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2007 Xterra

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### **PRECAUTIONS**

PRECAUTIONS PFP:00001

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

HS001DP

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

EHS001DQ

- 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 the 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.

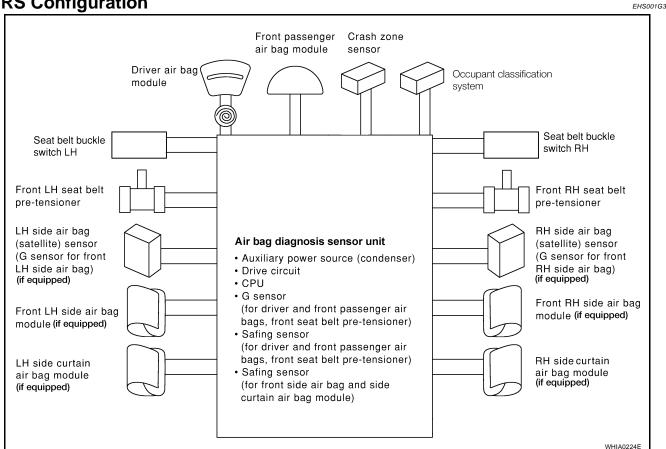
Tool number (Kent-Moore No.) Tool name		Description
— (J-42057-UPD) Air bag key set Part of kit (J-42057)	RS210	Removing and installing air bag lock

# **SUPPLEMENTAL RESTRAINT SYSTEM (SRS)**

PFP:28556

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**SRS Configuration** 



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 colli- sion	Rollover
Driver air bag module	х	_	_	_
Front passenger air bag module	х	_	_	_
Front LH seat belt pre-tensioner	х	_		Х
Front RH seat belt pre-tensioner	х	_	_	X
Front LH side air bag module	_	х	_	_
Front RH side air bag module	_	_	х	_
LH side curtain air bag module	_	х		Х
RH side curtain air bag module	_	_	х	X

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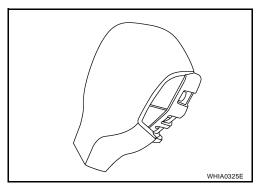
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## **Driver Air Bag Module**

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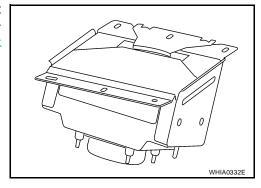
The driver air bag module is dual stage and located in the steering wheel assembly. It operates with the SRS system in a frontal collision exceeding a specified level.



# Front Passenger Air Bag Module

EHS0025N

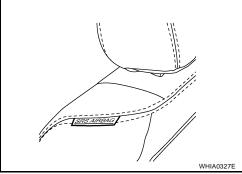
The front passenger air bag module is located behind the instrument panel assembly. It operates with the SRS system in a frontal collision exceeding a specified level. Refer to <a href="SRS-7">SRS-7</a>, "Occupant Classification System (OCS)" for more information.



# Front Side Air Bag

EHS001LQ

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**

EHS001LR

Side curtain air bag modules are located above the vehicle headlining. Vehicles with side curtain air bags are equipped with labels as shown.

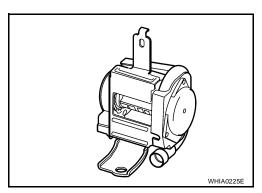


### Front Seat Belt Pre-tensioner with Load Limiter

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 sensor (located inside 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 passenger front air bag in the event of a collision. Depending on the signals received, the air bag diagnosis sensor unit can disable the passenger front air bag completely.

#### NOTE:

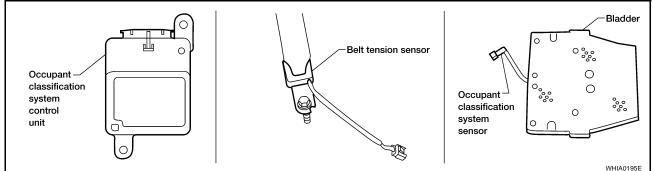
In case of customer concern, CONSULT-II can be used to confirm the passenger air bag status (readiness).

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

Front Passenger Seat (Condition)	PASS AIR BAG OFF Indicator (Status)	Passenger Air Bag Status (Readiness)	CONSULT-II 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.



# Direct-connect SRS Component Connectors

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

- Driver air bag module
- Front 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 locking tab prior to removing connector from SRS component.

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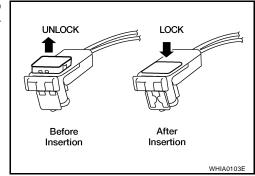
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Always push down to lock locking tab after installing connector to SRS component. When locked, the locking tab is level with the connector housing.



### **TROUBLE DIAGNOSIS**

PFP:00004

### **Trouble Diagnosis Introduction**

EHS001G9

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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. SRS wiring harnesses can be identified by yellow and/or orange harness connectors.
- 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-II.

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-II are as follows:

	User mode	Diagnosis mode	Display type
"AIR BAG" warning lamp	X	X	ON-OFF operation
CONSULT-II	_	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 SC-4, "How to Handle Battery".)
- Fuse (Refer to SRS-13, "Wiring Diagram SRS —" .)
- System component-to-harness connections

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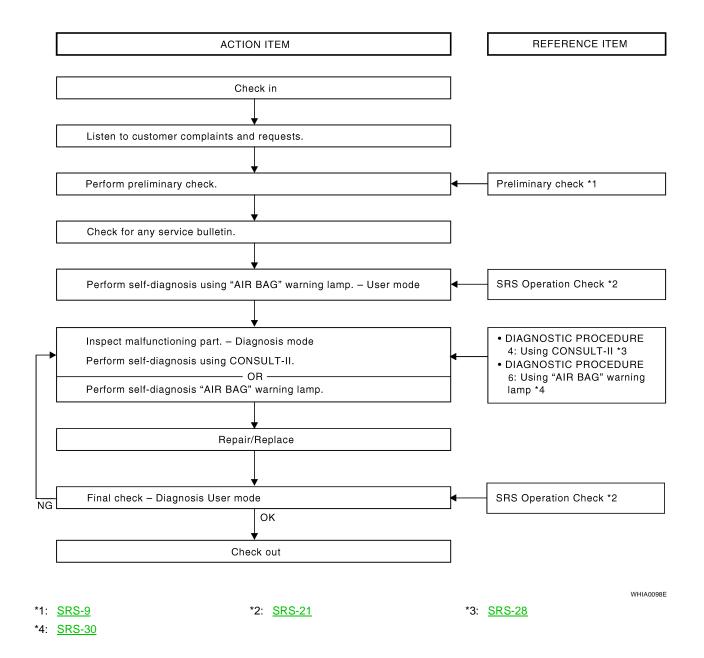
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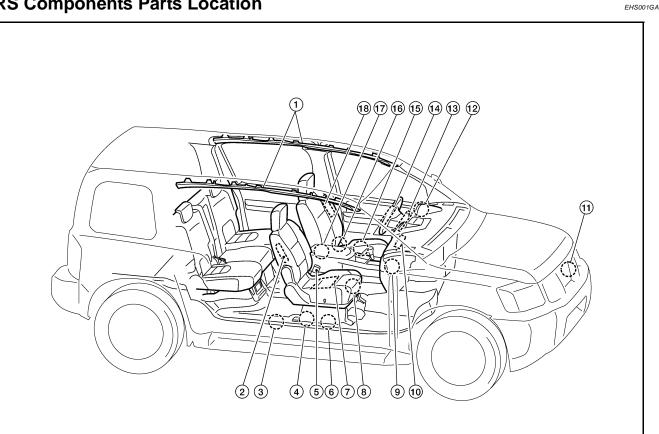
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### **WORK FLOW**



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# **SRS Components Parts Location**



- Side curtain air bag modules (If equipped)
- Belt tension sensor
- Occupant classification system sen- 8.
- 10. Front passenger air bag module
- Spiral cable
- 16. Front LH seat belt pre-tensioner

- Front RH side air bag module (If equipped)
- Seat belt buckle switch RH
- Occupant classification system control unit
- Crash zone sensor
- Driver air bag module
- 17. Air bag diagnosis sensor unit

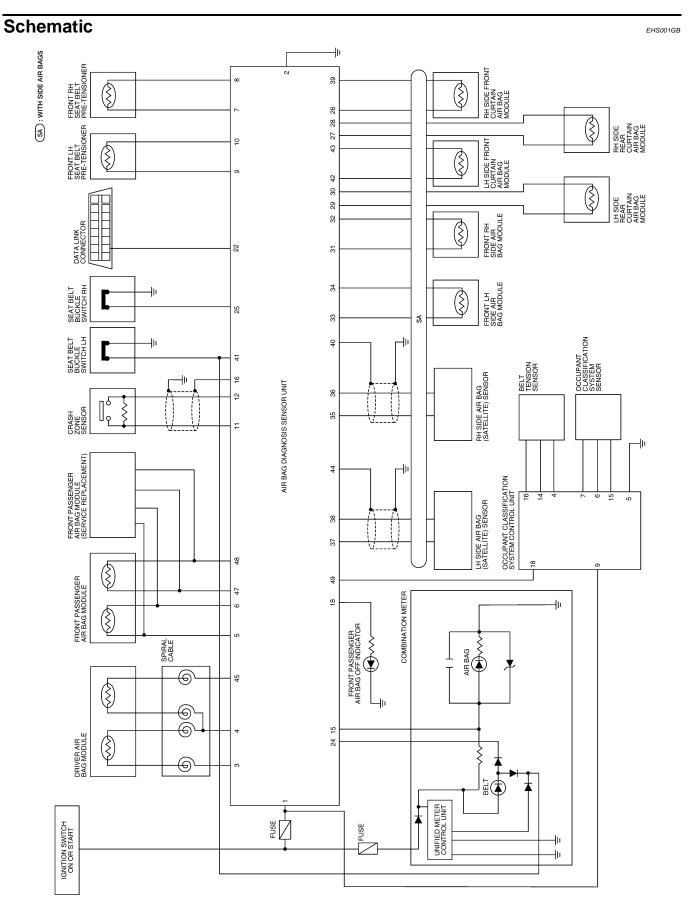
- Front RH seat belt pre-tensioner
- 6. RH side air bag (satellite) sensor (If equipped)
- Front passenger air bag off indicator 9.
- 12. Air bag warning lamp
- 15. LH side air bag (satellite) sensor (If equipped)
- 18. Front LH side air bag module (If equipped)

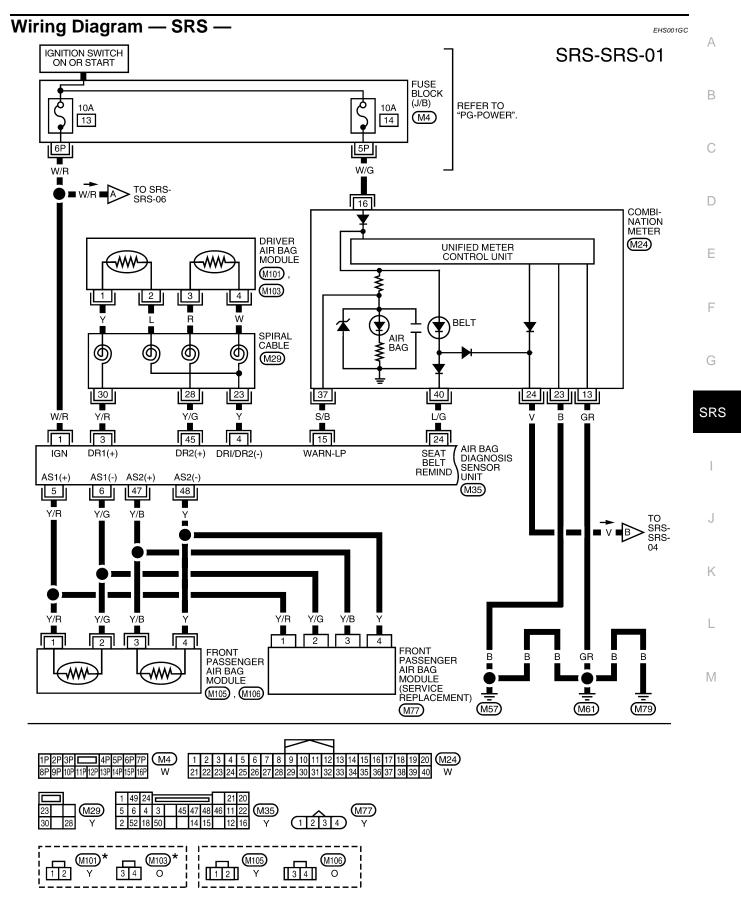
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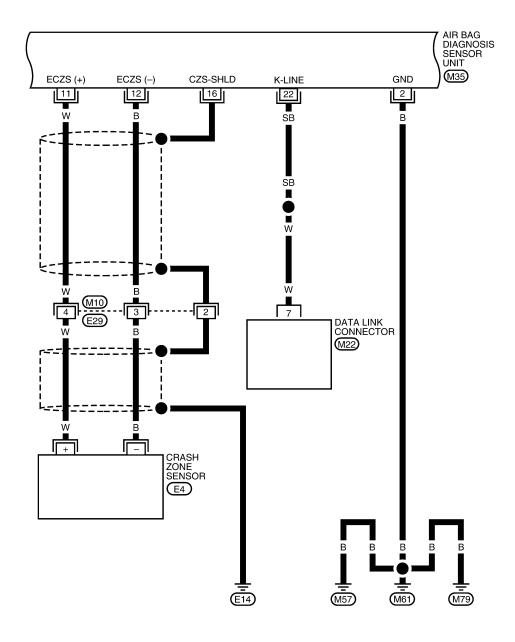


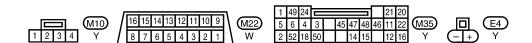


\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

WHWA0314E

# SRS-SRS-02





WHWA0272E

#### SRS-SRS-03 (SA): WITH SIDE AIR BAGS FRONT LH SIDE AIR BAG MODULE FRONT RH SIDE AIR BAG MODULE **B**126 **B10** (SA) (SA) Y/B Y/B 33 34 31 32 AIR BAG DIAGNOSIS SENSOR S-L H1(+) S-L H1(-) S-RH1(+) S-RH1(-) UNIT B9, B113 SAT SENS RH(+) SAT SENS RH(-) SAT SENS LH(-) SAT SENS LH(+) GND **GND** 44 40 35 37 36 38 BR **SRS** BR В 2 2 1 LH SIDE RH SIDE AGR(+) AGR(-) DGR(+) DGR(-) AIR BAG (SATELLITE) SENSOR AIR BAG (SATELLITE) SENSOR **B**15 **B114** SA (B5) (SA) (B112)



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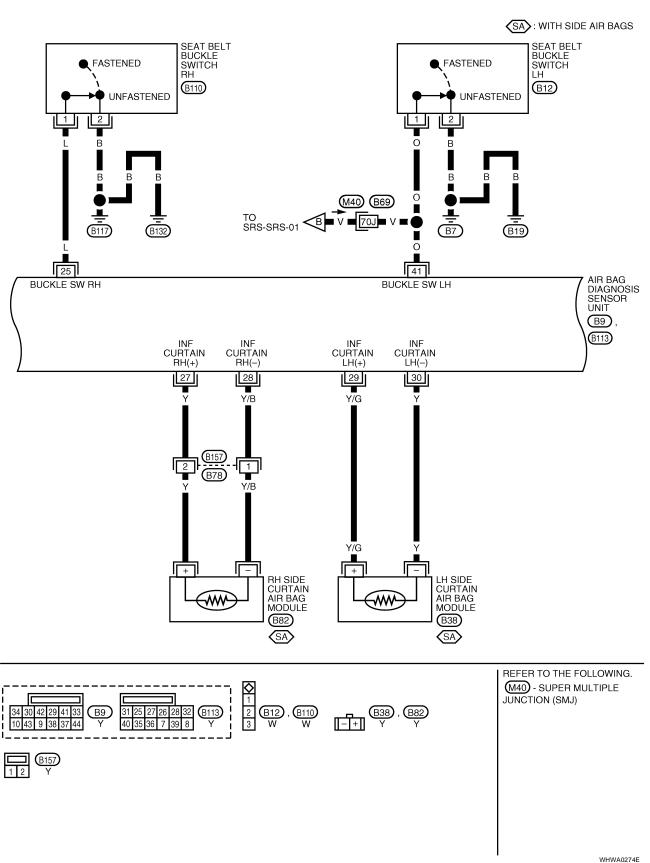
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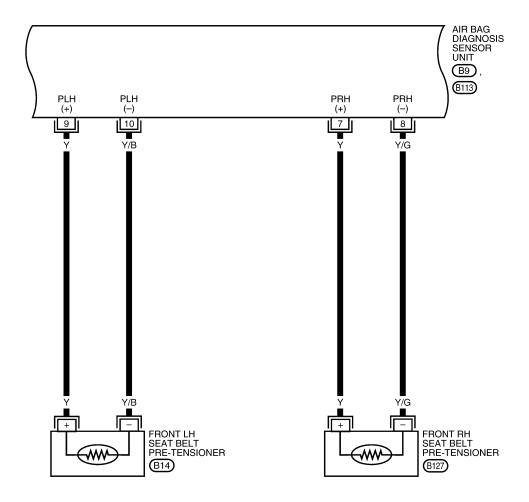
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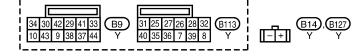
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### SRS-SRS-04



### SRS-SRS-05





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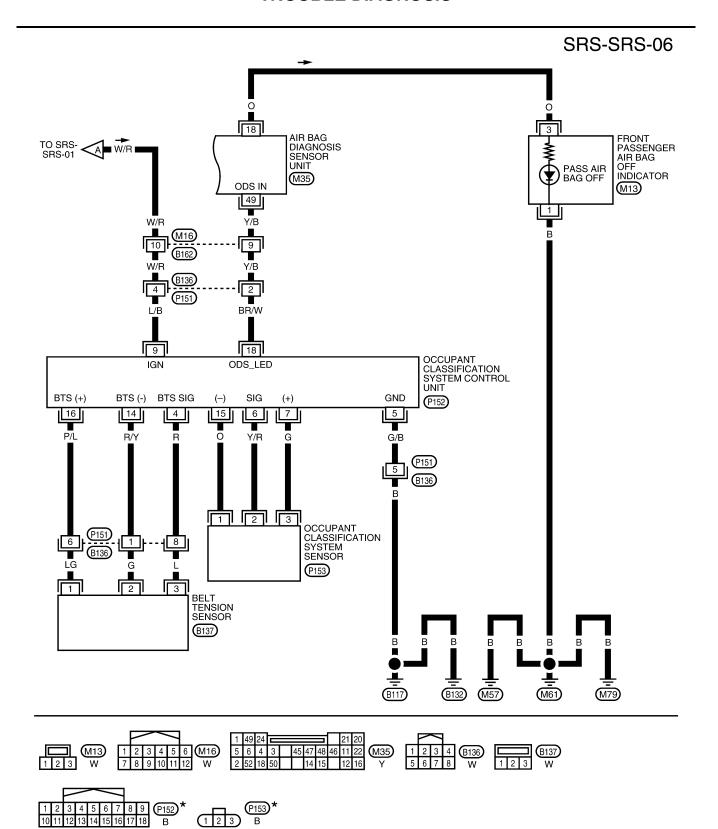
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\*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT" OF PG SECTION.

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

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CONSULT-II 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 (also indicated by the n mode) is displayed on the CONSULT-II screen in real ing repairs.		
SELF-DIAG [PAST]	Diagnosis results previously stored in the memory are stored results will remain until memory erasing is executed as the control of the contr	• •	
TROUBLE DIAG RECORD	With TROUBLE DIAG RECORD, diagnosis results proplayed on the CONSULT-II screen.	eviously erased by a reset operation can be dis	
	The air bag diagnosis sensor unit for each vehicle model is assigned with its own, individual classifi-	ECU DISCRIMINATED NO.	
ECU DISCRIMINATED NO.	cation number. This number will be displayed on the CONSULT-II 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-II screen.  The air bag diagnosis sensor unit discriminated numbers assigned are F64D (for models with side and side curtain air bags) and F64C (for models without side and side curtain air bags).	PRINT BACK LIGHT COPY ARS366	
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 SRS-7, "Occupant Classification System (OCS)" for more information.	PASSENGER AIRBAG STATUS OFF	

# CONSULT-II Function

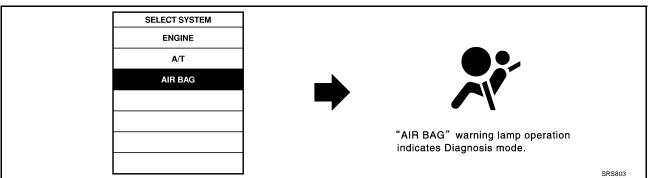
EHS001GE

MODE BACK LIGHT COPY

# (1) HOW TO CHANGE SELF-DIAGNOSIS MODE WITH CONSULT-II

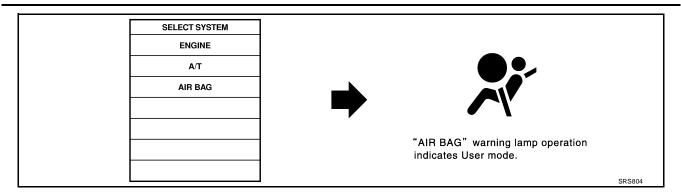
### From User Mode to Diagnosis Mode

After selecting "AIR BAG" on the "SELECT SYSTEM" screen, User mode automatically changes to Diagnosis mode.



### From Diagnosis Mode to User Mode

To return to User mode from Diagnosis mode, touch "BACK" key of CONSULT-II until "SELECT SYSTEM" appears, Diagnosis mode automatically changes to User mode.

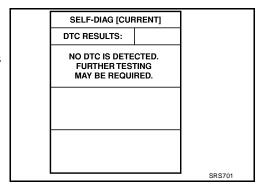


### **HOW TO ERASE SELF-DIAGNOSIS RESULTS**

"SELF-DIAG [CURRENT]"

A current self-diagnosis result is displayed on the CONSULT-II screen in real time.

After the malfunction is repaired completely, no malfunction is detected on "SELF-DIAG [CURRENT]".

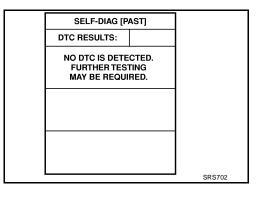


"SELF-DIAG [PAST]"

Return to the "SELF-DIAG [CURRENT]" CONSULT-II screen by touching "BACK" key of CONSULT-II and select "SELF-DIAG [PAST]" in SELECT DIAG MODE. Touch "ERASE" in "SELF-DIAG [PAST]" mode.

### NOTE:

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



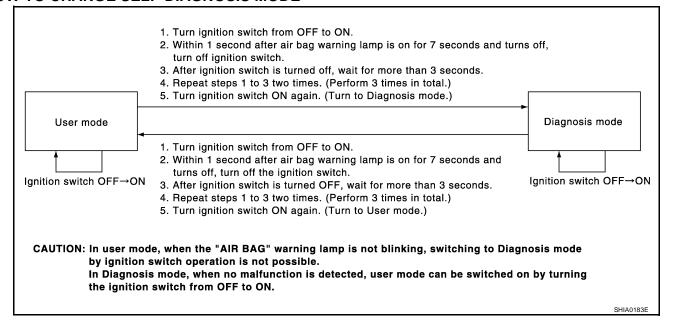
"TROUBLE DIAG RECORD"
 The memory of "TROUBLE DIAG RECORD" cannot be erased.

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

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

### **HOW TO CHANGE SELF-DIAGNOSIS MODE**



### **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

EHS001GG

### 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.



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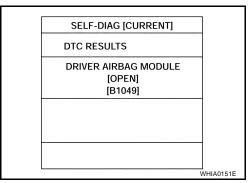
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o malfunction is detected. o further action is necessary.	<del>_</del>
system is malfunctioning and ds to be repaired as indicated.	Go to <u>SRS-23</u> , " <u>DIAGNOSTIC</u> <u>PROCEDURE 2</u> " with CONSUL  II or <u>SRS-30</u> , " <u>DIAGNOSTIC PROCEDURE 6</u> " without CONSULT-
r bag is deployed. eat belt pre-tensioner is deployed.	Go to <u>SRS-52</u> , "COLLISION DIAC NOSIS"
r bag diagnosis sensor unit is mal- nctioning. r bag power supply circuit is mal- nctioning. RS air bag warning lamp circuit is alfunctioning.	Go to <u>SRS-35</u> , "Trouble Diagnosis "AIR BAG" Warning Lamp Does N Turn Off" .
r bag diagnosis sensor unit is mal- nctioning. r bag warning lamp circuit is mal- nctioning.	Go to SRS-36, "Trouble Diagnosis "AIR BAG" Warning Lamp Does N Turn On" .
	r bag is deployed.  The bag diagnosis sensor unit is malactioning.  The bag bag warning lamp circuit is malactioning.  The bag diagnosis sensor unit is malactioning.  The bag warning lamp circuit is malactioning.

# Trouble Diagnosis With CONSULT-II DIAGNOSTIC PROCEDURE 2

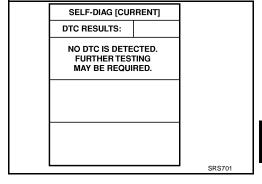
Refer to <u>GI-38</u>, "<u>CONSULT-II Start Procedure</u>". Diagnostic code is displayed on "SELF-DIAG [CURRENT]".



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-28, "DIAGNOSTIC PROCEDURE 4".



### **CONSULT-II 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 <u>SC-4, "BATTERY"</u> 2. Go to <u>SRS-27, "DIAGNOSTIC PROCEDURE 3"</u>
NO DTC IS DETECTED	BAG" warning lamp in User mode.	"SELF-DIAG [PAST]" memory might not be erased.	Go to SRS-28, "DIAGNOSTIC PRO- CEDURE 4" .
		Intermittent malfunction has been detected in the past.	Go to SRS-28, "DIAGNOSTIC PRO- CEDURE 5" .
	No malfunction is detected in User mode.		_
DRIVER AIRBAG MODULE [OPEN]	Driver air bag module circuit is open (including the spiral cable).		Visually check the wiring harness connection.
[B1049] or [B1054]  DRIVER AIRBAG MODULE	Driver eir beg medule a	irouit is shorted to some newer supply	Replace the harness if it has visible damage.
[VB-SHORT] [B1050] or [B1055]	Driver air bag module circuit is shorted to some power supply circuit (including the spiral cable).		3. Replace driver air bag module.
DRIVER AIRBAG MODULE [GND-SHORT] [B1051] or [B1056]	Driver air bag module circuit is shorted to ground (including the spiral cable).		4. Replace the spiral cable.  5. Replace the air bag diagnosis sensor unit.  6. Replace the related harness.
DRIVER AIRBAG MODULE [SHORT] [B1052] or [B1057]	Driver air bag module circuits are shorted to each other.		Straspinos no islanda hamisto.

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Diagnostic item	Explanation	Repair order Recheck SRS at each replacement	
ASSIST A/B MODULE [OPEN] [B1065] or [B1070]	Front passenger air bag module circuit is open.	Visually check the wiring harness connection.     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] [B1067] or [B1072]	Front passenger 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>	
ASSIST A/B MODULE [SHORT] [B1068] or [B1073]	Front passenger air bag module circuits are shorted to each other.		
CRASH ZONE SEN [UNIT FAIL] [B1033] or [B1034] CRASH ZONE SEN [COMM FAIL] [B1035]	Crash zone sensor	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace the crash zone sensor.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>	
SIDE MODULE LH [OPEN] [B1134]	Front LH side air bag module circuit is open.	Visually check the wiring harness connection.     Replace the harness if it has visible.	
SIDE MODULE LH [VB-SHORT] [B1135]	Front LH side air bag module circuit is shorted to some power supply circuit.	damage.  3. 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.	<ul><li>4. Replace the air bag diagnosis sensor unit.</li><li>5. Replace the related harness.</li></ul>	
SIDE MODULE LH [SHORT] [B1137]	Front LH side air bag module circuits are shorted to each other.	o. Nepiace tile lelateu Halliess.	
SIDE MODULE RH [OPEN] [B1129]	Front RH side air bag module circuit is open.	Visually check the wiring harness connection.  Replace the harness if it has visible.	
SIDE MODULE RH [VB-SHORT] [B1130]	Front RH side air bag module circuit is shorted to some power supply circuit.	Replace the harness if it has visible damage.     Replace front RH seat back assembly (front RH side air bag module).	
SIDE MODULE RH [GND-SHORT] [B1131]	Front RH side air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sensor unit. 5. Replace the related harness.	
SIDE MODULE RH [SHORT] [B1132]	Front RH side air bag module circuits are shorted to each other.		
SATELLITE SENS LH [UNIT FAIL] [B1118] or [B1119] SATELLITE SENS LH [COMM FAIL] [B1120]	LH side air bag (satellite) sensor	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace the LH side air bag (satellite) sensor.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>	

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
	RH side air bag (satellite) sensor	Visually check the wiring harness connection.
SATELLITE SENS RH [UNIT FAIL]		Replace the harness if it has visible damage.
[B1113] or [B1114] 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]		2. Replace the harness if it has visible
PRE-TEN FRONT LH [VB-SHORT] [B1087]	The circuit for front LH seat belt pre-tensioner is shorted to some power supply circuit.	damage.  3. Replace front LH seat belt pre-tensioner.
PRE-TEN FRONT LH [GND-SHORT]	The circuit for front LH seat belt pre-tensioner is shorted to ground.	4. Replace the air bag diagnosis sensor unit.
[B1088]		5. Replace the related harness.
PRE-TEN FRONT LH [SHORT] [B1089]	The circuits for the front LH seat belt pre-tensioner are shorted to each other.	
PRE-TEN FRONT RH [OPEN]	The circuit for front RH seat belt pre-tensioner is open.	Visually check the wiring harness connections.
[B1081]		2. Replace the harness if it has visible damage.
PRE-TEN FRONT RH [VB-SHORT] [B1082]	The circuit for front RH seat belt pre-tensioner is shorted to some power supply circuit.	Replace front RH seat belt pre-tensioner.
PRE-TEN FRONT RH [GND-SHORT]	The circuit for front RH seat belt pre-tensioner is shorted to ground.	Replace the air bag diagnosis sensor unit.
[B1083]		5. Replace the related harness.
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]	The LH side rear curtain air bag module circuit is open.	Visually check the wiring harness connection.
[B1150]		2. Replace the harness if it has visible
CURTAIN MODULE LH [VB-SHORT] [B1151]	The LH side rear 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]	The LH side rear curtain air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sensor unit.
[B1152]		5. Replace the related harness.
CURTAIN MODULE LH [SHORT] [B1153]	The circuits for the LH side rear curtain air bag module are shorted to each other.	

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
CURTAIN MODULE RH [OPEN] [B1145]	The RH side rear 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 rear 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 rear curtain air bag module circuit is shorted to ground.	4. Replace the air bag diagnosis sensor unit. 5. Replace the related harness.
CURTAIN MODULE RH [SHORT] [B1148]	The circuits for the RH side rear curtain air bag module are shorted to each other.	
CONTROL UNIT [B1XXX]	Air bag diagnosis sensor unit is malfunctioning.	Visually check the wiring harness connection.     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 control unit assembly.
OCCUPANT SENS C/U [COMM FAIL] [B1022]	Communication between the occupant classification system control unit and air bag diagnosis sensor unit is interrupted.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace RH front seat cushion/ occupant classification system control unit assembly.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>
OCCUPANT SENS [UNIT FAIL] [B1018]	Occupant classification sensor is malfunctioning.	Replace RH front seat cushion/     occupant classification system control unit assembly.
BELT TENSION SENS [UNIT FAIL] [B1019]	Belt tension sensor is malfunctioning.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace RH front seat belt assembly.</li> <li>Replace RH front seat cushion/occupant classification system control unit assembly.</li> <li>Replace the related harness.</li> </ol>
PASS A/B INDCTR CKT [B1023]	Front passenger air bag off indicator is malfunctioning.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace front passenger air bag off indicator.</li> <li>Replace the air bag diagnosis sensor unit.</li> <li>Replace the related harness.</li> </ol>

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement
FRONTAL COLLISION DETECTION [B1209]	Driver and front passenger air bag modules are deployed.	1. Refer to SRS-52, "COLLISION DIAGNOSIS" .
SIDE COLLISION DETECTION [B1210]	Side or curtain air bag modules are deployed (with side air bags only).	
ROLLOVER DETECTION [B1211]	Curtain air bag module and seat belt pre-tensioner are deployed.	

#### NOTE:

Follow the procedures in numerical order when repairing malfunctioning parts. Confirm whether malfunction is eliminated using air bag warning lamp or CONSULT-II each time repair is finished. If malfunction is still observed, proceed to the next step. When malfunction is eliminated, further repair work is not required.

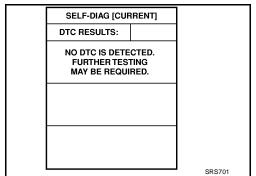
### **DIAGNOSTIC PROCEDURE 3**

NOSTIC PROCEDURE 2".

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

Refer to GI-38, "CONSULT-II Start Procedure".

 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-23, "DIAG-



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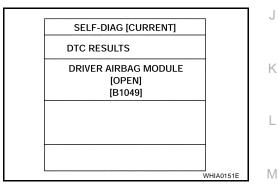
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2. Touch "ERASE".

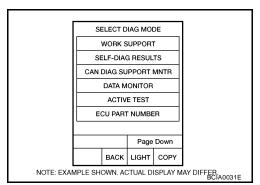
### NOTE:

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

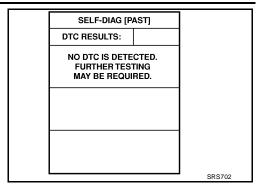
If the memory of the malfunction in "SELF-DIAG [PAST]" is not erased, the User mode shows the system malfunction by the operation of the warning lamp even if the malfunction is repaired completely.



Touch "BACK" key of CONSULT-II to "SELECT DIAG MODE" screen. Touch "SELF-DIAG [PAST]".



- Check that no malfunction is detected on "SELF-DIAG [PAST]".
- Touch "BACK" key of CONSULT-II until "SELECT SYSTEM" 5. appears in order to return to User mode from Diagnosis mode.
- Turn ignition switch OFF then turn off and disconnect CON-SULT-II.
- 7. Go to SRS-21, "DIAGNOSTIC PROCEDURE 1".



### **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?

>> Self-diagnostic result "SELF-DIAG [PAST]" (previously stored in the memory) might not be erased after repair. Go to <u>SRS-27</u>, "<u>DIAGNOSTIC PROCEDURE 3"</u> >> Go to <u>SRS-23</u>, "<u>DIAGNOSTIC PROCEDURE 2"</u> .

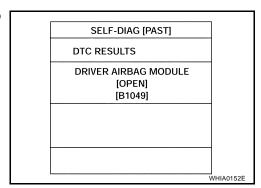
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### **DIAGNOSTIC PROCEDURE 5**

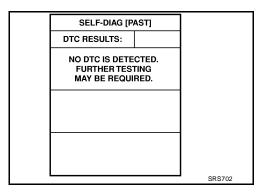
### Check SRS Intermittent Malfunction Using CONSULT-II—Diagnosis Mode

Refer to GI-38, "CONSULT-II Start Procedure" .

If diagnostic codes are displayed on "SELF-DIAG [PAST]", go to step 4.



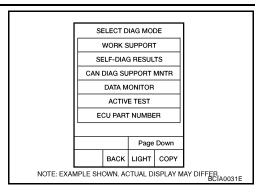
If no malfunction is detected on "SELF-DIAG [PAST]", touch "BACK" and go back to "SELECT DIAG MODE".



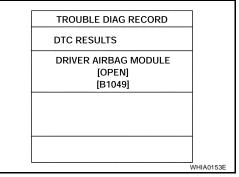
2. Touch "TROUBLE DIAG RECORD".

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. Touch "PRINT".
- 5. Compare diagnostic codes to <u>SRS-23, "CONSULT-II Diagnostic Code Chart"</u>.
- Touch "BACK" key of CONSULT-II until "SELECT SYSTEM" appears.
- 7. Turn ignition switch OFF, then turn off and disconnect CON-SULT-II, and both battery cables.
- 8. Repair the system as outlined by the "Repair order" in "Intermittent Malfunction 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-27, "DIAGNOSTIC PROCEDURE 3", for final checking.



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# **Trouble Diagnosis Without CONSULT-II DIAGNOSTIC PROCEDURE 6**

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# Inspect SRS Malfunction Using "AIR BAG" Warning Lamp—Diagnosis Mode NOTE:

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 more times (3 times total).
- 5. Turn ignition switch ON.

SRS is now in Diagnosis mode.

"AIR BAG" warning lamp operates in Diagnosis mode as follows:

### 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.
IGN ON ON OFF  7 sec. 2 sec. 2 sec.	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. 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 ON 7 sec 3 sec 2 sec. 2 sec. WHIA0198E

<Front passenger air bag module>

Flash pattern	Repair order
a through d are repeated. d: Eight flashes indicate malfunctioning front passenger air bag module circuit.  8 flashes ON  a b c d a b	Visually check the wiring harness connection.     Replace the harness if it has visible damage.     Replace front passenger air bag module.     Replace the air bag diagnosis sensor unit.     Replace the related harness.
OFF 7 sec. 3 sec. 1 1 1 1 1 1 1 1 3 sec. 2 sec. 2 sec. 2 sec. 2 sec. 2 sec.	WWW.

**SRS-31** 2007 Xterra Revision: September 2006

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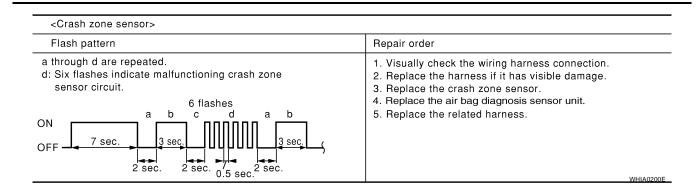
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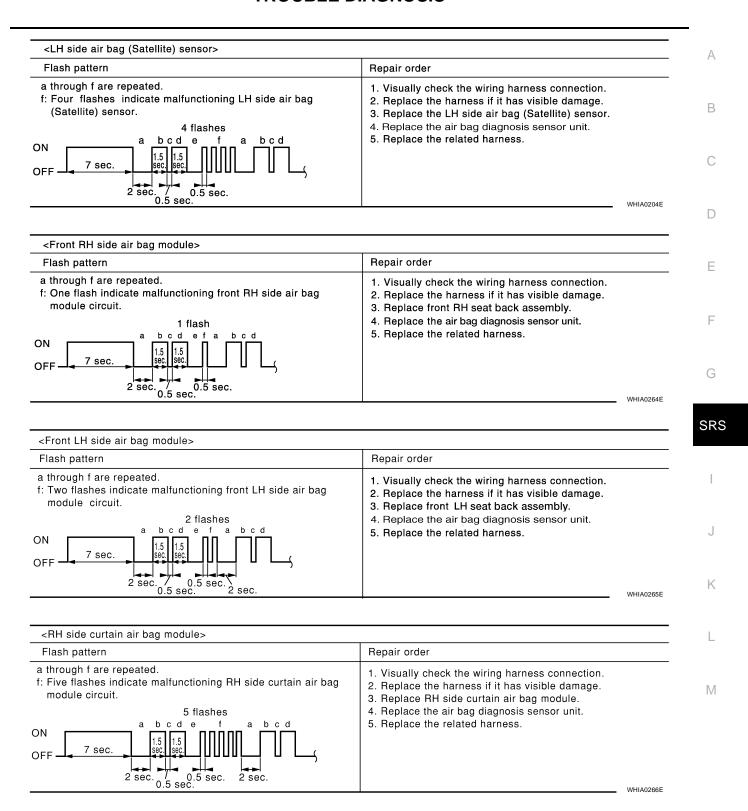
WHIA0261E



<pre><front belt="" pre-tensioner="" rh="" seat=""> Flash pattern</front></pre>	Repair order
a through d are repeated. d: One flash indicates malfunctioning front RH seat belt pre-tensioner circuit.  ON  OFF  7 sec.  2 sec.  0.5 sec.  2 sec.  0.5 sec.	1. Visually check the wiring harness connections. 2. Replace the harness if it has visible damage. 3. Replace front RH seat belt pre-tensioner. 4. Replace the air bag diagnosis sensor unit. 5. Replace the related harness.

<front belt="" lh="" pre-tensioner="" seat=""></front>		
Flash pattern	Repair order	
a through d are repeated. d: Three flashes indicate malfunctioning front LH seat belt pre-tensioner circuit.  ON OFF  7 sec. 2 sec. 2 sec. 0.5 sec.	Visually check the wiring harness connections.     Replace the harness if it has visible damage.     Replace front LH seat belt pre-tensioner.     Replace the air bag diagnosis sensor unit.     Replace the related harness.	

<rh (satellite)="" air="" bag="" sensor="" side=""></rh>		
Flash pattern	Repair order	
a through f are repeated.  f: Three flashes indicate malfunctioning RH side air bag (Satellite) sensor circuit.  3 flashes  ON  7 sec.  2 sec.  0.5 sec.  2 sec.	1. Visually check the wiring harness connection. 2. Replace the harness if it has visible damage. 3. Replace the RH side air bag (Satellite) sensor. 4. Replace the air bag diagnosis sensor unit. 5. Replace the related harness.	



#### <LH side curtain air bag module> Flash pattern Repair order a through f are repeated. 1. Visually check the wiring harness connection. f: Six flashes indicate malfunctioning LH side curtain air bag 2. Replace the harness if it has visible damage. module circuit. 3. Replace LH side curtain air bag module. 6 flashes a bcd e f 4. Replace the air bag diagnosis sensor unit. a bcd 5. Replace the related harness. ON 7 sec. OFF 7 0.5 sec. 2 sec. 2 sec.

#### <Occupant classification system>

Flash pattern	Repair order
a through d are repeated. d: Five flashes indicate malfuntioning occupant classification system control unit.  ON  OFF  7 sec.  2 sec.  2 sec.  0.5 sec.	Visually check the wiring harness connection.     Replace the harness if it has visible damage.     Replace the RH front seat cushion occupant classification system control unit assembly.     Replace the air bag diagnosis sensor unit.
	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.

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

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1. CHECK CONDITION OF AIR BAG MODULES

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-52</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

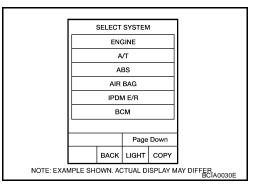
Connect CONSULT-II and CONSULT-II CONVERTER and touch "START".

### Is "AIR BAG" displayed on CONSULT-II?

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 <a href="SRS-50">SRS-50</a>, "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-50</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.

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# **Trouble Diagnosis: "AIR BAG" Warning Lamp Does Not Turn On DIAGNOSTIC PROCEDURE 8**

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# 1. CHECK METER FUSE

Check the 10A fuse [No. 14, located in the fuse block (J/B)] . Refer to PG-4, "POWER SUPPLY ROUTING CIRCUIT" .

### OK or NG

OK >> GO TO 3. NG >> GO TO 2.

# 2. REPLACE METER FUSE AND CHECK AGAIN

Replace 10A fuse [No. 14, located in the fuse block (J/B)] and turn ignition switch ON.

### Does the fuse blow again?

Yes >> Replace harness. No >> Inspection End.

# 3. CHECK HARNESS CONNECTIONS BETWEEN AIR BAG DIAGNOSIS SENSOR UNIT AND COMBINATION METER

Inspect the harness and connectors between the air bag diagnosis sensor unit and the combination meter. Do the harness or connectors have any visible damage?

Yes >> Replace harness.

No >> GO TO 4.

## 4. CHECK COMBINATION METER

Disconnect the air bag diagnosis sensor unit harness connectors and turn ignition switch ON. Does "AIR BAG" warning lamp turn on?

Yes >> Replace the air bag diagnosis sensor unit. Refer to SRS-50, "Removal and Installation".

No >> Replace the combination meter. Refer to IP-13, "COMBINATION METER".

## DRIVER AIR BAG MODULE

## **DRIVER AIR BAG MODULE**

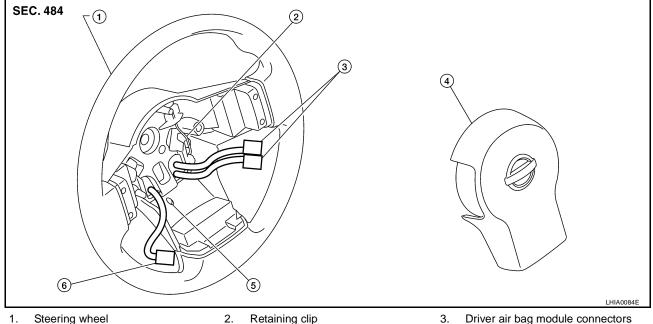
### PFP:K8510

## Removal and Installation

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Driver air bag module

- 2. Retaining clip
- 5. Retaining clip access hole
- 3. Driver air bag module connectors
- 6. Horn connector

## **REMOVAL**

### **CAUTION:**

- 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.
- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- When servicing the SRS, do not work from directly in front of air bag module.
- Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Locate retaining clip (1) through access hole (2) and insert suitable 4mm - 6mm blunt tool.

Do not use sharp edged objects such as screwdrivers to release driver air bag module from steering wheel, SRS components may be unintentionally damaged.

- 3. Press upward (toward center of steering wheel) on retaining clip until driver air bag module is released from steering wheel (3).
- 4. Lift the driver air bag module from the steering wheel.
- 5. Disconnect the driver air bag module and horn connectors, then remove the driver air bag module.
  - For removal/installation of the direct-connect SRS connectors, refer to SRS-7, "Direct-connect SRS Component Connectors".

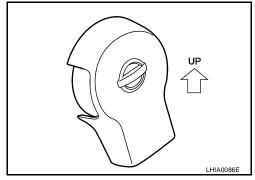
### **CAUTION:**

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

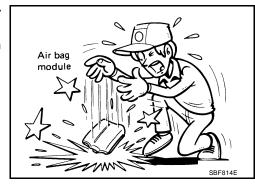
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## **DRIVER AIR BAG MODULE**

- Always place air bag module with pad side facing upward.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or 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.



## **INSTALLATION**

Installation is in the reverse order of installation.

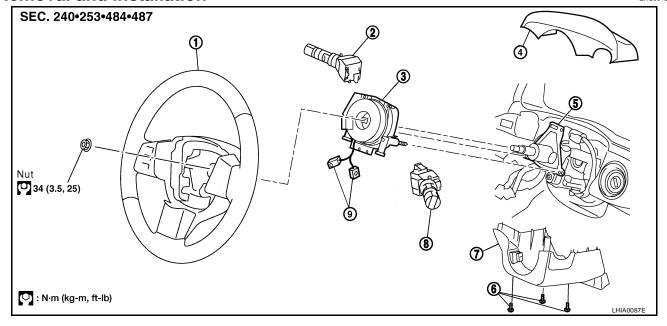
- If driver air bag module is being replaced due to deployment, spiral cable must also be replaced. Refer to SRS-39, "SPIRAL CABLE".
- For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7</u>, "<u>Direct-connect SRS Component Connectors</u>".
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to SRS-21, "SRS Operation Check".

SPIRAL CABLE PFP:25554

## Removal and Installation

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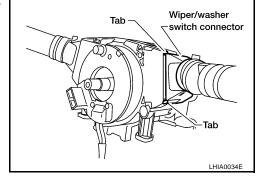


- Steering wheel
- Steering column cover upper
- Steering column cover lower
- 2. Lighting and turn signal switch
- 5. Steering column assembly
- Wiper and washer switch
- Spiral cable
- 6. Screw
- Driver air bag module connectors

## **REMOVAL**

### **CAUTION:**

- Before servicing the SRS, turn ignition switch OFF, disconnect both battery cables and wait at least 3 minutes.
- When servicing the SRS, do not work from directly in front of air bag module.
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Set the front wheels in the straight-ahead position.
- 3. Remove the steering wheel. Refer to PS-9, "Removal and Installation".
- 4. Remove the column cover upper and lower.
- 5. Disconnect wiper and washer switch connector. Then while pressing tabs, pull wiper and washer switch away from spiral cable to remove.

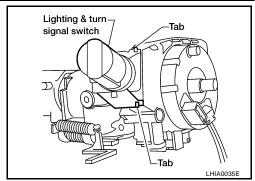


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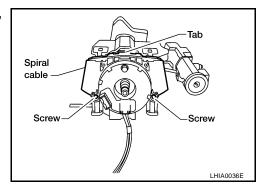
Disconnect lighting and turn signal switch connector. Then while
pressing tabs, pull lighting and turn signal switch toward driver
door to remove.



7. Remove the spiral cable screws. Then while pressing the tab, pull the spiral cable away from steering column assembly.

### **CAUTION:**

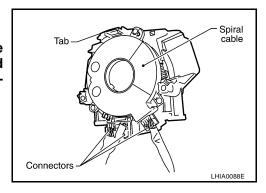
- Do not disassemble spiral cable.
- Do not apply lubricant to the spiral cable.



8. Disconnect the spiral cable connectors.

### **CAUTION:**

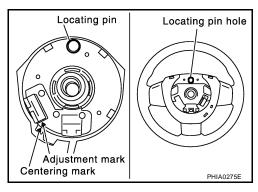
With the steering linkage disconnected, the spiral cable may snap by turning the steering wheel beyond the limited number of turns. The spiral cable can be turned counterclockwise about 2.5 turns from the neutral position.



## **INSTALLATION**

Installation is in the reverse order of removal.

- Align spiral cable correctly when installing steering wheel, refer
  to <u>PS-9</u>, "INSTALLATION". Make sure that the spiral cable is in
  the neutral position. The neutral position is detected by turning
  left 2.6 revolutions from the right end position and ending with
  the locating pin at the top.
- Reset the steering angle sensor calibration after installing spiral cable. Refer to <u>BRC-56</u>, "Adjustment of Steering Angle Sensor Neutral Position".
- After the work is completed, perform self-diagnosis to make sure no malfunction is detected. Refer to <u>SRS-21</u>, "SRS Operation Check".



### **CAUTION:**

- The spiral cable may snap due to steering operation if the cable is not installed in the correct position.
- 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.

## FRONT PASSENGER AIR BAG MODULE

PFP:K8515

## Removal and Installation

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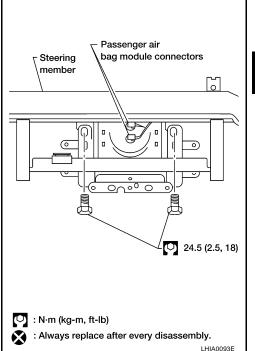
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The passenger air bag module originally installed in the vehicle uses direct-connect style harness connectors. Service replacement passenger air bag modules use tab-locking style harness connectors. If the passenger air bag module is replaced or if 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-43">SRS-43</a>, "WIRING HARNESS MODIFICATION" for wiring harness modification procedure.

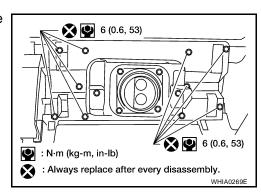
## **REMOVAL**

### **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.
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes
- 2. Remove the glove box. Refer to IP-14, "LOWER INSTRUMENT PANEL RH AND LOWER GLOVE BOX"
- 3. Remove two bolts (through glove box opening) retaining front passenger air bag module to the steering member.
- 4. Disconnect the passenger air bag module connectors.
  - For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7</u>, "<u>Direct-connect SRS Component Connectors</u>".
- 5. Remove the instrument panel assembly from the vehicle. Refer to <a href="IP-10">IP-10</a>, "INSTRUMENT PANEL"</a>.



6. Remove front passenger air bag module screws then remove passenger air bag module from instrument panel assembly.



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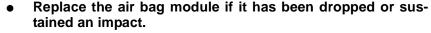
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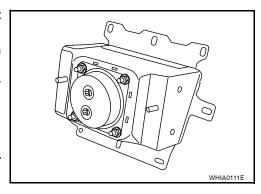
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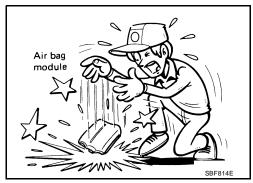
## **CAUTION:**

- When servicing the SRS, do not work from directly in front of air bag module.
- Always place front passenger air bag module with caution label side facing upward.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module or harness connectors.
- Do not disassemble air bag module.
- Do not use old nuts after removal; replace with new nuts.
- Do not expose the front passenger air bag module to temperatures exceeding 90°C (194°F).



- Do not allow oil, grease or water to come in contact with the air bag module.
- For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7</u>. "<u>Direct-connect SRS Component Connectors</u>".





## **INSTALLATION**

## **Original Passenger Air Bag Module**

Installation is in the reverse order of removal.

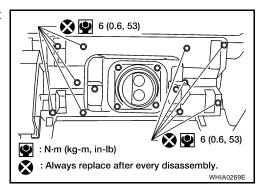
For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7</u>, "<u>Direct-connect SRS Component Connectors</u>".

### **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-21</u>, "<u>SRS Operation Check"</u>.

## Service Replacement Passenger Air Bag Module

 Install the front passenger air bag module to the instrument panel pad assembly.



- 2. Install the instrument panel assembly. Refer to IP-10, "INSTRUMENT PANEL" .
- 3. Connect the front passenger air bag module harness connector to yellow 4-pin service replacement air bag connector and fasten connector to mounting bracket.

## **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-21</u>, "<u>SRS Operation Check"</u>.

## WIRING HARNESS MODIFICATION

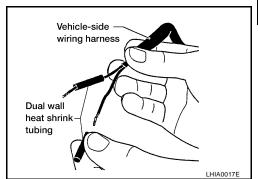
The passenger air bag module originally installed in the vehicle uses direct-connect style harness connectors. Service replacement passenger air bag modules use tab-locking style harness connectors. If the passenger air bag module is replaced or if the direct-connect harness connectors are damaged, the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

### NOTE:

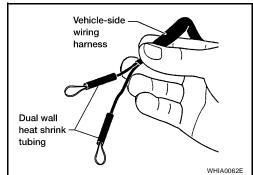
The wiring harness modification is to be performed only if the vehicle is equipped with the original passenger air bag which uses direct-connect harness connectors. If the passenger air bag is to be replaced in a vehicle that has already had the service replacement passenger air bag installed, the wiring 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-21</u>, "<u>SRS Operation Check"</u>.
- 1. 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.

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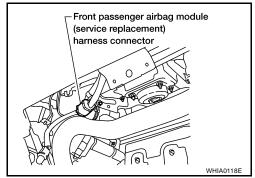
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8. Locate the front passenger air bag service replacement connector that is taped back to the main harness. Unwrap the tape to access the yellow service replacement connector and remove the dust cover from the connector.



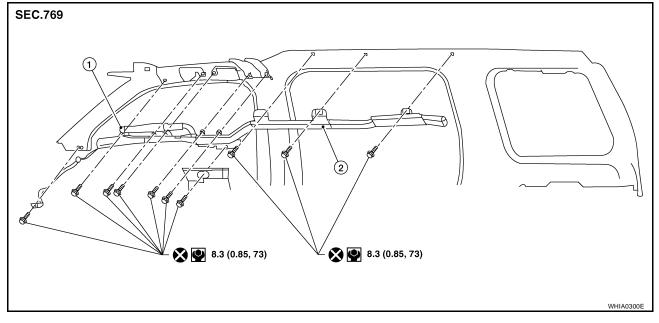
## SIDE CURTAIN AIR BAG MODULE

## SIDE CURTAIN AIR BAG MODULE

PFP:985P0

## Removal and Installation

FHS001FH



- 1. Side curtain air bag module connector
- 2. Side curtain air bag module

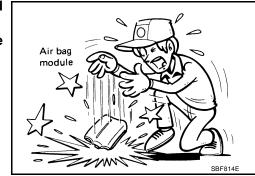
## **REMOVAL**

### **CAUTION:**

- 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.
- Before servicing the SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- When servicing the SRS, do not work from directly in front of air bag module.
- 1. Remove headlining. Refer to El-30, "Removal and Installation".
- 2. Disconnect side curtain air bag module connector.
  - For removal/installation of the direct-connect SRS connectors, refer to <u>SRS-7</u>, "<u>Direct-connect SRS</u>
     <u>Component Connectors</u>".
- 3. Remove the bolts in order starting at the front or rear, and remove the side curtain air bag module.

### **CAUTION:**

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



## **INSTALLATION**

Installation is in the reverse order of removal.

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## SIDE CURTAIN AIR BAG MODULE

•	For removal/installation of the direct-connect SRS connectors, refer to SRS-7, "Direct-connect SRS Com-
	ponent Connectors".

 After replacement of side curtain air bag module, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-21, "SRS Operation Check"</u>.

## **CRASH ZONE SENSOR**

## **CRASH ZONE SENSOR**

PFP:98531

# Removal and Installation REMOVAL

### EHS001EI

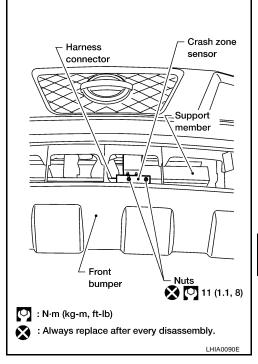
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## **CAUTION:**

- Before servicing the SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- Remove crash zone sensor nuts and shield from support member.
- 3. Disconnect the crash zone sensor harness connector.
- 4. Remove crash zone sensor.

## **CAUTION:**

- Replace crash zone sensor if it has been dropped or sustained an impact.
- Do not disassemble crash zone sensor.



## **INSTALLATION**

Installation is in the reverse order of removal.

After the work is complete, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-21</u>, "SRS Operation Check".

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## SIDE AIR BAG (SATELLITE) SENSOR

## SIDE AIR BAG (SATELLITE) SENSOR

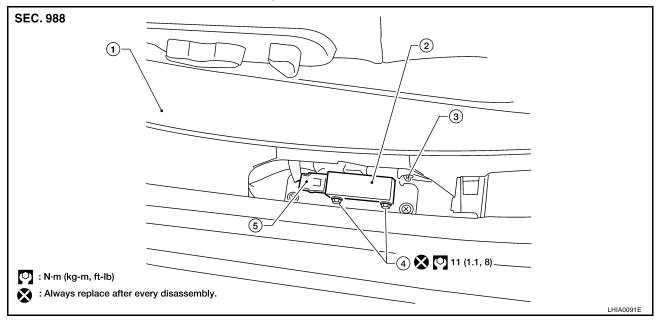
PFP:98830

# Removal and Installation REMOVAL

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### **CAUTION:**

- Before servicing the SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Remove front door sill finisher and lift carpet.



- 1. Front seat finisher
- 2. Side air bag (satellite) sensor

3. Clip

Nuts

- 5. Side air bag (Satellite) sensor connector
- Remove side air bag (satellite) sensor nuts and release the clip.
- 4. Disconnect the side air bag (satellite) sensor connector.

### CAUTION:

- Do not use old nuts after removal; replace with new nuts.
- Check side air bag (satellite) sensor to ensure it is free of deformities, dents, cracks or rust. If it shows any visible signs of damage, replace it with new one.
- Do not disassemble side air bag (satellite) sensor.
- Replace side air bag (satellite) sensor if it has been dropped or sustained an impact.

## 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 <u>SRS-21, "SRS Operation Check"</u>.

## FRONT SEAT BELT PRE-TENSIONER

## FRONT SEAT BELT PRE-TENSIONER

PFP:86884

## **Removal and Installation**

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

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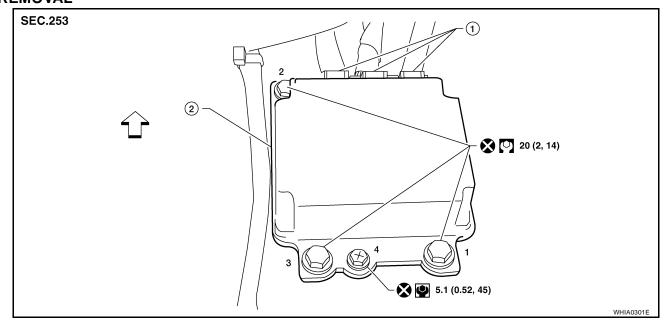
## DIAGNOSIS SENSOR UNIT

## **DIAGNOSIS SENSOR UNIT**

PFP:28556

FHS001FI

# Removal and Installation REMOVAL



- 1. Diagnosis sensor unit connectors
- Diagnosis sensor unit
- ∀ehicle front

### **CAUTION:**

- Before servicing the SRS, turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- 1. Disconnect the negative and positive battery cables, then wait at least 3 minutes.
- 2. Disconnect the connectors for each air bag module and seat belt pre-tensioner.
- Remove center console. Refer to IP-14, "CENTER CONSOLE".
- 4. Disconnect diagnosis sensor unit connectors.
- 5. Remove bolts from the diagnosis sensor unit.

### **CAUTION:**

- Do not use old bolts; replace with new bolts.
- Replace diagnosis sensor unit if it has been dropped or sustained an impact.

## **INSTALLATION**

Installation is in the reverse order of removal.

- Install diagnosis sensor unit bolts, then tighten to specification in the order shown.
- After the work is completed, perform self-diagnosis to check that no malfunction is detected. Refer to <u>SRS-21, "SRS Operation Check"</u>.

### **CAUTION:**

• The diagnosis sensor unit must always be installed with the arrow mark "←" pointing toward the front of the vehicle for proper operation.

## **ECU DISCRIMINATED NUMBER**

After replacing the diagnosis sensor unit, confirm that the diagnosis sensor unit identification is correct for the vehicle as equipped. Refer to <u>SRS-19</u>, "CONSULT-II Function (AIR BAG)".

## OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

## OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

### PFP:98852

## **Removal and Installation**

EHS001EM

The occupant classification control unit, occupant classification (pressure) sensor, and bladder are an integral part of the front passenger seat cushion and are replaced as an assembly. Refer to <a href="SE-13">SE-13</a>, "SEATBACK ASSEMBLY" to remove the seat, and <a href="SE-16">SE-16</a>, "SEAT CUSHION TRIM AND PAD" to replace the seat cushion.

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## **COLLISION DIAGNOSIS**

PFP:00015

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## **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-21, "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-II only.	<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-ten- sioner assemblies (All applicable loca- tions: 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-II 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	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 bag has deployed: REPLACE the spiral cable.	If the driver front air bag has not deployed:		
•		Visually check spiral cable and combination switch for damage.		
		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 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 ar	nd cushion pan for dents or deformities.		
	5. If no damage is four	d, reinstall seat with new fasteners.		
	6. If damaged — REPL	ACE seat cushion assembly with new fasteners.		
Harness and connec-	1. Check connectors for	or 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 air bag has deployed: REPLACE the instrument panel assembly.	If the passenger front air bag has NOT deployed:		
		Visually check instrument panel for damage.		
		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

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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-21, "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).
- Conduct self-diagnosis using CONSULT-II and "AIR BAG" warning lamp. Refer to <u>SRS-21, "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-II and "AIR BAG" warning lamp. Refer to <u>SRS-21, "SRS Operation Check"</u> for details. Ensure entire SRS operates properly.

Revision: September 2006 SRS-53 2007 Xterra

## 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 pre-tensioner* has been activated: REPLACE all seat belt pre-tensioner assemblies with new fasteners.	If the pre-tensioners have NOT been activated:  1. Remove seat belt pre-tensioners.		
(All applicable locations: buckle, reel, lap		Check harness cover and connectors for damage, terminals for deformities, and harness for binding.		
outer)		2. 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 activation using CONSULT-	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>		
	II only.	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	If the front LH or front RH side air bag modules have NOT deployed:		
air bag)	or front RH side air	1. Visually check the seat on the collision side.		
	bag modules has been deployed: REPLACE front seat-	<ol><li>Remove the seat on the collision side and check the following for damage and deformities.</li></ol>		
	back assembly on the	- Harness, connectors and terminals		
	deployed side.	<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 inn	heck the center inner pillar on the collision side for damage (dents, cracks, deformation).		
	2. If damaged—REPAII	R the center inner pillar.		
Trim/headlining	1. Check for visible sign	ole 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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