SECTION SRS

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

Occupant Classification System Precaution

NHS0008Q

Replace occupant classification system control unit and passenger front seat cushion as an assembly. Refer to <u>SE-165</u>, "<u>Passenger's Seat Components"</u>.

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PREPARATION

PREPARATION PFP:00002

Commercial Service Tools

NHS0008R

Tool name		Description
Tamper resistant TORX bit	S-N1757	Size: T30

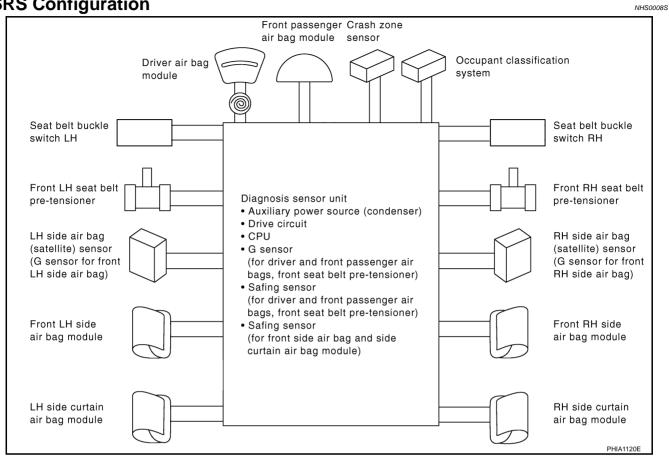
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

PFP:28556

SRS Configuration

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The air bag deploys if the diagnosis sensor unit activates 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 and front passenger air bag module are activated in a frontal collision but not in a side collision.

SRS configurations which are activated 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	_	_	×

SRS-5 Revision: 2006 January 2006 M35/M45

SRS

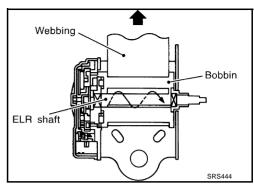
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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.

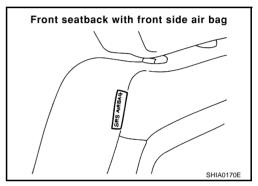
When passengers in a vehicle are thrown forward in a collision and the restraining force of the seat belt exceeds a specified level, the load limiter permits the specified extension of the seat belt by the twisting of the ELR shaft, and a relaxation of the chest-area seat belt web tension while maintaining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



Front Side Air Bag

Front side air bag is built-in type.

The front seatback with built-in type side air bag have the labels as shown.



NHS0008V

NHS0008U

Side Curtain Air Bag

The side curtain air bags have the labels as shown.



NHS0008T

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

Occupant Classification System (OCS)

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The occupant classification system identifies different size occupants, out of position occupants, and detects if child seat is present in the front passenger seat. The occupant classification system 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 passenger, the occupant classification system sends a signal to the diagnosis sensor unit. The diagnosis sensor unit uses this signal to determine full, partial, or non deployment of passenger front air bag in the event of a collision. Depending on the signal received, the 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 Condition

VHS0008X

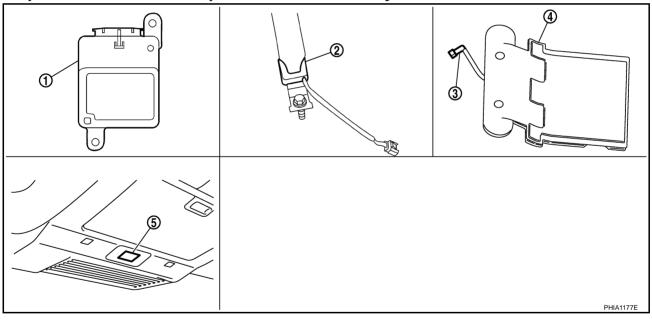
Front Passenger Seat (Condition)	PASS AIR BAG OFF Indicator (Status)	Passenger Air Bag Status (Readiness)	CONSULT-II Display
Seat occupied	OFF	Active (enabled)	ON
seat occupiedNOTE	ON	Deactivated (disabled)	OFF
Seat empty	OFF	Deactivated (disabled)	OFF

NOTE:

Passenger does not meet Ocuupant classification System specifications for passenger air bag activation.

Component Parts of Occupant Classification System

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- Occupant classification system control unit
- 4. Bladder

- Belt tension sensor
- 3. Seat pressure sensor
- Front passenger air bag OFF indicator (Cutoff telltaile)

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TROUBLE DIAGNOSIS

PFP:00004

Trouble Diagnosis Introduction

NHS00090

CAUTION:

- Do not use electrical test equipment on any circuit related to the SRS unless instructed in this Service Manual. SRS wiring harnesses can be identified by yellow and/or orange harnesses or harness connectors.
- Do not repair, splice or modify the SRS wiring harness. If the harness is damaged, replace it with a new one.
- Keep ground portion 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	Х	X	ON-OFF operation
CONSULT-II	_	X	Monitoring

HOW TO PERFORM TROUBLE DIAGNOSIS 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

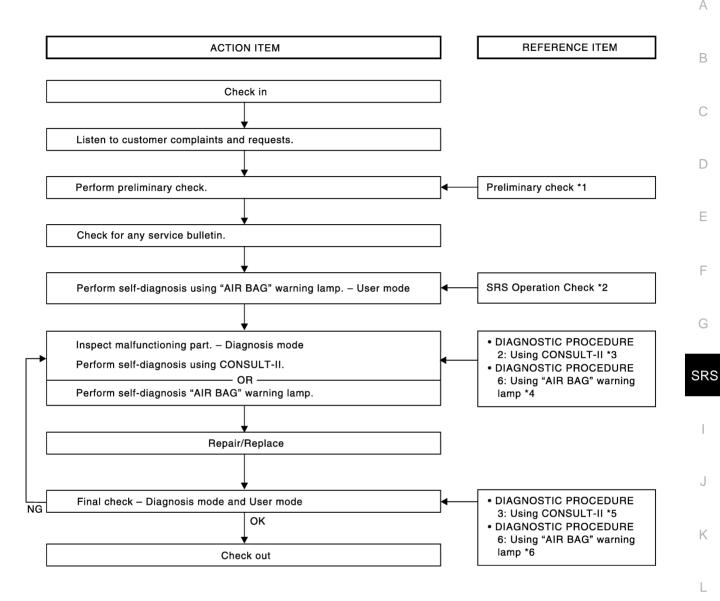
HOW..... Operating conditions, Symptoms

Preliminary Check

Make sure the following parts are in good order.

- Battery (Refer to <u>SC-4, "How to Handle Battery"</u>.)
- Fuse (Refer to <u>SRS-12</u>, "Wiring <u>Diagram SRS —</u>" .)
- System component-to-harness connections

WORK FLOW



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*1: SRS-8, "Preliminary Check".

*2: SRS-19, "SRS Operation Check".

*3: SRS-21, "DIAGNOSTIC PROCE-

*4: SRS-32, "DIAGNOSTIC PROCE-DURE 6".

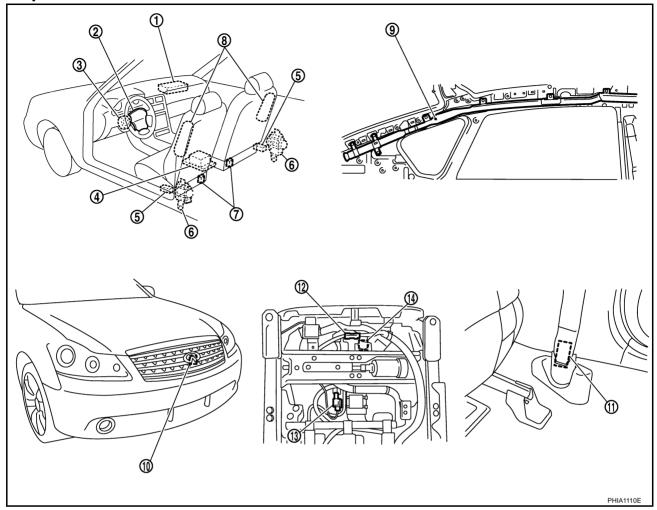
*5: SRS-25, "DIAGNOSTIC PROCE-**DURE 3"**.

DURE 2". *6: SRS-32, "DIAGNOSTIC PROCE-

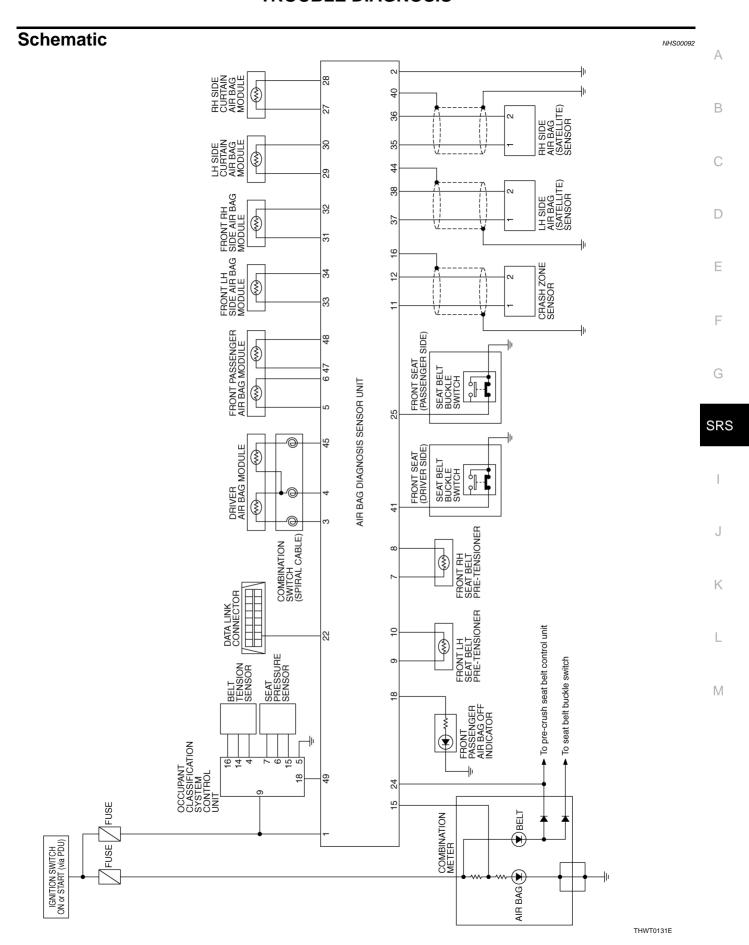
DURE 6".

Component Parts Location





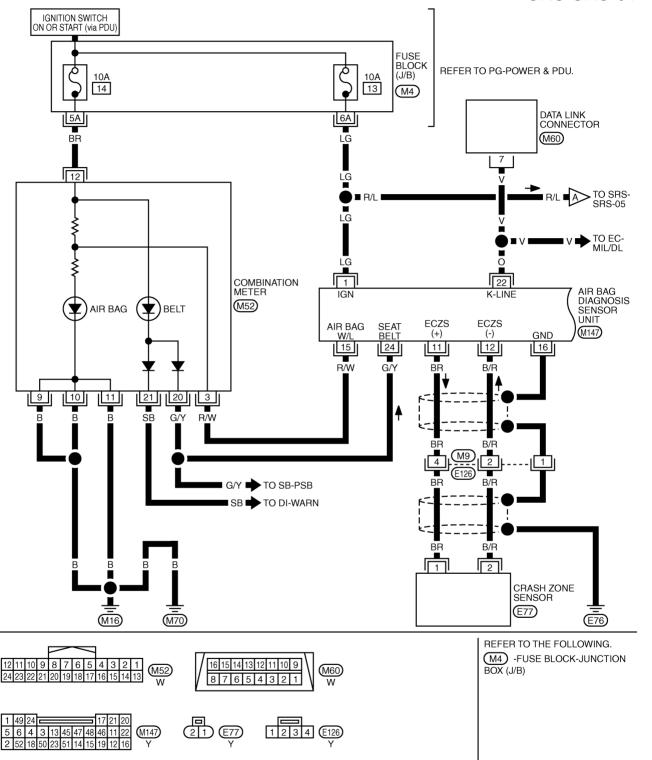
- 1. Front passenger air bag module
- 4. Diagnosis sensor unit
- 7. Seat belt buckle switch (RH/LH)
- 10. Crash zone sensor
- 13. Seat pressure sensor *
- *: The bottom of front passenger seat
- 2. Driver air bag module
- 5. Side air bag (Satellite) sensor (RH/LH)
- 8. Front side air bag modules
- 11. Belt tension sensor
- 14. Occupant classification system control unit *
- 3. Spiral cable
- 6. Front seat belt pre-tensioner (RH/LH)
- 9. Side curtain air bag module
- 12. Belt tension sensor connector *



Wiring Diagram — SRS —

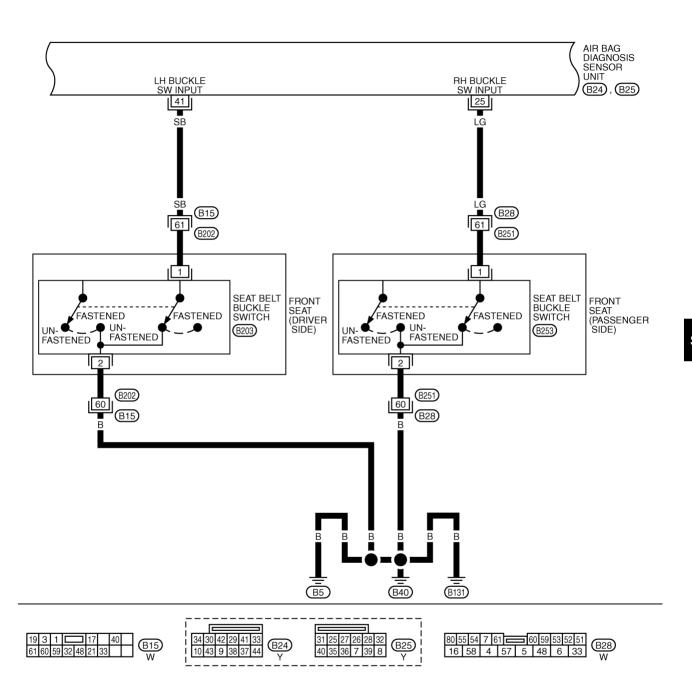
VHS00093

SRS-SRS-01



THWT0132E

SRS-SRS-02





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

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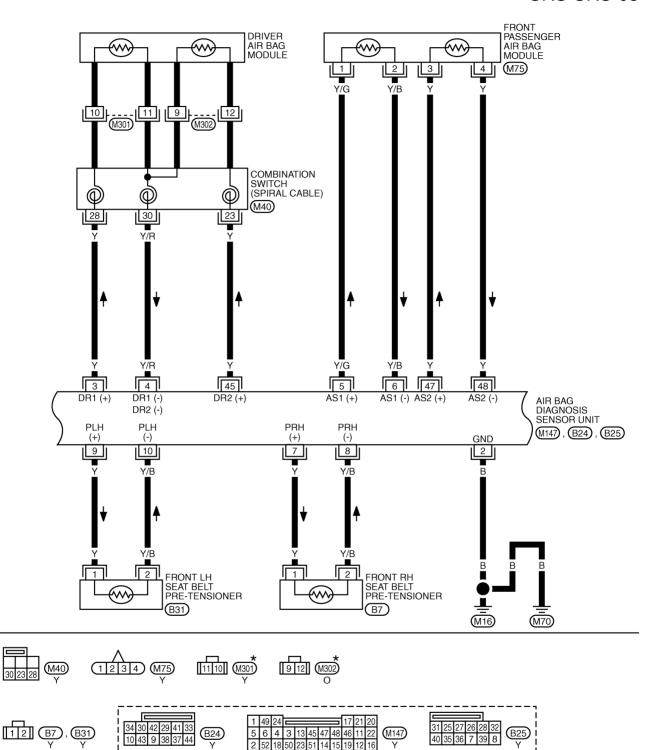
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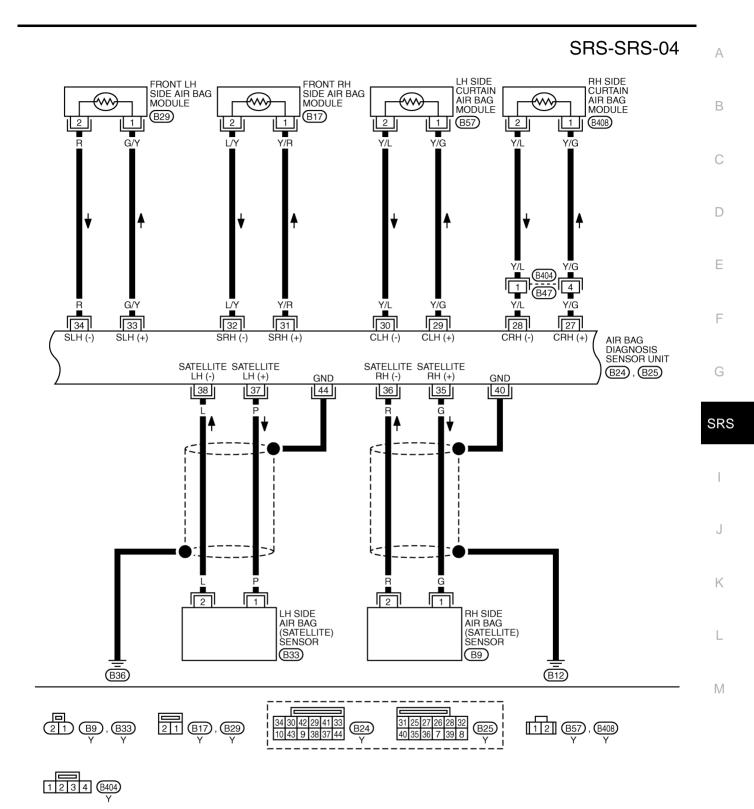
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SRS-SRS-03



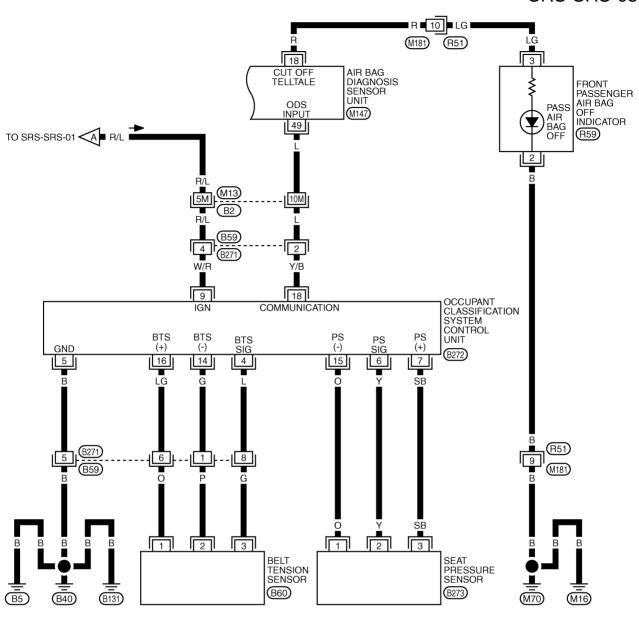
*: THIS CONNECTOR IS NOT SHOWN IN "HARNESS LAYOUT", PG SECTION.

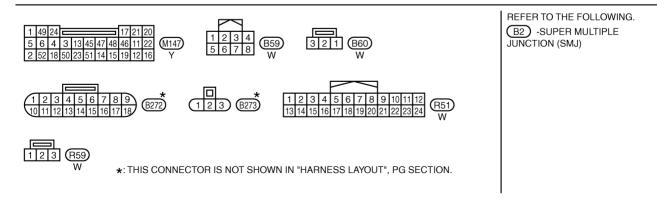
THWT0134E



THWT0135E

SRS-SRS-05





THWT0136E

CONSULT-II Function DIAGNOSIS MODE FOR CONSULT-II

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• "SELF-DIAG [CURRENT]"

A current self-diagnosis results (also indicated by the number of warning lamp flashes in the Diagnosis mode) is displayed on the CONSULT-II screen in real time. This refers to a malfunctioning part requiring repairs.

"SELF-DIAG [PAST]"

Diagnosis results previously stored in the memory are displayed on the CONSULT-II screen. The stored results are not erased until memory erasing is executed.

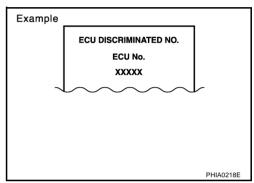
"TROUBLE DIAG RECORD"

With TROUBLE DIAG RECORD, diagnosis results previously erased by a reset operation can be displayed on the CONSULT-II screen.

"ECU DISCRIMINATED NO."

The diagnosis sensor unit for each vehicle model is assigned with its own, individual classification number. This number will be displayed on the CONSULT-II screen, as shown. When replacing the 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.

After repair, make sure the discriminated number of diagnosis sensor unit installed to vehicle are same. Refer to SRS-48, "ECU DISCRIMINATED NO." .



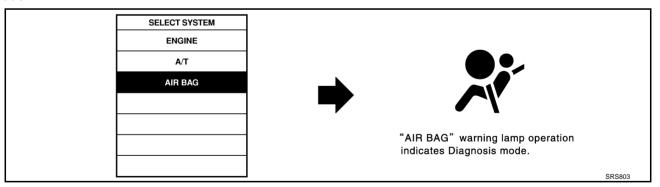
PASSENGER AIR BAG

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 infomation.

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

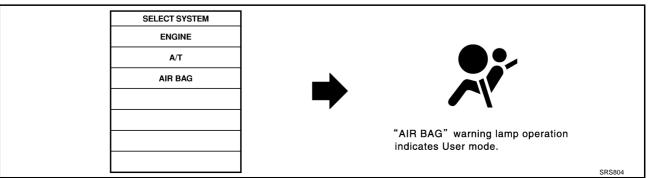
From User Mode to Diagnosis Mode

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, then diagnosis mode automatically changes to User mode.



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HOW TO ERASE SELF-DIAGNOSTIC RESULTS

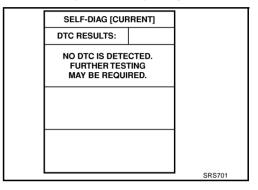
- "SELF-DIAG [CURRENT]"
 - A current self-diagnosis result is displayed on the CONSULT-II screen in real time.
 - After the malfunction is repaired completely, no malfunction is detected on "SELF-DIAG [CURRENT]".
- "SELF-DIAG [PAST]"

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

NOTE:

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.

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

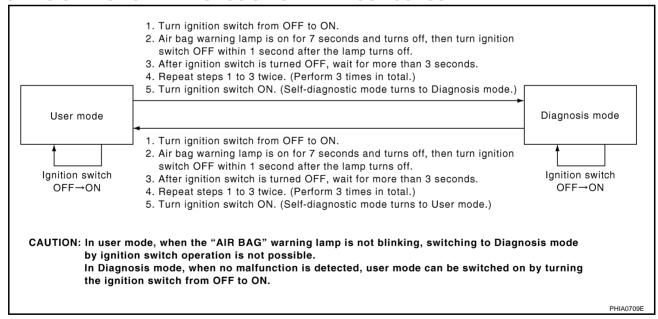


Self-Diagnosis Function (Without CONSULT-II)

NHS00095

- The reading of these results is accomplished "User mode" and "Diagnosis mode".
- After a malfunction is repaired, turn ignition switch ON. Diagnosis mode returns to the User mode. At that time, the self-diagnosis result is cleared.

HOW TO CHANGE SELF-DIAGNOSIS MODE WITHOUT CONSULT-II



HOW TO ERASE SELF-DIAGNOSTIC 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-diagnosis result is cleared.

SRS Operation Check DIAGNOSTIC PROCEDURE 1

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Checking Air Bag Operation by Using "AIR BAG" Warning Lamp — User Mode

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



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"AIR BAG" warning lamp operation — User mode —	SRS condition	Reference item
ON OFF 7 sec.	No malfunction is detected.No further action is necessary.	
ON OFF 7 sec. 0.5 sec. 0.5 sec. SHIA0012E	 The system is malfunctioning and needs to be repaired as indicated. 	Go to SRS-21, "DIAGNOSTIC PROCEDURE 2" or SRS-27, "DIAGNOSTIC PROCEDURE 5".
	Air bag is deployed.Seat belt pre-tensioner is deployed.	Go to SRS-50, "COLLISION DIAGNOSIS".
IGN ON OFF SHIA0013E	 Diagnosis sensor unit is malfunctioning. Air bag power supply circuit is malfunctioning. SRS air bag warning lamp circuit is malfunctioning. 	Go to <u>SRS-36</u> , "Trouble Diagnosis "AIR BAG" Warning Lamp Does N Turn OFF"
IGN ON ON OFF	 Diagnosis sensor unit is malfunctioning. Air bag warning lamp circuit is malfunctioning. 	Go to <u>SRS-37</u> , "Trouble Diagnosis "AIR BAG" Warning Lamp Does N Turn ON" .

Trouble Diagnosis with CONSULT-II DIAGNOSTIC PROCEDURE 2

NHS00097

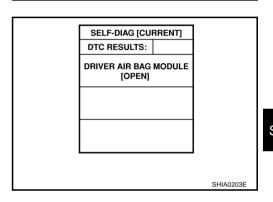
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

1. Touch "SELF-DIAG [CURRENT]".

SELECT DIAG MODE	
SELF-DIAG [CURRENT]	
SELF-DIAG [PAST]	
TROUBLE DIAG RECORD	
ECU DISCRIMINATED NO.	
	SDS607

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



- a. If no malfunction is detected on "SELF-DIAG [CURRENT]" even though malfunction is detected in "SRS Operation Check", check the battery voltage. If the battery voltage is less than 9 V, charge or replace the battery. Then go to SRS-25, "DIAGNOSTIC PROCEDURE 3". If the battery voltage is OK, go to SRS-27, "DIAGNOSTIC PROCEDURE 4 (CONTINUED FROM DIAGNOSTIC PROCEDURE 2)" to diagnose the following cases:
 - Self-diagnosis result "SELF-DIAG [PAST]" (previously stored in the memory) might not be erased after repair.
 - The SRS system malfunctions intermittently.

SELF-DIAG [CUF	RENT]	
DTC RESULTS:		
NO DTC IS DETE FURTHER TES MAY BE REQUI	ΓING	
		SRS701

CONSULT-II Diagnostic Code Chart ("SELF-DIAG [CURRENT]")

Diagnostic item		Explanation	Repair order "Recheck SRS at each replacement"
NO DTC IS DETECTED.	When malfunction is indicated by the "AIR BAG" warning lamp in	Low battery voltage (Less than 9 V)	Go to <u>SRS-25</u> , " <u>DIAGNOSTIC PRO-CEDURE 3"</u> after charging the battery.
	User mode.	 Self-diagnosis result "SELF-DIAG [PAST]" (previously stored in the memory) might not be erased after repair. Intermittent malfunction has been detected in the past. 	Go to <u>SRS-27</u> , "DIAGNOSTIC PROCEDURE 4 (CONTINUED FROM DIAGNOSTIC PROCEDURE 2)". Go to <u>SRS-27</u> , "DIAGNOSTIC PROCEDURE 5".
No malfunction is detected.		_	

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Diagnostic item	Explanation	Repair order "Recheck SRS at each replacement"
DRIVER AIRBAG MODULE [OPEN]	Driver air bag module circuit is open (including the spiral cable).	Visually check the wiring harness connection.
DRIVER AIRBAG MODULE [VB-SHORT]	Driver air bag module circuit is shorted to a power supply circuit (including the spiral cable).	2. Replace the harness if it has visible damage.3. Replace the driver air bag module)4. Replace the spiral cable.
DRIVER AIRBAG MODULE [GND-SHORT]	Driver air bag module circuit is shorted to ground (including the spiral cable).	Replace the diagnosis sensor unit. Replace the related harness.
DRIVER AIRBAG MODULE [SHORT]	Driver air bag module circuit is shorted between lines.	
ASSIST A/B MODULE [OPEN]	Front passenger air bag module circuit is open.	Visually check the wiring harness connection.
ASSIST A/B MODULE [VB-SHORT]	Front passenger air bag module circuit is shorted to a power supply circuit.	Replace the harness if it has visible damage.
ASSIST A/B MODULE [GND-SHORT]	Front passenger air bag module circuit is shorted to ground.	Replace the front passenger air bag module.
ASSIST A/B MODULE	Front passenger air bag module circuit is shorted between lines.	4. Replace the diagnosis sensor unit.
[SHORT]		5. Replace the related harness.
CRASH ZONE SEN [UNIT FAIL] CRASH ZONE SEN	Crash zone sensor	Visually check the wiring harness connection.
[COMM FAIL]		Replace the harness if it has visible damage.
		3. Replace the crash zone sensor.
		4. Replace the diagnosis sensor unit.
		5. Replace the related harness.
SIDE MODULE LH [OPEN]	Front LH side air bag module circuit is open.	Visually check the wiring harness connection.
SIDE MODULE LH [VB-SHORT]	 Front LH side air bag module circuit is shorted to a power sup- ply circuit. 	Replace the harness if it has visible damage.
SIDE MODULE LH [GND-SHORT]	Front LH side air bag module circuit is shorted to ground.	Replace the front LH seatback assembly (front LH side air bag module).
SIDE MODULE LH [SHORT]	Front LH side air bag module circuit is shorted between lines.	4. Replace the diagnosis sensor unit.
		5. Replace the related harness.
SIDE MODULE RH [OPEN]	Front RH side air bag module circuit is open.	Visually check the wiring harness connection.
SIDE MODULE RH [VB-SHORT]	Front RH side air bag module circuit is shorted to a power supply circuit.	Replace the harness if it has visible damage.
SIDE MODULE RH [GND-SHORT]	Front RH side air bag module circuit is shorted to ground.	3. Replace the front RH seatback assembly (front RH side air bag
SIDE MODULE RH [SHORT]	Front RH side air bag module circuit is shorted between lines.	module). 4. Replace the diagnosis sensor unit.
		5. Replace the related harness.
SATELLITE SENS LH [UNIT FAIL]	LH side air bag (Satellite) sensor	Visually check the wiring harness connection.
SATELLITE SENS LH [COMM FAIL]		Replace the harness if it has visible damage.
		3. Replace the LH side air bag (Satellite) sensor.
		4. Replace the diagnosis sensor unit.5. Replace the related harness.

		Repair order
Diagnostic item	Explanation	"Recheck SRS at each replacement"
SATELLITE SENS RH [UNIT FAIL]	RH side air bag (Satellite) sensor	Visually check the wiring harness connection.
SATELLITE SENS RH [COMM FAIL]		Replace the harness if it has visible damage.
		Replace the RH side air bag (Satellite) sensor.
		4. Replace the diagnosis sensor unit.
		5. Replace the related harness.
PRE-TEN FRONT LH [OPEN]	Front LH pre-tensioner circuit is open.	Visually check the wiring harness connections.
PRE-TEN FRONT LH [VB-SHORT]	 Front LH pre-tensioner circuit is shorted to a power supply circuit. 	Replace the harness if it has visible damage.
PRE-TEN FRONT LH	Front LH pre-tensioner circuit is shorted to ground.	3. Replace the front LH seat belt.
[GND-SHORT]		4. Replace the diagnosis sensor unit.
PRE-TEN FRONT LH [SHORT]	Front LH pre-tensioner circuit is shorted between lines.	5. Replace the related harness.
PRE-TEN FRONT RH [OPEN]	Front RH pre-tensioner circuit is open.	Visually check the wiring harness connections.
PRE-TEN FRONT RH [VB-SHORT]	 Front RH pre-tensioner circuit is shorted to a power supply circuit. 	Replace the harness if it has visible damage.
PRE-TEN FRONT RH	Front RH pre-tensioner circuit is shorted to ground.	3. Replace the front RH seat belt.
[GND-SHORT] PRE-TEN FRONT RH	a Front DLI pro tongionar girguit is aborted between lines	4. Replace the diagnosis sensor unit.
[SHORT]	Front RH pre-tensioner circuit is shorted between lines.	5. Replace the related harness.
CURTAIN MODULE LH [OPEN]	LH side curtain air bag module circuit is open.	Visually check the wiring harness connection.
CURTAIN MODULE LH [VB-SHORT]	LH side curtain air bag module circuit is shorted to some power supply circuits.	Replace the harness if it has visible damage.
CURTAIN MODULE LH [GND-SHORT]	LH side curtain air bag module circuit is shorted to ground.	Replace the LH side curtain air bag module.
CURTAIN MODULE LH	LH side curtain air bag module circuit is shorted between lines.	4. Replace the diagnosis sensor unit.
[SHORT]		5. Replace the related harness.
CURTAIN MODULE RH [OPEN]	RH side curtain air bag module circuit is open.	Visually check the wiring harness connection.
CURTAIN MODULE RH [VB-SHORT]	RH side curtain air bag module circuit is shorted to a power supply circuit.	Replace the harness if it has visible damage.
CURTAIN MODULE RH [GND-SHORT]	RH side curtain air bag module circuit is shorted to ground.	Replace the RH side curtain air bag module.
CURTAIN MODULE RH	RH side curtain air bag module circuit is shorted between lines.	4. Replace the diagnosis sensor unit.
[SHORT]		5. Replace the related harness.
CONTROL UNIT	Diagnosis sensor unit is malfunctioning.	Visually check the wiring harness connection.
		2. Replace the diagnosis sensor unit.
OCCUPANT SENS C/U [UNIT FAIL]	Occupant classification system control unit is malfunctioning.	Visuary check the wiring harness connection.
		Replace front passenger seat cush- ion/occupant classification system control unit assembly.

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Diagnostic item	Explanation	Repair order "Recheck SRS at each replacement"
OCCUPANT SENS C/U [COMM FAIL]	Communication between the occupant classification system control unit and air bag diagnosis sensor unit is interrupted, or	Visually check the wiring harness connection.
	occupant classification system control unit is malfunctioning.	Replace the harness if it has visible damage.
		Replace front passenger seat cush- ion/occupant classification system control unit assembly.
		4. Replace the diagnosis sensor unit.
		5. Replace the related harness.
OCCUPANT SENS [UNIT FAIL]	Occupant classification sensor is malfunctioning.	Replace front passenger seat cush- ion/occupant classification system control unit assembly.
BELT TENSION SENS [UNIT FAIL]	Belt tension sensor circuit between belt tension sensor and occupant classification system control unit, or diagnosis sensor	Visually check the wiring harness connection.
	unit is malfunctioning.	Replace the harness if it has visible damage.
		Replace front seat belt (passenger side) assembly.
		Replace front passenger seat cush- ion/occupant classification system control unit assembly.
PASS A/B INDCTR CKT	 Front passenger air bag off indicator or related circuit is mal- functioning. 	Visually check the wiring harness connection.
		Replace the harness if it has visible damage.
		Replace front passenger air bag off indicator (The installation position is an overhead consoul).
		4. Replace the diagnosis sensor unit.
		5. Replace the related harness.
FRONTAL COLLISION DETECTION	Seat belt pre-tensioner and front air bag are deployed.	Go to <u>SRS-50</u> , "For Frontal Collision"
SIDE COLLISION DETECTION	Side and curtain air bag is deployed.	Go to SRS-52, "For Side Collision".

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.

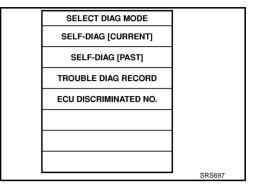
DIAGNOSTIC PROCEDURE 3

Final inspection after repairing SRS by using CONSULT-II — Diagnosis mode

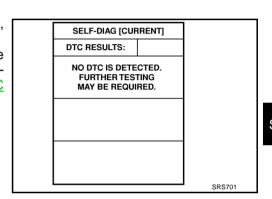
CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

1. Touch "SELF-DIAG [CURRENT]".



a. If no malfunction is detected on "SELF-DIAG [CURRENT]", repair of SRS is completed. Go to step 2. If any malfunction is detected on "SELF-DIAG [CURRENT]", the malfunctioning part is not repaired completely or another malfunctioning part is detected. Go to <u>SRS-21</u>, "<u>DIAGNOSTIC PROCEDURE 2</u>", and repair malfunctioning part completely.

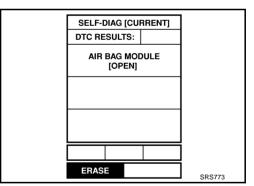


2. Touch "ERASE".

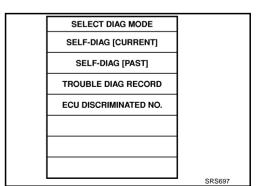
NOTE:

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]".



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- 4. Make sure no malfunction is detected on "SELF-DIAG [PAST]".
- 5. Touch "BACK" key of CONSULT-II until "SELECT SYSTEM" appears in order to return to User mode from Diagnosis mode.
- 6. Turn ignition switch OFF then turn off and disconnect CON-SULT-II.

Refer to <u>SRS-19</u>, "Checking Air Bag Operation by Using "AIR BAG" Warning Lamp — User Mode".

SELF-DIAG [P/	AST]	
DTC RESULTS:		
NO DTC IS DETE FURTHER TEST MAY BE REQUI	ING	
		SRS702

DIAGNOSTIC PROCEDURE 4 (CONTINUED FROM DIAGNOSTIC PROCEDURE 2) Inspecting SRS malfunctioning record

1. CONSIDER POSSIBILITY OF NOT ERASING SELF-DIAGNOSTIC RESULT AFTER REPAIRING

Is it the first time for maintenance of SRS?

YES or NO

YES >> Go to SRS-21, "DIAGNOSTIC PROCEDURE 2".

NO >> Self-diagnostic result "SELF-DIAG [PAST]" (previously stored in the memory) might not be erased after repair. Go to SRS-25, "DIAGNOSTIC PROCEDURE 3".

DIAGNOSTIC PROCEDURE 5

Inspecting SRS intermittent malfunction by using CONSULT-II — Diagnosis mode CAUTION:

If CONSULT-II is used with no connection of CONSULT-II CONVERTER, malfunctions might be detected in self-diagnosis depending on control unit which carry out CAN communication.

1. Touch "SELF-DIAG [PAST]".

SELECT DIAG MODE	
SELF-DIAG [CURRENT]	
SELF-DIAG [PAST]	
TROUBLE DIAG RECORD	
ECU DISCRIMINATED NO.	
	SRS697

2. If diagnostic codes are displayed on "SELF-DIAG [PAST]", go to step 5.

		_
SELF-DIAG [PAST]		
DTC RESULTS:		
AIR BAG MOD [OPEN]	ULE	
		SRS700

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

SELF-DIAG [PAST]	
DTC RESULTS:	
NO DTC IS DETECTED. FURTHER TESTING MAY BE REQUIRED.	
	_
	SRS702

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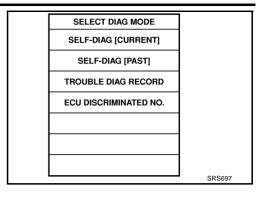
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Touch "TROUBLE DIAG RECORD".

NOTE:

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



TROUBLE DIAG RECORD

DRIVER AIR BAG MODULE [OPEN]

DTC RESULTS:

- 4. Diagnostic code is displayed on "TROUBLE DIAG RECORD".
- 5. Touch "PRINT".
- 6. Compare diagnostic codes to <u>SRS-28, "CONSULT-II Diagnostic Code Chart ("SELF-DIAG [PAST]" or "TROUBLE DIAG RECORD")"</u>.
- 7. Touch "BACK" key of CONSULT-II until "SELECT SYSTEM" appears.
- 8. Turn ignition switch OFF, then turn off and disconnect CON-SULT-II, and both battery cables.
- 9. Repair the system as outlined by the "Repair order" in "Intermittent Malfunction Diagnostic Code Chart", that corresponds to the
 self-diagnosis result. For replacement procedure of component parts, refer to the Removal and Installation procedure for the appropriate component.
- 10. Go to SRS-25, "DIAGNOSTIC PROCEDURE 3", for final checking.

CONSULT-II Diagnostic Code Chart ("SELF-DIAG [PAST]" or "TROUBLE DIAG RECORD")

		•	•
Diagnostic item		Explanation	Repair order "Recheck SRS at each replacement"
NO DTC IS DETECTED.	When malfunction is indicated by the "AIR BAG" warning lamp in User mode.	Low battery voltage (Less than 9V)	Go to <u>SRS-25</u> , " <u>DIAGNOSTIC PROCEDURE 3</u> ".
	No malfunction is determined.	cted.	Go to <u>SRS-25</u> , " <u>DIAGNOSTIC PRO-CEDURE 3"</u> .
DRIVER AIRBAG MODULE [OPEN]	Driver air bag module circuit is open (including the spiral cable).		Visually check the wiring harness connection. Replace the harness if it has visible
DRIVER AIRBAG MODULE [VB-SHORT]	Driver air bag module circuit is shorted to a power supply circuit (including the spiral cable).		damage. 3. If the harness check result is OK, replace driver air bag module, diag-
DRIVER AIRBAG MODULE [GND-SHORT]			nosis sensor unit and spiral cable.
DRIVER AIRBAG MODULE [SHORT]	Driver air bag module	circuit is shorted between lines.	
ASSIST A/B MODULE [OPEN]	Front passenger air bag module circuit is open.		Visually check the wiring harness connection.
ASSIST A/B MODULE [VB-SHORT]	 Front passenger air bag module circuit is shorted to a power supply circuit. 		Replace the harness if it has visible damage.
ASSIST A/B MODULE [GND-SHORT]	Front passenger air ba	ag module circuit is shorted to ground.	3. If the harness check result is OK, replace the diagnosis sensor unit
ASSIST A/B MODULE [SHORT]	Front passenger air ba	ng module circuit is shorted between lines.	and front passenger air bag module.

Diagnostic item	Explanation	Repair order "Recheck SRS at each replacement"
CRASH ZONE SEN	Crash zone sensor	Nisually check the wiring harness
[UNIT FAIL]		connection.
CRASH ZONE SEN [COMM FAIL]		Replace the harness if it has visible damage.
		If the harness check result is OK, replace crash zone sensor and diagnosis sensor unit.
SIDE MODULE LH [OPEN]	Front LH side air bag module circuit is open.	Visually check the wiring harness connection.
SIDE MODULE LH VB-SHORT]	Front LH side air bag module circuit is shorted to a power supply circuit.	Replace the harness if it has visible damage.
SIDE MODULE LH [GND-SHORT]	Front LH side air bag module circuit is shorted to ground.	If the harness check result is OK, replace the diagnosis sensor unit
SIDE MODULE LH SHORT]	Front LH side air bag module circuit is shorted between lines.	and LH side air bag module.
SIDE MODULE RH [OPEN]	Front RH side air bag module circuit is open.	Visually check the wiring harness connection.
SIDE MODULE RH [VB-SHORT]	Front RH side air bag module circuit is shorted to a power supply circuit.	Replace the harness if it has visible damage.
SIDE MODULE RH GND-SHORT]	Front RH side air bag module circuit is shorted to ground.	3. If the harness check result is OK, replace the diagnosis sensor unit
SIDE MODULE RH SHORT]	Front RH side air bag module circuit is shorted between lines.	and RH side air bag module.
SATELLITE SENS LH UNIT FAIL]	LH side air bag (Satellite) sensor	Visually check the wiring harness connection.
SATELLITE SENS LH COMM FAIL]		Replace the harness if it has visible damage.
		If the harness check result is OK, replace the diagnosis sensor unit and LH side air bag (Satellite) sensor.
SATELLITE SENS RH UNIT FAIL]	RH side air bag (Satellite) sensor	Visually check the wiring harness connection.
SATELLITE SENS RH [COMM FAIL]		Replace the harness if it has visible damage.
		If the harness check result is OK, replace the diagnosis sensor unit and RH side air bag (Satellite) sensor.
PRE-TEN FRONT LH OPEN]	Front LH pre-tensioner circuit is open.	Visually check the wiring harness connections.
PRE-TEN FRONT LH [VB-SHORT]	Front LH pre-tensioner circuit is shorted to a power supply circuit.	connections. Replace the harness if it has visible damage.
PRE-TEN FRONT LH [GND-SHORT]	Front LH pre-tensioner circuit is shorted to ground.	3. If the harness check result is OK, replace the diagnosis sensor unit
PRE-TEN FRONT LH [SHORT]	Front LH pre-tensioner circuit is shorted between lines.	and front LH seat belt.

SRS-29 Revision: 2006 January 2006 M35/M45

Diagnostic item	Explanation	Repair order "Recheck SRS at each replacement"
PRE-TEN FRONT RH [OPEN]	Front RH pre-tensioner circuit is open.	Visually check the wiring harness
PRE-TEN FRONT RH [VB-SHORT]	Front RH pre-tensioner circuit is shorted to a power supply circuit.	connections. 2. Replace the harness if it has visible
PRE-TEN FRONT RH [GND-SHORT]	Front RH pre-tensioner circuit is shorted to ground.	damage. 3. If the harness check result is OK, replace the diagnosis sensor unit
PRE-TEN FRONT RH [SHORT]	Front RH pre-tensioner circuit is shorted between lines.	and front RH seat belt.
CURTAIN MODULE LH [OPEN]	LH side curtain air bag module circuit is open.	1. Visually check the wiring harness
CURTAIN MODULE LH [VB-SHORT]	LH side curtain air bag module circuit is shorted to a power supply circuits.	connection. 2. Replace the harness if it has visible
CURTAIN MODULE LH [GND-SHORT]	LH side curtain air bag module circuit is shorted to ground.	damage. 3. If the harness check result is OK, replace the diagnosis sensor unit
CURTAIN MODULE LH [SHORT]	LH side curtain air bag module circuit is shorted between lines.	and LH side curtain air bag module.
CURTAIN MODULE RH [OPEN]	RH side curtain air bag module circuit is open.	Visually check the wiring harness
CURTAIN MODULE RH [VB-SHORT]	RH side curtain air bag module circuit is shorted to a power supply circuit.	connection. 2. Replace the harness if it has visible
CURTAIN MODULE RH [GND-SHORT]	RH side curtain air bag module circuit is shorted to ground.	damage. 3. If the harness check result is OK, replace the diagnosis sensor unit
CURTAIN MODULE RH [SHORT]	RH side curtain air bag module circuit is shorted between lines.	and RH side curtain air bag module.
CONTROL UNIT	Diagnosis sensor unit is malfunctioning.	Visually check the wiring harness connection.
		2. Replace the diagnosis sensor unit.
OCCUPANT SENS C/U [UNIT FAIL]	Occupant classification system control unit is malfunctioning.	Replace front passenger seat cush- ion/occupant classification system control unit assembly.
OCCUPANT SENS C/U [COMM FAIL]	Communication between the occupant classification system control unit and air bag diagnosis sensor unit is interrupted,	Visually check the wiring harness connection.
	diagnosis sensor unit is malfunction, or occupant classification system control unit is malfunctioning.	Replace the harness if it has visible damage.
		Replace front passenger seat cush- ion/occupant classification system control unit assembly.
		4. Replace the diagnosis sensor unit.
		5. Replace the related harness.
OCCUPANT SENS [UNIT FAIL]	Occupant classification sensor is malfunctioning.	 Replace front passenger seat cush- ion/occupant classification system control unit assembly.
BELT TENSION SENS [UNIT FAIL]	Belt tension sensor circuit between belt tension sensor and occupant classification system control unit, or diagnosis sensor	Visually check the wiring harness connection.
	unit is malfunctioning.	Replace the harness if it has visible damage.
		Replace front seat belt (passenger side) assembly.
		Replace front passenger seat cush- ion/occupant classification system control unit assembly.

Diagnostic item	Explanation	Repair order "Recheck SRS at each replacement"	А
PASS A/B INDCTR CKT	 Front passenger air bag off indicator or related circuit is mal- functioning. 	Visually check the wiring harness connection.	
		Replace the harness if it has visible damage.	В
		Replace front passenger air bag off indicator (The installation position is an overhead consoul).	С
		4. Replace the diagnosis sensor unit.	
		5. Replace the related harness.	D
FRONTAL COLLISION DETECTION	Seat belt pre-tensioner and front air bag are deployed.	Go to <u>SRS-50</u> , "For Frontal Collision"	E
SIDE COLLISION DETECTION	Side and curtain air bag is deployed.	Go to <u>SRS-52</u> , "For <u>Side Collision"</u> .	_

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Trouble Diagnosis without CONSULT-II DIAGNOSTIC PROCEDURE 6

NHS00098

Inspecting SRS Malfunctioning Parts by Using "AIR BAG" Warning Lamp — Diagnosis Mode NOTE:

SRS will not enter Diagnosis mode if no malfunction is detected in User mode.

- 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 the steps 1 to 3 twice. (Perform three times in all.)
- 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. IGN ON ON OFF 7 sec. 2 sec. 2 sec.	Erase memory. (Once key switch is turned from OFF to ON, TROUBLE DIAG RECORD will be erased.)

PHIA0532E

PHIA1233E

<driver air="" bag="" module=""></driver>	
Flash pattern	Repair order
a through d are repeated. d: Two flashes indicate malfunctioning driver air bag module circuit.	Visually check the wiring harness connection. Replace the harness if it has visible damage. Replace the spiral cable.
2 flashes	4. Replace the related harness.
ON 7 sec. 3 sec. 2 sec. 2 sec. 2 sec. 2 sec.	PHIA122E

<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 diagnosis sensor unit. 4. Replace the related harness. 7 flashes b а b ON 7 sec 3 sec OFF 2 sec. 2 sec. 2 sec. 0.5 sec SHIA0028E

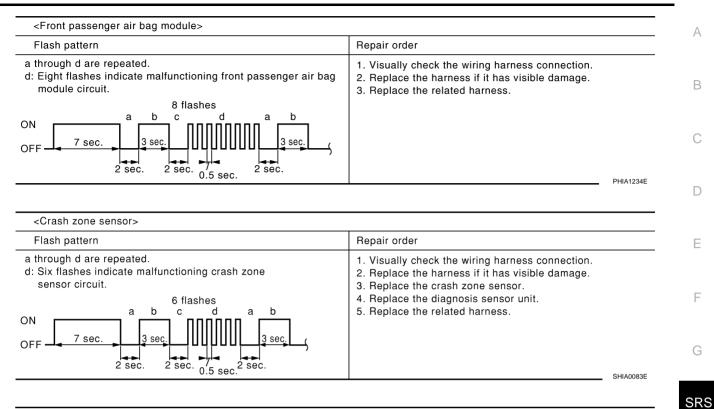
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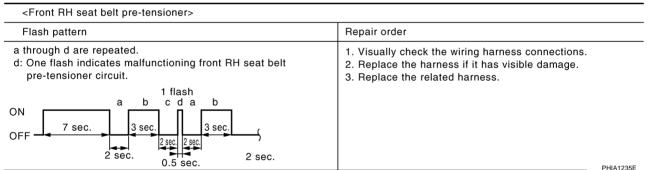
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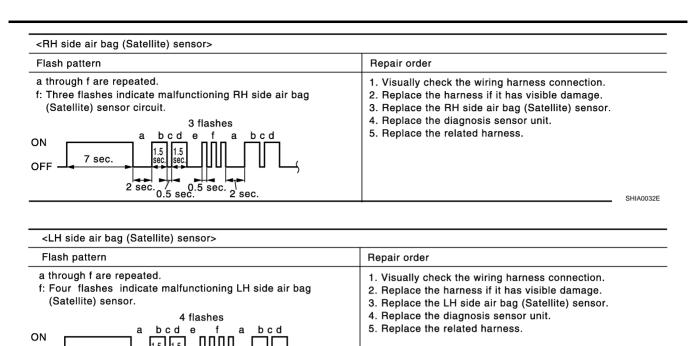
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<front belt="" lh="" pre-tensioner="" seat=""></front>	
Flash pattern	Repair order
a through d are repeated. d: Three flashes indicate malfunctioning front LH seat belt pre-tensioner circuit. ON 7 sec. 2 sec. 2 sec. 2 sec. 2 sec.	Visually check the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



<Front RH side air bag module> Flash pattern Repair order a through f are repeated. 1. Visually check the wiring harness connection. f: One flash indicates malfunctioning front RH side air bag 2. Replace the harness if it has visible damage. module circuit. 3. Replace the related harness. 1 flash bcd efa b c d ON 7 sec 0.5 sec. PHIA1237E

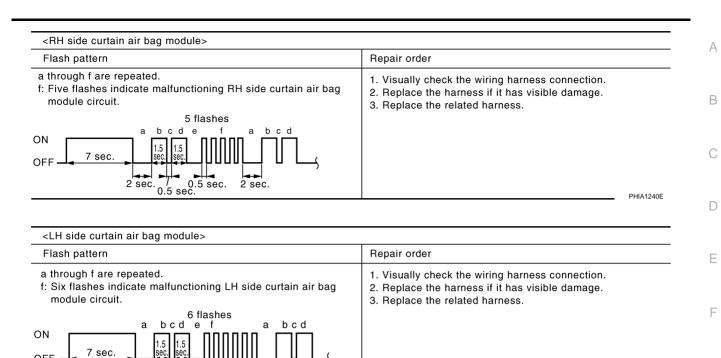
SHIA0033E

7 sec.

2 sec

0.5 sec.

Flash pattern	Repair order
a through f are repeated. f: Two flashes indicate malfunctioning front LH side air bag module circuit.	Visually check the wiring harness connection. Replace the harness if it has visible damage. Replace the related harness.
2 flashes a b c d e f a b c d 7 sec. 15 15 15 15 15 15 15 1	



<occupant classification="" system=""></occupant>	
Flash pattern	Repair order
a through d are repeated. d: Five flashes indicate malfunctioning OCS control unit. 5 flashes ON OFF 7 sec. 2 sec. 2 sec. 2 sec. 2 sec.	Visually check the wiring harness connection. Replace the harness if it has visible damage. Replace front passenger seat cushion and occupant classification system control unit as an assembly. Replace the diagnosis sensor unit.
2 sec. 2 sec. 2 sec. 0.5 sec.	PHIA124

OFF

2 sec. / 0.5 sec. 0.5 sec.

2 sec.

Repair order
 Visually check the wiring harness connection. Replace the harness if it has visible damage. Replace front passenger air bag off indicator unit. Replace the diagnosis sensor unit. Replace the related harness.
2 3 4

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PHIA1241E

Trouble Diagnosis: "AIR BAG" Warning Lamp Does Not Turn OFF **DIAGNOSTIC PROCEDURE 7**

1. CHECK THE DEPLOYMENT OF AIR BAG MODULE

Is air bag module deployed?

YES or NO

>> Refer to SRS-50, "COLLISION DIAGNOSIS". YES

NO >> GO TO 2.

2. CHECK THE AIR BAG FUSE

Check 10A fuse [No.13, located in fuse block (J/B)]. Refer to PG-3, "POWER SUPPLY ROUTING CIRCUIT".

OK or NG

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

3. CHECK AIR BAG FUSE AGAIN

Replace "AIR BAG" fuse and turn ignition switch ON.

Does the "AIR BAG" fuse blow again?

YES >> Repair or replace main harness.

NO >> INSPECTION END

4. CHECK DIAGNOSIS SENSOR UNIT

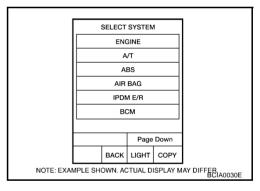
Connect CONSULT-II and touch "START". Is "AIR BAG" displayed on CONSULT-II?

YES or NO

YES >> GO TO 5.

NO

>> Visually check the wiring harness connection of diagnosis sensor unit. If the harness connection check result is OK, replace diagnosis sensor unit.



5. CHECK HARNESS CONNECTION

Is harness connection between warning lamp and diagnosis sensor unit OK?

OK or NG

OK >> Replace diagnosis sensor unit.

NG

>> Connect "AIR BAG" warning lamp and diagnosis sensor unit connector properly. If "AIR BAG" warning lamp still does not go off, replace harness.

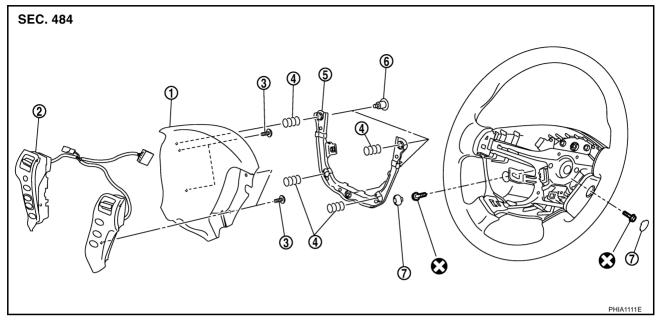
TROUBLE DIAGNOSIS					
Trouble Diagnosis: "AIR BAG" Warning Lamp Does Not Turn ON DIAGNOSTIC PROCEDURE 8	A A				
1. CHECK METER FUSE	_				
Check 10A fuse [No.14, located in fuse block (J/B)]. Refer to PG-3, "POWER SUPPLY ROUTING CIRCUIT". OK or NG	В				
OK >> GO TO 3. NG >> GO TO 2.	С				
2. CHECK METER FUSE AGAIN	D				
Replace 10A fuse [No.14, located in fuse block (J/B)] and turn ignition switch ON. Does the meter fuse blow again? YES >> Repair or replace the related harness. NO >> INSPECTION END	Е				
3. CHECK HARNESS CONNECTION BETWEEN DIAGNOSIS SENSOR UNIT AND COMBINATION METER	F				
Disconnect diagnosis sensor unit connector and turn ignition switch ON. Does "AIR BAG" warning lamp turn ON? YES or NO	G				
YES >> Replace diagnosis sensor unit. NO >> Replace combination meter assembly.	SRS				
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	J				
	K				

DRIVER AIR BAG MODULE

PFP:K8510

Removal and Installation

NHS0009C



- 1. Driver air bag module
- 4. Spring
- 7. Side lid (left/right)
- Steering switch
- 5. Bracket

- 3. Screw
- 6. Screw

REMOVAL

CAUTION:

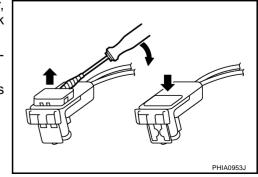
- Before servicing, turn ignition switch OFF, disconnect both battery terminal and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- Always work from the side of air bag module. Do not work from the front of it.
- Always place air bag module with pad side facing upward.
- Do not use old TORX bolts after removal; replace with new bolts.
- Do not make an impact to the air bag module by dropping etc. Replace the air bag module if it has been dropped or sustained an impact.
- 1. Remove the side lids (left / right).
- Remove the driver air bag module.
 - Using Tamper resistant TORX bit (T30), remove the TORX bolts (T30) at left and right.

★TORX bolt (T30) : **9**9.3 N·m (0.95 kg-m, 82 in-lb)

• Disconnect the harness connector with the driver air bag module rassed a bit.

NOTE:

- For installing/removing driver air bag module connector, insert thin screwdriver wrapped in tape into notch, lift lock and remove connector.
- Install connector with lock raised, and push lock into connector.
- After installing the connector, make sure that the lock is pushed securely into it.



DRIVER AIR BAG MODULE

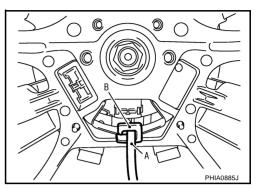
3. Remove the screws then remove the steering switch.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

 Fix the air bag module harness (shown as A in the figure) to the harness fixing hook (shown as B in the figure).



- Be careful not to damage the harness while installing.
- Tighten the special bolts after exactly adjusting the centers of fixing holes on the air bag module side and the steering wheel side. If the holes are misaligned, the bolt threads are damaged and the module is not installed securely.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case that malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSOULT-II.
- In case that malunction is still detected after the above operation, peform self-diagnosis to repair malfunctions. Refer to SRS-19, "SRS Operation Check".

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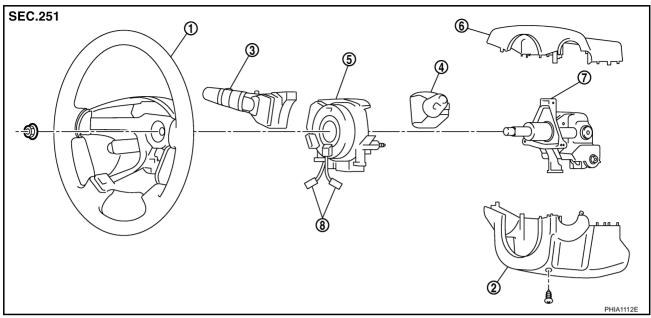
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SPIRAL CABLE PFP:25554

Removal and Installation

NHS0009D



- 1. Steering wheel
- 4. Wiper washer switch
- 7. Steering column assembly
- 2. Steering column cover (lower)
- 5. Spiral cable
- 8. Driver air bag module connector
- 3. Light and turn signalswitchs
- S. Steering column cover (upper)

REMOVAL

CAUTION:

- Before servicing, turn ignition switch OFF, disconnect both battery terminal and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- Do not disassemble the spiral cable.
- Do not arrow oil, grease, detergent or water to come in contact with the spiral cable.
- Do not make an impact to the spiral cable by dropping etc. Replace the spiral cable if it has been dropped or sustained an impact.
- 1. Remove the air bag module. Refer to SRS-38, "Removal and Installation".
- 2. Remove the steering wheel. Refer to PS-12, "Removal and Installation".
- 3. Remove the column cover.
- 4. Remove the wiper washer switch, then remove light and turn signal switch from the spiral cable.
- Remove the spiral cable.
 - Disconnect the horn switch connector (shown as A in the figure).
 - Disconnect the spiral cable connector (shown as B in the figure).
 - Loosen the spiral cable fixing screws.
 - Shift the spiral cable forward a bit while pushing the pawl located above the spiral cable.
 - Disconnect the steering wheel switch connector (shown as C in the figure).

NOTE:

Disconnect the spiral cable connector after disconnecting the horn switch connector.

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INSTALLATION

Install in the reverse order of removal.

SPIRAL CABLE

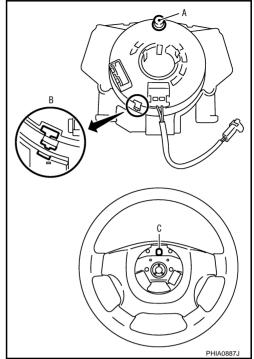
CAUTION:

- The spiral cable may snap by steering operation if the cable is installed in an improper position.
- The neutral position is set as follows.
 Turn quietly the spiral cable clockwise to the end position.

Then turn it counterclockwise (about 2 and harf turns) and stop turning at the point on which the stopper insertion holes are in the same position.

The service part is installed in the neutral position by the stopper and can be set without adjusting after the stopper is removed.

- Do not turn the spiral cable rashly and also beyond the limit number of turns. (These will cause cable snap.)
- Adjust the spiral cable locating pin (showed as A inthe figure) to the steering wheel locating pin hole (showed as C in the figuer).
- Secure the air bag harness with the harness fixing hook.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case that malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT-II.
- In case that malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <u>SRS-19</u>, "<u>SRS Operation Check"</u>.



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FRONT PASSENGER AIR BAG MODULE

FRONT PASSENGER AIR BAG MODULE

PFP:K8515

Removal and Installation

NHS0009F

CAUTION:

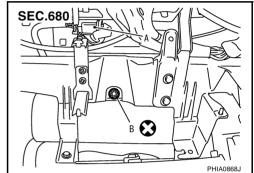
- Before servicing, turn ignition switch OFF, disconnect both battery terminal and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- Always work from the side of air bag module. Do not work from the front of it.
- Always place air bag module with pad side facing upward.
- Do not use old fixing bolts after removal; replace with new bolts.
- Do not make an impact to the air bag module by dropping etc. Replace the air bag module if it has been dropped or sustained an impact.
- 1. Remove the instrument panel & pad assemblies. Refer to <u>IP-10</u>, <u>"INSTRUMENT PANEL ASSEMBLY"</u>.

NOTE:

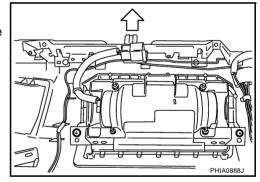
The figure shows installed condition of the front passenger air bag module. (Under view of the module installed without glove box cover.)

Passenger air bag module connector-A Passenger air bag module fixing bolt-B

★Fixing bolt : **△**24.5 N⋅m (2.5 kg−m, 18 ft−lb)



- 2. Remove the front passenger air bag module from the instrument panel & pad assemblies.
 - Remove the 2 screws.
 - Remove the air bag from the rear side hook. (← shows the backward direction of the vehicle.)



INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Be careful not to damage the harness while installing.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case that malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSOULT-II.
- In case that malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <u>SRS-19</u>, <u>"SRS Operation Check"</u>.

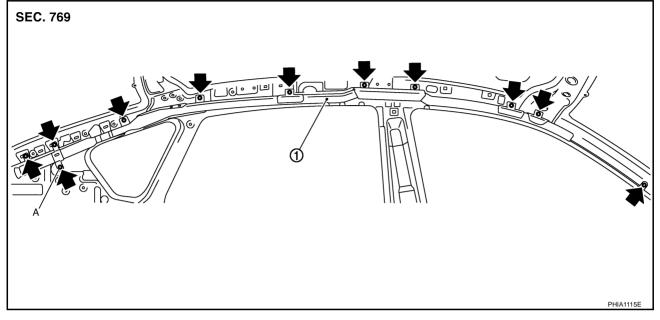
SIDE CURTAIN AIR BAG MODULE

SIDE CURTAIN AIR BAG MODULE

PFP:985P0

Removal and Installation

NHS0009F



Side curtain air bag module

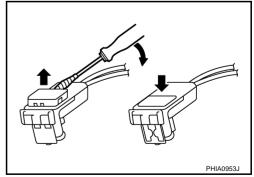
Ground bolt

REMOVAL

CAUTION:

- Before servicing, turn ignition switch OFF, disconnect both battery terminal and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- Always work from the side of air bag module. Do not work from the front of it.
- Leave the curtain air bag module with air bag deployment side facing upward.
- Do not make an impact to the air bag module by dropping etc. Replace the air bag module if it has been dropped or sustained an impact.
- 1. Remove the curtain air bag module.
 - Remove the headlining. Refer to EI-52, "HEADLINING" .
 - Remove the side curtain air bag module connector.

- For installing / removing side curtain air bag module connector, insert thin screwdriver wrapped in tape into notch, lift lock and remove connector.
- Install connector with lock raised, and push lock into connector.
- After installing the connector, make sure that the lock is pushed securely into it.



Remove the curtain air bag module fixing bolts, then remove the ground bolt.

Fixing bolt () : 10.8 N·m (1.1 kg-m, 8 ft-lb)

Ground bolt A : 10.8 N·m (1.1 kg-m, 8 ft-lb) SRS

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SIDE CURTAIN AIR BAG MODULE

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Be careful not to damage the air bag harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case that malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT-II.
- In case that malfunction is still detected after the avove operation, perform self-diagnosis to repair malfunctions. Refer to <u>SRS-19</u>, "<u>SRS Operation Check"</u>.

CRASH ZONE SENSOR

CRASH ZONE SENSOR

PFP:98531

Removal and Installation

NHS0009G

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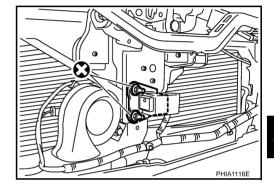
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CAUTION:

- Before servicing, turn ignition switch OFF, disconnect both battery terminal and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- Do not use old fixing nuts after removal; replace with new nuts.
- Do not make an impact to the crash zone sensor by dropping etc. Replace the crash zone sensor if it has been dropped or sustained an impact.
- Replace the crash zone sensor of deployed SRS driver air bag and deployed SRS front passenger air bag.
- 1. Remove the crash zone sensor.
 - Remove the front grille. Refer to El-16, "Removal and Installation".
 - Remove the crash zone sensor fixing nuts.

Fixing nut : 10.8 N·m (1.1 kg-m, 8 ft-lb)



Disconnect the crash zone sensor harness connector.

INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Be careful not to damage the crash zone sensor harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case that malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT-II.
- In case that malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to <u>SRS-19</u>, <u>"SRS Operation Check"</u>.

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Revision: 2006 January SRS-45 2006 M35/M45

SIDE AIR BAG (SATELLITE) SENSOR

SIDE AIR BAG (SATELLITE) SENSOR

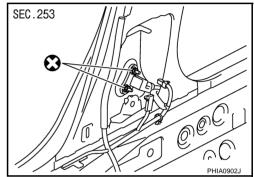
PFP:98830

Removal and Installation REMOVAL

NHS0009H

CAUTION:

- Before servicing, turn ignition switch OFF, disconnect both battery terminal and wait at least 3 minutes.
- Do not use air tools or electric tools for servicing.
- Do not use old fixing nuts after removal; replace with new nuts.
- Do not make an impact to the side air bag (satellite) sensor by dropping etc. Replace the side air bag (satellite) sensor if it has been dropped or sustained an impact.
- Replace the satellite sensor of deployed SRS front side air bag and deployed SRS side curtain air bag.
- 1. Remove the side air bag (Satellite) sensor.
 - Remove front seat belt. Refer to SB-30, "Removal and Installation of Front Seat Belt".
 - Remove fixing nuts, then remove side air bag (Satellite) sensor.
 - Fixing nut : 010.8 N-m (1.1 kg-m, 8 ft-lb)
 - Disconnect the side air bag (Satellite) sensor harness connector.



INSTALLATION

Install in the reverse order of removal.

CAUTION:

- Be careful not to damage the satellite sensor harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning lamp.
- In case that malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT-II.
- In case that malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to SRS-19, "SRS Operation Check".

FRONT SEAT BELT PRE-TENSIONER

FRONT SEAT BELT PRE-TENSIONER

PFP:86884

Removal and Installation

NHS0009I

For removal and installation procedures, refer to SB-30, "Removal and Installation of Front Seat Belt".

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DIAGNOSIS SENSOR UNIT

DIAGNOSIS SENSOR UNIT

PFP:28556

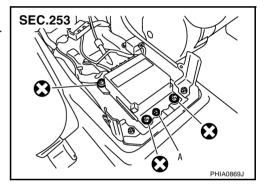
Removal and Installation REMOVAL

NHS0009.

CAUTION:

- Before servicing, turn ignition switch OFF, disconnect both battery terminal and wait at least 3 minutes.
- Before disconnecting the air bag sensor unit harness connector, be sure to disconnect the each harness connector of the air bag module and pre-tensioner seatbelt to prevent air bag deployment by static electricity and pre-tensioner seatbelt operation.
- Do not use air tools or electric tools for servicing.
- Do not use old fixing bolts after removal: replace with new bolts.
- Do not make an impact to the diagnosis sensor unit by dropping etc. Replace the diagnosis sensor unit if it has been dropped or sustained an impact.
- Replace the diagnosis sensor unit of deployed SRS air bag and deployed SRS front seat belt pretensioner.
- Remove the diagnosis sensor unit.
 - Disconnect each connector of all air bag modules and pre-tensioner seat belts.
 - Remove the center console assembly. Refer to IP-10, "INSTRUMENT PANEL ASSEMBLY".
 - Disconnect diagnosis sensor unit harness connector.
 - Remove hex bolts and ground bolt, then remove the diagnosis sensor unit.

Hex bolts : (24.5 N·m (2.5 kg-m, 18 ft-lb) **Ground bolt A** : 96.9 N·m (0.7kg-m, 61 in-lb)



INSTALLATION

Install in the reverse order of removal.

- Be careful not to damage the diagnosis sensor harness.
- After the work is completed, make sure no system malfunction is detected by air bag warning
- In case that malfunction is detected by the air bag warning lamp, reset by the self-diagnosis function and delete the memory by CONSULT-II.
- In case that malfunction is still detected after the above operation, perform self-diagnosis to repair malfunctions. Refer to SRS-19, "SRS Operation Check".

ECU DISCRIMINATED NO.

After replacing the diagnosis sensor unit, confirm that the diagnosis sensor unit identification is correct for the vehicle as equipped.

	Specification	ECU DISCRIMINATED No.
2WD AWD		FA8E

OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

OCCUPANT CLASSIFICATION SYSTEM CONTROL UNIT

PFP:98852

Removal and Installation

NHS0009K

The occupant classification system control unit, seat pressure sensor, and bladder are an integral part of the front passenger seat cushion and are replaced as an assembly. Refer to <u>SE-165, "Passenger's Seat Components"</u>.

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COLLISION DIAGNOSIS

PFP:00015

For Frontal Collision

NHS00091

To repair the SRS, perform the following steps.

When SRS (except the front side air bag and side curtain air bag modules) is activated in a collision:

- Replace the diagnosis sensor unit.
- 2. Remove the air bag modules (except the front side air bag modules and side curtain air bag modules), crash zone sensor assembly, bracket and seat belt pre-tensioner assemblies.
- 3. Check the SRS components using the table below:
- Replace any SRS components showing visible signs of damage (dents, cracks and deformation).
- 4. Install new air bag modules (except the front side air bag modules and side curtain air bag modules) crash zone sensor assembly, bracket and seat belt pre-tensioner assemblies.
- 5. Conduct self-diagnosis using CONSULT-II or "AIR BAG" warning lamp. Refer to <u>SRS-19, "SRS Operation Check"</u> for details. Ensure entire SRS operates properly.

When SRS is not activated in a collision:

- 1. Check the SRS components using the table below:
- Replace any SRS components showing visible signs of damage (dents, cracks and deformation).
- 2. Conduct self-diagnosis using CONSULT-II or "AIR BAG" warning lamp. Refer to <u>SRS-19</u>, "<u>SRS Operation Check"</u> for details. Ensure entire SRS operates properly.

When only one front air bag module is activated in a collision:

- Replace the following components:
- Diagnosis sensor unit
- Crash zone sensor
- Activated front air bag and seat belt pre-tensioner.
- Check the other SRS components using the table below (Refer to "SRS is NOT activated").
- Replace any SRS components showing visible signs of damage (dents, cracks and deformation).
- 3. Conduct self-diagnosis using CONSULT-II or "AIR BAG" warning lamp. Refer to <u>SRS-19, "SRS Operation Check"</u> for details. Ensure entire SRS operates properly.

Only one front air bag may inflate a crash, depending on the crash severity and whether the front occupants are belted or unbelted. This does not indicate improper performance of the system. Perform self-diagnosis to make sure the entire SRS operates properly.

SRS INSPECTION (FOR FRONTAL COLLISION)

Part	SRS is activated	SRS is NOT activated
Driver airbag module	If the Driver airbag has deployed: REPLACE. Install with new fasteners.	If the Driver air bag has NOT been activated: [same text as in current manual]
Passenger front airbag module	If the Passenger front airbag has deployed: REPLACE. Install with new fasteners.	If the Passenger front air bag has NOT been activated: [same text as in current manual]
Crash zone sensor	If any of the front airbags or seat belt pretensionsers have been activated: REPLACE the crash zone sensor and bracket with new fasteners.	If the front airbags or seat belt pre-tensionsers have NOT been activated: [same text as in current manual]
Seat belt pre-ten- sioner assemblies	If the driver or passenger Seat belt pre-ten- sioner has been activated: REPLACE the seat belt pre-tensioner assemblies with new fasteners.	If the pre-tensioners have NOT been activated: [same text as in current manual]
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: [same text as in current manual]

Part	SRS is activated	SRS is NOT activated	
Steering wheel	[same tex	t as in current manual]	
0.1.1.11	Kil Di il I	The British of the Control of the Co	
Spiral cable	If the Driver airbag has deployed: REPLACE the spiral cable.	If the Driver airbag has not deployed: [same text as in current manual]	
	The state of the s	[cano on ac in our on manaa]	
Harness and con- nectors	Check connectors for poor connection, date	 amage, and terminals for deformities.	
	2. Check harness for binding, chafing, cuts, or deformities.		
	3. If no damage is found, reinstall the harness and connectors.		
	4. If damaged—REPLACE damaged section	n of harness. Do not repair, splice or modify any SRS harness.	
Instrument panel	1. Visually check instrument panel for dama	ge.	
	2. If no damage is found, reinstall the instrument panel.		
	3. If damaged—REPLACE the instrument p	anel with bolts.	

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For Side Collision WHEN THE SIDE AIR BAG IS ACTIVATED IN THE SIDE COLLISION:

NHS0009M

- 1. Replace the following components:
- All parts of front seatback (including front seatback frame) with front side air bag module (on the side on which front side air bag is activated)
- Curtain air bag module (on the side on which side curtain air bag is activated)
- Diagnosis sensor unit
- Satellite sensor (on the side on which side air bag and side curtain 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-II or "AIR BAG" warning lamp. Refer to <u>SRS-19, "SRS Operation Check"</u>. Ensure entire SRS operates properly.

WHEN SRS IS NOT ACTIVATED IN THE SIDE COLLISION:

- 1. 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).
- 2. Conduct self-diagnosis using CONSULT-II or "AIR BAG" warning lamp. Refer to <u>SRS-19, "SRS Operation Check"</u>. Ensure entire SRS operates properly.

SRS INSPECTION (FOR SIDE COLLISION)

	•	•
Part	Front side air bag and side curtain air bag is activated	Front side air bag and side curtain air bag is NOT activated
LH or RH side curtain air bag module	REPLACE the side curtain air bag module. (Repair the center pillar inner, etc. before installing new one if damaged.)	Check for visible signs of damage (dents, tears, deformation) of the center pillar on the collision side.
		2. If damaged— Remove the LH or RH side curtain air bag module.
		3. Check for visible signs of damaged (tears etc.) of the LH or RH side curtain air bag module.
		4. Check harness and connectors for damage, and terminals for deformities.
		5. If no damage is found, reinstall the LH or RH side curtain air bag module with new bolts.
		6. If damaged—REPLACE the LH or RH side curtain air bag module with new bolts.
Front LH or RH side air bag module	REPLACE all parts of seatback with deployed front side air bag module.	Check for visible signs of damage (dents, tears, deformation) of the seatback on the collision side.
		2. Check harness and connectors for damage, and terminals for deformities.
		3. If damaged—REPLACE the front seatback assembly.
LH or RH side air bag (Satellite) sensor	REPLACE the side air bag (Satellite) sensor on the collision side with new nuts. (Repair the center pillar inner, etc. before installing new one if damaged.)	1. Remove the LH or RH side air bag (Satellite) sensor on the collision side. Check harness connectors for damage, terminals for deformities, and harness for binding.
,		Check for visible signs of damage (dents, cracks, deformation) of the LH or RH side air bag (Satellite) sensor.
		3. Install the LH or RH side air bag (Satellite) sensor to check fit.
		4. If no damage is found, reinstall the LH or RH side sir bag (Satellite) sensor with new nuts.
		5. If damaged—REPLACE the LH or RH side air bag (Satellite) sensor with new nuts.
Diagnosis sensor unit	REPLACE the diagnosis sensor unit with the new bolts.	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 bolts and ground bolt.
		4. If damaged—REPLACE the diagnosis sensor unit with new bolts and ground bolt.

Part	Front side air bag and side curtain air bag is activated	Front side air bag and side curtain air bag is NOT activated	1
Seat belt pre-ten-		t can be extended smoothly.	
sioner assembly	If the seat belt cannot be extended smoothly,		-
		s of the center pillar inner.	
	 If the center pillar in 	ner has no damage, REPLACE the seat belt pre-tensioner assembly.	
		It pre-tensioner assembly on the collision side. Check harness cover and connectors ls for deformities, and harness for binding.	
	3. Check for visible sig	ns of damage (dents, cracks, deformation) of the seat belt pre-tensioner assembly.	
	4. Check seat belt adjuster for damage.		
	5. If no damage is found, reinstall the seat belt pre-tensioner assembly.		
	6. If damaged—REPLACE the seat belt pre-tensioner assembly with new bolts.		
Seat with front side	REPLACE all parts of front seatback (including front seat- back frame)	1. Visually check the seat on the collision side.	- E
air bag		Remove the seat on the collision side and check the following for damage and deformities.	
		- Harness, connectors and terminals	
		 Frame and recliner (for front and rear seat), and also adjuster and slides (for front seat) 	
		3. If no damage is found, reinstall the seat.	
		4. If damaged—REPLACE the damaged seat parts using new bolts.	
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.		S
Trim/headlining	1. Check for visible sig	ns of damage (dents, cracks, deformation) of the interior trim on the collision side.	
	2. If damaged—REPLA	ACE the damaged trim parts.	