# SECTION SRS SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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#### **PRECAUTIONS**

PRECAUTIONS PFP:00001

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

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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 SRS 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 SRS 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 for SRS "AIR BAG" and "SEAT BELT PRE-TENSIONER" Service

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- 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 pre-tensioner to deploy. Therefore, do not work on any SRS connectors or wires until at least 3 minutes have passed.
- The air bag diagnosis sensor unit must always be installed with the arrow mark "←" pointing toward the
  front of the vehicle for proper operation. Also check air bag 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 attempt to turn steering wheel or 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.

# **Occupant Classification System Precaution**

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Replace control unit and passenger front seat cushion as an assembly.

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### **PREPARATION**

# PREPARATION PFP:00002

# **Special Service Tools**

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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	ERS210	Removing and installing air bag lock

PFP:28556

FHS0025X

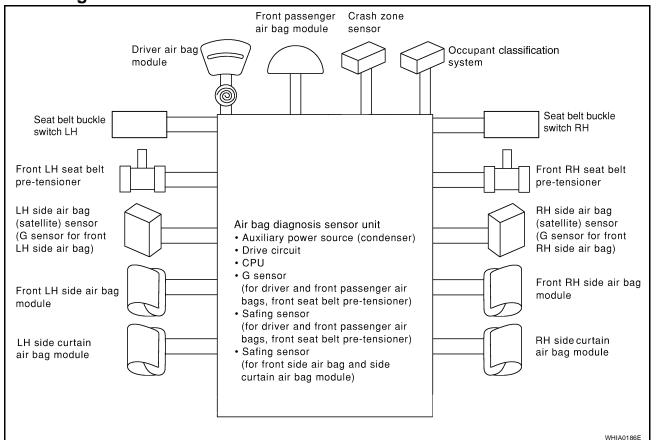
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# SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS Configuration Front passenger Crash zone



The air bag deploys if the air bag diagnosis sensor unit is activated while the ignition switch is in the ON or START position.

The collision modes for which supplemental restraint systems are activated are different among the SRS systems. For example, the driver air bag module, front passenger air bag module and front seat belt pre-tensioners are activated in a frontal collision but not in a side collision.

SRS configurations for some collision modes are as follows:

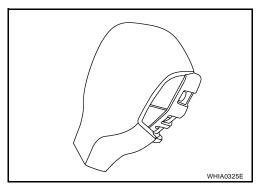
SRS configuration	Frontal collision	Left side collision	Right side collision
Driver air bag module	×	_	_
Front passenger air bag module	×	_	_
Front LH seat belt pre-tensioner	×	_	_
Front RH seat belt pre-tensioner	×	_	_
Front LH side air bag module	_	×	_
Front RH side air bag module	_	_	×
LH side curtain air bag module	_	×	_
RH side curtain air bag module	_	_	×

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# **Driver Air Bag Module**

EHS0025Y

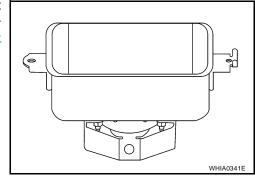
The driver air bag module is dual stage and located in the steering wheel assembly. It operates with the SRS system in a frontal collision exceeding a specified level.



# Front Passenger Air Bag Module

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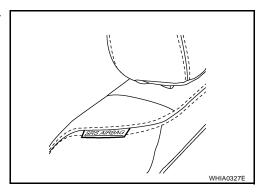
The front passenger air bag module is located behind the instrument panel assembly. It operates with the SRS system in a frontal collision exceeding a specified level. Refer to <a href="SRS-7">SRS-7</a>, "Occupant Classification System (OCS)" for more information.



# **Front Side Air Bag**

EHS00260

Front side air bag modules are built into the front seatback assemblies. Vehicles with side air bags are equipped with labels as shown.



# Side Curtain Air Bag

EHS00261

Side curtain air bag modules are located above the vehicle headlining and run from the front to the rear of the vehicle. Vehicles with side curtain air bags are equipped with labels as shown.

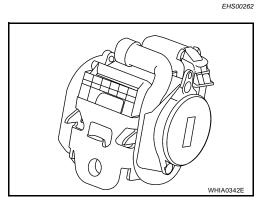


#### Front Seat Belt Pre-tensioner with Load Limiter

The seat belt pre-tensioner system with load limiter is installed for both the driver's seat and the front passenger's seat. It operates simultaneously with the SRS air bag system in the event of a frontal collision with an impact exceeding a specified level.

When the frontal collision with an impact exceeding a specified level occurs, seat belt slack resulting from clothing or other factors is immediately taken up by the pre-tensioner. Vehicle passengers are securely restrained.

When passengers in a vehicle are thrown forward in a collision and the restraining force of the seat belt exceeds a specified level, the load limiter permits the specified extension of the seat belt by the twisting of the ELR shaft, and a relaxation of the chest-area seat belt web tension while maintaining force.



# **Occupant Classification System (OCS)**

The occupant classification system (OCS) identifies different size occupants, out of position occupants, and detects if child seat is present in the front passenger seat. The OCS receives inputs from the occupant classification system sensor (located under the passenger seat cushion assembly) and belt tension sensor (part of the passenger front seat belt assembly and located at the belt anchor location). Depending on classification of the passenger, the OCS sends a signal to the air bag diagnosis sensor unit. The air bag diagnosis sensor unit uses this signal and the seat belt buckle switch RH signal to determine deployment or non deployment of the front passenger air bag module in the event of a collision. Depending on the signals received, the air bag diagnosis sensor unit can disable the front passenger air bag module completely.

#### NOTE:

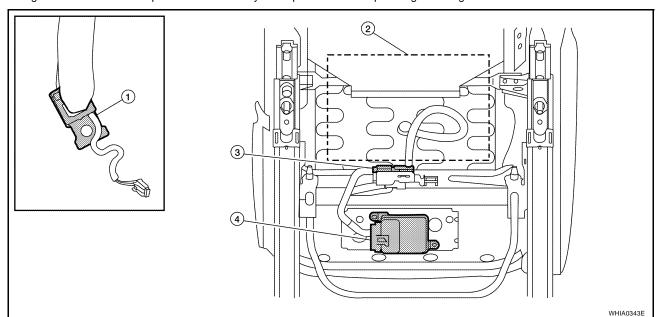
In case of customer concern, CONSULT-III can be used to confirm the passenger air bag status (readiness).

#### **Passenger Air Bag Status Conditions**

Front Passenger Seat (Condition)	PASS AIR BAG OFF Indicator (Status)	Passenger Air Bag Status (Readiness)	CONSULT-III Display
Seat occupied	OFF	Active (enabled)	ON
Seat occupied NOTE	ON	Deactivated (disabled)	OFF
Seat empty	OFF	Deactivated (disabled)	OFF

#### NOTE:

Passenger does not meet Occupant Classification System specifications for passenger air bag activation.



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- 1. Belt tension sensor
- Occupant classification system bladder
- 3. Occupant classification system sensor

Occupant classification system control unit

# **Direct-connect SRS Component Connectors**

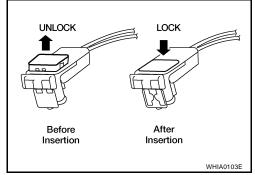
EHS00264

The following SRS components use direct-connect style harness connectors.

- Driver air bag module
- Passenger air bag module
- LH side curtain air bag module
- RH side curtain air bag module
- Front LH seat belt pre-tensioner
- Front RH seat belt pre-tensioner

Always pull up to release the locking tab prior to removing connector from SRS component.

Always push down to lock the locking tab after installing connector to SRS component. When locked, the locking tab is level with the connector housing.



#### **TROUBLE DIAGNOSIS**

PFP:00004

#### **Trouble Diagnosis Introduction**

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#### **CAUTION:**

- Do not use electrical test equipment on any circuit related to the SRS unless instructed to do so in this Service Manual.
- Do not attempt to repair, splice or modify SRS wiring harnesses. If a harness is damaged, replace
  it with a new one.
- Keep ground connections clean.

#### **DIAGNOSIS FUNCTION**

The SRS self-diagnosis results can be read by using "AIR BAG" warning lamp and/or CONSULT-III.

The User mode is exclusively prepared for the customer (driver). This mode warns the driver of a system malfunction through the operation of the "AIR BAG" warning lamp.

The Diagnosis mode allows the technician to locate and inspect the malfunctioning part.

The mode applications for the "AIR BAG" warning lamp and CONSULT-III are as follows:

	User mode	Diagnosis mode	Display type
"AIR BAG" warning lamp	X	X	ON-OFF operation
CONSULT-III	_	X	Monitoring

#### HOW TO PERFORM TROUBLE DIAGNOSES FOR QUICK AND ACCURATE REPAIR

A good understanding of the malfunction conditions can make troubleshooting faster and more accurate. In general, each customer feels differently about a malfunction. It is important to fully understand the symptoms or conditions for a customer complaint.

#### **Information From Customer**

WHAT - Vehicle model

WHEN - Date, Frequencies

WHERE - Road conditions

**HOW** - Operating conditions, Symptoms

#### **Preliminary Check**

Check that the following parts are in good order.

- Battery (Refer to <u>SC-4, "How to Handle Battery"</u>.)
- Fuses (Refer to SRS-12, "Schematic" .)
- System component-to-harness connections

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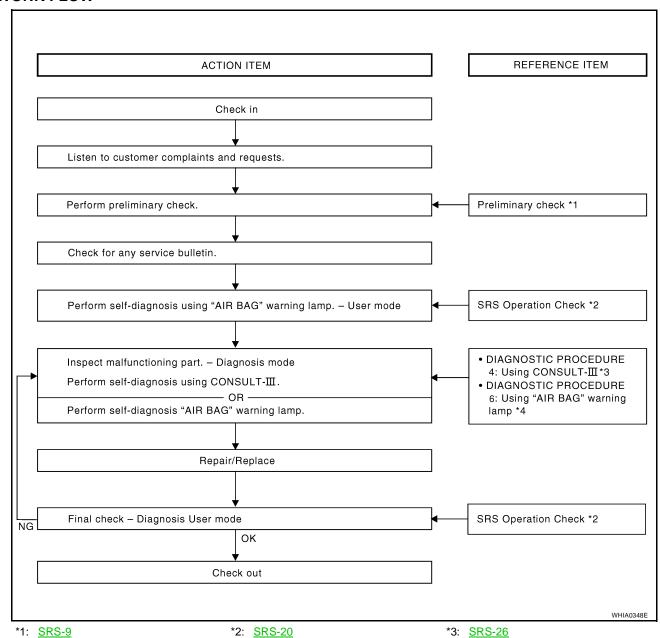
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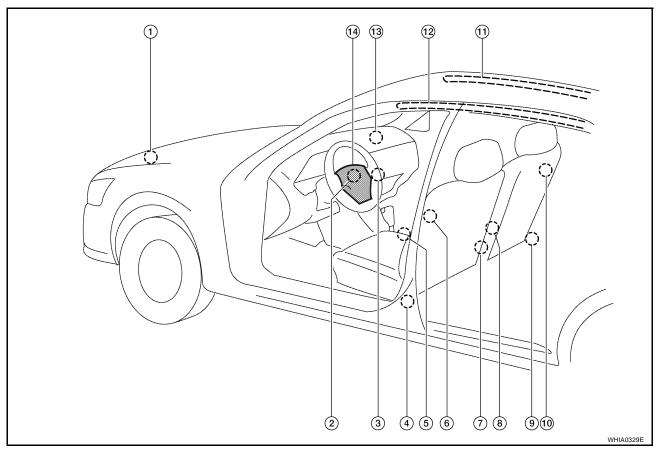
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#### **WORK FLOW**



\*4: <u>SRS-27</u>

# **SRS Components Parts Location**



- 1. Crash zone sensor
- 4. Front LH seat belt pre-tensioner LH side air bag (satellite) sensor
- Seat belt buckle switch (LH) Seat belt buckle switch (RH)
- 10. Front RH side air bag module
- 13. Front passenger air bag module
- 2. Spiral cable
- 5. Air bag diagnosis sensor unit
- Occupant classification system control unit Occupant classification system sensor
- 11. RH side curtain air bag module
- 14. Driver air bag module

- 3. Front passenger air bag off indicator
- 6. Front LH side air bag module
  - Front RH seat belt pre-tensioner RH side air bag (satellite) sensor Belt tension sensor
- 12. LH side curtain air bag module

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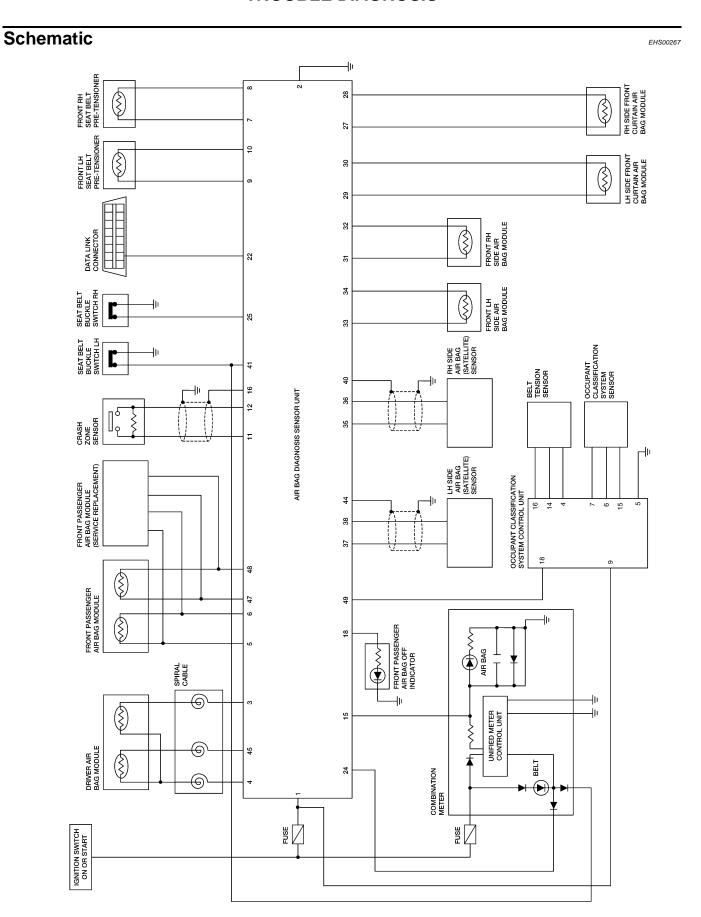
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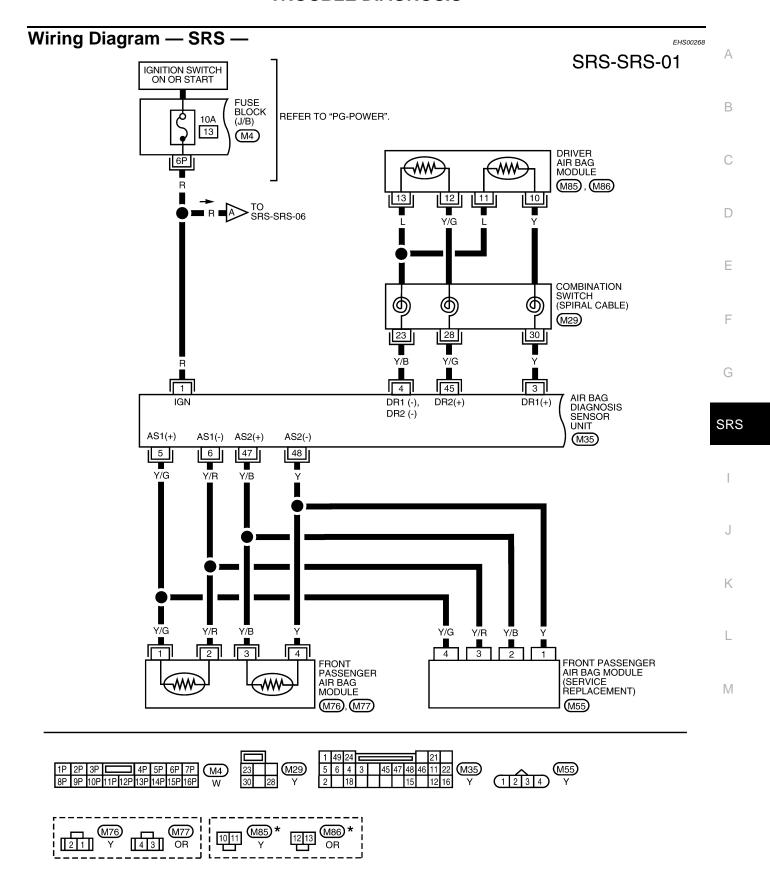
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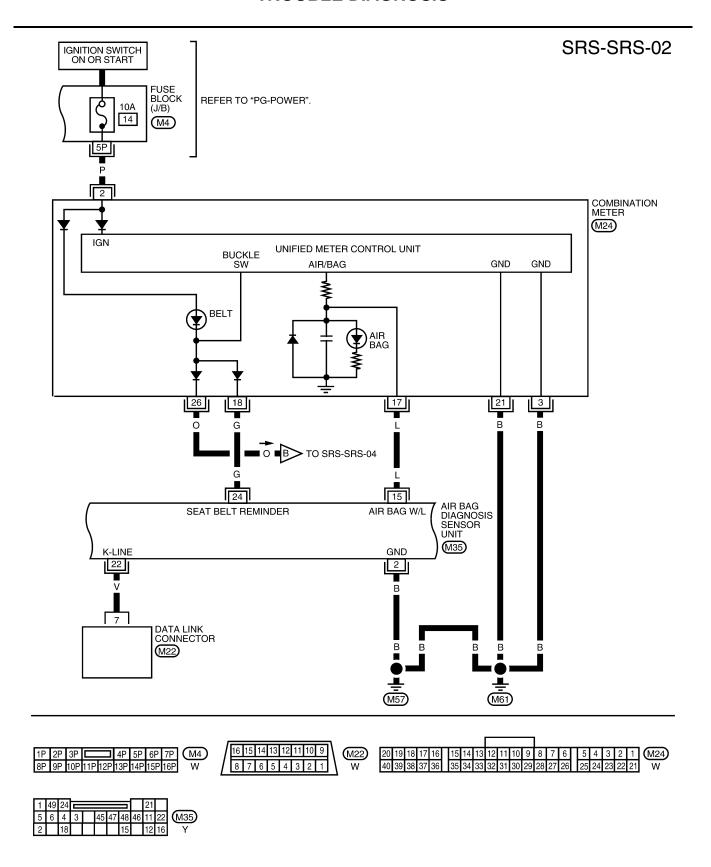




\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

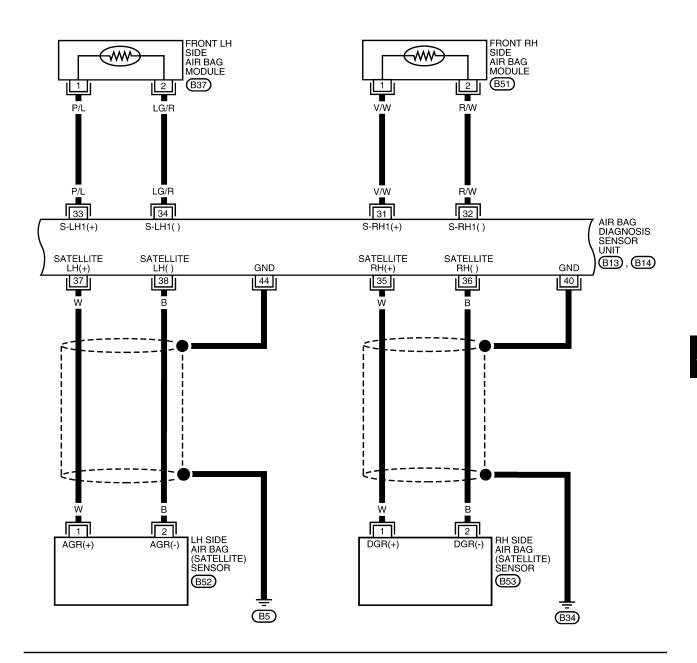
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# SRS-SRS-03





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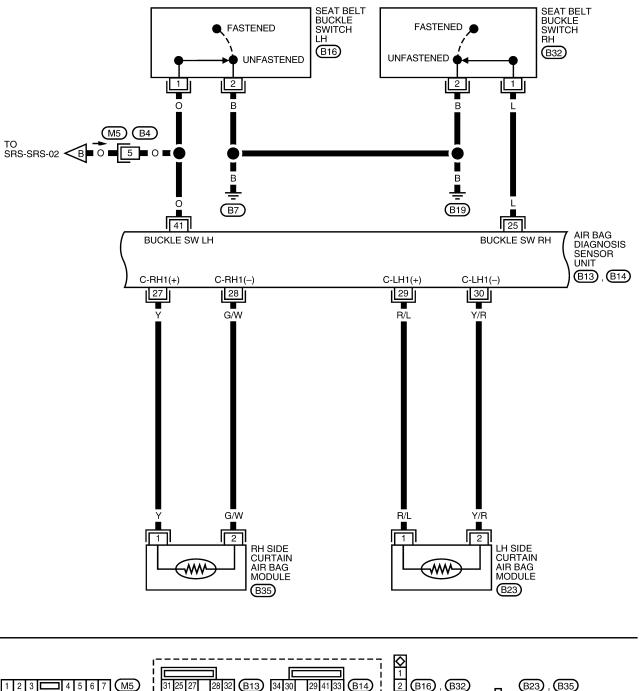
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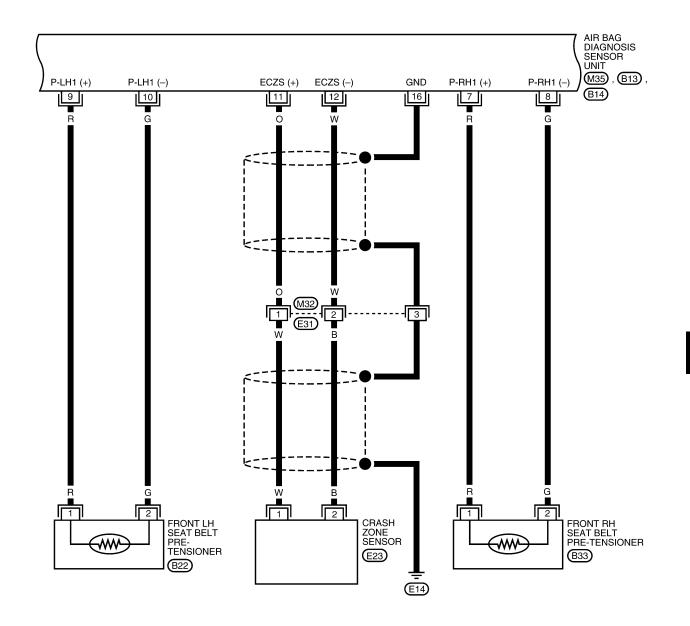
# SRS-SRS-04

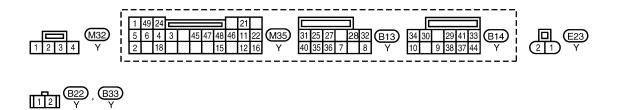




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# SRS-SRS-05





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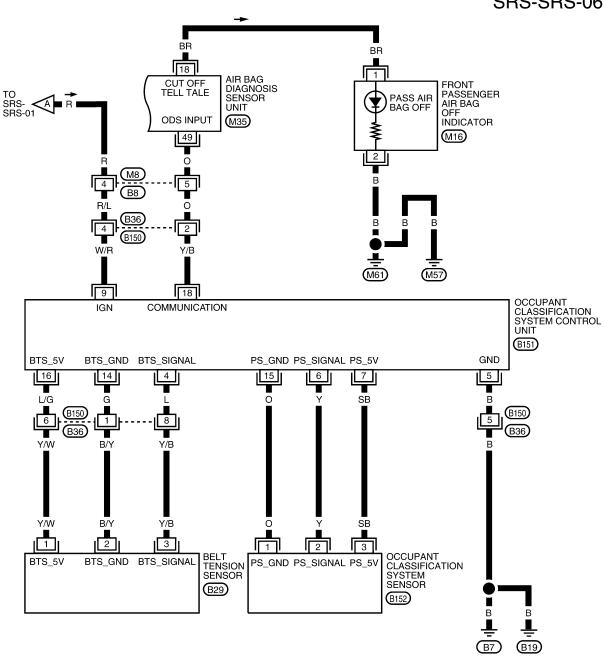
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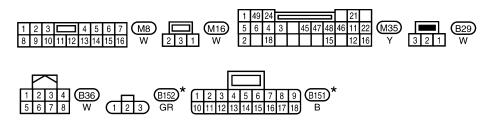
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\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

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### **CONSULT-III Function (AIR BAG)**

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CONSULT-III can display each diagnostic item using the diagnostic test modes shown following.

AIR BAG diagnostic mode	Description
SELF-DIAG [CURRENT]	A current Self-diagnosis result is displayed on the CONSULT-III screen in real time. This refers to a malfunctioning part requiring replacement.
SELF-DIAG [PAST]	Diagnosis results previously stored in the memory are displayed on the CONSULT-III screen. The stored results will remain until the memory is erased.
TROUBLE DIAG RECORD	With TROUBLE DIAG RECORD, diagnosis results previously erased by a reset operation can be displayed on the CONSULT-III screen.
ECU DISCRIMINATED NO.	The air bag diagnosis sensor unit for each vehicle model is assigned with its own, individual classification number. This number will be displayed on the CONSULT-III screen, as shown. When replacing the air bag diagnosis sensor unit, refer to the part number for the compatibility. After installation, replacement with a correct unit can be checked by confirming this classification number on the CONSULT-III screen.  The air bag diagnosis sensor unit discriminated number assigned is F668.
PASSENGER AIR BAG	The STATUS (readiness) of the front passenger air bag module is displayed. The STATUS displayed (ON/OFF) depends on the signals supplied to the occupant classification system control module and air bag diagnosis sensor unit. Refer to <a href="SRS-7">SRS-7</a> , "Occupant Classification System (OCS)" for more information.

# HOW TO CHANGE BETWEEN SELF-DIAGNOSIS MODE AND USER MODE WITH CONSULT-III From User Mode to Diagnosis Mode

After selecting "AIR BAG", user mode automatically changes to Diagnosis mode.

#### From Diagnosis Mode to User Mode

To return to User mode from Diagnosis mode, touch "BACK" on CONSULT-III screen. Diagnosis mode automatically changes to User mode.

#### **HOW TO ERASE SELF-DIAGNOSIS RESULTS**

#### NOTE:

If the memory in "SELF-DIAG [PAST]" is not erased, User mode will continue to show the system malfunction by the operation of the warning lamp even if the malfunction is repaired completely.

- "SELF-DIAG [CURRENT]"
  - A current self-diagnosis result is displayed on the CONSULT-III screen in real time. After the malfunction is repaired completely, no malfunction is detected on "SELF-DIAG [CURRENT]".
- "SELF-DIAG [PAST]"
  - Return to the "SELF-DIAG [CURRENT]" CONSULT-III screen and select "SELF-DIAG [CURRENT]". Touch "ERASE" in "SELF-DIAG [CURRENT]" mode.
- "TROUBLE DIAG RECORD"
   The memory of "TROUBLE DIAG RECORD" cannot be erased.

# **Self-Diagnosis Function (Without CONSULT-III)**

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The reading of these results is accomplished using one of two modes — "User mode" and "Diagnosis mode".

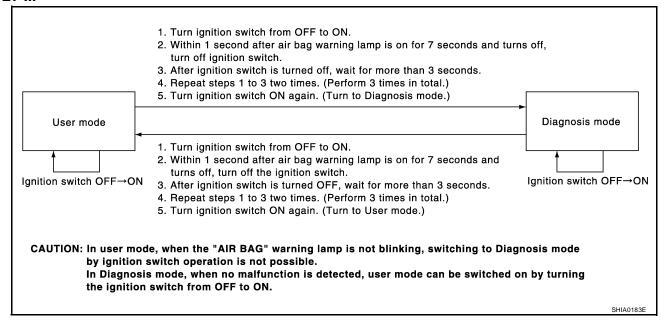
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# HOW TO CHANGE BETWEEN USER MODE AND SELF-DIAGNOSIS MODE WITHOUT CONSULT-III



#### **HOW TO ERASE SELF-DIAGNOSIS RESULTS**

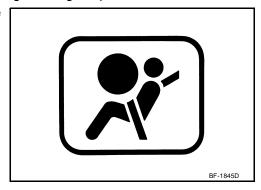
After a malfunction is repaired, turn the ignition switch OFF for at least one second, then back ON. Diagnosis mode returns to the User mode. At that time, the self-diagnostic result is cleared.

# SRS Operation Check DIAGNOSTIC PROCEDURE 1

EHS0026B

#### Checking SRS Operation Using "AIR BAG" Warning Lamp—User Mode

- 1. Turn the ignition switch from OFF to ON, and check that the air bag warning lamp blinks.
- 2. Compare the SRS air bag warning lamp blinking pattern with the examples.



AIR BAG" warning lamp operation-User mode-	SRS condition	Reference item
OFF 7 sec.	<ul> <li>No malfunction is detected.</li> <li>No further action is necessary.</li> </ul>	
OFF 7 sec. 0.5 sec. 0.5 sec. SHIA0012E	The system is malfunctioning and needs to be repaired as indicated.	Go to SRS-22, "DIAGNOSTIC PROCEDURE 2" with CONSULT-III or SRS-27, "DIAGNOSTIC PROCEDURE 6" without CONSULT-III.
	Air bag is deployed.	Go to SRS-50, "COLLISION DIAG-
JGN ON OFF SHIA0013E	<ul> <li>Seat belt pre-tensioner is deployed.</li> <li>Air bag diagnosis sensor unit is malfunctioning.</li> <li>Air bag power supply circuit is malfunctioning.</li> <li>Air bag warning lamp circuit is malfunctioning.</li> </ul>	Go to SRS-32, "Trouble Diagnosis:  "AIR BAG" Warning Lamp Does Not Turn Off"
IGN ON  DFF	<ul> <li>Air bag diagnosis sensor unit is malfunctioning.</li> <li>Air bag warning lamp circuit is malfunctioning.</li> </ul>	Go to SRS-33, "Trouble Diagnosis: "AIR BAG" Warning Lamp Does Not Turn On".

# Trouble Diagnosis With CONSULT-III DIAGNOSTIC PROCEDURE 2

EHS0026C

Diagnostic code is displayed on "SELF-DIAG [CURRENT]".

If no malfunction is detected on "SELF-DIAG [CURRENT]", but malfunction is detected in "SRS Operation Check", the following cases may exist:

- "SELF-DIAG [PAST]" memory might not be erased.
- The SRS system malfunctions intermittently.

Refer to SRS-26, "DIAGNOSTIC PROCEDURE 4"

#### **CONSULT-III Diagnostic Code Chart**

Diagnostic item		Explanation	Repair order Recheck SRS at each replacement
	Malfunction is indi- cated by the "AIR	Low battery voltage (Less than 9V)	1. Go to SC-4, "BATTERY"  2. Go to SRS-25, "DIAGNOSTIC PROCEDURE 3".
NO DTC IS DETECTED	BAG" warning lamp in User mode.	"SELF-DIAG [PAST]" memory might not be erased.	Go to SRS-26, "DIAGNOSTIC PRO- CEDURE 4"
		Intermittent malfunction has been detected in the past.	Go to SRS-26, "DIAGNOSTIC PRO- CEDURE 5" .
	No malfunction is dete	cted in User mode.	_
DRIVER AIRBAG MODULE [OPEN]	Driver air bag module (cable).	circuit is open (including the spiral	Visually check the wiring harness connection.
[B1049] or [B1054] DRIVER AIRBAG MODULE	Driver air bag module o	circuit is shorted to some power supply	2. Replace the harness if it has visible damage.
[VB-SHORT]	circuit (including the sp	iral cable).	3. Replace driver air bag module.
[B1050] or [B1055]			4. Replace the spiral cable.
DRIVER AIRBAG MODULE [GND-SHORT] [B1051] or [B1056]	Driver air bag module circuit is shorted to ground (including the spiral cable).		Replace the air bag diagnosis sensor unit.
DRIVER AIRBAG MODULE [SHORT] [B1052] or [B1057]	Driver air bag module o	circuits are shorted to each other.	6. Replace the related harness.
ASSIST A/B MODULE [OPEN]	Front passenger air bag module circuit is open.		Visually check the wiring harness connection.
[B1065] or [B1070]			2. Replace the harness if it has visible
ASSIST A/B MODULE [VB-SHORT] [B1066] or [B1071]	Front passenger air bag module circuit is shorted to some power supply circuit.		damage.  3. Replace front passenger air bag module.
ASSIST A/B MODULE [GND-SHORT]	Front passenger air bag module circuit is shorted to ground.		Replace the air bag diagnosis sensor unit.
[B1067] or [B1072]  ASSIST A/B MODULE [SHORT]	Front passenger air bag module circuits are shorted to each other.		5. Replace the related harness.
[B1068] or [B1073]	Crash zone sensor		Visually check the wiring harness
CRASH ZONE SEN			connection.
[UNIT FAIL] [B1033] or [B1034]			Replace the harness if it has visible damage.
CRASH ZONE SEN			3. Replace the crash zone sensor.
[COMM FAIL] [B1035]			Replace the air bag diagnosis sensor unit.
			5. Replace the related harness.

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
SIDE MODULE LH [OPEN]	Front LH side air bag module circuit is open.	Visually check the wiring harness connection.
[B1134] SIDE MODULE LH	Front LH side air bag module circuit is shorted to some power	2. Replace the harness if it has visible damage.
[VB-SHORT] [B1135]	supply circuit.	Replace front LH seat back assembly (front LH side air bag module).
SIDE MODULE LH [GND-SHORT] [B1136]	Front LH side air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sensor unit.
SIDE MODULE LH [SHORT] [B1137]	Front LH side air bag module circuits are shorted to each other.	5. Replace the related harness.
SIDE MODULE RH [OPEN] [B1129]	Front RH side air bag module circuit is open.	Visually check the wiring harness connection.
SIDE MODULE RH	Front RH side air bag module circuit is shorted to some	2. Replace the harness if it has visible damage.
[VB-SHORT] [B1130]	power supply circuit.	Replace front RH seat back assembly (front RH side air bag module).
SIDE MODULE RH [GND-SHORT]	Front RH side air bag module circuit is shorted to ground.	Replace the air bag diagnosis sensor unit.
[B1131]	Front Dilloide side or module significance shorted to see	5. Replace the related harness.
SIDE MODULE RH [SHORT] [B1132]	Front RH side air bag module circuits are shorted to each other.	
	LH side air bag (satellite) sensor	Visually check the wiring harness connection.
SATELLITE SENS LH [UNIT FAIL]		Replace the harness if it has visible damage.
[B1118] or [B1119] SATELLITE SENS LH [COMM FAIL]		3. Replace the LH side air bag (satellite) sensor.
[B1120]		Replace the air bag diagnosis sensor unit.
		5. Replace the related harness.
CATELLITE OFNO DIL	RH side air bag (satellite) sensor	Visually check the wiring harness connection.
SATELLITE SENS RH [UNIT FAIL] [B1113] or [B1114]		2. Replace the harness if it has visible damage.
SATELLITE SENS RH [COMM FAIL]		3. Replace the RH side air bag (satellite) sensor.
[B1115]		Replace the air bag diagnosis sensor unit.
		5. Replace the related harness.
PRE-TEN FRONT LH [OPEN]	The circuit for front LH seat belt pre-tensioner is open.	Visually check the wiring harness connections.
[B1086] PRE-TEN FRONT LH	The circuit for front I H coat helt are tensioner in shorted to	2. Replace the harness if it has visible damage.
[VB-SHORT] [B1087]	The circuit for front LH seat belt pre-tensioner is shorted to some power supply circuit.	Replace front LH seat belt pre-tensioner.
PRE-TEN FRONT LH [GND-SHORT] [B1088]	The circuit for front LH seat belt pre-tensioner is shorted to ground.	Replace the air bag diagnosis sensor unit.      Replace the related barrees.
PRE-TEN FRONT LH [SHORT] [B1089]	The circuits for the front LH seat belt pre-tensioner are shorted to each other.	5. Replace the related harness.

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
PRE-TEN FRONT RH [OPEN] [B1081]	The circuit for front RH seat belt pre-tensioner is open.	Visually check the wiring harness connections.      Replace the harness if it has visible.
PRE-TEN FRONT RH [VB-SHORT]	The circuit for front RH seat belt pre-tensioner is shorted to some power supply circuit.	Replace the harness if it has visible damage.      Replace front RH seat belt pre-ten-
[B1082]		sioner.
PRE-TEN FRONT RH [GND-SHORT] [B1083]	The circuit for front RH seat belt pre-tensioner is shorted to ground.	<ul><li>4. Replace the air bag diagnosis sensor unit.</li><li>5. Replace the related harness.</li></ul>
PRE-TEN FRONT RH [SHORT] [B1084]	The circuits for the front RH seat belt pre-tensioner are shorted to each other.	
CURTAIN MODULE LH [OPEN] [B1150]	The LH side curtain air bag module circuit is open.	Visually check the wiring harness connection.     Replace the harness if it has visible
CURTAIN MODULE LH [VB-SHORT] [B1151]	The LH side curtain air bag module circuit is shorted to some power supply circuits.	damage.  3. Replace LH side curtain air bag module.
CURTAIN MODULE LH [GND-SHORT] [B1152]	The LH side curtain air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sensor unit. 5. Replace the related harness.
CURTAIN MODULE LH [SHORT] [B1153]	The circuits for the LH side curtain air bag module are shorted to each other.	o. Nopiace the lotated names.
CURTAIN MODULE RH [OPEN] [B1145]	The RH side curtain air bag module circuit is open.	Visually check the wiring harness connection.     Replace the harness if it has visible
CURTAIN MODULE RH [VB-SHORT] [B1146]	The RH side curtain air bag module circuit is shorted to some power supply circuits.	damage.  3. Replace RH side curtain air bag module.
CURTAIN MODULE RH [GND-SHORT] [B1147]	The RH side curtain air bag module circuit is shorted to ground.	<ul><li>4. Replace the air bag diagnosis sensor unit.</li><li>5. Replace the related harness.</li></ul>
CURTAIN MODULE RH [SHORT] [B1148]	The circuits for the RH side curtain air bag module are shorted to each other.	
CONTROL UNIT	Air bag diagnosis sensor unit is malfunctioning.	Visually check the wiring harness connection.
[B1XXX]		2. Replace the air bag diagnosis sensor unit.
OCCUPANT SENS C/U [UNIT FAIL] [B1017], [B1020] or [B1021]	Occupant classification system is malfunctioning.	Replace RH front seat cushion/ occupant classification system con- trol unit assembly.
	Communication between the occupant classification system control unit and air bag diagnosis sensor unit is interrupted.	Visually check the wiring harness connection.
		Replace the harness if it has visible damage.
OCCUPANT SENS C/U [COMM FAIL] [B1022]		Replace RH front seat cushion/ occupant classification system con- trol unit assembly.
		Replace the air bag diagnosis sensor unit.
		5. Replace the related harness.
OCCUPANT SENS [UNIT FAIL] [B1018]	Occupant classification sensor is malfunctioning.	Replace RH front seat cushion/ occupant classification system con- trol unit assembly.

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
	Belt tension sensor is malfunctioning.	Visually check the wiring harness connection.
BELT TENSION SENS		2. Replace the harness if it has visible damage.
[UNIT FAIL] [B1019]		3. Replace RH front seat belt assembly.
		Replace RH front seat cushion/ occupant classification system con- trol unit assembly.
	Front passenger air bag off indicator is malfunctioning.	Visually check the wiring harness connection.
		Replace the harness if it has visible damage.
PASS A/B INDCTR CKT [B1023]		Replace front passenger air bag off indicator.
		4. Replace the air bag diagnosis sensor unit.
		5. Replace the related harness.
FRONTAL COLLISION DETECTION [B1209]	Driver and front passenger air bag modules are deployed.	Refer to SRS-50, "COLLISION DIAGNOSIS" .
SIDE COLLISION DETECTION [B1210]	Side or curtain air bag modules are deployed.	

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#### NOTE:

Follow the procedures in numerical order when performing repairs. Confirm whether the repair has been successful using air bag warning lamp or CONSULT-III after each repair. If malfunction is still observed, proceed to the next step. When malfunction has been eliminated, further repair work is not required.

#### **DIAGNOSTIC PROCEDURE 3**

#### Final Check of SRS Using CONSULT-III—Diagnosis Mode

If no DTC is detected on "SELF-DIAG [CURRENT]", repair of SRS is completed. Go to step 2. If any DTC is detected on "SELF-DIAG [CURRENT]", the malfunctioning part has not been repaired completely or another malfunctioning part is being detected. Go to SRS-22, "DIAGNOSTIC PROCEDURE 2".

2. Touch "ERASE".

#### NOTE:

Touch "ERASE" to clear the memory of the malfunction ("SELF-DIAG [PAST]").

If the memory of the malfunction in "SELF-DIAG [PAST]" is not erased, the User mode shows the system malfunction by the operation of the warning lamp even if the malfunction is repaired completely.

- Touch "BACK" on CONSULT-III screen. Touch "SELF-DIAG [PAST]".
- Check that no malfunction is detected on "SELF-DIAG [PAST]".
- Touch "BACK" on CONSULT-III screen to return to User mode from Diagnosis mode.
- Turn ignition switch OFF then turn off and disconnect CONSULT-III.
- Go to SRS-20, "Checking SRS Operation Using "AIR BAG" Warning Lamp—User Mode".

# DIAGNOSTIC PROCEDURE 4 Check SRS Repair History

# 1. CONSIDER POSSIBILITY THAT SELF-DIAGNOSTIC RESULT WAS NOT ERASED AFTER REPAIR

Check repair history of the SRS.

Have any previous repairs been made to the SRS?

Yes >> Self-diagnostic result "SELF-DIAG [PAST]" (previously stored in the memory) might not be erased after repair. Go to <a href="SRS-25">SRS-25</a>, "DIAGNOSTIC PROCEDURE 3"</a>.

No >> Go to <u>SRS-26</u>, "<u>DIAGNOSTIC PROCEDURE 5</u>".

#### **DIAGNOSTIC PROCEDURE 5**

#### Check SRS Intermittent Malfunction Using CONSULT-III—Diagnosis Mode

- If diagnostic codes are displayed on "SELF-DIAG [PAST]", go to step 4.
   If no malfunction is detected on "SELF-DIAG [PAST]" touch "BACK".
- 2. Touch "TROUBLE DIAG RECORD".

#### NOTE

With "TROUBLE DIAG RECORD", diagnosis results previously erased by a reset operation can be displayed.

- 3. Diagnostic code is displayed on "TROUBLE DIAG RECORD".
- 4. Write down information from "TROUBLE DIAG RECORD" screen.
- 5. Compare diagnostic codes to SRS-22, "CONSULT-III Diagnostic Code Chart".
- Touch "BACK" on CONSULT-III screen.
- 7. Turn ignition switch OFF, then turn off and disconnect CONSULT-III, and both battery cables.
- 8. Repair the system as outlined by the "Repair order" in "CONSULT-III Diagnostic Code Chart", that corresponds to the self-diagnostic result. For replacement procedure of component parts, refer to the Removal and Installation procedure for the appropriate component.
- 9. Go to SRS-25, "DIAGNOSTIC PROCEDURE 3", for final checking.

# **Trouble Diagnosis Without CONSULT-III** EHS0026D **DIAGNOSTIC PROCEDURE 6** Inspect SRS Malfunction Using "AIR BAG" Warning Lamp—Diagnosis Mode SRS will not enter Diagnosis mode if no malfunction is detected in User mode. 1. Turn ignition switch ON. 2. After "AIR BAG" warning lamp lights for 7 seconds, turn ignition switch OFF within 1 second. 3. Wait more than 3 seconds. 4. Repeat steps 1 to 3 two times. 5. Turn ignition switch ON. SRS is now in Diagnosis mode. "AIR BAG" warning lamp operates in Diagnosis mode according to the Warning Lamp Flash Code Chart: SRS

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#### WARNING LAMP FLASH CODE CHART

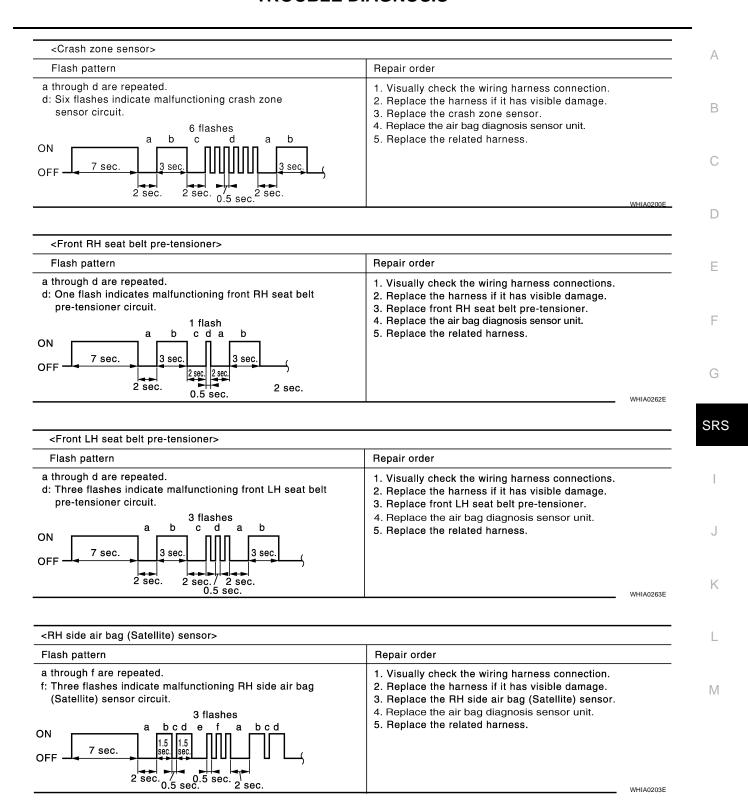
<Diagnosis results (previously stored in the memory) might not be erased after repair or intermittent malfunctions have been detected in the past.>

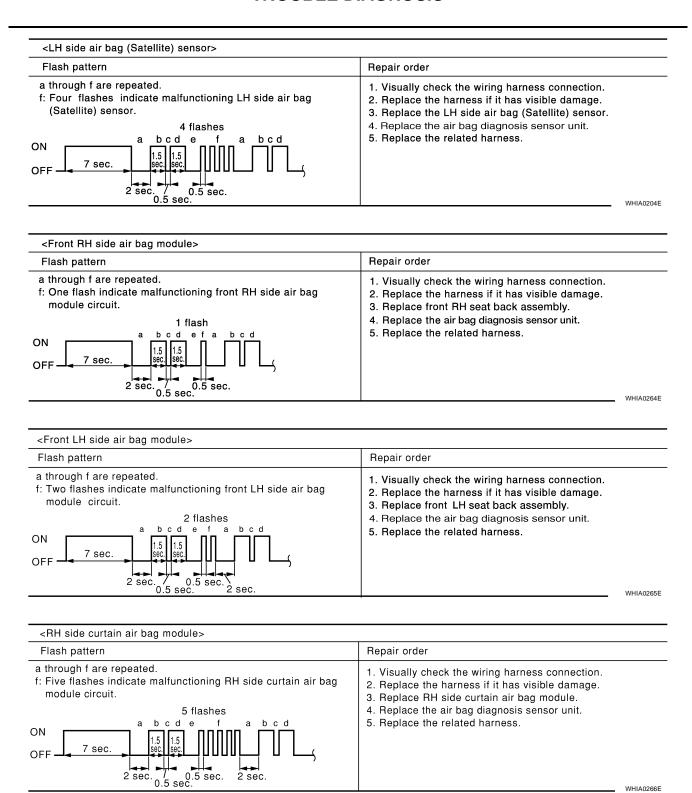
Flash pattern	Repair order
a through b are repeated.	1. Go to DIAGNOSTIC PROCEDURES 2 and 3.
ON a b a b a b a b a b a b a b a b a b a	SHIA0026E

<Driver air bag module> Flash pattern Repair order a through d are repeated. 1. Visually check the wiring harness connection. d: Two flashes indicate malfunctioning driver air bag 2. Replace the harness if it has visible damage. module circuits. 3. Replace the spiral cable. 4. Replace driver air bag module. 2 flashes 5. Replace the air bag diagnosis sensor unit. а ON 6. Replace the related harness. 7 sec 3 sec 2 sec. 2 sec. 0.5 sec WHIA0260E

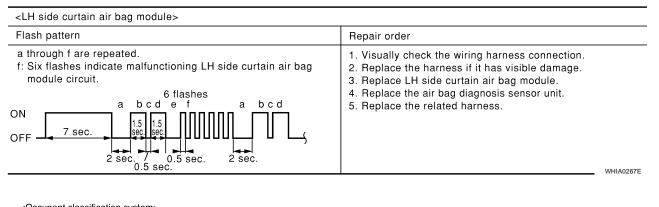
<Air bag diagnosis sensor unit> Flash pattern Repair order a through d are repeated. 1. Visually check the wiring harness connections. d: Seven flashes indicate malfunctioning diagnosis sensor unit 2. Replace the harness if it has visible damage. circuit. 3. Replace the air bag diagnosis sensor unit. 4. Replace the related harness. 7 flashes а b ON 3 sec 7 sec 2 sec. 2 sec. WHIA0198E

<Front passenger air bag module> Flash pattern Repair order a through d are repeated. 1. Visually check the wiring harness connection. d: Eight flashes indicate malfunctioning front passenger air bag 2. Replace the harness if it has visible damage. module circuit. 3. Replace front passenger air bag module. 4. Replace the air bag diagnosis sensor unit. 8 flashes 5. Replace the related harness. а b ON 2 sec. 2 sec 2 sec WHIA0261E





WHIA0266E



#### <Occupant classification system>

Flash pattern	Repair order
a through d are repeated. d: Five flashes indicate malfuntioning occupant classification system control unit.  5 flashes ON OFF 7 sec. 2 sec. 2 sec. 2 sec. 0 5 sec.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace the RH front seat cushion occupant classification system control unit assembly.</li> <li>Replace the air bag diagnosis sensor unit.</li> </ol>

WHIA0211E

#### <Front passenger air bag off indicator>

Flash pattern	Repair order
a through d are repeated. d:Eleven flashes indicate malfunctioning front passenger air bag off indicator.  ON  OFF  7 sec.  2 sec.  2 sec.  0.5 sec.	1. Visually check the wiring harness connection. 2. Replace the harness if it has visible damage. 3. Replace front passenger air bag off indicator. 4. Replace the air bag diagnosis sensor unit. 5. Replace the related harness.

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# Trouble Diagnosis: "AIR BAG" Warning Lamp Does Not Turn Off DIAGNOSTIC PROCEDURE 7

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# 1. CHECK CONDITION OF AIR BAG MODULE

Inspect for any deployed air bag modules or seat belt pre-tensioners.

Are any air bag modules or seat belt pre-tensioners deployed?

Yes >> Refer to <u>SRS-50</u>, "COLLISION DIAGNOSIS".

No >> GO TO 2.

# 2. CHECK THE AIR BAG FUSE

Check 10A fuse [No. 13, located in the fuse block (J/B)]. Refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT".

#### OK or NG

OK >> GO TO 4. NG >> GO TO 3.

# 3. Check air bag fuse again

Replace 10A fuse [No. 13, located in the fuse block (J/B)] and turn ignition switch ON.

Does the fuse blow again?

Yes >> Repair harness. No >> Inspection End.

# 4. CHECK AIR BAG DIAGNOSIS SENSOR UNIT

Connect CONSULT-III.

Is "AIR BAG" displayed on CONSULT-III?

Yes >> GO TO 5.

No >> Visually inspect the air bag diagnosis sensor unit harness connections. If the connections are OK, replace the air bag diagnosis sensor unit. Refer to SRS-47, "Removal and Installation".

### 5. CHECK HARNESS CONNECTION

Check for loose connections between the combination meter and the air bag diagnosis sensor unit. OK or NG

OK >> Replace air bag diagnosis sensor unit. Refer to <u>SRS-47</u>, "Removal and Installation".

NG >> Properly connect the combination meter and air bag diagnosis sensor unit harness connectors. If "AIR BAG" warning lamp still does not turn off, replace the wiring harness.

Troub DIAGN	e Diagnosis: "AIR BAG" Warning Lamp Does Not Turn On DSTIC PROCEDURE 8
1. сне	CK METER FUSE
	ne 10A fuse [No. 14, located in the fuse block (J/B)] . PG-4, "POWER SUPPLY ROUTING CIRCUIT" .
OK or N	
OK NG	>> GO TO 3. >> GO TO 2.
2. ref	LACE METER FUSE AND CHECK AGAIN
•	10A fuse [No. 14, located in the fuse block (J/B)] and turn ignition switch ON.
Yes	e fuse blow again? >> Replace harness.
No	>> Inspection End.
•	he harness and connectors between the air bag diagnosis sensor unit and the combination meter.  arness or connectors have any visible damage?  >> Replace harness.  >> GO TO 4.
4. сне	CK COMBINATION METER
	ect the air bag diagnosis sensor unit harness connectors and turn ignition switch ON. IR BAG" warning lamp turn on?
Yes No	>> Replace the air bag diagnosis sensor unit. Refer to <u>SRS-47, "Removal and Installation"</u> . >> Replace the combination meter. Refer to <u>IP-15, "COMBINATION METER"</u> .

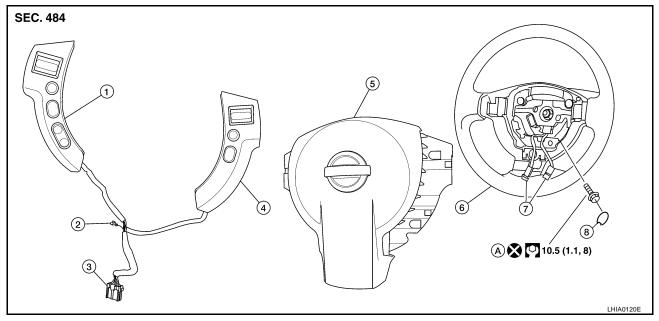
#### DRIVER AIR BAG MODULE

#### **DRIVER AIR BAG MODULE**

PFP:K8510

#### **Removal and Installation**

EHS0026G



- 1. Steering wheel switch LH
- 4. Steering wheel switch RH
- 7. Driver air bag module connectors
- 2. Horn connector
- 5. Driver air bag module
- 8. Cover

- 3. Spiral cable connector
- 6. Steering wheel
- A. Tamper proof bolt

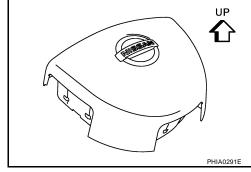
#### **REMOVAL**

#### **WARNING:**

- When servicing the SRS, do not work from directly in front of air bag module.
- Always place air bag module with pad side facing upward.

#### **CAUTION:**

- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables, then wait at least 3 minutes.
- Do not attempt to repair or replace damaged direct-connect SRS component connectors. If a driver air bag direct-connect harness connector is damaged, the spiral cable must be replaced.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or harness connectors.
- Do not disassemble air bag module.
- Do not expose the air bag module to temperatures exceeding 90°C (194°F).
- Replace the air bag module if it has been dropped or sustained an impact.
- Do not allow oil, grease or water to come in contact with the air bag module.

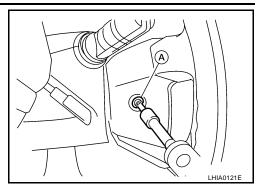




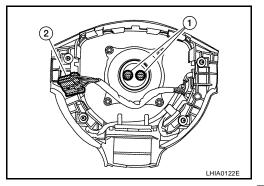
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Place the steering wheel in the straight ahead position.

#### DRIVER AIR BAG MODULE

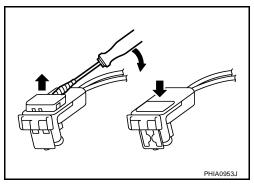
Remove the covers RH/LH and the driver air bag module tamper proof bolts RH/LH (A).



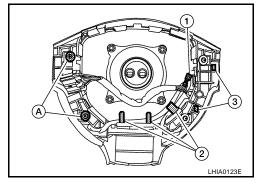
4. Lift driver air bag module away from steering wheel. Disconnect driver air bag module connectors (1) and spiral cable connector (2).



• For removal/installation of the direct-connect SRS connectors, refer to SRS-8, "Direct-connect SRS Component Connectors".



- 5. Disconnect horn connector (1) and release harness from clips (2).
- 6. Remove the steering wheel switch screws (A) and release the tabs (3) from the driver air bag module.



#### **INSTALLATION**

Installation is in the reverse order of removal.

- For removal/installation of the direct-connect SRS connectors, refer to SRS-8, "Direct-connect SRS Component Connectors".
- If driver air bag module is being replaced due to deployment, spiral cable must also be replaced. Refer to SRS-36, "SPIRAL CABLE".
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-20, "SRS Operation Check".

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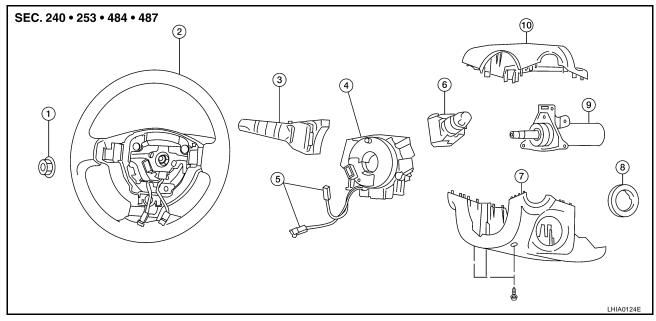
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SPIRAL CABLE PFP:25554

#### **Removal and Installation**

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- Nut, refer to <u>PS-6</u>, "<u>STEERING</u> <u>WHEEL</u>"
- 4. Spiral cable
- 7. Column cover lower
- 10. Column cover upper

- 2. Steering wheel
- 5. Driver air bag module connectors
- 8. Steering lock escutcheon
- 3. Lighting and turn signal switch
- 6. Wiper and washer switch
- 9. Steering column assembly

#### **REMOVAL**

#### **WARNING:**

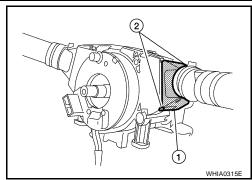
When servicing the SRS, do not work from directly in front of air bag module.

#### **CAUTION:**

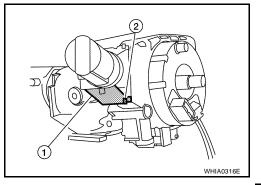
- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- Do not tap or bump the steering wheel.
- Do not disassemble the spiral cable.
- Do not allow oil, grease or water to come in contact with the spiral cable.
- Replace the spiral cable if it has been dropped or sustained an impact.
- With the steering linkage disconnected, the spiral 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.
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Set the front wheels to the straight-ahead/neutral position.
- Remove the steering wheel. Refer to <u>PS-6</u>, "<u>STEERING WHEEL</u>".
- 4. Remove the column cover upper and lower.

# SPIRAL CABLE

Disconnect wiper and washer switch connector (1). Then while
pressing tabs (2), pull wiper and washer switch away from spiral
cable to remove.



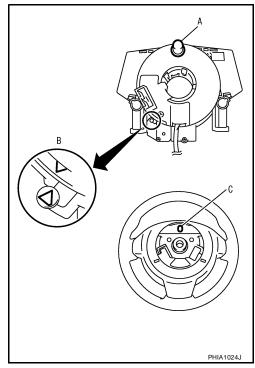
- 6. Disconnect lighting and turn signal switch connector (1). Then while pressing tabs (2), pull lighting and turn signal switch toward driver door to remove.
- 7. Remove the screws, then release the tab at the top and pull the spiral cable away from the steering column assembly.
- 8. Disconnect spiral cable connectors.



#### **INSTALLATION**

Installation is in the reverse order of removal.

- Align spiral cable correctly when installing steering wheel, refer to PS-6, "STEERING WHEEL". Make sure spiral cable alignment and centering marks (B) are matched and in the neutral position. The neutral position is detected by turning left 2.6 revolutions from the right end position, ending with the locating pin (A) at the top. Place steering wheel in straight ahead position, then install it with the locating pin hole (C) directly over spiral cable locating pin.
- After the work is completed, perform self-diagnosis to make sure no malfunction is detected. Refer to <u>SRS-20</u>, "<u>SRS Operation</u> Check".



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Revision: December 2006 SRS-37 2007 Sentra

# FRONT PASSENGER AIR BAG MODULE

PFP:K8515

### Removal and Installation

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The passenger air bag module originally installed in the vehicle uses direct-connect style harness connectors. Service replacement passenger air bag modules use tab-locking style harness connectors. If the passenger air bag module is replaced or if the direct-connect harness connectors are damaged, the vehicle wiring harness must be modified to allow connection of the service replacement passenger air bag module. Refer to <a href="mailto:srs-40">SRS-40</a>, "WIRING HARNESS MODIFICATION" for wiring harness modification procedure.

#### **REMOVAL**

#### **WARNING:**

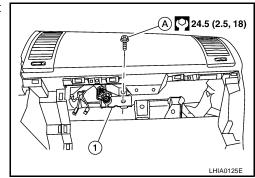
- When servicing the SRS, do not work from directly in front of air bag module. Always work from the side of or under front passenger air bag module.
- Always place front passenger air bag module with pad side facing upward.

#### **CAUTION:**

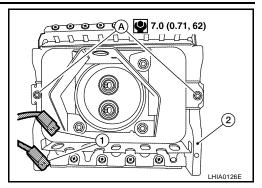
- Do not attempt to repair or replace damaged direct-connect front passenger air bag module connectors. If a direct-connect harness connector is damaged, the front passenger air bag must be replaced and the wiring harness modified.
- Before servicing SRS, turn the ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- Do not use old bolts after removal; replace with new bolts.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or harness connectors.
- Do not disassemble air bag module.
- Do not expose the front passenger air bag module to temperatures exceeding 90°C (194°F).
- Replace the front passenger air bag module if it has been dropped or sustained an impact.
- Do not allow oil, grease or water to come in contact with the front passenger air bag module.



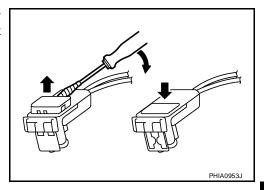
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Remove the RH lower instrument panel glove box assembly. Refer to IP-15, "GLOVE BOX ASSEMBLY".
- 3. Remove the front passenger air bag module lower bracket bolt (A) from the steering member (1) through glove box opening.



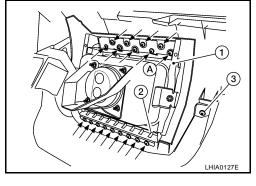
Disconnect the front passenger air bag module connectors (1), then remove the nuts (A) from the steering member (2). Remove the front passenger air bag module through the glove box door opening area.



 For removal/installation of the direct-connect SRS connectors, refer to SRS-8, "Direct-connect SRS Component Connectors".



- 5. For front passenger air bag module instrument panel upper bracket removal, perform the following:
  - Remove the instrument panel assembly. Refer to IP-11, "INSTRUMENT PANEL ASSEMBLY".
  - Remove the 3 screws (3) and the RH side ventilator duct.
  - Remove the 9 screws (A) attaching upper bracket (1) to instrument panel assembly.
  - Release the molded in tabs (2) and remove the front passenger air bag module instrument panel upper bracket.



#### **INSTALLATION**

#### **Original Front Passenger Air Bag Module**

Installation is in the reverse order of removal.

For removal/installation of the direct-connect SRS connectors, refer to SRS-8, "Direct-connect SRS Component Connectors".

#### **CAUTION:**

- Always work from the side of or under front passenger air bag module.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-20, "SRS Operation Check".

#### Service Replacement Front Passenger Air Bag Module

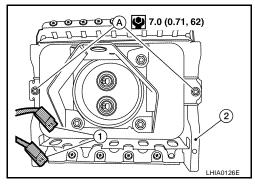
- 1. Install the front passenger air bag module instrument panel upper bracket.
- 2. Install the RH side ventilator duct.

**SRS** 

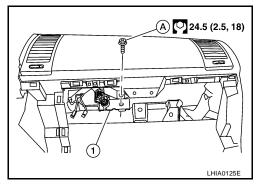
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- 3. Install the front passenger air bag module and nuts (A) to the instrument panel upper bracket (2).
- Install the instrument panel assembly. Refer to <u>IP-10</u>, "<u>INSTRU-MENT PANEL ASSEMBLY</u>".



- 5. Install the front passenger air bag module lower bracket bolt (A) to the steering member (1) through glove box opening.
- Connect the front passenger air bag module harness connector to yellow 4-pin service replacement air bag connector and fasten connector to mounting bracket.
- Install RH lower instrument panel glove box assembly. Refer to IP-15, "GLOVE BOX ASSEMBLY".



#### **CAUTION:**

- Always work from the side of or under front passenger air bag module.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-20</u>, "<u>SRS Operation Check"</u>.

#### WIRING HARNESS MODIFICATION

The passenger air bag module originally installed in the vehicle uses direct-connect style harness connectors. Service replacement passenger air bag modules use tab-locking style harness connectors. If the passenger air bag module is replaced or if the direct-connect harness connectors are damaged, the vehicle wiring harness must be modified to allow connection of the service replacement passenger air bag module.

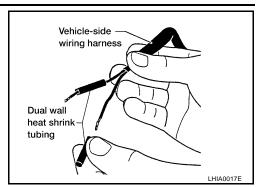
#### NOTE:

The wiring harness modification is to be performed only if the vehicle is equipped with the original passenger air bag which uses direct-connect harness connectors. If the passenger air bag is to be replaced in a vehicle that has already had the service replacement passenger air bag installed, the wiring harness modification is not required.

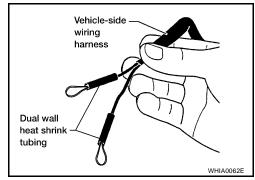
#### **CAUTION:**

- Do not attempt to repair or replace damaged direct-connect front passenger air bag module connectors. If a direct-connect harness connector is damaged, the front passenger air bag must be replaced and the wiring harness modified.
- Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- Always work from the side of or under front passenger air bag module.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected.
   Refer to <u>SRS-20</u>, "<u>SRS Operation Check</u>".
- Locate the yellow and orange direct-connect passenger air bag module harness connectors.
- 2. Use wire cutters to cut back both previously used direct-connect passenger air bag module harness connectors from the vehicle wiring harness approximately 50 mm (1.9 in) from the connectors.
- 3. Remove approximately 150 mm (5.9 in) of the vehicle harness covering from the cut end.

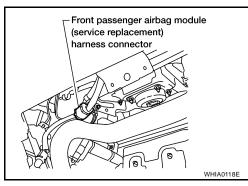
 Slide a piece of dual-wall heat shrink tubing (provided in the passenger air bag service kit) onto each wire of the previously used vehicle wiring harness.



5. Fold each wire back and insert into the end of the heat shrink tubing so that the end of the wire is approximately centered in the heat shrink tubing.



- 6. Use a heat gun to shrink the heat shrink tubing and seal the wire.
- 7. Use electrical tape to secure the modified circuits to the outside of the wiring harness.
- 8. Locate the front passenger air bag service replacement connector that is taped back to the main harness. Unwrap the tape to access the yellow service replacement connector and remove the dust cover from the connector.



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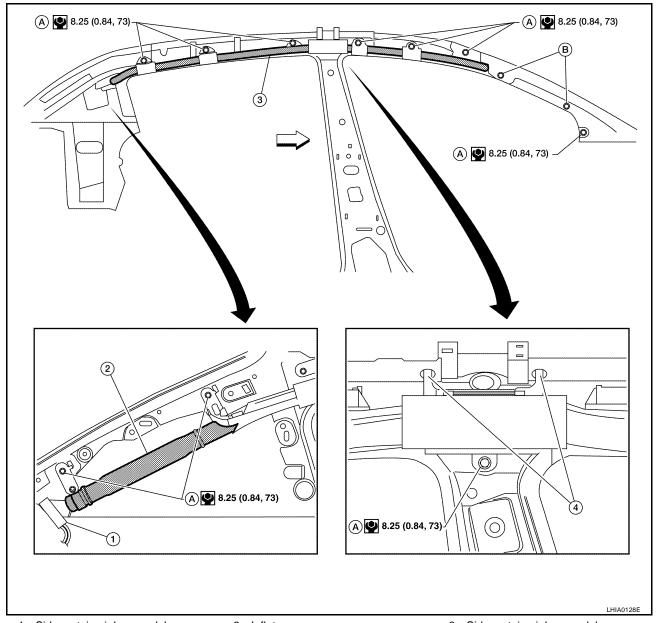
### SIDE CURTAIN AIR BAG MODULE

### SIDE CURTAIN AIR BAG MODULE

#### PFP:985P0

# **Removal and Installation**

EHS0026J



- Side curtain air bag module connector
- 2. Inflator

3. Side curtain air bag module

- 4. Ramp bracket tab
- A. Side curtain air bag module bolt
- B. Clip CE117 (front tether)

 $\leftarrow$  Vehicle front

### **REMOVAL**

#### **WARNING:**

- When servicing the SRS, do not work from directly in front of side curtain air bag module.
- Always place the curtain air bag module with deployment side facing upward.

#### **CAUTION:**

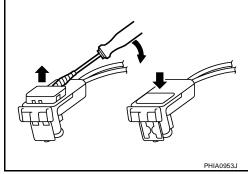
- Before servicing SRS, turn the ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or harness connectors.
- Do not attempt to disassemble side curtain air bag module.
- Do not expose the side curtain air bag module to temperatures exceeding 90°C (194°F).

# SIDE CURTAIN AIR BAG MODULE

- Replace the side curtain air bag module if it has been dropped or sustained an impact.
- Do not allow oil, grease or water to come in contact with the side curtain air bag module.
- Do not attempt to repair or replace damaged direct-connect SRS component connectors. If a direct-connect harness connector is damaged, the harness must be replaced.



- 1. Disconnect both the negative and positive battery cables, then wait at least 3 minutes.
- 2. Remove the headlining. Refer to EI-39, "HEADLINING".
- 3. Disconnect side curtain air bag module connector.
  - For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-8</u>, "<u>Direct-connect SRS Component Connectors</u>".
- 4. Remove the front tether clips.
- 5. Remove the side curtain air bag module bolts in order starting at the front or rear, then remove the side curtain air bag module.



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### **INSTALLATION**

Installation is in the reverse order of removal.

- For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-8</u>, "<u>Direct-connect SRS Component Connectors</u>".
- After replacement of side curtain air bag module, perform self-diagnosis to check that no malfunction is detected. Refer to <a href="SRS-20">SRS-20</a>, "SRS Operation Check"</a>.

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### **CRASH ZONE SENSOR**

PFP:98531

# Removal and Installation REMOVAL

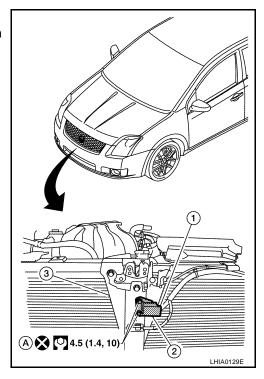
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#### **CAUTION:**

- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- Do not attempt to disassemble the crash zone sensor.
- Do not use old nuts after removal; replace with new nuts.
- Replace the crash zone sensor if it has been dropped or sustained an impact.
- Check crash zone sensor to make sure it is free of deformities, dents, cracks or rust. If it shows any visible signs of damage, replace it with a new one.



- 1. Disconnect both the negative and positive battery cables, then wait at least 3 minutes.
- 2. Remove front grille, refer to EI-18, "FRONT GRILLE".
- Disconnect crash zone sensor harness connector (1).
- 4. Remove crash zone sensor nuts (A), then remove the crash zone sensor (2) from the radiator core support (3).



#### **INSTALLATION**

Installation is in the reverse order of removal.

• After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-20, "SRS Operation Check".

# SIDE AIR BAG (SATELLITE) SENSOR

# SIDE AIR BAG (SATELLITE) SENSOR

#### PFP:98830

#### FHS00261

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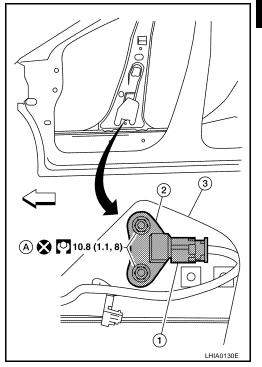
# Removal and Installation REMOVAL

#### **CAUTION:**

- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- Do not attempt to disassemble the side air bag (satellite) sensor.
- Do not use old nuts after removal; replace with new nuts.
- Replace the side air bag (satellite) sensor if it has been dropped or sustained an impact.
- Check side air bag (satellite) sensor to make sure it is free of deformities, dents, cracks or rust. If it shows any visible signs of damage, replace it with a new one.



- 1. Disconnect both the negative and positive battery cables, then wait at least 3 minutes.
- 2. Remove front seat belt retractor. Refer to SB-3, "Removal and Installation of Front Seat Belt".
- 3. Disconnect side air bag (satellite) sensor harness connector (1).
- 4. Remove side air bag (satellite) sensor nuts (A), then remove side air bag (satellite) sensor (2) from the center pillar (3).
   ←: Vehicle front



### **INSTALLATION**

Installation is in the reverse order of removal.

 After the work is completed, perform self-diagnosis to make sure no malfunction is detected. Refer to SRS-20, "SRS Operation Check".

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# FRONT SEAT BELT PRE-TENSIONER

# FRONT SEAT BELT PRE-TENSIONER

PFP:86884

# **Removal and Installation**

EHS0026M

For removal and installation procedures, refer to SB-3, "Removal and Installation of Front Seat Belt" .

### **DIAGNOSIS SENSOR UNIT**

#### PFP:28556

# Removal and Installation REMOVAL

#### EHS0026N

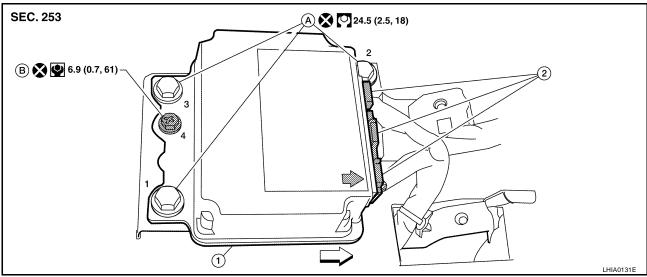
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#### **WARNING:**

Before disconnecting diagnosis sensor unit harness connector(s), be sure to disconnect harness connectors from air bag modules and front seat belt pre-tensioner to prevent deployment by static electricity.

### **CAUTION:**

- Before servicing the SRS, turn the ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- Do not disassemble diagnosis sensor unit.
- Do not use old bolts; replace with new bolts.
- Replace the diagnosis sensor unit if it has been dropped or sustained an impact.
- Check diagnosis sensor unit bracket to make sure it is free of deformities, dents, cracks or rust. If
  it shows any visible signs of damage, replace with new one.
- The diagnosis sensor unit must always be installed with the arrow mark "⇐" pointing toward the front of the vehicle for proper operation.



- 1. Diagnosis sensor unit
- 2. Diagnosis sensor unit connector

B. Ground bolt

∀ehicle front

- A. Diagnostic sensor unit bolt
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Disconnect the harness connectors for each air bag module and seat belt pre-tensioner. Refer to <a href="SRS-34">SRS-34</a>, <a href="BRIVER AIR BAG MODULE"</a>, <a href="SRS-38">SRS-38</a>, <a href="FRONT PASSENGER AIR BAG MODULE"</a>, <a href="SRS-42">SRS-42</a>, <a href="SISINER"</a>, <a href="SRS-46">SRS-46</a>, <a href="FRONT SEAT BELT PRE-TEN-SIONER"</a>.
- 3. Remove center console assembly. Refer to <a href="IP-10">IP-10</a>, "INSTRUMENT PANEL ASSEMBLY".
- 4. Disconnect diagnosis sensor unit connectors.
- 5. Remove the bolts and the ground bolt, then remove the diagnosis sensor unit.

#### **INSTALLATION**

Installation is in the reverse order of removal.

- The diagnosis sensor unit must always be installed with the arrow mark "←" pointing toward the front of the vehicle.
- Follow the tightening sequence 1,2,3,4 as shown.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-20, "SRS Operation Check".

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# **DIAGNOSIS SENSOR UNIT**

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After replacing the diagnosis sensor unit, confirm that the diagnosis sensor unit identification is correct for the vehicle as equipped. Refer to  $\underline{\mathsf{SRS-19}}$ ,  $\underline{\mathsf{"CONSULT-III Function (AIR BAG)"}}$ .

# OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

# OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

PFP:98852

# **Removal and Installation**

EHS00260

The occupant classification system control unit, occupant classification system sensor, and bladder are an integral part of the front passenger seat cushion and are replaced as an assembly. Refer to <u>SE-10, "FRONT SEAT"</u> to remove the seat, and <u>SE-14, "SEAT CUSHION TRIM AND PAD"</u> to replace the seat cushion.

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# **COLLISION DIAGNOSIS**

PFP:00015

EHS0026P

# **For Frontal Collision**

Check the SRS components using the following table.

 After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-20, "SRS Operation Check"</u>.

# SRS INSPECTION (FOR FRONTAL COLLISION)

Part SRS is activated		SRS is NOT activated				
Driver air bag module	If the driver air bag has deployed: REPLACE Install with new fas- teners.	<ol> <li>If the driver air bag has NOT been activated:</li> <li>Remove driver air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.</li> <li>Install driver air bag module into the steering wheel to check fit and alignment with the wheel.</li> <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 the front passenger air bag has deployed: REPLACE Install with new fas- teners.	<ol> <li>If the front passenger air bag has NOT been activated:</li> <li>Remove front passenger air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.</li> <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 any of the front air bags or seat belt pretensioners* have been activated: REPLACE the crash zone sensor and bracket with new fasteners.  *: Confirm seat belt pre-tensioner activation using CONSULT-		<ol> <li>If the front air bags or seat belt pre-tensioners have NOT been activated:</li> <li>Remove the crash zone sensor. 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 crash zone sensor and bracket.</li> <li>Install the crash zone sensor to check fit.</li> <li>If no damage is found, reinstall with new fasteners.</li> <li>If damaged—REPLACE the crash zone sensor and bracket with new fasteners.</li> </ol>				
Seat belt pre-tensioner assemblies (All applicable locations: buckle, reel, 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-III only.		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.  2. Check belts for damage and anchors for loose mounting.  3. Check retractor for smooth operation.  4. Check seat belt adjuster for damage.  5. Check for deformities of the center pillar inner.  6. If the center pillar inner has no damage, REPLACE the seat belt pre-tensioner assembly.  7. If no damage is found, reinstall seat belt pre-tensioners with new fasteners.				
Diagnosis sensor unit  If any of the SRS components have been activated:  REPLACE the diagnosis sensor unit.  Install with new fasteners.		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.				

Part	SRS is activated	SRS is NOT activated					
Steering wheel	1. Visually check steering wheel for deformities.						
	2. Check harness (built into steering wheel) and connectors for damage, and terminals for deformities.						
	3. Install driver air bag module into the steering wheel to check fit and alignment with the wheel.						
	4. Check steering wheel for excessive free play.						
	5. If no damage is found, reinstall.						
	6. If damaged—REPLACE.						
Spiral cable	If the driver front air	If the driver front air bag has not deployed:					
	bag has deployed: REPLACE the spiral cable.	Nisually check spiral cable and combination switch for damage.					
		2. Check connectors and protective tape for damage.					
	Cable.	3. Check steering wheel for noise, binding or heavy operation.					
		4. If no damage is found, reinstall.					
		5. If damaged—REPLACE.					
Occupant classifica-	1. Remove passenger seat.						
tion system (Passen-	2. Check control unit case for dents, cracks of deformities.						
ger seat)	3. Check connectors and pressure sensor tube for damage, and terminals for deformities.						
	4. Check seat frame and cushion pan for dents or deformities.						
	5. If no damage is found, reinstall seat with new fasteners.						
	6. If damaged — REPLACE seat cushion assembly with new fasteners.						
Harness and connec-	Check connectors for poor connection, damage, and terminals for deformities.						
tors	2. Check harness for binding, chafing, cuts, or deformities.						
	3. If no damage is found, reinstall the harness and connectors.						
	4. If damaged—REPLACE the damaged harness. Do not attempt to repair, splice or modify any SRS harness.						
Instrument panel	If the passenger front	If the passenger front air bag has NOT deployed:					
-	air bag has deployed:	Visually check instrument panel for damage.					
	REPLACE the instrument panel assembly.	2. If no damage is found, reinstall the instrument panel.					
	ment paner assembly.	3. If damaged—REPLACE the instrument panel.					

#### For Side and Rollover Collision

EHS0026Q

Check the SRS components using the following table.

• After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-20, "SRS Operation Check".

#### WHEN SRS IS ACTIVATED IN THE SIDE OR ROLLOVER COLLISION

- Replace the following components:
- Front seat back assembly (on the side on which side air bag is activated)
- Diagnosis sensor unit
- (LH or RH) side air bag (satellite) sensor (on the side on which side air bag is activated)
- 2. 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).
- 3. Conduct self-diagnosis using CONSULT-III and "AIR BAG" warning lamp. Refer to <u>SRS-20, "SRS Operation Check"</u> for details. Ensure entire SRS operates properly.

#### WHEN SRS IS NOT ACTIVATED IN THE SIDE OR ROLLOVER COLLISION

- 1. 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.
- 2. Conduct self-diagnosis using CONSULT-III and "AIR BAG" warning lamp. Refer to <u>SRS-20, "SRS Operation Check"</u> for details. Ensure entire SRS operates properly.

Revision: December 2006 SRS-51 2007 Sentra

SRS

# SRS INSPECTION (FOR SIDE AND ROLLOVER COLLISION)

Part	SRS is activated	SRS is NOT activated
LH side curtain air bag module	If the LH side curtain air bag has deployed: REPLACE the LH side curtain air bag module. (Repair the center pillar inner, etc. before installing new one if damaged.)	<ol> <li>If the LH side curtain air bag 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 LH side curtain air bag module.</li> <li>Check for visible signs of damaged (tears etc.) of the LH side curtain air bag module.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> <li>If no damage is found, reinstall the LH side curtain air bag module with new fasteners.</li> <li>If damaged—REPLACE the LH side curtain air bag module with new fasteners.</li> </ol>
RH side curtain air bag module	If the RH side curtain air bag has deployed: REPLACE the RH side curtain air bag module. (Repair the center pillar inner, etc. before installing new one if damaged.)	<ol> <li>If the RH side curtain air bag 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 RH side curtain air bag module.</li> <li>Check for visible signs of damaged (tears etc.) of the RH side curtain air bag module.</li> <li>Check harness and connectors for damage, and terminals for deformities.</li> <li>If no damage is found, reinstall the RH side curtain air bag module with new fasteners.</li> <li>If damaged—REPLACE the RH side curtain air bag module with new fasteners.</li> </ol>
Front LH side air bag module	If the front LH side air bag has deployed: REPLACE front LH seatback assembly.	<ol> <li>If the front LH side air bag 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 LH seatback assembly.</li> </ol>
Front RH side air bag module	If the front RH side air bag has deployed: REPLACE front RH seatback assembly.	If the front RH side air bag has NOT deployed:  1. Check for visible signs of damage (dents, tears, deformation) of the seat back on the collision side.  2. Check harness and connectors for damage, and terminals for deformities.  3. If damaged—REPLACE the front RH seatback assembly.
(LH or RH) side air bag (satellite) sensor	If any of the SRS components have deployed: REPLACE the side air bag (satellite) sensor on the collision side with new fasteners. (Repair the center pillar inner, etc. before installing new one if damaged.)	If none of the SRS components have been activated:  1. Remove the side air bag (satellite) sensor on the collision side. Check harness connectors for damage, terminals for deformities, and harness for binding.  2. Check for visible signs of damage (dents, cracks, deformation) of the side air bag (satellite) sensor.  3. Install the side air bag (satellite) sensor to check fit.  4. If no damage is found, reinstall the side sir bag (satellite) sensor with new fasteners.  5. If damaged—REPLACE the side air bag (satellite) sensor with new fasteners.
Diagnosis sensor unit  If any of the SRS components have deployed:  REPLACE the diagnosis sensor unit with new fasteners.		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.

Part	SRS is activated	SRS is NOT activated				
Seat belt pre-ten- sioner assemblies	If either the driver or passenger seat belt	If the pre-tensioners have NOT been activated:  1. Remove seat belt pre-tensioners.				
(All applicable locations: buckle, reel, lap	pre-tensioner* has been activated: REPLACE all seat belt pre-tensioner assemblies with new fasteners.	Check harness cover and connectors for damage, terminals for deformities, and harness for binding.				
outer)		Check belts for damage and anchors for loose mounting.				
		3. Check retractor for smooth operation.				
		4. Check seat belt adjuster for damage.				
	*: Confirm seat belt pre-tensioner activa- tion using CONSULT- III only.	5. Check for deformities of the center pillar inner.				
		<ol><li>If the center pillar inner has no damage, REPLACE the seat belt pre-tensioner assembly.</li></ol>				
		7. If no damage is found, reinstall seat belt pre-tensioner assembly.				
		8. If damaged—REPLACE. Install the seat belt pre-tensioners with new fasteners.				
Seat (with front side	If either the front LH or front RH side air bag modules has been deployed: REPLACE front seat- back assembly on the deployed side.	If the front LH or front RH side air bag modules have NOT deployed:				
air bag)		1. Visually check the seat on the collision side.				
		<ol><li>Remove the seat on the collision side and check the following for damage and deformities.</li></ol>				
		- Harness, connectors and terminals				
		<ul> <li>Frame and recliner (for front and rear seat), and also adjuster and slides (for front seat)</li> </ul>				
		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.				
Center inner pillar	1. Check the center inner pillar on the collision side for damage (dents, cracks, deformation).     2. If damaged—REPAIR the center inner pillar.					
Trim/headlining	1. Check for visible signs of damage (dents, cracks, deformation) of the interior trim on the collision side.					
	2. If damaged—REPLA	CE the damaged trim parts.				

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