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## **PRECAUTION**

## **PRECAUTIONS**

Precaution for Supplemental Restraint System (SRS) "AIR BAG" and "SEAT BELT PRE-TENSIONER"

The Supplemental Restraint System such as "AIR BAG" and "SEAT BELT PRE-TENSIONER", used along with a front seat belt, helps to reduce the risk or severity of injury to the driver and front passenger for certain types of collision. This system includes seat belt switch inputs and dual stage front air bag modules. The SRS system uses the seat belt switches to determine the front air bag deployment, and may only deploy one front air bag, depending on the severity of a collision and whether the front occupants are belted or unbelted. Information necessary to service the system safely is included in the SR and SB section of this Service Manual.

#### **WARNING:**

- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN/INFINITI dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal
  injury caused by unintentional activation of the system. For removal of Spiral Cable and Air Bag
  Module, see the SR section.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.

PRECAUTIONS WHEN USING POWER TOOLS (AIR OR ELECTRIC) AND HAMMERS

#### **WARNING:**

- When working near the Airbag Diagnosis Sensor Unit or other Airbag System sensors with the Ignition ON or engine running, DO NOT use air or electric power tools or strike near the sensor(s) with a hammer. Heavy vibration could activate the sensor(s) and deploy the air bag(s), possibly causing serious injury.
- When using air or electric power tools or hammers, always switch the Ignition OFF, disconnect the battery, and wait at least 3 minutes before performing any service.

- Do not use electrical test equipment to check SRS circuits unless instructed to in this Service Manual.
- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
  - For approximately 3 minutes after the cables are removed, it is still possible for the air bag and seat belt pretensioner to deploy. Therefore, do not work on any SRS connectors or wires until at least 3 minutes have passed.
- Diagnosis sensor unit must always be installed with their arrow marks "

  " pointing towards the front of the
  vehicle for proper operation. Also check diagnosis sensor unit for cracks, deformities or rust before installation and replace as required.
- The spiral cable must be aligned with the neutral position since its rotations are limited. Do not turn steering wheel and column after removal of steering gear.
- Handle air bag module carefully. Always place driver and front passenger air bag modules with the pad side facing upward and seat mounted front side air bag module standing with the stud bolt side facing down.
- Conduct self-diagnosis to check entire SRS for proper function after replacing any components.
- After air bag inflates, the front instrument panel assembly should be replaced if damaged.
- Always replace instrument panel pad following front passenger air bag deployment.

## Occupant Classification System

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Replace occupant classification system control unit and passenger front seat cushion as an assembly.
 Refer to <u>SE-78</u>, "<u>PASSENGER SIDE</u>: <u>Disassembly and Assembly</u>" with climate controlled seat, and <u>SE-128</u>, "<u>PASSENGER SIDE</u>: <u>Disassembly and Assembly</u>" without climate controlled seat.

## **PREPARATION**

## < PREPARATION >

# **PREPARATION**

## **PREPARATION**

# Special Service Tool

The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.

Tool number (Kent-Moore No.) Tool name		Description
(J-44615) Air bag lock master key set	LRS191	Removing and installing air bag lock

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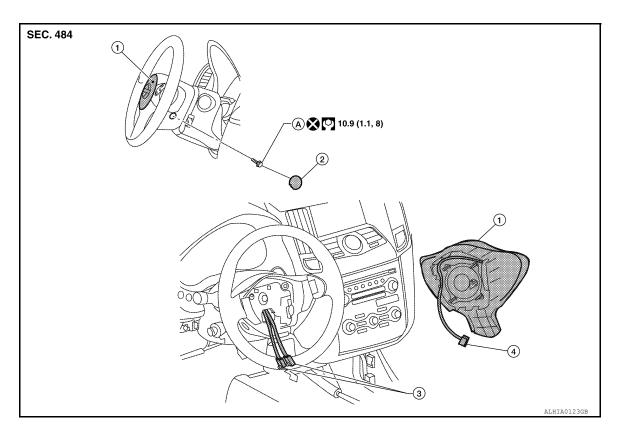
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# REMOVAL AND INSTALLATION

## DRIVER AIR BAG MODULE

Exploded View



- 1. Driver air bag module
- Steering wheel switch assembly con- A. nector
- Side lid
  - Driver air bag module
- 3. Driver air bag module harness connectors

### Removal and Installation

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#### **CAUTION:**

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- · Always work from the side of air bag module. Do not work from the front of it.
- Always place air bag module with pad side facing upward.
- Do not cause impact to the air bag module by dropping etc. Replace the air bag module if it has been dropped or sustained an impact.

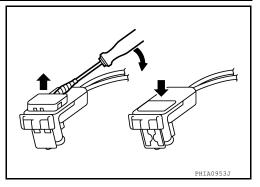
### **REMOVAL**

- 1. Disconnect the negative and positive battery terminals, then wait at least 3 minutes.
- 2. Remove side lids, then remove the driver air bag module bolts (RH/LH).
- 3. Disconnect the driver air bag module harness connectors.

## **DRIVER AIR BAG MODULE**

### < REMOVAL AND INSTALLATION >

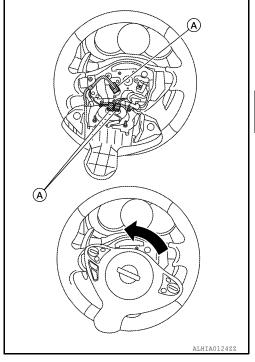
- For installing/removing direct-connect SRS connectors, refer to <u>SRC-9</u>, "<u>SRS Component Connectors</u>".
- 4. Disconnect the steering wheel switch assembly connector. Then remove driver air bag module from steering wheel.
- 5. Remove the steering wheel switch assembly from driver air bag module. Refer to <u>AV-73</u>, "Removal and Installation".



### **INSTALLATION**

#### **CAUTION:**

- · Do not use old bolts after removal; replace with new bolts.
- 1. Attach steering wheel switch assembly to driver air bag module.
- 2. Route the driver air bag module harness through attachment hook on steering wheel.
- 3. Place the driver air bag module near the steering wheel and attach connectors (A).
- 4. Lift the driver air bag module while rotating counterclockwise into position over steering wheel.



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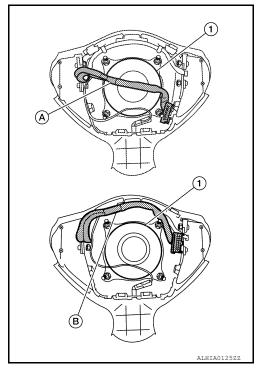
### DRIVER AIR BAG MODULE

### < REMOVAL AND INSTALLATION >

- Pushing upward into place, position the steering wheel switch assembly harness along the upper edge and install the driver air bag module into the steering wheel.
  - Make sure that the steering wheel switch assembly harness is routed above the center of the driver air bag module inflator (1) as shown (B), and is not routed so it is pinched between the driver air bag module inflator (1) and steering column shaft threads as shown (A).

#### **CAUTION:**

- Make sure the steering switch harness is correctly routed above the center of the driver air bag module inflator (1) as shown (B), and NOT incorrectly routed across the driver air bag module inflator as shown (A).
- Be careful not to damage or pinch the harness while installing.
- Tighten the driver air bag module bolts after centering the holes between the driver air bag module and the steering wheel horn contact bracket. If the holes are misaligned, the bolt threads may become damaged and the module will not install securely.



6. Install the driver air bag module bolts.

- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <a href="SRC-12">SRC-12</a>, "SRS Operation Check".

## SPIRAL CABLE

### Removal and Installation

#### **CAUTION:**

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least 3 minutes.
- · Do not use air tools or electric tools for servicing.
- Do not disassemble the spiral cable.
- Do not allow oil, grease, detergent or water to come in contact with the spiral cable.
- With the steering linkage disconnected, the cable may snap by turning the steering wheel beyond the limited number of turns. The spiral cable can be turned counterclockwise about 2.5 turns from the neutral position.
- Do not cause impact to the spiral cable by dropping etc. Replace the spiral cable if it has been dropped or sustained an impact.



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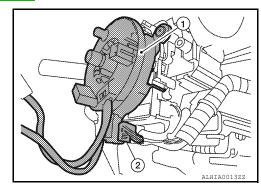
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#### REMOVAL

- 1. Disconnect the negative and positive battery terminals, then wait at least 3 minutes.
- 2. Remove the steering wheel. Refer to ST-17, "Removal and Installation".
- 3. Remove the column cover. Refer to IP-11, "Removal and Installation".
- 4. Disconnect the harness connectors (2) from spiral cable (1).



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### SPIRAL CABLE

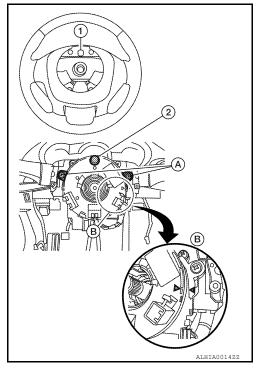
#### < REMOVAL AND INSTALLATION >

- 5. Rotate the spiral cable slightly so that both the locating pin (2) is positioned at the top and aligned with the locating hole (1) of steering wheel, and the alignment marks (B) are directly across from each other.
- 6. Remove the screws (A), then remove spiral cable from the steering column.

#### **CAUTION:**

Do not turn the spiral cable quickly or beyond the limit number of turns (approximately 2.5 turns from the neutral position), this may cause the cable to snap.

7. Remove the steering angle sensor from the spiral cable. Refer to BRC-110, "Removal and Installation".



#### INSTALLATION

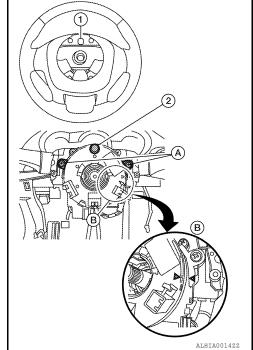
- 1. Install the steering angle sensor to the spiral cable. Refer to BRC-110, "Removal and Installation".
- Set the spiral cable neutral position.
  - 1. Slowly turn the spiral cable clockwise to the end position.
  - 2. Next, turn it counterclockwise (about 2.5 turns) then stop turning at the point when the alignment arrows (B) are directly across from each other.
  - 3. Rotate the spiral cable slightly so the locating pin (2) is positioned at the top.

#### NOTE:

A service part is installed in the neutral position with a stopper clip in place and should not be adjusted after the stopper clip is removed.

- 3. Install the spiral cable in the reverse order of removal.
  - Align the locating hole (1) at the top of the steering wheel with the locating pin (2) of spiral cable during installation.
  - Install the spiral cable screws (A).
- Adjust the neutral position of the steering angle sensor. Refer to <u>BRC-8</u>. "ADJUSTMENT OF STEERING ANGLE SENSOR NEUTRAL POSITION: Special Repair Requirement".

- The spiral cable may snap by steering operation if the cable is installed in an improper position.
- Do not turn the spiral cable quickly or beyond the limit number of turns. (This can cause the cable to snap.)
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory with CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <u>SRC-12</u>, "<u>SRS Operation Check"</u>.



## FRONT PASSENGER AIR BAG MODULE

## < REMOVAL AND INSTALLATION >

## FRONT PASSENGER AIR BAG MODULE

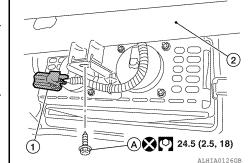
### Removal and Installation

#### **CAUTION:**

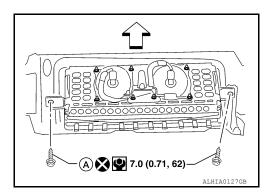
- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least 3 minutes.
- · Do not use air tools or electric tools for servicing.
- · Always work from the side of air bag module. Do not work from the front of it.
- Always place air bag module with pad side facing upward.
- Do not cause impact to the air bag module by dropping etc. Replace the air bag module if it has been dropped or sustained an impact.

#### REMOVAL

- 1. Disconnect the negative and positive battery terminals, then wait at least 3 minutes.
- 2. Remove the glove box assembly. Refer to IP-11, "Removal and Installation".
- Disconnect the front passenger air bag module connector (1).
   NOTE:
  - The figure shows installed condition of the front passenger air bag module without glove box in place.
- 4. Remove front passenger air bag module bolt (A) from steering member (2).
- 5. Remove the remaining instrument panel from the vehicle. Refer to <u>IP-11</u>, "Removal and Installation".



6. Remove the front passenger air bag module screws (A). 
<□ Vehicle front.



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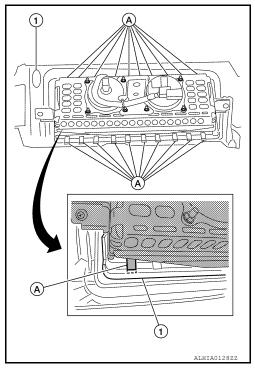
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Revision: January 2012 SR-9 2011 Maxima

## FRONT PASSENGER AIR BAG MODULE

### < REMOVAL AND INSTALLATION >

- 7. Release the upper and lower front passenger air bag module tabs (A) from instrument panel and pad assembly (1).
- 8. Rotate and lift the front passenger air bag module away from the instrument panel, then remove.

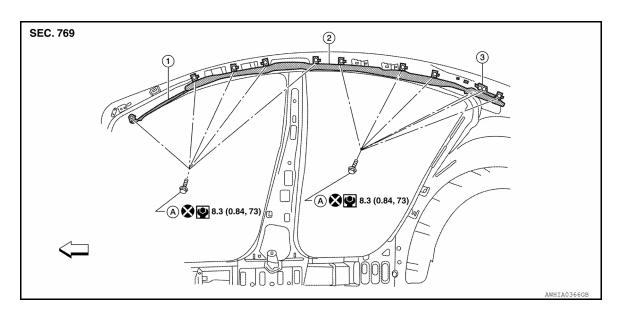


### **INSTALLATION**

- Do not use old bolts after removal; replace with new bolts.
- Be careful not to damage the harness while installing.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset with the self-diagnosis function and delete the memory by CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to SRC-12, "SRS Operation Check".
- 1. Install front passenger air bag module to the instrument panel assembly.
- 2. Install the instrument panel assembly. Refer to IP-11, "Removal and Installation".
- Connect the front passenger air bag module harness connector to yellow 4-pin service replacement connector and fasten to mounting bracket.

## SIDE CURTAIN AIR BAG MODULE

Component



- 1. Side curtain air bag module tether 2. Side curtain air bag module assembly 3. Side curtain air bag module inflator
- A. Side curtain air bag module bolt < Vehicle front

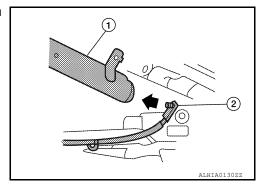
### Removal and Installation

### **CAUTION:**

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- Always work from the side of air bag module. Do not work from the front of it.
- Always place the curtain air bag module with air bag deployment side facing upward.
- Do not attempt to disassemble side curtain air bag module.

### **REMOVAL**

- 1. Disconnect the negative and positive battery terminals, then wait at least 3 minutes.
- 2. Remove the headlining. Refer to <a href="INT-33">INT-33</a>, "Removal and Installation".
- 3. Disconnect the side curtain air bag module connector (2) from the inflator (1).



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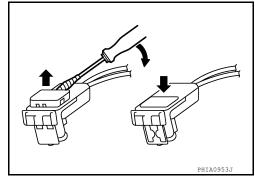
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## SIDE CURTAIN AIR BAG MODULE

### < REMOVAL AND INSTALLATION >

- For installing/removing direct-connect SRS connectors, refer to <u>SRC-9</u>, "<u>SRS Component Connectors</u>".
- Do not repair direct-connect SRS component connectors. Refer to SRC-12, "Trouble Diagnosis Introduction".
- 4. Remove the bolts, then remove side curtain air bag module assembly.



#### INSTALLATION

Installation is in the reverse order of removal.

- Be careful not to damage the air bag harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <a href="SRC-12">SRC-12</a>, "SRS Operation Check".
- Make sure the side curtain air bag module is not twisted at any point along the vehicle when installed.
- Replace the side curtain air bag module if it has been dropped or sustained an impact.



## Removal and Installation

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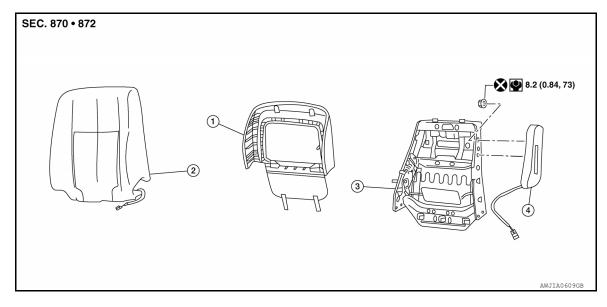
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#### SEAT ASSEMBLY WITH SIDE AIR BAG MODULE



- 1. Seatback board
- Seatback assembly
- 3. Seatback frame

4. Side air bag module

#### **WARNING:**

Never leave any objects (screwdrivers, tools, etc.) on the seat during seatback repair. It can lead to personal injury if the side air bag should accidentally deploy.

#### **CAUTION:**

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least three minutes.
- Handle the side air bag module carefully. During disassembly, always hold the side air bag module, do not let it hang by the wire harness.
- Always place side air bag module with the stud bolt side facing downward.
- Always work from the side or back of the seatback assembly, do not work in front of seat.
- Do not use air tools or electric tools when servicing the seat assembly.
- Replace the side air bag module if it has been dropped or sustained an impact.
- Do not insert any objects into the side air bag module.
- Do not disassemble the side air bag module.
- Do not expose the side air bag module to temperatures exceeding 90°C (194° F).
- Do not expose the side air bag module to any oil, grease or water.
- During disassembly, do not damage the trim cover, chutes, connectors, retainers, clips, module harness or the side air bag module.

#### NOTE:

If the vehicle has been involved in a collision and the side air bag has deployed, the front seatback assembly must be replaced.

### DISASSEMBLY

1. Remove the front seat assembly. Refer to <u>SE-63, "Removal and Installation"</u> (WITH CLIMATE CONTROLLED SEATS) or <u>SE-113, "Removal and Installation"</u> (W/O CLIMATE CONTROLLED SEATS).

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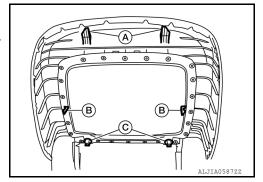
### < REMOVAL AND INSTALLATION >

2. Remove the seatback board as follows:

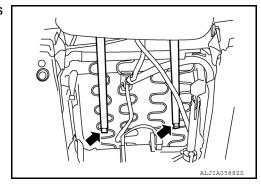
#### NOTE:

The seatback board is attached to the seat frame with the following:

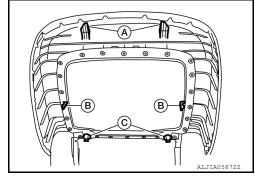
- 2 top hooks (A)
- 2 side hooks (B)
- 2 bottom retainers (C)



a. From the bottom of the seat, unhook the two seat skirt hooks as shown.



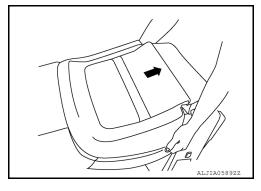
- b. Carefully pull upward on the lower seatback board to release the two bottom retainers (C).
  - Do not pull outward at two top hooks (A)
- c. Hold the seatback board at the side hook locations and push in the side hooks (B) to release them from the seatback frame, then pull it rearward.



d. Carefully pull the seatback board downward to disengage the top hooks as shown.

### **CAUTION:**

Use care not to break the seatback board hooks and retainers. Replace seatback board if any hooks or retainers are damaged.



3. If equipped with climate controlled seats, disconnect the climate control seat duct.

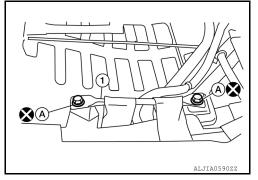
### < REMOVAL AND INSTALLATION >

4. Remove and discard the two chute rod bolts (A), then remove the chute rod (1).

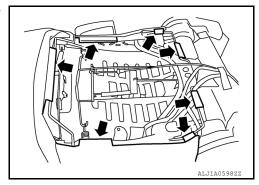
Chute rod bolts (A) : 8.2 N·m (0.84 kg-m, 73 in-lb)

#### **CAUTION:**

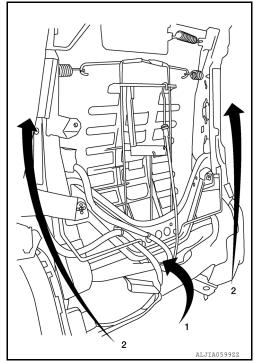
Do not reuse the chute rod bolts.



5. Release the seven seatback retainers from the seatback frame as shown.



6. Push the seatback trim and foam pad forward at the bottom (1), then holding the seatback assembly on both sides, lift upward (2). Move the seatback trim and foam pad forward enough to access the side air bag module.



7. Disconnect the side air bag module harness clips from the seat frame as shown.

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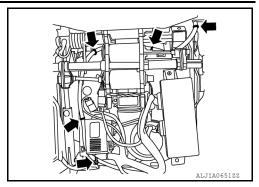
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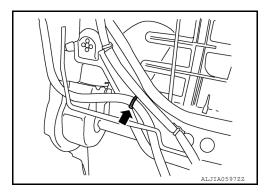
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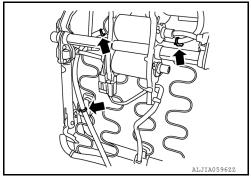
## < REMOVAL AND INSTALLATION >

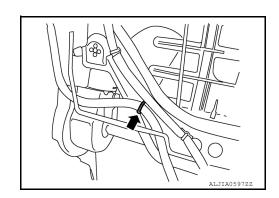
- a. Front LH climate controlled seat
  - Remove side air bag module harness clips from seat frame (arrows).





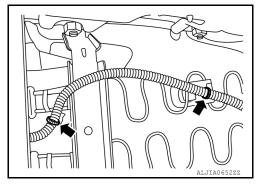
- b. Front LH without climate controlled seat
  - Remove side air bag module harness clips from seat frame (arrows).

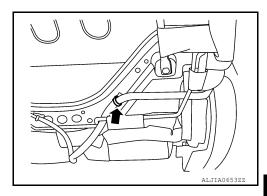




### < REMOVAL AND INSTALLATION >

- c. Front RH seat
  - Remove side air bag module harness clips from seat frame (arrows).



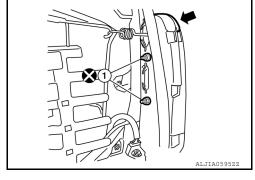


8. Disconnect the side air bag electrical connector.

9. Remove and discard the two side air bag module nuts (1), then remove the side air bag module.

Air bag module nuts (1) : 8.2 N·m (0.84 kg-m, 73 in-lb) CAUTION:

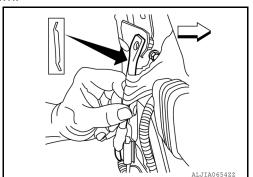
Do not reuse the side air bag module nuts.



## **ASSEMBLY**

Assembly is in the reverse order of disassembly. During assembly, note the following.

- Make sure the chute rod is properly positioned and installed as shown.
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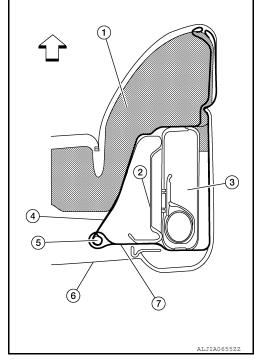
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#### < REMOVAL AND INSTALLATION >

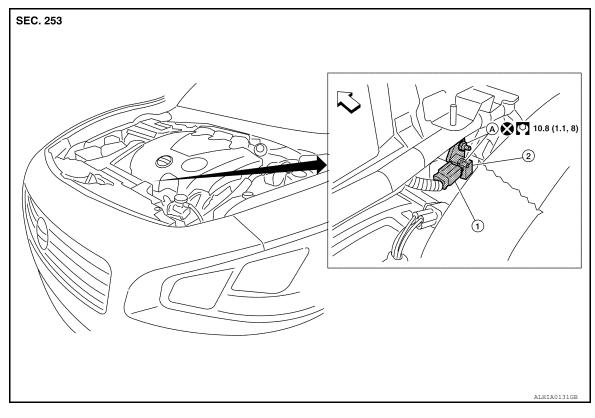
- Make sure the side air bag outer chute (7) is pulled over the side air bag module (3) and the side air bag inner chute (4) is pulled around the frame (2). Make sure there are no wrinkles and the chutes are not folded, twisted or pinched.
  - (1) Seatback pad
  - (2) Frame
  - (3) Side air bag module
  - (4) Inner side air bag chute
  - (5) Chute rod
  - (6) Seatback board
  - (7) Outer chute
  - : Front of vehicle



- If a malfunction was detected by the air bag warning lamp, after repair or replacement of the malfunction parts, reset the memory using self-diagnosis or CONSULT.
- After work is completed, check that no system malfunction is detected by air bag warning lamp.
- Make sure side air bag module shell is closed at all tabs and cushion of module is not exposed. Do not reuse if the tab of shell is not secured.
- Always install new side air bag module attaching nuts and side air bag chute rod bolts.
- Always route side air bag module harness in original location. Replace any deformed or damaged clips with the same type and color. Always install clips in the original location on the harness.
- Smooth out all wrinkles during assembly.
- Inspect seatback cushion, trim cover and trim cover chutes. Replace any damaged parts.
- Replace any deformed or damaged parts.

## **CRASH ZONE SENSOR**

Component



1. Crash zone sensor harness connector

2. Crash zone sensor

A. Nut

√ Vehicle front

### Removal and Installation

#### **CAUTION:**

 Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least 3 minutes.

· Do not use air tools or electric tools for servicing.

 Replace the crash zone sensor of deployed SRS driver air bag and deployed SRS front passenger air bag.

 Do not cause impact to the crash zone sensor by dropping etc. Replace the crash zone sensor if it has been dropped or sustained an impact.



#### **REMOVAL**

- 1. Disconnect the negative and positive battery terminals, then wait at least 3 minutes.
- 2. Remove the air inlet duct, then position upper radiator hose aside.
- Disconnect the crash zone sensor harness connector.

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## **CRASH ZONE SENSOR**

### < REMOVAL AND INSTALLATION >

4. Remove the nuts, then remove crash zone sensor.

### **INSTALLATION**

Installation is in the reverse order of removal.

- Do not use old crash zone sensor nuts after removal; replace with new nuts.
- Be careful not to damage the crash zone sensor harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <a href="SRC-12">SRC-12</a>, "SRS Operation Check".

## SIDE AIR BAG (SATELLITE) SENSOR

### < REMOVAL AND INSTALLATION >

## SIDE AIR BAG (SATELLITE) SENSOR

### Removal and Installation

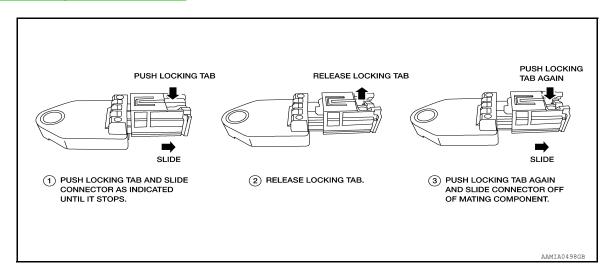
#### **CAUTION:**

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least 3 minutes.
- · Do not use air tools or electric tools for servicing.
- Replace the satellite sensor of deployed SRS front side air bag and deployed SRS side curtain air bag.
- Do not cause impact to the side air bag (satellite) sensor by dropping etc. Replace the side air bag (satellite) sensor if it has been dropped or sustained an impact.



### REMOVAL

- 1. Disconnect the negative and positive battery terminals, then wait at least 3 minutes.
- 2. Remove the front seat belt retractor. Refer to SB-6, "Removal and Installation".
- Disconnect the side air bag (satellite) sensor slide double locking harness connector. Refer to <u>SRC-9</u>, <u>"SRS Component Connectors"</u>.



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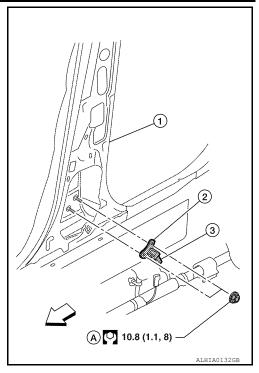
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## SIDE AIR BAG (SATELLITE) SENSOR

## < REMOVAL AND INSTALLATION >

- 4. Remove the nuts (A), then remove side air bag (satellite) sensor (2) from center pillar (1) studs.
  - ⟨□: Vehicle front
  - (3): Side air bag (satellite) sensor slide double locking harness connector.



### **INSTALLATION**

Installation is in the reverse order of removal.

- Do not use old fixing nuts after removal; replace with new nuts.
- Be careful not to damage the satellite sensor harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <a href="SRC-12">SRC-12</a>, "SRS Operation Check".

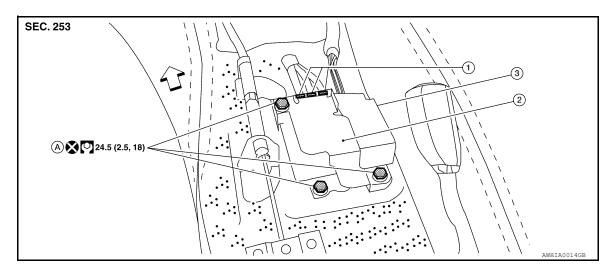
## **DIAGNOSIS SENSOR UNIT**

## Removal and Installation

## WARNING:

- Before servicing, turn ignition switch OFF, disconnect both battery terminals and wait at least 3 minutes.
- Before disconnecting the air bag sensor unit harness connector, be sure to disconnect the harness connector of each air bag module and pre-tensioner seat belt to prevent air bag deployment by static electricity.
- Do not use air tools or electric tools for servicing.
- When replacing the air bag diagnosis sensor unit, always check with the parts department for the latest parts information. Installing an incorrect air bag diagnosis sensor unit may or may not cause the air bag warning lamp to illuminate and may cause incorrect deployment of the supplemental air bags and seat belt pre-tensioner in a collision resulting in serious personal injury or death.

#### REMOVAL



- Diagnosis sensor unit harness connector
- Diagnosis sensor unit shield
- 3. Diagnosis sensor unit

- A. Diagnosis sensor unit bolts
- Vehicle front
- 1. Always check the air bag diagnosis sensor unit ECU discriminated number (identification number) or part number using CONSULT.
- 2. Disconnect the negative and positive battery terminals, then wait at least 3 minutes.
- 3. Disconnect the harness connectors for each of the following SRS components. Refer to <a href="SR-11">SR-11</a>, "Removal and Installation" (Side curtain air bag module), <a href="SE-63">SE-63</a>, "Removal and Installation"</a> (Side air bag module with climate controlled seats) or <a href="SE-113">SE-113</a>, "Removal and Installation" (Seat belt pre-tensioner).
- Remove the center console. Refer to <u>IP-21, "Disassembly and Assembly"</u>.

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- 5. Disconnect the diagnosis sensor unit harness connectors.
- 6. Remove the bolts, then remove the diagnosis sensor unit.

#### **CAUTION:**

· Never impact the air bag diagnosis sensor unit.

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### DIAGNOSIS SENSOR UNIT

#### < REMOVAL AND INSTALLATION >

 Do not cause an impact to the diagnosis sensor unit by dropping etc. Replace the diagnosis sensor unit if it has been dropped or sustained an impact.



#### INSTALLATION

Installation is in the reverse order of removal.

#### **CAUTION:**

- Do not use old bolts after removal; replace with new bolts.
- Be careful not to damage the diagnosis sensor unit harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case a malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT.
- If a malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <a href="SRC-12">SRC-12</a>, "SRS Operation Check".
- After replacing the air bag diagnosis sensor unit, confirm using CONSULT that the ECU discriminated number (identification number) or part number of the new replacement air bag diagnosis sensor unit matches the ECU discriminated number (identification number) or part number of the replaced (old) air bag diagnosis sensor unit.

#### NOTE:

If the ECU discriminated number or part number of the new replacement air bag diagnosis sensor unit differs from the ECU discriminated number or part number of the replaced air bag diagnosis sensor unit, reconfirm the parts information and verify that the correct air bag diagnosis sensor unit was installed.

## OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

< REMOVAL AND INSTALLATION >

Removal and Installation

## OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

## OCCUPATION OF A CONTROL OF A CO

The occupant classification system control unit and sensor mat are an integral part of the front passenger seat cushion, and are replaced as an assembly only. Refer to <u>SE-63, "Removal and Installation"</u> (WITH CLIMATE CONTROL), or <u>SE-113, "Removal and Installation"</u> (W/O CLIMATE CONTROL).

Do not disassemble the seat trim from the seat cushion foam.

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### < REMOVAL AND INSTALLATION >

## **COLLISION DIAGNOSIS**

### For Frontal Collision

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FOR FRONTAL COLLISION: When SRS is activated in a collision

#### **CAUTION:**

Due to varying models and option levels, not all parts listed in the chart below apply to all vehicles.

### WORK PROCEDURE

- 1. Before performing any of the following steps, ensure that all vehicle body and structural repairs have been completed.
- 2. Replace the diagnosis sensor unit.
- 3. Remove the front air bag modules, crash zone sensor assembly, bracket and seat belt pre-tensioner assemblies.
- 4. Check the SRS components using the table below:
  Replace any SRS components showing visible signs of damage. (dents, cracks and deformation, etc.)
- 5. Install new front air bag modules, crash zone sensor assembly, bracket and seat belt pre-tensioner assemblies.
- 6. Perform self-diagnosis using CONSULT or air bag warning lamp. Refer to <a href="SRC-14">SRC-14</a>, "Self-Diagnosis Function (Without CONSULT)" for details.
  - Ensure entire SRS operates properly.
- 7. After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRC-12, "SRS Operation Check".

### SRS INSPECTION (FOR FRONTAL COLLISION)

Part	Inspection
Driver air bag module	If the driver air bag has deployed: REPLACE Install with new fasteners.
Front passenger air bag module (if equipped)	If the front passenger air bag has deployed: REPLACE Install with new fasteners.
Crash zone sensor	If any of the front air bags or seat belt pre-tensioners* have been activated: REPLACE the crash zone sensor and bracket with new fasteners. *: Confirm seat belt pre-tensioner activation using CONSULT only.
Seat belt pre-tensioner assemblies (All applicable locations: buckle, retractor, lap outer)	If either the driver or passenger seat belt pre-tensioner* has been activated: REPLACE all seat belt pre-tensioner assemblies with new fasteners. *: Confirm seat belt pre-tensioner activation using CONSULT only.
Diagnosis sensor unit	If any of the SRS components have been activated: REPLACE the diagnosis sensor unit. Install with new fasteners.
Steering wheel	<ol> <li>Visually check steering wheel for deformities.</li> <li>Check harness (built into steering wheel) and connectors for damage, and terminals for deformities.</li> <li>Install driver air bag module into the steering wheel to check fit and alignment with the wheel.</li> <li>Check steering wheel for excessive free play.</li> <li>If no damage is found, reinstall.</li> <li>If damaged—REPLACE.</li> </ol>
Spiral cable	If the driver front air bag has deployed: REPLACE the spiral cable.
Occupant classification system (Passenger seat)	<ol> <li>Remove passenger seat assembly.</li> <li>Check control unit case for dents, cracks of deformities.</li> <li>Check connectors and pressure sensor tube for damage, and terminals for deformities.</li> <li>Check seat frame and cushion pan for dents or deformities.</li> <li>If no damage is found, reinstall seat with new fasteners.</li> <li>If damaged — REPLACE seat cushion assembly with new fasteners.</li> </ol>

#### < REMOVAL AND INSTALLATION >

Part	Inspection
Harness and connectors	<ol> <li>Check connectors for poor connection, damage, and terminals for deformities.</li> <li>Check harness for binding, chafing, cuts, or deformities.</li> <li>If no damage is found, reinstall the harness and connectors.</li> <li>If damaged—REPLACE the damaged harness. Do not attempt to repair, splice or modify any SRS harness.</li> </ol>
Instrument panel assembly	If the passenger front air bag has deployed: REPLACE the instrument panel assembly. (integrated type)

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FOR FRONTAL COLLISION: When SRS is not activated in a collision

#### **CAUTION:**

Due to varying models and option levels, not all parts listed in the chart below apply to all vehicles.

### WORK PROCEDURE

- 1. Before performing any of the following steps, ensure that all vehicle body and structural repairs have been completed.
- 2. Check the SRS components using the table below:
  Replace any SRS components showing visible signs of damage. (dents, cracks and deformation, etc.)
- 3. Perform self-diagnosis using CONSULT or air bag warning lamp. Refer to <u>SRC-14</u>, "<u>Self-Diagnosis Function (Without CONSULT)</u>" for details. Ensure entire SRS operates properly.
- 4. After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRC-12, "SRS Operation Check".

## SRS INSPECTION (FOR FRONTAL COLLISION)

Part	Inspection	
Driver air bag module	If the driver air bag has NOT been activated:  Remove driver air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.  Install driver air bag module into the steering wheel to check fit and alignment with the wheel.	
	<ol> <li>If no damage is found, reinstall with new fasteners.</li> <li>If damaged—REPLACE. Install driver air bag modules with new fasteners.</li> </ol>	
Front passenger air bag module (if equipped)	If the front passenger air bag has NOT been activated:  Remove front passenger air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.	
	<ol> <li>Install front passenger air bag module into the instrument panel to check fit with the instrument panel.</li> <li>If no damage is found, reinstall with new fasteners.</li> <li>If damaged—REPLACE. Install front passenger air bag modules with new fasteners.</li> </ol>	
Crash zone sensor	If the front air bags or seat belt pre-tensioners have NOT been activated:  Remove the crash zone sensor. Check harness connectors for damage, terminals for deformities, and harness for binding.  Check for visible signs of damage (dents, cracks, deformation) of the crash zone sensor and	
	bracket. 3. Install the crash zone sensor to check fit. 4. If no damage is found, reinstall with new fasteners. 5. If damaged—REPLACE the crash zone sensor and bracket with new fasteners.	
Seat belt pre-tensioner assemblies (All applicable locations: buckle,	If the pre-tensioners have NOT been activated:  1. Remove seat belt pre-tensioners.  Check harness cover and connectors for damage, terminals for deformities, and harness for binding.	
retractor, lap outer)	<ol> <li>binding.</li> <li>Check belts for damage and anchors for loose mounting.</li> <li>Check retractor for smooth operation.</li> <li>Check seat belt adjuster for damage.</li> <li>Check for deformities of the center pillar inner.</li> <li>If the center pillar inner has no damage, REPLACE the seat belt pre-tensioner assembly.</li> <li>If no damage is found, reinstall seat belt pre-tensioner assembly.</li> <li>If damaged—REPLACE. Install the seat belt pre-tensioners with new fasteners.</li> </ol>	

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#### < REMOVAL AND INSTALLATION >

Part	Inspection
Diagnosis sensor unit	If none of the SRS components have been activated:  1. Check case for dents, cracks or deformities.  2. Check connectors for damage, and terminals for deformities.  3. If no damage is found, reinstall with new fasteners.  4. If damaged—REPLACE. Install diagnosis sensor unit with new fasteners.
Steering wheel	<ol> <li>Visually check steering wheel for deformities.</li> <li>Check harness (built into steering wheel) and connectors for damage, and terminals for deformities.</li> <li>Install driver air bag module into the steering wheel to check fit and alignment with the wheel.</li> <li>Check steering wheel for excessive free play.</li> <li>If no damage is found, reinstall.</li> <li>If damaged—REPLACE.</li> </ol>
Spiral cable	If the driver front air bag has not deployed:  1. Visually check spiral cable and combination switch for damage.  2. Check connectors and protective tape for damage.  3. Check steering wheel for noise, binding or heavy operation.  4. If no damage is found, reinstall.  5. If damaged—REPLACE.
Occupant classification system (Passenger seat)	<ol> <li>Remove passenger seat assembly.</li> <li>Check control unit case for dents, cracks of deformities.</li> <li>Check connectors and pressure sensor tube for damage, and terminals for deformities.</li> <li>Check seat frame and cushion pan for dents or deformities.</li> <li>If no damage is found, reinstall seat with new fasteners.</li> <li>If damaged — REPLACE seat cushion assembly with new fasteners.</li> </ol>
Harness and connectors	<ol> <li>Check connectors for poor connection, damage, and terminals for deformities.</li> <li>Check harness for binding, chafing, cuts, or deformities.</li> <li>If no damage is found, reinstall the harness and connectors.</li> <li>If damaged—REPLACE the damaged harness. Do not attempt to repair, splice or modify any SRS harness.</li> </ol>
Instrument panel assembly	If the passenger front air bag has NOT deployed:  1. Visually check instrument panel for damage.  2. If no damage is found, reinstall the instrument panel assembly.  3. If damaged—REPLACE the instrument panel assembly.

### For Side and Rollover Collision

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# FOR SIDE AND ROLLOVER COLLISION: When SRS is activated in a collision **CAUTION**:

Due to varying models and option levels, not all parts listed in the chart below apply to all vehicles.

## WORK PROCEDURE

- 1. Before performing any of the following steps, ensure that all vehicle body and structural repairs have been completed.
- 2. Replace the following components:
- Front seat back assembly (on the side on which side air bag is activated).
- Door finisher (on the side on which door-mounted curtain air bag is activated).
- Pop-up roll bar assemblies and pop-up roll bar covers.
- Side air bag (satellite) sensor LH/RH (on the side on which side air bag is activated).
- Diagnosis sensor unit.
- Seat belt pre-tensioner assemblies.
- Check the SRS components and the related parts using the following table.
   Replace any SRS components and the related parts showing visible signs of damage (dents, cracks, deformation, etc.).
- 4. Perform self-diagnosis using CONSULT and "AIR BAG" warning lamp. Refer to <u>SRC-12, "SRS Operation Check"</u> for details. Make sure entire SRS operates properly.
- 5. After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRC-14, "Self-Diagnosis Function (Without CONSULT)".

#### SRS INSPECTION (FOR SIDE AND ROLLOVER COLLISION)

### < REMOVAL AND INSTALLATION >

Part	Inspection	
Side curtain air bag module LH	If the side curtain air bag LH has deployed: REPLACE the side curtain air bag module LH. Install with new fasteners.	
Side curtain air bag module RH	If the side curtain air bag RH has deployed: REPLACE the side curtain air bag module RH. Install with new fasteners.	
Front side air bag module LH	If the front side air bag LH has deployed: REPLACE front seatback assembly LH.	
Front side air bag module RH	If the front side air bag RH has deployed: REPLACE front seatback assembly RH.	
Side air bag (satellite) sensor (LH or RH)	If any of the SRS components have deployed: REPLACE the side air bag (satellite) sensor on the collision side with new fasteners.	
Diagnosis sensor unit	If any of the SRS components have deployed: REPLACE the diagnosis sensor unit with new fasteners.	
Seat belt pre-tensioner assemblies (All applicable locations: buckle, retractor, lap outer)	If either the driver or passenger seat belt pre-tensioner* has been activated: REPLACE all seat belt pre-tensioner assemblies with new fasteners. *: Confirm seat belt pre-tensioner activation using CONSULT only.	
Center inner pillar	<ol> <li>Check the center inner pillar on the collision side for damage (dents, cracks, deformation).</li> <li>If damaged—REPAIR the center inner pillar.</li> </ol>	
Seat (if equipped with front side air bag)	If either the front LH or front RH side air bag modules has been deployed: REPLACE front seatback assembly on the deployed side.	S
Trim/headlining	<ol> <li>Check for visible signs of damage (dents, cracks, deformation) of the interior trim on the collision side.</li> <li>If damaged—REPLACE the damaged trim parts.</li> </ol>	
Door-mounted curtain air bag module LH	If the door-mounted curtain air bag module LH has been deployed: REPLACE the door finisher LH and door-mounted curtain air bag module. Install with new fasteners.	
Door-mounted curtain air bag module RH	If the door-mounted curtain air bag module RH has been deployed: REPLACE the door finisher RH and door-mounted curtain air bag module. Install with new fasteners.	
Pop-up roll bar assemblies	If the pop-up roll bar has deployed: REPLACE pop-up roll bar assemblies and pop-up roll bar covers. Install with new fasteners.	

## FOR SIDE AND ROLLOVER COLLISION: When SRS is not activated in a collision **CAUTION:**

Due to varying models and option levels, not all parts listed in the chart below apply to all vehicles.

### WORK PROCEDURE

- Before performing any of the following steps, ensure that all vehicle body and structural repairs have been completed.
- Check the SRS components and the related parts using the following table.
- If the front seat back assembly is damaged, the front seat back assembly must be replaced.
- If the door finisher assembly is damaged, the door finisher assembly and door-mounted curtain air bag module must be replaced.
- 3. Perform self-diagnosis using CONSULT and "AIR BAG" warning lamp. Refer to SRC-12, "SRS Operation Check" for details. Make sure entire SRS operates properly.
- 4. After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRC-14, "Self-Diagnosis Function (Without CONSULT)".

SRS INSPECTION (FOR SIDE AND ROLLOVER COLLISION)

## < REMOVAL AND INSTALLATION >

Part	Inspection
Side curtain air bag module LH	<ol> <li>If the side curtain air bag LH has NOT deployed:</li> <li>Check for visible signs of damage (dents, tears, deformation) of the center pillar on the collision side.</li> <li>If damaged—Remove the side curtain air bag module LH.</li> <li>Check for visible signs of damage (tears etc.) of the side curtain air bag module LH.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> <li>If no damage is found, reinstall the side curtain air bag module LH with new fasteners.</li> <li>If damaged—REPLACE the side curtain air bag module LH with new fasteners.</li> </ol>
Side curtain air bag module RH	<ol> <li>If the side curtain air bag RH has NOT deployed:</li> <li>Check for visible signs of damage (dents, tears, deformation) of the center pillar on the collision side.</li> <li>If damaged—Remove the side curtain air bag module RH.</li> <li>Check for visible signs of damage (tears etc.) of the side curtain air bag module RH.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> <li>If no damage is found, reinstall the side curtain air bag module RH with new fasteners.</li> <li>If damaged—REPLACE the side curtain air bag module RH with new fasteners.</li> </ol>
Front side air bag module LH	If the front LH side air bag has NOT deployed:  Check for visible signs of damage (dents, tears, deformation) of the seat back on the collision side.  Check harness and connectors for damage, and terminals for deformities.  If damaged—REPLACE the front seatback assembly LH.
Front side air bag module RH	<ol> <li>If the front side air bag RH has NOT deployed:</li> <li>Check for visible signs of damage (dents, tears, deformation) of the seat back on the collision side.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> <li>If damaged—REPLACE the front seatback assembly RH.</li> </ol>
Side air bag (satellite) sensor (LH or RH)	<ol> <li>If none of the SRS components have been activated:</li> <li>Remove the side air bag (satellite) sensor (LH or RH) on the collision side. Check harness connectors for damage, terminals for deformities, and harness for binding.</li> <li>Check for visible signs of damage (dents, cracks, deformation) of the side air bag (satellite) sensor (LH or RH).</li> <li>Install the side air bag (satellite) sensor (LH or RH) to check fit.</li> <li>If no damage is found, reinstall the side sir bag (satellite) sensor (LH or RH) with new fasteners.</li> <li>If damaged—REPLACE the side air bag (satellite) sensor (LH or RH) with new fasteners.</li> </ol>
Diagnosis sensor unit	If none of the SRS components have been activated:  1. Check case and bracket for dents, cracks or deformities.  2. Check connectors for damage, and terminals for deformities.  3. If no damage is found, reinstall the diagnosis sensor unit with new fasteners.  4. If damaged—REPLACE the diagnosis sensor unit with new fasteners.
Seat belt pre-tensioner assemblies (All applicable locations: buckle, retractor, lap outer)	<ol> <li>If the pre-tensioners have NOT been activated:</li> <li>Remove seat belt pre-tensioners.         Check harness cover and connectors for damage, terminals for deformities, and harness for binding.</li> <li>Check belts for damage and anchors for loose mounting.</li> <li>Check retractor for smooth operation.</li> <li>Check seat belt adjuster for damage.</li> <li>Check for deformities of the center pillar inner.</li> <li>If the center pillar inner has no damage, REPLACE the seat belt pre-tensioner assembly.</li> <li>If odamaged—REPLACE. Install the seat belt pre-tensioners with new fasteners.</li> </ol>
Seat (with front side air bag)	If the front LH or front RH side air bag modules have NOT deployed:  1. Visually check the seat on the collision side.  2. Remove the seat on the collision side and check the following for damage and deformities.  - Harness, connectors and terminals  - Frame and recliner (for front and rear seat), and also adjuster and slides (for front seat)  3. If no damage is found, reinstall the seat.  4. If damaged—REPLACE the damaged seat parts using new fasteners. If the front seat back is damaged, the front seat back assembly must be replaced.

## < REMOVAL AND INSTALLATION >

Part	Inspection
Center inner pillar	<ol> <li>Check the center inner pillar on the collision side for damage (dents, cracks, deformation, etc.).</li> <li>If damaged - REPAIR the center inner pillar.</li> </ol>
Trim/headlining	<ol> <li>Check for visible signs of damage (dents, cracks, deformation, etc.) of the interior trim on the collision side.</li> <li>If damaged - REPLACE the damaged trim parts.</li> </ol>
	If the door-mounted curtain air bag LH has NOT deployed:  1. Check for visible signs of damage (dents, tears, deformation, etc.) of the door finisher on the collision side.
Door-mounted curtain air bag module LH	<ol> <li>If damaged - REPLACE the door finisher LH with new fasteners.</li> <li>Check for visible signs of damage (tears etc.) of the door-mounted curtain air bag module LH.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> <li>If no damage is found, reinstall door finisher.</li> </ol>
	CAUTION: When removing door mounted curtain air bag module from door finisher, never reuse door finisher.
	<ol><li>If damaged - REPLACE the door finisher LH and door-mounted curtain air bag module LH with new fasteners.</li></ol>
	If the door-mounted curtain air bag RH has NOT deployed:  1. Check for visible signs of damage (dents, tears, deformation, etc.) of the door finisher on the collision side.
Door-mounted curtain air bag	<ol> <li>If damaged - REPLACE the door finisher RH with new fasteners.</li> <li>Check for visible signs of damage (tears etc.) of the door-mounted curtain air bag module RH.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> </ol>
module RH	<ol><li>If no damage is found, reinstall door finisher.</li><li>CAUTION:</li></ol>
	When removing door mounted curtain air bag module from door finisher, never reuse door finisher.
	6. If damaged - REPLACE the door finisher RH and door-mounted curtain air bag module RH with new fasteners.
	If the pop-up roll bar NOT deployed:  1. Check for visible signs of damage (dents, tears, deformation, etc.) of the pop-up roll bar.
Pop-up roll bar	<ol> <li>If damaged - REPLACE the pop-up roll bar with new fasteners.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> <li>If no damage is found, reinstall the pop-up roll bar with new fasteners.</li> </ol>
	5. Check for visible signs of damage (dents, cracks, deformation, etc.) of the seatback support brace assembly.
	If damaged - REPAIR the seatback support brace assembly.

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