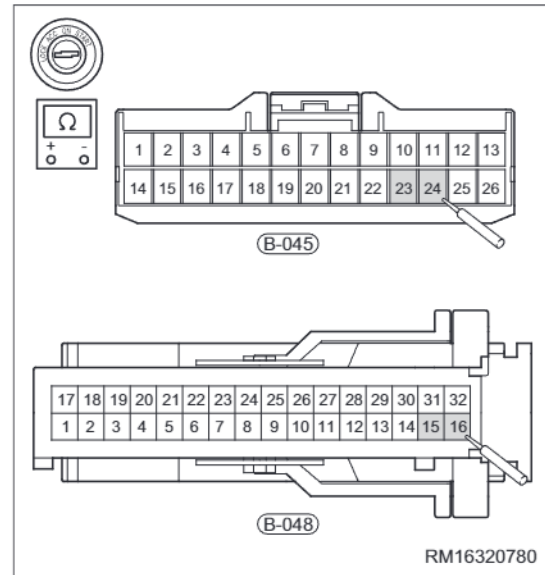
- g. Using a digital multimeter, check for continuity between the terminals of connectors B-045 and B-048 to check if there is an open in CAN communication circuit according to the table below.

Standard Condition

Multimeter Connection	Condition	Specified Condition
B-045 (23) - B-048 (15)	Always	Continuity
B-045 (24) - B-048 (16)	Always	Continuity

NG

Repair or replace instrument panel/body wire harness and connector

**OK****5****Reconfirm DTCs**

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

NG

Replace SRS control module assembly

OK

Malfunction has been repaired and system operates normally

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 • SRS control module assembly

32**HINT:**

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

Diagnosis Procedure

1	Check for DTCs
----------	-----------------------

- Use X-431 3G diagnostic tester (the latest software) to clear and read DTCs stored in supplemental restraint system again.
- Refer to "DTC confirmation procedure".
- Check if the same DTCs are still output.

NO	Malfunction indicated by DTC is intermittent

YES

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

- Turn ignition switch to ON.
- 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
----------	-----------------------

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

NG

Replace SRS control module assembly

OK

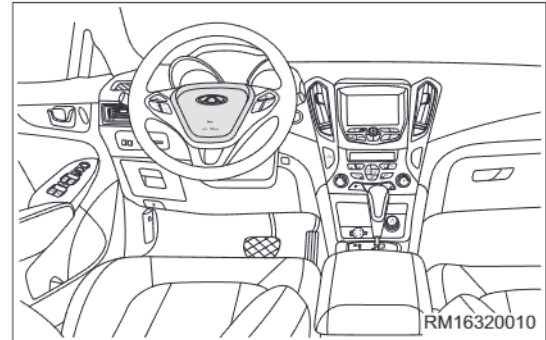
Malfunction has been repaired and system operates normally

ON-VEHICLE SERVICE

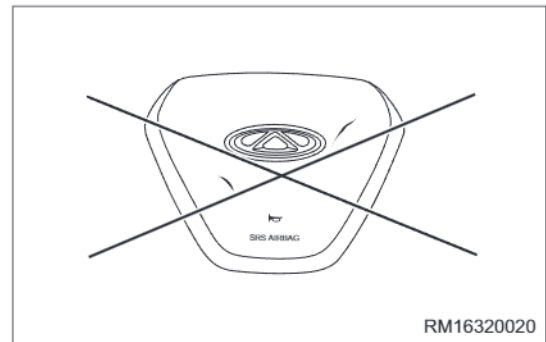
Driver Airbag Assembly

On-vehicle Inspection

1. Check the driver airbag assembly (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 assembly on vehicle:
 - Check for cuts, cracks or discoloration on the outer surface and grooved portion of driver airbag assembly.
 - If any defect above is found, replace the driver airbag assembly with a new one.



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

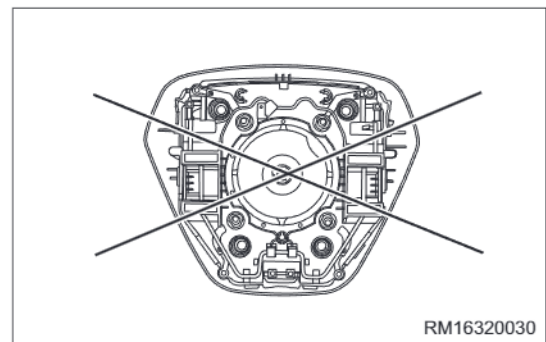


WARNING

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

HINT:

If driver airbag assembly contact plate is deformed, never repair it. Always replace with a new one.



- There should not be any contact between driver airbag assembly and steering wheel, and keep a uniform clearance all around, when installing new driver airbag assembly onto the steering wheel.

Removal

CAUTION

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

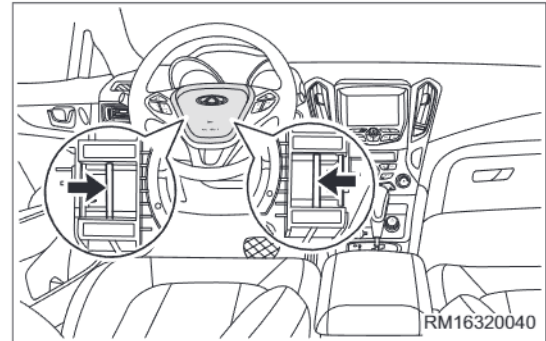
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.

32

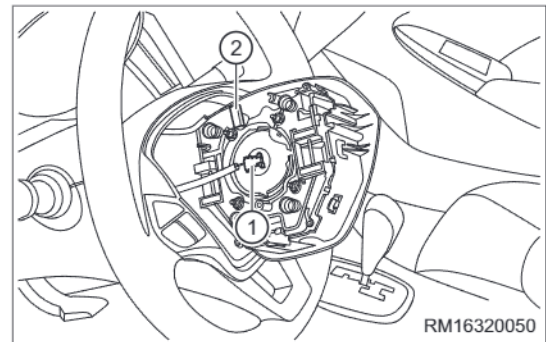
WARNING

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

3. Remove the driver airbag assembly.
 - a. Position the front wheels straight ahead.
 - b. Using a flat tip screwdriver wrapped with protective tape, push the driver airbag assembly snap springs (arrow) from service hole on both sides of steering wheel.



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



WARNING

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

 CAUTION

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

e. Remove the driver airbag assembly.

Installation

Installation is in the reverse order of removal.

 CAUTION

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

Disposal

Always dispose of airbag together with vehicle which is equipped with supplemental restraint system. Otherwise, the airbag will be in chemical and physical hazard. 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 disposal.

Spiral Cable

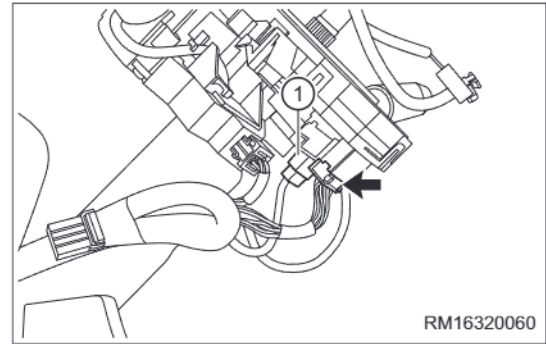
Removal

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

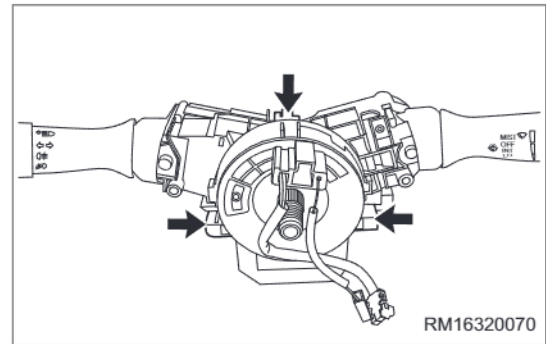
WARNING

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

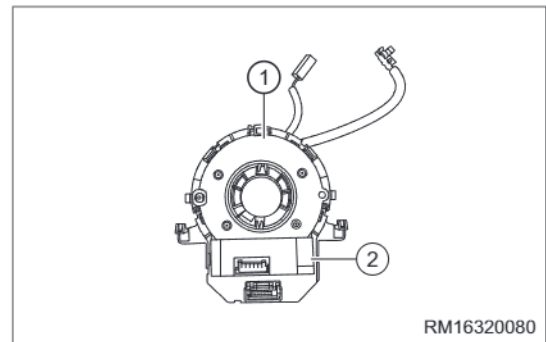
3. Position the front wheels straight ahead.
4. Remove the steering wheel assembly ([See page 28-25](#)).
5. Remove the combination switch cover ([See page 28-28](#)).
6. Remove the spiral cable.
 - a. Disconnect the spiral cable wire harness connector (arrow) and angle sensor connector (1) (if equipped).



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

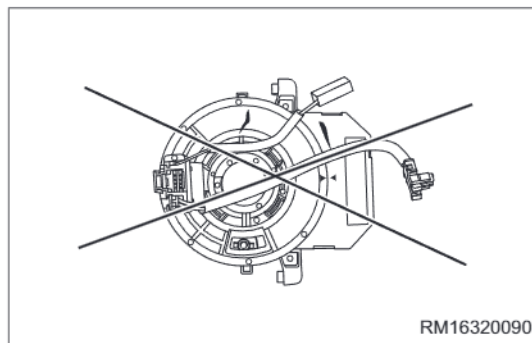


- c. Detach the angle sensor fixing claws and separate the angle sensor (1) and spiral cable (2).



Inspection

1. Check the spiral cable.
 - a. Check that there are no scratches or cracks on connectors, and/or no cracks, dents or chipping on the cable.
 - b. If there are scratches, cracks, dents or cuts on connectors or spiral cable, replace the spiral cable with a new one.



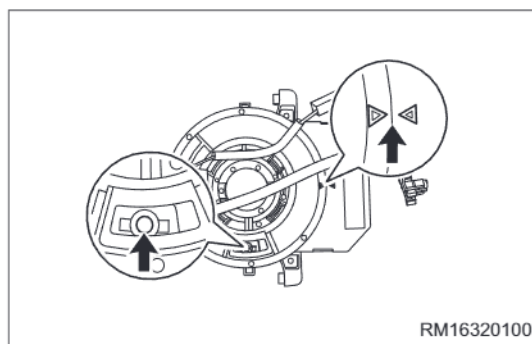
32

Installation

Installation is in the reverse order of removal.

HINT:

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



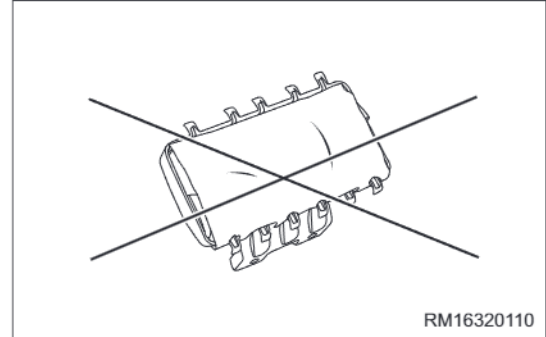
CAUTION

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

Front Passenger Airbag Assembly

On-vehicle Inspection

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



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WARNING

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

Removal

CAUTION

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

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

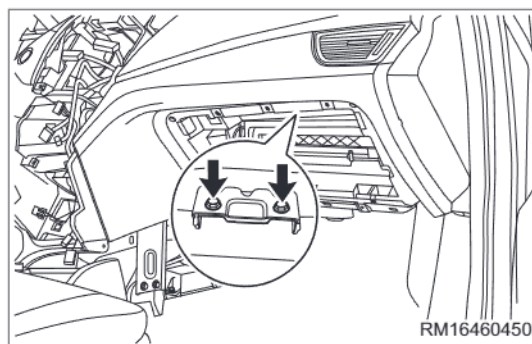
WARNING

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

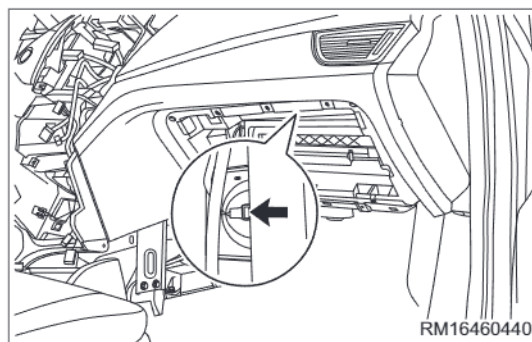
3. Remove the glove box assembly ([See page 46-20](#)).

4. Remove the front passenger airbag assembly.

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



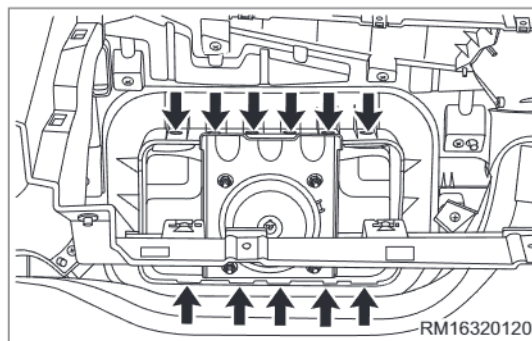
- b. Disconnect the front passenger airbag assembly wire harness connector (arrow).



WARNING

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

- c. Remove the instrument panel assembly ([See page 46-20](#)).
- d. Using a flat tip screwdriver wrapped with protective tape, slightly pry the fixing claws (arrow) around the front passenger airbag assembly mounting bracket to separate it from the instrument panel assembly.



- e. Remove the front passenger airbag assembly.

Installation

Installation is in the reverse order of removal.

CAUTION

- Before installing tightening bolts, always make sure that airbag wire harness is not hold down or stuck. Adjust if necessary and install it in place.
- Make sure to tighten fixing bolts to specified torques during installation.
- When installing front passenger airbag assembly, first slide the hook on one side into locating hole in airbag box, and then press in hook on the other side firmly, making sure that hooks on both sides enter the corresponding locating holes correctly.
- Always keep vehicle power off during installation. It is forbidden to install the front passenger airbag assembly with vehicle power on.
- During installation of instrument panel assembly, if installation cannot proceed due to contact of front passenger airbag assembly bracket and instrument panel crossmember assembly, hold the airbag slightly at the opening of glove box assembly to install it in place.
- Check SRS warning light after installation, and make sure that supplemental restraint system operates normally.

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Disposal

Always dispose of airbag together with vehicle which is equipped with supplemental restraint system. Otherwise, the airbag will be in chemical and physical hazard. 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.

Curtain Shield Airbag Assembly (if equipped)

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.
- 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.

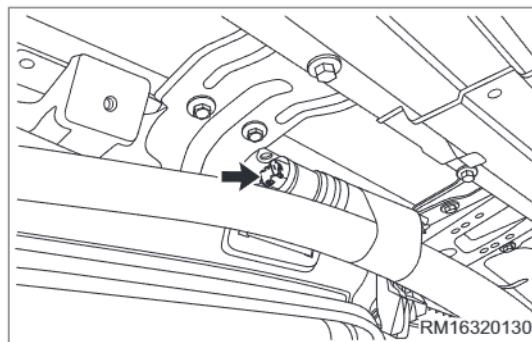
32

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

WARNING

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

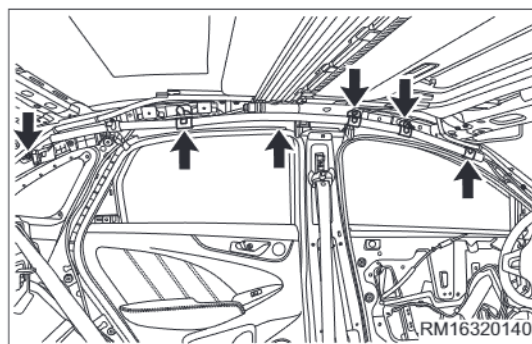
3. Remove the roof assembly ([See page 50-28](#)).
4. Remove the curtain shield airbag assembly.
 - a. Disconnect the curtain shield airbag assembly wire harness connector (arrow).



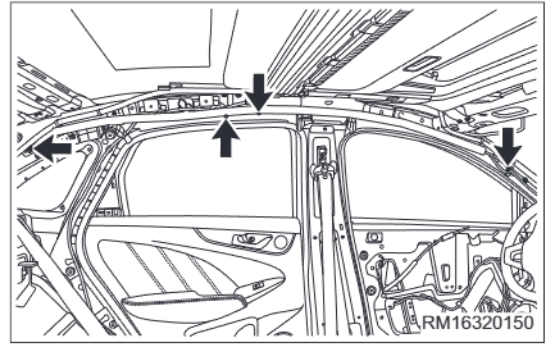
WARNING

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

- b. Detach the fixing clips (arrow) between curtain shield airbag assembly and body.



- c. Remove the fixing bolts (arrow) between curtain shield airbag assembly and body.
(Tightening torque: 10 ± 1 N·m)



- d. Remove the curtain shield airbag assembly.

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Installation

Installation is in the reverse order of removal.

CAUTION

- Be sure to install fixing clips in place during installation.
- Make sure to tighten fixing bolts to specified torques during installation.
- Check that horn operates normally after installation.
- Always keep vehicle power off during installation. It is forbidden to install the curtain shield airbag assembly with vehicle power on.
- Check SRS warning light after installation, and make sure that supplemental restraint system operates normally.

Disposal

Always dispose of airbag together with vehicle which is equipped with supplemental restraint system. Otherwise, the airbag will be in chemical and physical hazard. 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.

Side Collision Sensor (if equipped)

Removal

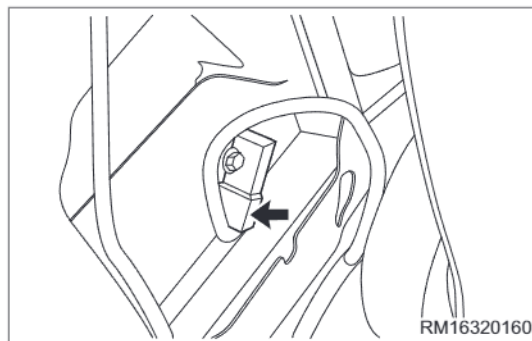
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.

WARNING

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

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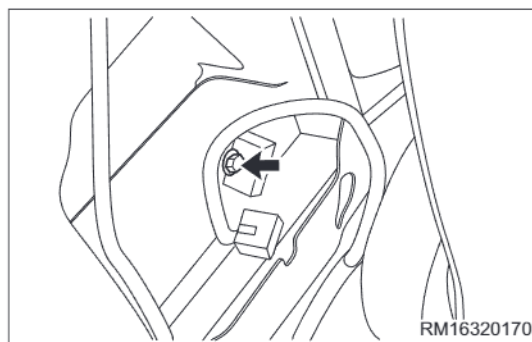
3. Remove the B-pillar lower protector assembly ([See page 50-19](#)).
4. Remove the side collision sensor.
 - a. Disconnect the side collision sensor connector (arrow).



WARNING

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

- b. Remove the fixing bolt (arrow) between side collision sensor and body.
(Tightening torque: 10 ± 1 N·m)



- c. Remove the side collision sensor.

Installation

Installation is in the reverse order of removal.

CAUTION

- Make sure to align dowel pin of side collision sensor with locating hole on body during installation.
- Make sure to tighten fixing bolts to specified torques during installation.
- Always keep vehicle power off during installation.
- Check that horn operates normally after installation.
- Check SRS warning light after installation, and make sure that supplemental restraint system operates normally.

SRS Control Module Assembly

Removal

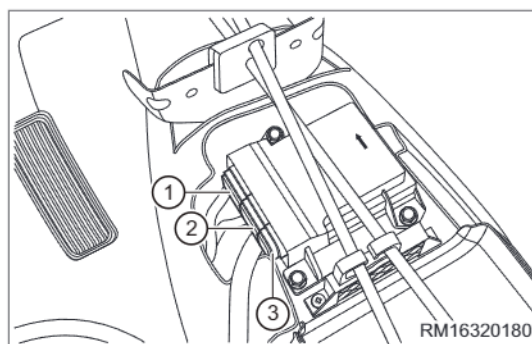
1. Turn off all electrical equipment and the ignition switch.
2. Disconnect the negative battery cable.

WARNING

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

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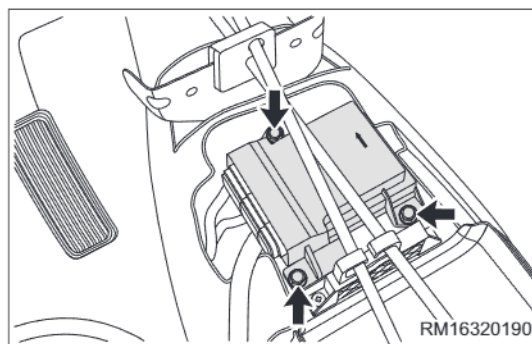
3. Remove the auxiliary fascia console body assembly (See page 46-10).
4. Remove the SRS control module assembly.
 - a. Disconnect the SRS control module assembly wire harness connector (1) (if equipped).
 - b. Disconnect the SRS control module assembly wire harness connectors (2) and (3).



WARNING

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

- c. Remove 3 fixing bolts (arrow) between SRS control module assembly and body.
(Tightening torque: 10 ± 1 N·m)



- d. Remove the SRS control module assembly.

Installation

Installation is in the reverse order of removal.

CAUTION

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

