### **RESTRAINT SYSTEM**

## SECTION

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When you read wiring diagrams:

Read GI section, "HOW TO READ WIRING DIAGRAMS".
See EL section, "POWER SUPPLY ROUTING" for power distribution circuit. When you perform trouble diagnoses, read GI section, "HOW TO FOLLOW FLOW CHART IN TROUBLE DIAGNOSES" and "HOW TO PERFORM EFFICIENT DIAGNOSIS FOR AN ELECTRICAL INCIDENT".

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#### **PRECAUTION**

## Supplemental Restraint System (SRS) "AIR BAG"

The Supplemental Restraint System "Air Bag", used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger in a frontal collision. The Supplemental Restraint System consists of air bag modules (located in the center of the steering wheel and on the instrument panel on the passenger side), a diagnosis sensor unit, warning lamp, wiring harness and spiral cable.

#### **WARNING:**

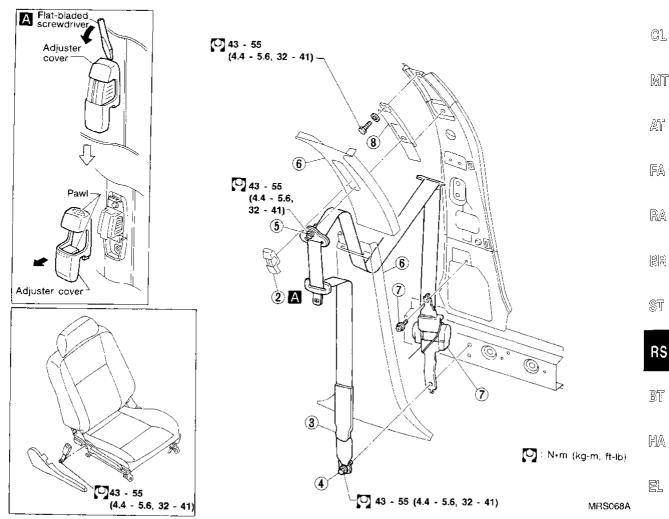
- To avoid rendering the SRS inoperative, which could increase the risk of personal injury or death in the event of a collision which would result in air bag inflation, all maintenance must be performed by an authorized NISSAN dealer.
- Improper maintenance, including incorrect removal and installation of the SRS, can lead to personal injury caused by unintentional activation of the system.
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses are covered with yellow insulation either just before the harness connectors or for the complete harness, for easy identification.

#### **CAUTION:**

- . Do not disassemble buckle or seat belt assembly.
- Replace anchor bolts if they are deformed or worn out.
- Never oil tongue and buckle.
- If any component of seat belt assembly is questionable, do not repair. Replace the whole seat belt assembly.
- If webbing is cut, frayed, or damaged, replace seat belt assembly.
- . When replacing seat belt assembly, use a genuine seat belt assembly.
- After any collision, inspect all seat belt assemblies, including retractors and other attached hardwares (i.e., guide rail set).

#### **Front Seat Belt**

- ① Remove front seat. Refer to "SEAT" in BT section for details.
- ② Remove adjuster cover.
- 3) Slide the floor anchor cover.
- (4) Remove floor anchor bolt.
- (5) Remove shoulder anchor bolt.
- ® Remove center pillar upper and lower garnish. Refer to "INTERIOR TRIM" in BT section for details.
- Remove the bolt securing seat belt retractor, then remove seat belt and seat belt retractor.
- **8** Remove bolts securing seat belt adjuster, then remove seat belt adjuster.



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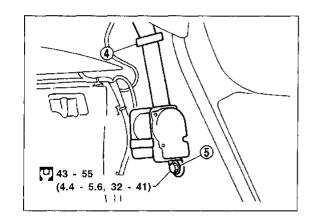
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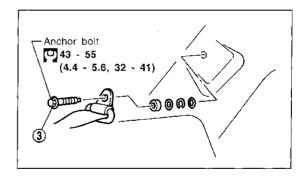
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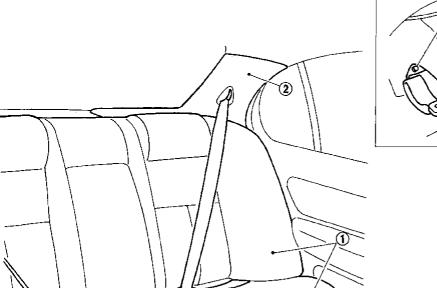
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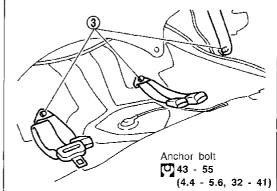
#### **Rear Seat Belt**

- ① Remove rear seat. Refer to "SEAT" in BT section for details.
- Remove rear pillar garnish. Refer to "INTERIOR TRIM" in BT section for details.
   Remove each anchor bolt.
- 4 Remove second sash guide.
- **5** Remove the bolt securing rear seat belt retractor, then remove seat belt retractor.









: N-m (kg-m, ft-lb)

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#### Precautions for SRS "Air Bag" Service

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- Do not use a circuit tester to check SRS circuits.
- Before servicing the SRS, turn ignition switch "OFF", disconnect both battery cables and wait for at least 10 minutes.
  - For approximately ten minutes after the cables are removed, it is still possible for the air bag to deploy. Therefore, do not work on any SRS connectors or wires until at least ten minutes have passed.
- Diagnosis sensor unit must always be installed with arrow marks "\( \sigma\)" 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 attempt to turn steering wheel or column after removal of steering gear.
- Handle air bag module carefully. Always place it with the pad side facing upward.
- Do not use old bolts after removing any SRS parts; replace with new ones. Conduct self-diagnosis to check entire SRS for proper function.
- After air bag inflates, the front instrument panel assembly should be replaced.

#### **Special Service Tools**

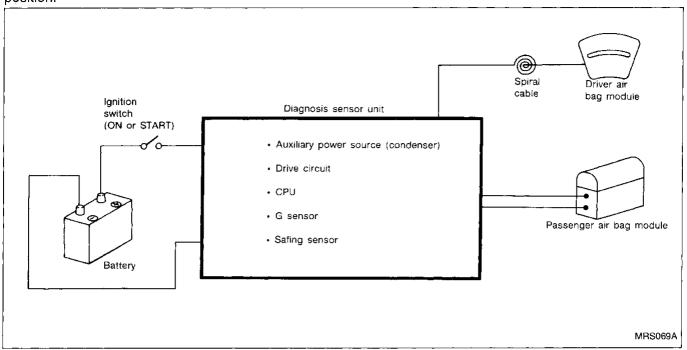
The actual shapes of Kent-Moore tools may differ from those of special service tools illustrated here.
\*: Special tool or commercial equivalent

: Special tool or commercial e	quivaient	· · · · · · · · · · · · · · · · · · ·	FE
Tool number (Kent-Moore No.) Tool name	Description		GL
KV991072S0 (J38381-KIT) Air bag deployment kit		Disposing of air bag module	MT
KV99106400 (J38381) Deployment tool	NT357		AJ
KV991065S0 (J38381-30) Deployment tool adapters	For seat belt pre-to	ensioner	FA
	NT353 Black White For passenger air bag module		RA BR
KV99105300 (J41246) Passenger air bag bracket		Anchor the passenger air bag module	ST
HT61961000 and	NT354	Use for special bolts	RS
HT62152000 combined (J38219) *Special torx bit		[TAMPER RESISTANT TORX (Size T50)] a: 3.5 (0.138) dia.	87
opeoid told bit	NT361	b: 8.5 - 8.6 (0.335 - 0.339) dia. c: approx. 10 (0.39) sq. Unit: mm (in)	HA
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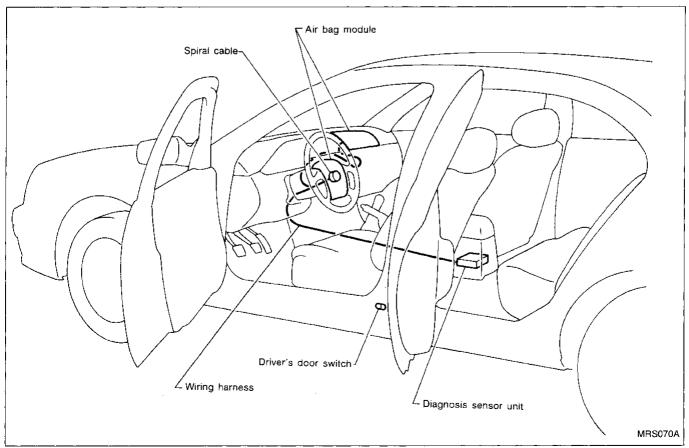
**RS-5** 947

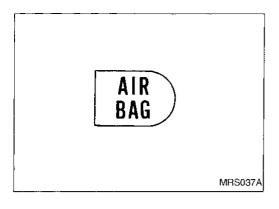
#### **Description**

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



#### **SRS Component Parts Location**





#### Maintenance Items

- Check "AIR BAG" warning lamp operation After turning ignition key to "ON" position, "AIR BAG" warning lamp illuminates. The "AIR BAG" warning lamp will turn off after about 7 seconds if no malfunction is detected. If any of the following air bag warning lamp conditions occur, immediately check the air bag system. Refer to RS-22 for details.
- **G**1 MA
- The warning lamp does not illuminate when the ignition switch is turned "ON".
- The warning lamp does not turn off about 7 seconds after the ignition switch is turned "ON".
- The warning lamp blinks about 7 seconds after the ignition switch is turned "ON".

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- Visually check SRS components
- (1) Diagnosis sensor unit

- Check diagnosis sensor unit and bracket for dents, cracks or deformities.
- Check connectors for damage, and terminals for deformities.
- EE

- (2) Air bag module and steering wheel
- Remove air bag module from steering wheel or instrument panel. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.
  - MT Install driver side air bag module to steering wheel to check fit
- or alignment with the wheel. Check steering wheel for excessive free play.
- Install passenger side air bag module to instrument panel to check fit or alignment with the instrument panel.

(3) Spiral cable

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- Check spiral cable for dents, cracks, or deformities.
- Check connectors and protective tape for damage.
- Check steering wheel for noise, binding or heavy operation.
- RA

- (4) Main harness and air bag harness
- Check connectors for poor connections, damage, and terminals for deformities.
- Check harnesses for binding, chafing or cut.

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#### CAUTION:

Replace previously used screws with new ones.

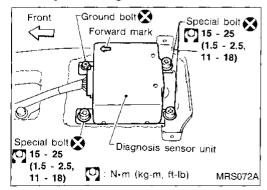
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## Removal and Installation — Diagnosis Sensor Unit

#### **CAUTION:**

- Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait for at least 10 minutes.
- The special bolts are coated with bonding agent while the other bolt is for ground. Do not use old bolts after removal; replace with new ones.
- Check diagnosis sensor unit for proper installation.
- Check diagnosis sensor unit to ensure they are free of deformities, dents, cracks or rust. If they
  show any visible signs of damage, replace them with new ones.
- Check diagnosis sensor unit brackets to ensure they are free of deformities or rust.
- Replace diagosis sensor unit if it has been dropped or sustained an impact.



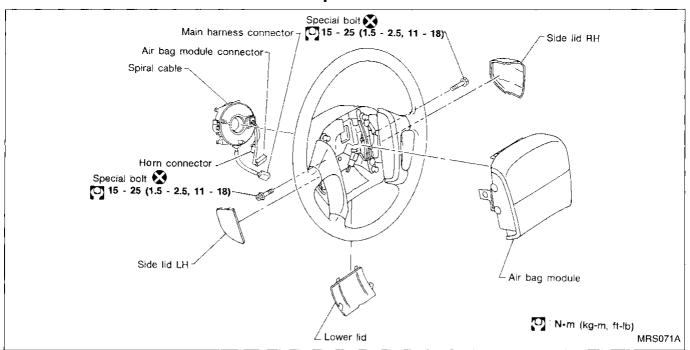
#### **REMOVAL OF DIAGNOSIS SENSOR UNIT**

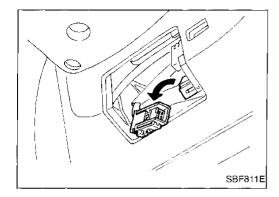
- 1. Disconnect driver and passenger air bag module connectors.
- Remove console box. Refer to "INSTRUMENT PANEL" in BT section.
- 3. Disconnect diagnosis sensor unit connector.
- 4. Remove bolt and also remove special bolts using the TAMPER RESISTANT TORX (Size T50), from diagnosis sensor unit. Then remove the diagnosis sensor unit.

#### NOTE:

To install, reverse the removal procedure sequence.

## Removal and Installation — Air Bag Module and Spiral Cable



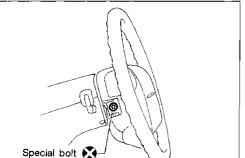


## Removal — Air Bag Module and Spiral Cable CAUTION:

- Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait for at least 10 minutes.
- Always work from the side of air bag module.
- Remove lower lid from steering wheel, and disconnect air bag module connector.

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2. Remove side lids. Using the TAMPER RESISTANT TORX (Size T50), remove left and right special bolts. Air bag module can then be removed.

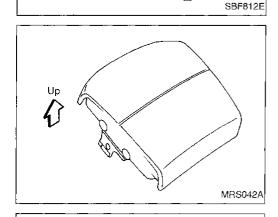
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Air bag

#### **CAUTION:**

- · Always place air bag module with pad side facing upward.
- Do not attempt to disassemble air bag module.
- The special bolts are coated with bonding agent. Do not use old bolts after removal; replace with new ones.

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Replace air bag module if it has been dropped or sustained an impact.

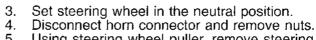
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Do not expose the air bag module to temperatures exceeding 90°C (194°F).

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 Do not allow oil, grease or water to come in contact with the air bag module.

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Using steering wheel puller, remove steering wheel. Be careful not to over-tighten puller bolt on steering wheel.

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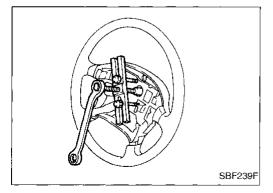


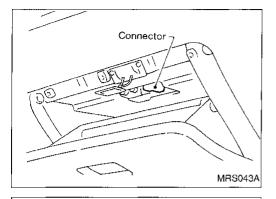
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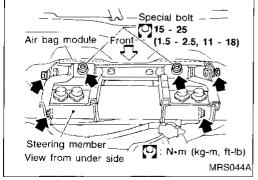
- Do not tap or bump the steering wheel.
- Remove steering column cover.
- Disconnect connectors and remove the four screws. The spiral cable can then be removed.

#### **CAUTION:**

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



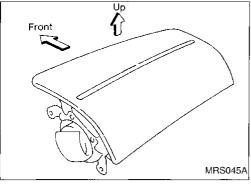


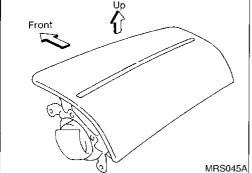




Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait for at least 10 minutes.

- Open the glove box lid.
- Disconnect inflator connector from body harness air bag connector.
- 3. Remove glove box assembly. Refer to "INSTRUMENT PANEL" in BT section for details.
- Remove the bolts and special bolts using the TAMPER RESIS-TANT TORX (Size T50) from front passenger air bag module. Take out the air bag module from the instrument panel.
- The air bag module is heavy and should be supported using both hands during removal.

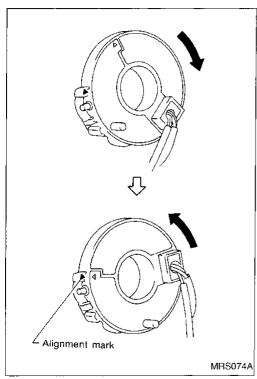






#### CAUTION:

- Always place air bag module with pad side facing upward.
- Do not attempt to disassemble air bag module.
- The special bolts are coated with bonding agent. Do not use old bolts after removal; replace with new coated bolts.
- Do not insert any foreign objects (screwdriver, etc.) into air bag module connector.
- Do not use a circuit tester to check the air bag module harness connector.
- Do not drop or impact air bag module. If any portion is deformed or cracked, replace the module.
- Do not expose the 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.





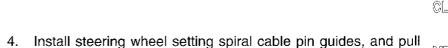
Set the front wheels in the straight-ahead position.

Make sure that the spiral cable is in the neutral position. The neutral position is detected by turning left about 2.5 revolutions from the right end position. Align the two marks (X).

The spiral cable may snap due to steering operation if the cable is installed in an improper position.

Also, 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 up to 2.5 turns from the neutral position to both the right and left.)

Connect spiral cable connector and tighten with screws. Install steering column cover.



spiral cable through. Connect horn connector and engage spiral cable with pawls in steering wheel. Move air bag module connector away from steering wheel lower lid opening.

Tighten nut.

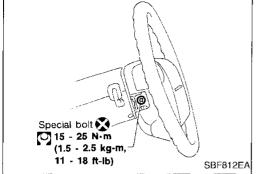
(3.0 - 4.0 kg-m, 22 - 29 ft-lb)

- 8. Connect air bag module connector.
- Install all lids.
- 10. Conduct self-diagnosis to ensure entire SRS operates properly. (Use CONSULT or warning lamp check.) Before performing self-diagnosis, connect both battery cables.

11. Turn steering wheel to the left end and then to the right end fully to make sure that spiral cable is set in the neutral position.

If air bag warning lamp blinks or stays ON (at the user mode), it shows the spiral cable may be snapped due to its improper position. Perform self-diagnosis again (use CONSULT or warning lamp). If a malfunction is detected, replace the spiral cable with a new one.

7. Position air bag module and tighten with new special bolts.



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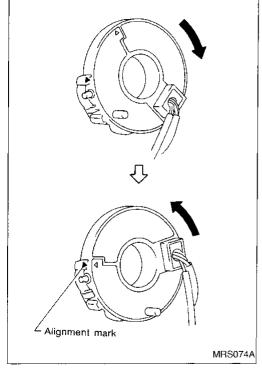
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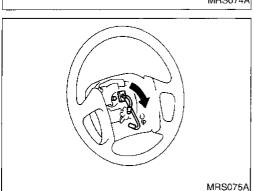
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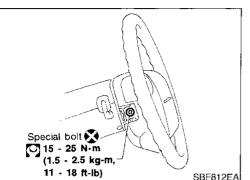
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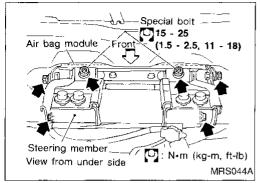
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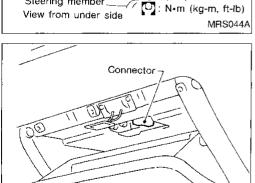
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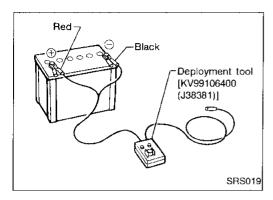
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#### Installation — Front Passenger Air Bag Module

- 1. Install front passenger air bag module on steering member.
- Ensure harness is not caught between rear of air bag module and steering member.
- 2. Install glove box assembly. (Glove box lid is open.)
- 3. Connect air bag module connector to body harness connector.
- 4. Close the glove box lid.

#### Disposal of Air Bag Module

- Before disposing of air bag modules or vehicles equipped with such a system, deploy the system. If such a system has already been deployed due to an accident, dispose of as indicated in "DISPOSING OF AIR BAG MODULE" (RS-16).
- When deploying the air bag module, always use the Special Service Tool; Deployment tool KV99106400 (Kent-Moore No. J38381).
- When deploying the air bag module stand at least 5 m (16 ft) away from the deployment component.
- Due to heat, leave air bag module unattended for more than 30 minutes after deployment.
- Be sure to wear gloves when handling a deployed air bag module.
- Never apply water to a deployed air bag module.
- Wash your hands clean after finishing work.
- Do not dispose of the air bag module un-deployed.



#### CHECKING DEPLOYMENT TOOL Connecting to battery

Place the vehicle outdoors with an open space of at least 6 m (20 ft) on all sides.

Use a voltmeter to make sure the vehicle battery is fully charged.

#### CAUTION:

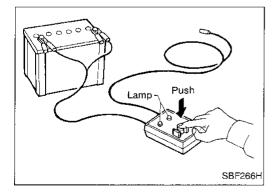
#### The battery must show voltage of 9.6V or more.

Remove the battery from the vehicle and place it on dry wood blocks approximately 5 m (16 ft) away from the vehicle.

Wait 10 to 12 minutes after the vehicle battery is disconnected before proceeding.

Connect red clip of deployment tool to battery positive terminal and black clip to negative terminal.

Make sure the polarity is correct. The right side lamp in the tool, marked "deployment tool power", should glow with a green light. If the right side lamp glows red, reverse the connections to the battery.



#### Deployment tool check

Press the deployment tool switch to the "ON" position. The left side lamp in the tool, marked "air bag connector voltage" should illuminate. If it does not illuminate, replace the tool.

#### Air bag deployment tool lamp illumination chart (Battery connected)

`	<u> </u>	
Switch operation	Left side lamp, green* "AIR BAG CONNECTOR VOLTAGE"	Right side lamp, green* "DEPLOYMENT TOOL POWER"
OFF	OFF	ON
ON	ON	ON

<sup>\*:</sup> If this lamp glows red, the tool is connected to the battery incorrectly. Reverse the connections and make sure the lamp glows green.

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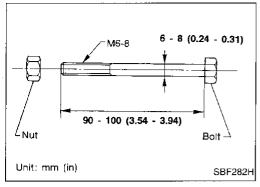
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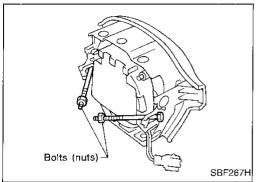
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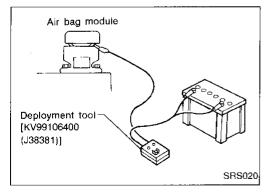
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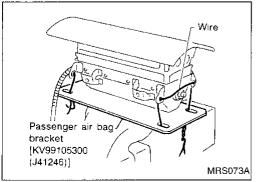
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# Bolt (nut) Air bag module connector Deployment tool [KV99106400 (J38381)] SBF268HC





## Disposal of Air Bag Module (Cont'd) DEPLOYMENT PROCEDURES FOR AIR BAG MODULE (OUTSIDE OF VEHICLE)

Unless the vehicle is being scrapped, deploying the air bag in the vehicle is not recommended. This may cause damage to the vehicle interior.

Anchor air bag module in a vise secured to a firm foundation during deployment.

### Deployment of driver's air bag module (outside of vehicle)

- 1. Prepare two sets of nuts and bolts (see figure at left). These bolts are required to secure driver's air bag module to the vise.
- Install one set of nuts and bolts to each side of the air bag module.

#### **CAUTION:**

Make sure to install a bolt and nut on each side.

3. Firmly place two nuts (secured to air bag module) in the vise. **CAUTION:** 

Ensure these two nuts are equally placed in the vise. Never finish the installation with just one nut.

- Connect deployment tool [SST: KV99106400 (J38381)] to air bag module connector.
- Connect red clip of deployment tool to battery positive terminal and black clip to negative terminal.
- 6. The lamp on the right side of the tool, marked "deployment tool power", should glow green, not red.
- 7. Press the button on the deployment tool. The left side lamp on the tool, marked "air bag connector voltage", will illuminate and the air bag module will deploy.

#### **CAUTION:**

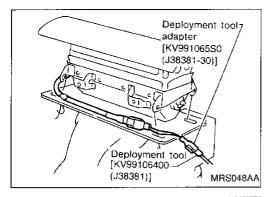
When deploying the air bag module, stand at least 5 m (16 ft) away from the air bag module.

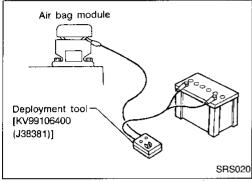
## Deployment of passenger air bag module (outside of vehicle)

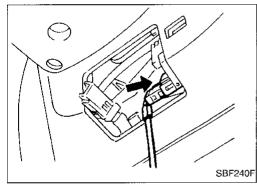
1. Using wire, secure air bag module to passenger air bag bracket [SST: KV99105300 (J41246)] at two places.

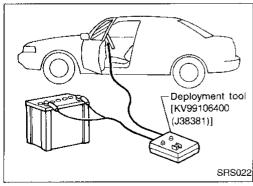
#### CALITION:

Use wire of at least 1 mm (0.04 in) in diameter.









#### Disposal of Air Bag Module (Cont'd)

- 2. Firmly anchor passenger air bag bracket in a vise.
- 3. Connect deployment tool adapter [SST: KV991065S0 (J38381-30)] to deployment tool [SST: KV99106400 (J38381)] connector and connector on either side of air bag module.
- 4. Connect red clip of deployment tool to battery positive terminal and black clip to negative terminal.
- 5. The lamp on the right side of the tool, marked "deployment tool power", should glow green, not red.
- 6. Press the button on the deployment tool. The left side lamp on the tool, marked "air bag connector voltage", will illuminate and the air bag module will deploy.

#### **CAUTION:**

When deploying the air bag module, stand at least 5 m (16 ft) away from the air bag module.

Activate the other inflator.

#### **CAUTION:**

Always activate one inflator at a time.

### DEPLOYMENT OF AIR BAG MODULE WHILE MOUNTED IN VEHICLE

When disposing of a vehicle, deploy air bag module while it is mounted in vehicle.

#### **CAUTION:**

#### When deploying air bag module, ensure vehicle is empty.

- 1. Disconnect both battery cables and wait 10 minutes.
- 2. Disconnect air bag module connector.
- Connect deployment tool connector [SST: KV99106400 (J38381)] to air bag module.
   For front passenger air bag module, attach deployment tool

adapters [SST: KV991065S0 (J38381-30)] to the tool connector.

- Connect red clip of deployment tool to battery positive terminal and black clip to negative terminal.
- The lamp on the right side of the tool, marked "deployment tool power", should glow green, not red.
- Press the button on the deployment tool. The left side lamp on the tool, marked "air bag connector voltage", will illuminate and the air bag module will deploy.

#### CAUTION:

Always activate one inflator at a time.

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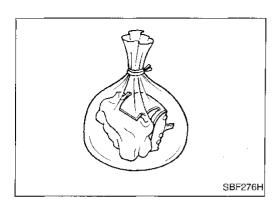
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## Disposal of Air Bag Module (Cont'd) DISPOSING OF AIR BAG MODULE

Deployed air bag module is very hot. Before disposing of air bag modules, wait at least 30 minutes. Seal them in a plastic bag before disposal.

#### **CAUTION:**

- Never apply water to a deployed air bag module.
- Be sure to wear gloves when handling a deployed air bag module.
- No poisonous gas is produced upon air bag module deployment. However, be careful not to inhale gas since it irritates throat and can cause choking.
- Do not attempt to disassemble air bag module.
- Air bag module can not be re-used.
- Wash your hands clean after finishing work.

## 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 problem. 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 MA section ("GENERAL MAINTENANCE").]
- Fuse [Refer to EL section ("Fuse", "POWER SUPPLY ROUTING").]
- System component-to-harness connections

#### **DIAGNOSIS FUNCTION**

The SRS self-diagnosis results can be read by using "AIR BAG" warning lamp and/or CONSULT. The reading of these results is accomplished using one of two modes — "User mode" and "Diagnosis mode". 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 are as follows:

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

#### DIAGNOSIS MODE FOR CONSULT

SELF-DIAG [CURRENT]

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

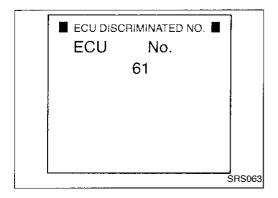
SELF-DIAG [PAST]

Diagnosis results previously stored in the memory (also indicated by the warning lamp flashes in the User mode) are displayed on the CONSULT 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 screen.

RS-17



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 screen, as shown at left. 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 screen.

For NISSAN MODEL A32, the diagnosis sensor unit classification number assigned is 61.

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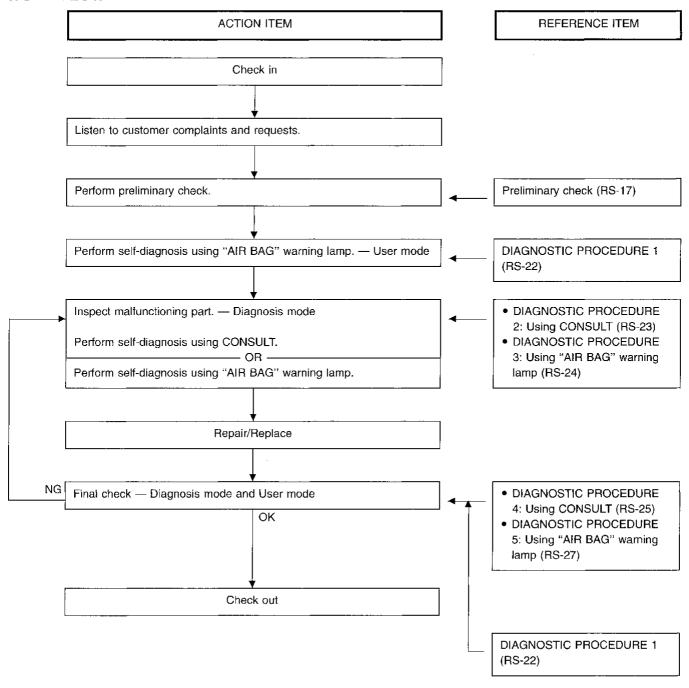
IDX

## How to Perform Trouble Diagnoses for Quick and Accurate Repair (Cont'd)

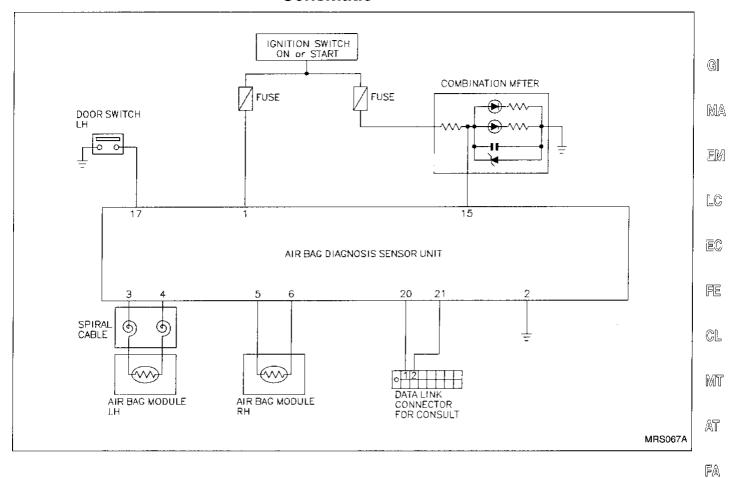
#### **CAUTION:**

- Do not use a circuit tester to check SRS harness connectors unless instructed to in this Service Manual. SRS wiring harnesses are covered with yellow insulation either just before the harness connectors or for the complete harness, for easy identification.
- Do not attempt to repair, splice or modify the SRS wiring harness. If the harness is damaged, replace it with a new one.
- Keep ground portion clean.

#### **WORK FLOW**



#### **Schematic**



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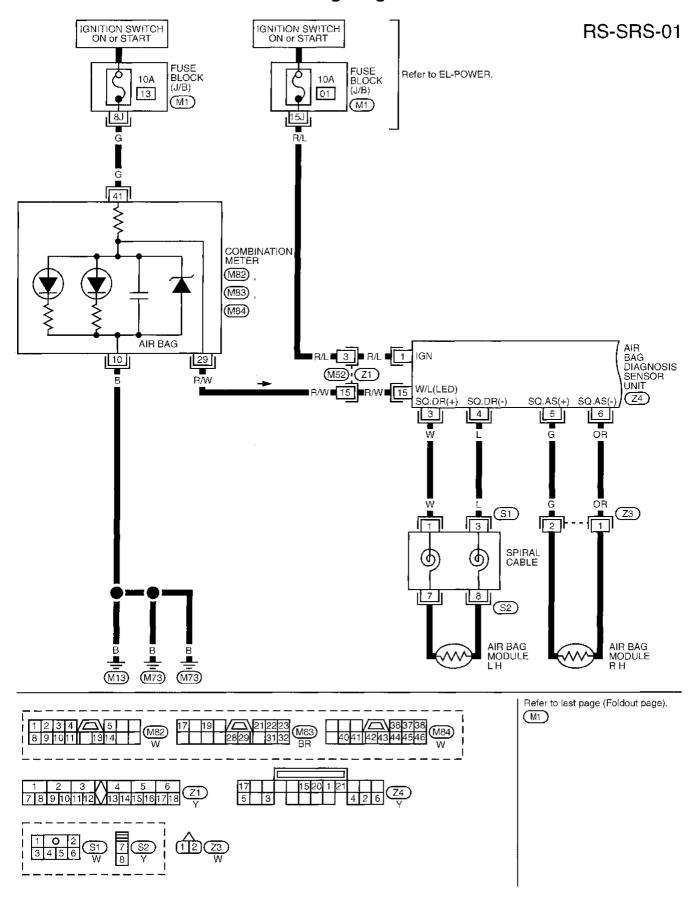
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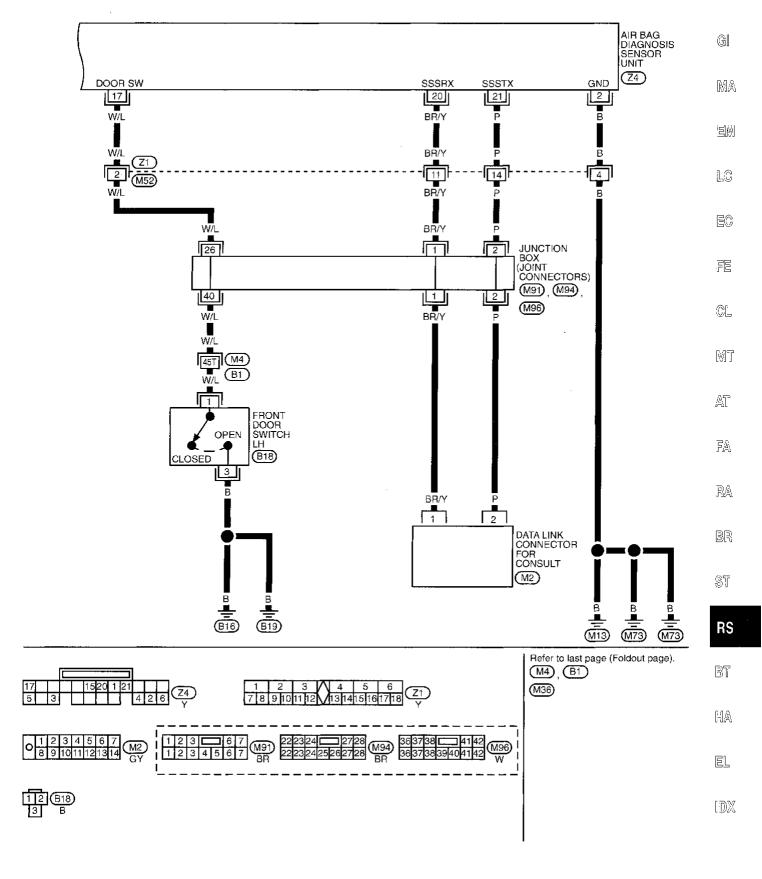
**RS-19** 961

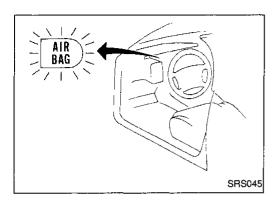
#### Wiring Diagram — SRS —



#### Wiring Diagram — SRS — (Cont'd)

#### RS-SRS-02





#### Self-diagnosis

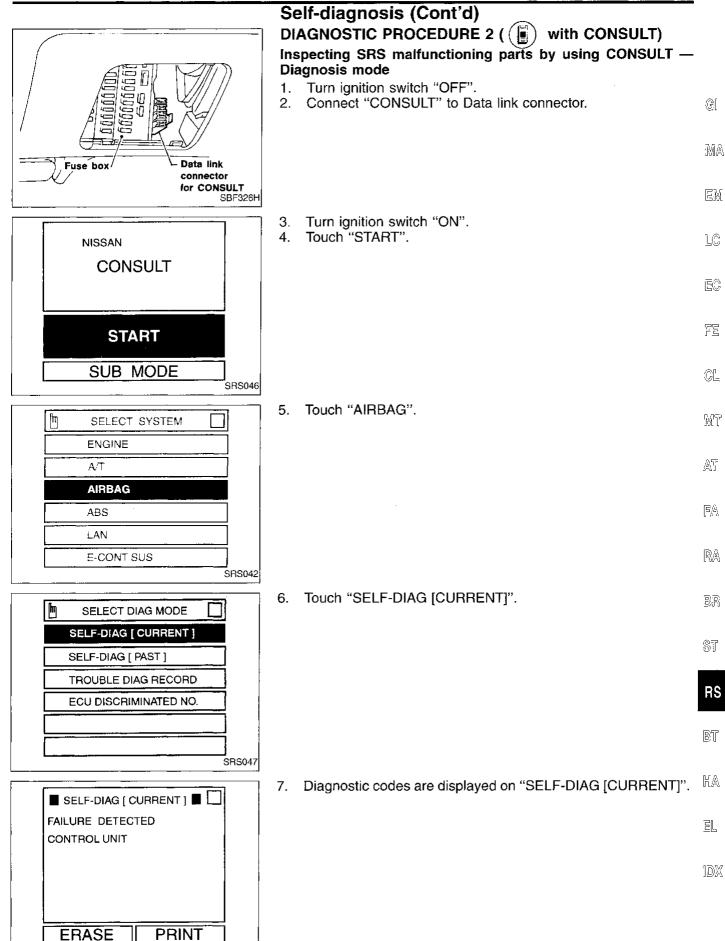
DIAGNOSTIC PROCEDURE 1 ( without CONSULT)
Checking SRS operation by using "AIR BAG" warning lamp —
User mode

- 1. After turning ignition switch from "OFF" to "ON", "AIR BAG" warning lamp operates.
- 2. Compare "AIR BAG" warning lamp operation to the chart below.

"AIR BAG" warning lamp operation — User mode —	SRS condition	Reference item
OFF 7 sec.	No malfunction is detected. No further action is necessary.	
OFF 0.5 sec. 0.5 sec.	The system has problem and needs to be repaired as indicated.	Go to DIAGNOSTIC PRO- CEDURE 2, or 3 (RS-23 or 24).
MR	S096A	
IGN ON	Air bag is deployed.	Go to COLLISION DIAGNOSIS (RS-8).
OFF	Diagnosis sensor unit is malfunctioning and needs to be repaired.	Go to DIAGNOSTIC PRO- CEDURE 8 (RS-34).
MR	S097A	
IGN ON ON	Diagnosis sensor unit or "AIR BAG" warning lamp circuit is shorted or open and needs to be repaired.	Go to DIAGNOSTIC PRO- CEDURE 9 (RS-34).
MR	S098A	

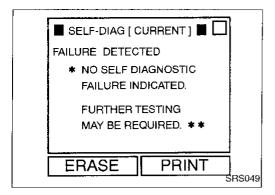
#### NOTE:

If "AIR BAG" warning lamp operates differently from the operations shown above, refer to "AIR BAG" warning lamp operation — Diagnosis mode —, DIAGNOSTIC PROCEDURE 5, RS-27. Then repair as necessary.



SRS048

**RS-23** 965



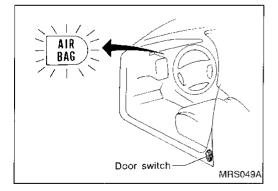
#### Self-diagnosis (Cont'd)

If no self-diagnostic failure is detected on "SELF-DIAG [CURRENT]" even though malfunction is detected in DIAGNOSTIC PROCEDURE 1, go to DIAGNOSTIC PROCEDURE 6, page RS-29.

- Touch "PRINT".
- Compare diagnostic codes to the CONSULT DIAGNOSTIC CODE CHART, page RS-32.

  10. Touch "BACK" key of CONSULT until SELECT SYSTEM
- appears, then turn off CONSULT.
- 11. Turn ignition switch "OFF", then disconnect CONSULT and both battery cables.
- 12. Repair the system as outlined by the "Repair order" in CON-SULT DIAGNOSTIC CODE CHART, that corresponds to the problem code. For replacement procedure of component parts, refer to RS-8.
- 13. After repairing the system, conduct DIAGNOSTIC PROCE-DURE 2 again.

If repair is completed, turn ignition switch "OFF" and disconnect CONSULT. Then go to DIAGNOSTIC PROCEDURE 1.



DIAGNOSTIC PROCEDURE 3 ( 💢 without CONSULT) 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.

- Open driver's door.
- Turn ignition switch from "OFF" to "ON".
- Press driver's door switch at least 5 times within 7 seconds after turning ignition switch "ON". SRS is now in Diagnosis mode.
- "AIR BAG" warning lamp operates in diagnosis mode as follows:

#### NOTE:

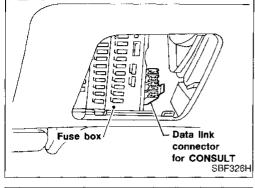
If SRS does not enter diagnostic mode even though malfunction is detected in User mode, go to DIAGNOSTIC PROCE-DURE 10, page RS-35.

#### Self-diagnosis (Cont'd)

No.	"AIR BAG" warning lamp operation — Diagnosis	s mode —	SRS condition	
1	OFF 7 sec. 3 sec. 2 sec.	ⓐ through ⓑ are repeated.	Intermittent problem has been detected in the past. Go to DIAGNOS- TIC PROCE- DURE 7 (RS- 30).	© 1
	MRS100A	·		_
		<ul> <li>a) through (a) are repeated.</li> <li>NOTE:</li> <li>a) — Interval I</li> <li>b) — Start signal (Start signal identifies display modes)</li> </ul>	The system has problem and needs to be repaired.	l
2	OFF 7 sec. 3 sec. 0.5 sec. 0.5 sec. 2 sec. 2 sec. Varies with malfunctioning part	interval II     indicates malfunctioning     part (0.5 sec. ON and 0.5		<u>=</u>
	MRS099A	sec. OFF is counted as one flash.)		[=

- Malfunctioning part is indicated by the number of flashes (part

   (a)). Compare the number of flashes to WARNING LAMP
   FLASH CODE CHART, page RS-32, and locate malfunctioning part.
- 6. Turn ignition switch "OFF", and disconnect both battery cables.
- Repair the system as outlined by the "Repair order" in WARN-ING LAMP FLASH CODE CHART that corresponds to the flash code. For replacement procedure of component parts, refer to RS-8.
- 8. After repairing the system, go to DIAGNOSTIC PROCEDURE 5, page RS-27.



## NISSAN CONSULT START SUB MODE SRS046

## DIAGNOSTIC PROCEDURE 4 ( with CONSULT) Final checking after repairing SRS by using CONSULT — Diagnosis mode

- 1. After repairing SRS, connect both battery cables.
- 2. Connect CONSULT to Data link connector.
- 3. Turn ignition switch from "OFF" to "ON".

4. Touch "START".

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**RS-25** 967

#### Self-diagnosis (Cont'd)

SELECT SYSTEM

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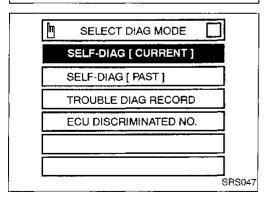
AIRBAG

ABS

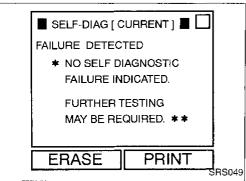
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5. Touch "AIRBAG".



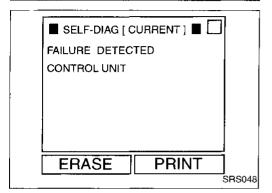
6. Touch "SELF-DIAG [CURRENT]".



7. If no malfunction is detected on "SELF-DIAG [CURRENT]", repair of SRS is completed. Touch "ERASE".

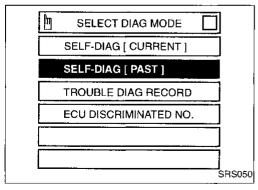
#### NOTE:

Touch "ERASE" to erase problem (Trouble code) retained in memory. Otherwise, CONSULT still senses problem in memory when step 13 (Air bag warning lamp operation check) is performed. The result is confusing a new with an old problem.



If any problem code was displayed on "SELF-DIAG [CURRENT]", the malfunctioning part is not repaired completely or another malfunctioning part is detected. Go to DIAGNOSTIC PROCEDURE 2, page RS-23, and repair malfunctioning part completely.

8. Touch "BACK" key of CONSULT.



Touch "SELF-DIAG [PAST]".

#### SELF-DIAG [PAST] FAILURE DETECTED \* NO SELF DIAGNOSTIC FAILURE INDICATED. **FURTHER TESTING** MAY BE REQUIRED. \*\* PRINT SRS062

#### Self-diagnosis (Cont'd)

10. Check that no self-diagnostic failure is detected on "SELF-DIAG [PAST]".

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11. Touch "BACK" key of CONSULT until SELECT SYSTEM appears, turn off CONSULT, then disconnect CONSULT.

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12. Turn ignition switch "OFF".

13. Go to DIAGNOSTIC PROCEDURE 1, page RS-22 to check-SRS operation by using "AIR BAG" warning lamp with User mode.

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DIAGNOSTIC PROCEDURE 5 ( ) without CONSULT) Final checking after repairing SRS by using "AIR BAG" warning lamp — Diagnosis mode and User mode

1. After repairing SRS connect both battery cables. AT

2. Open driver's door.

Turn ignition switch from "OFF" to "ON".

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

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No.	"AIR BAG" warning lamp operation — Diagnosis mode —	SRS condition	
	③ through ⑤ a  IGN ON  a   a	tion is	\$T
1	OFF - OFF	pieteu.	RS
	7 sec. 3 sec. 2 sec. MRS100A	No further action is necessary.	87
	(a) through (d) and NOTE:  (a) — Interval I  (b) — Start signs	has problem and needs to	HA
2	identifies (© — Interval II		EL
	2 sec. 2 sec. Varies with malfunctioning part part (0.5 sec.	on ON and OE	IDX
	MRS099A		

#### Self-diagnosis (Cont'd)

- 5. If "AIR BAG" warning lamp operates as shown in No. 1 in chart above, turn ignition switch "OFF" to reset from Diagnosis mode to User mode.
  - If "AIR BAG" warning lamp operates as shown in No. 2 in chart above, the malfunctioning part is not repaired completely, or another malfunctioning part is detected. Go to DIAGNOSTIC PROCEDURE 3, page RS-24, and repair malfunctioning part completely.
- 6. Turn ignition switch "ON". "AIR BAG" warning lamp operates in User mode. Compare "AIR BAG" warning lamp operation to the chart below.

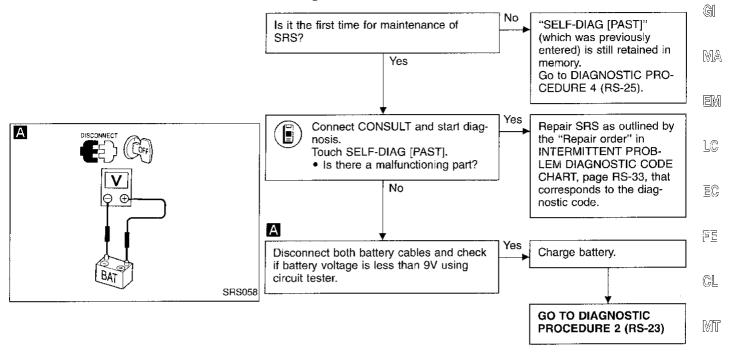
#### NOTE:

If switching Diagnosis mode to User mode is required while malfunction is being detected, turn ignition switch from "OFF" to "ON". Then press driver's door switch at least 5 times within 7 seconds after turning ignition switch "ON". SRS is now in User mode.

"AIR BAG" warning lamp operation — User mode —	SRS condition	Reference item
OFF 7 sec.	No malfunction is detected. No further action is necessary.	
OFF 0.5 sec. 0.5 sec.	The system has problem and needs to be repaired as indicated.	Go to DIAGNOSTIC PRO- CEDURE 2 or 3 (RS-23 or 24).
IGN ON	Air bag is deployed.	Go to COLLISION DIAGNOSIS (RS-36).
OFF MRS097A	Diagnosis sensor unit is malfunctioning and needs to be repaired.	Go to DIAGNOSTIC PRO- CEDURE 8 (RS-34).
IGN ON OFF	Diagnosis sensor unit or "AIR BAG" warning lamp circuit is shorted or open and needs to be repaired.	Go to DIAGNOSTIC PRO- CEDURE 9 (RS-34).
MRS098A		

## Self-diagnosis (Cont'd) DIAGNOSTIC PROCEDURE 6 (Continued from DIAGNOSTIC PROCEDURE 2)

Inspecting SRS malfunctioning record and checking battery voltage



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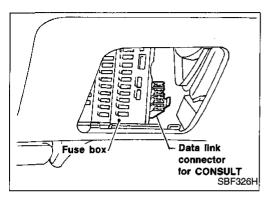
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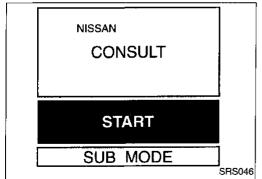
**RS-29** 971



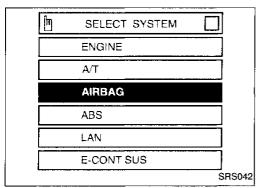
#### Self-diagnosis (Cont'd)

DIAGNOSTIC PROCEDURÉ 7 ( with CONSULT)
Inspecting SRS intermittent problem by using CONSULT —
Diagnosis mode

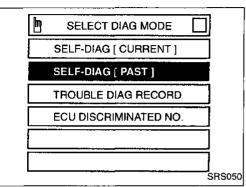
- 1. Turn ignition switch "OFF".
- 2. Connect "CONSULT" to Data link connector.



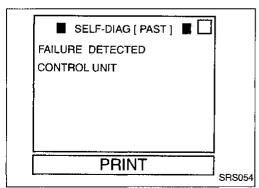
- 3. Turn ignition switch "ON".
- 4. Touch "START".



5. Touch "AIRBAG".



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

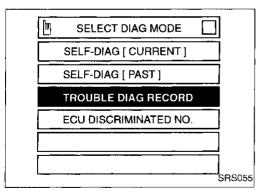


7. If diagnostic codes are displayed on "SELF-DIAG [PAST]", go to step 10.

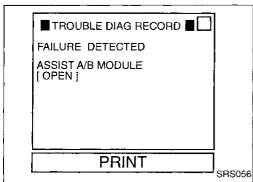
Self-diagnosis (Cont'd)

## SELF-DIAG [ PAST ] FAILURE DETECTED \* NO SELF DIAGNOSTIC FAILURE INDICATED. FURTHER TESTING MAY BE REQUIRED. \*\* PRINT SRS062

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



8. Touch "TROUBLE DIAG RECORD".



Diagnostic code is displayed on "TROUBLE DIAG RECORD".

- 10. Touch "PRINT".
- 11. Compare diagnostic codes to the INTERMITTENT PROBLEM DIAGNOSTIC CODE CHART, page RS-33.
- 12. Touch "BACK" key of CONSULT until SELECT SYSTEM appears, then turn off CONSULT.
- 13. Turn ignition switch "OFF", then disconnect CONSULT and both battery cables.
- 14. Repair the system as outlined by the "Repair order" in INTER-MITTENT PROBLEM DIAGNOSTIC CODE CHART, that corresponds to the problem code. For replacement procedure of component parts, refer to RS-8.

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#### Self-diagnosis (Cont'd)

#### CONSULT DIAGNOSTIC CODE CHART

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement.
NO SELF DIAGNOSTIC FAILURE INDICATED.	No malfunction is detected.	_
AIRBAG MODULE [OPEN]	Driver's air bag module circuit is open. (including the spiral cable)	Visually check the wiring harness connections.
AIRBAG MODULE [VB-SHORT]	Driver's air bag module circuit is shorted to some power supply circuit. (including the spi- ral cable)	<ol> <li>Replace the spiral cable.</li> <li>Replace driver's air bag module.</li> <li>(Before disposing of it, it must be deployed.)</li> <li>Replace the diagnosis sensor unit.</li> </ol>
AIRBAG MODULE [GND-SHORT]	Driver's air bag module circuit is shorted to ground. (including the spiral cable)	The place the diagnosis sensor unit.     Replace the air bag harness.
AIRBAG MODULE [SHORT]	Driver's air bag module circuits are shorted to each other.	
ASSIST A/B MODULE [OPEN]	Front passenger air bag module circuit is open.	Visually check the wiring harness connections.
ASSIST A/B MODULE [VB-SHORT]	<ul> <li>Front passenger air bag module circuit is shorted to some power supply circuit.</li> </ul>	Replace front passenger air bag module.     (Before disposing of it, it must be deployed.)     Replace the diagnosis sensor unit.
ASSIST A/B MODULE [GND-SHORT]	Front passenger air bag module circuit is shorted to ground.	Replace the diagnosis serior unit.  4. Replace the air bag harness.
ASSIST A/B MODULE [SHORT]	Front passenger air bag module circuits are shorted to each other.	
CONTROL UNIT	Diagnosis sensor unit is out of order.	Visually check the wiring harness connections.     Replace the diagnosis sensor unit.     Replace the air bag harness.     Replace the main harness.

<sup>\*</sup> Follow the procedures in numerical order when repairing malfunctioning parts. Confirm whether malfunction is eliminated using the air bag warning lamp (in user mode) or CONSULT 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.

#### WARNING LAMP FLASH CODE CHART

Warning lamp	Flash code ⓓ (# of flashes)	Explanation	Repair order Recheck SRS at each replacement.
"AIR BAG" warning lamp	2	The driver's air bag module circuit is out of order.	<ol> <li>Visually check the wiring harness connections.</li> <li>Replace the spiral cable.</li> <li>Replace the driver's air bag module.         <ul> <li>(Before disposing of it, it must be deployed.)</li> </ul> </li> <li>Replace the diagnosis sensor unit.</li> <li>Replace the air bag harness.</li> </ol>
	7	The diagnosis sensor unit is out of order.	<ol> <li>Visually check the wiring harness connections.</li> <li>Replace the diagnosis sensor unit.</li> <li>Replace the air bag harness.</li> <li>Replace the main harness.</li> </ol>
	8	The front passenger air bag module circuit is out of order.	<ol> <li>Visually check the wiring harness connections.</li> <li>Replace the front passenger air bag module. (Before disposing of it, it must be deployed.)</li> <li>Replace the diagnosis sensor unit.</li> <li>Replace the air bag harness.</li> </ol>

<sup>\*</sup> Follow the procedures in numerical order when repairing malfunctioning parts. Confirm whether malfunction is eliminated using the air bag warning lamp (in user mode) or CONSULT 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.

#### Self-diagnosis (Cont'd)

#### INTERMITTENT PROBLEM DIAGNOSTIC CODE CHART

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement.	
NO SELF DIAGNOSTIC FAILURE INDICATED.	No malfunction is detected.		Œſ
AIRBAG MODULE [VB-SHORT]	Driver's air bag module circuit is shorted to some power supply circuit. (including the spi- ral cable)	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace the spiral cable.</li> </ol>	JMA
AIRBAG MODULE [OPEN]	Driver's air bag module circuit is open.     (including the spiral cable)	Visually check the wiring harness connection.     Replace the harness if it has visible damage.	EM
AIRBAG MODULE [GND-SHORT]	Driver's air bag module circuit is shorted to ground. (including the spiral cable)	Replace the spiral cable.     Replace driver's air bag module.     (Before disposal of it, it must be deployed.)	<u>l</u> ©
AIRBAG MODULE [SHORT]	Driver's air bag module circuits are shorted to each other.		EC
ASSIST A/B MODULE [VB-SHORT]	Front passenger air bag module circuit is shorted to some power supply circuit.	<ol> <li>Visually check the wiring harness connection.</li> <li>Replace the harness if it has visible damage.</li> <li>Replace the air bag harness.</li> </ol>	<u>50</u>
ASSIST A/B MODULE [OPEN]	Front passenger air bag module circuit is open.	Visually check the wiring harness connection.     Replace the harness if it has visible damage.	⊘II
ASSIST A/B MODULE [GND-SHORT]	Front passenger air bag module circuit is shorted to ground.	Replace front passenger air bag module.     (Before disposal of it, it must be deployed.)	GL
ASSIST A/B MODULE [SHORT]	Front passenger air bag module circuits are shorted to each other.		MT
CONTROL UNIT	Diagnosis sensor unit is out of order.	Replace the diagnosis sensor unit.	AT.

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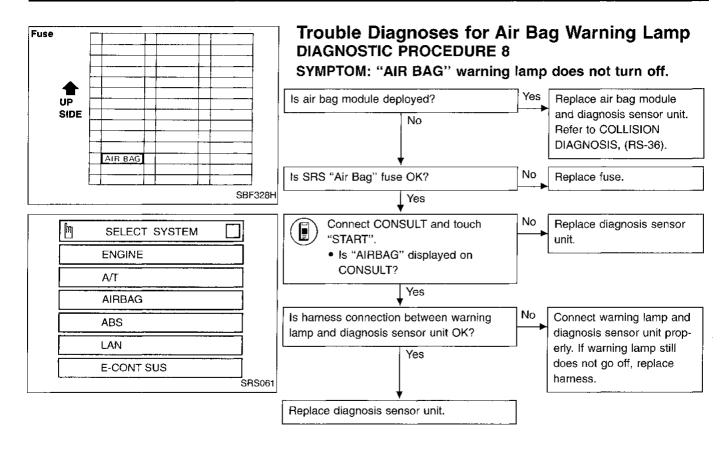
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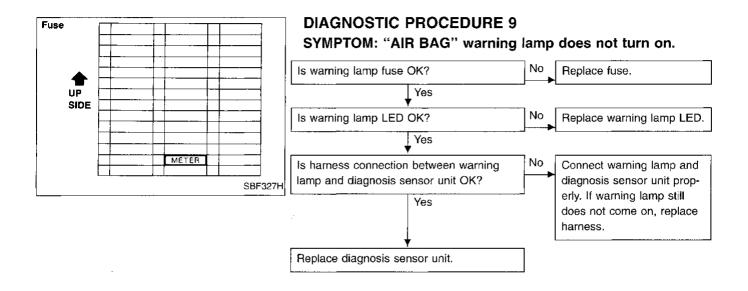
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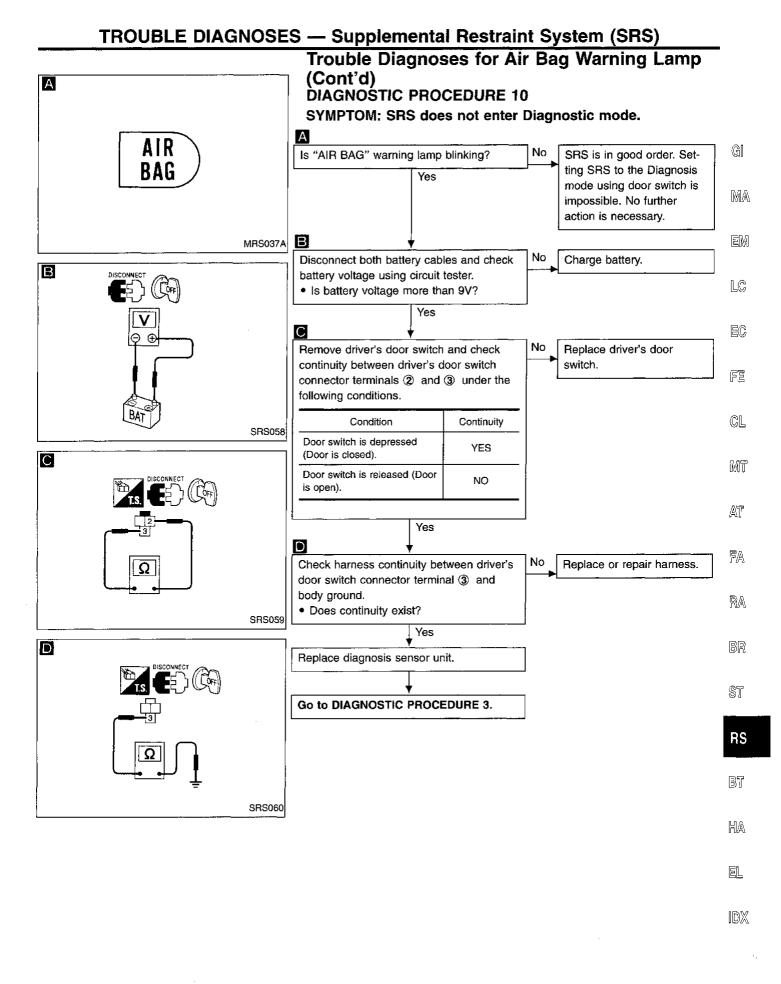
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**RS-33** 975







#### **COLLISION DIAGNOSIS**

To repair the SRS, perform the following steps.

#### When SRS is activated in a collision:

- ① Replace the diagnosis sensor unit.
- 2 Remove the air bag modules.
- 3 Check the SRS components using the table shown below:
  - Replace any SRS components showing visible signs of damage (dents, cracks, deformation).
- (4) Conduct self-diagnosis. Refer to "Self-diagnosis" for details (RS-22). Ensure the remainder of the SRS is operating properly.
- ⑤ Install new air bag modules.
- 6 Conduct self-diagnosis again.

#### When SRS is not activated in a collision:

- ① Check the SRS components using the table shown below:
  - Replace any SRS components showing visible signs of damage (dents, cracks, deformation).
- 2 Conduct self-diagnosis using CONSULT and "AIR BAG" warning lamp. Refer to "Self-diagnosis" for details (RS-22). Ensure entire SRS operates properly.

#### **SRS** inspection

Part	SRS is activated	SRS is NOT activated
Air bag module (driver and passen- ger side)	REPLACE Install with new bolts.	<ol> <li>Remove 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>Install passenger air bag module into the instrument panel to check fit with the instrument panel.</li> <li>No damage found, reinstall with new bolts.</li> <li>If damaged—REPLACE. Air bag must be deployed before discarding.</li> </ol>
Instrument panel	REPLACE Install with new bolts.	Check instrument panel for bending, deformities, or cracks.     If no damage is found, reinstall with new bolts.     If damaged—REPLACE.
Diagnosis sensor unit	REPLACE Install with new bolts.	Check case and bracket for dents, cracks or deformities.     Check connectors for damage, and terminals for deformities.     If no damage is found, reinstall with new bolts.     If damaged—REPLACE.
Steering wheel	<ol> <li>Visually check steering wheel for deformities.</li> <li>Check harness (built into steering wheel) and connectors for damage, and terminals for deformities.</li> <li>Install air bag module to check fit or alignment with steering wheel.</li> <li>Check steering wheel for excessive free play.</li> <li>If no damage is found, reinstall with new bolts.</li> <li>If damaged—REPLACE.</li> </ol>	
Spiral cable	<ol> <li>Visually check spiral cable and combination switch for damage.</li> <li>Check connectors, flat cable and protective tape for damage.</li> <li>Check steering wheel for noise, binding or heavy operation.</li> <li>If no damage is found, reinstall with new bolts.</li> <li>If damaged—REPLACE.</li> </ol>	
Harness and Con- nectors	1. Check connectors for poor connection, damage, and terminals for deformities. 2. Check harness for binding, chafing, cuts, or deformities. 3. If no damage is found, reinstall 4. Damaged—REPLACE damaged section of harness. Do not attempt to repair, splice or modify any SRS harness.	