

# RESTRAINT SYSTEM

## SECTION **RS**

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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”.**

## PRECAUTION

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### **Supplemental Restraint System (SRS) “AIR BAG” and “SEAT BELT PRE-TENSIONER”**

The Supplemental Restraint System such as “AIR BAG” and “SEAT BELT PRE-TENSIONER” used along with a seat belt, helps to reduce the risk or severity of injury to the driver and front passenger in a frontal collision. The SRS composition which is available to NISSAN MODEL Y61 is as follows (The composition varies according to the destination.):

Driver air bag module (located in the center of the steering wheel), front passenger air bag module (located on the instrument panel on passenger side), seat belt pre-tensioner, 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. Spiral cable and wiring harnesses covered with yellow insulation either just before the harness connectors or for the complete harness are related to the SRS.**

## SEAT BELTS

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### CAUTION:

- Before removing the seat belt pre-tensioner assembly (if equipped), turn the ignition switch off, disconnect both battery cables and wait at least 3 minutes.
- After replacing or reinstalling seat belt pre-tensioner assembly, or reconnecting seat belt pre-tensioner connector, check the system function. Refer to “SRS Operation Check” (RS-30) for details.
- 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 hardware (i.e., guide rail set).

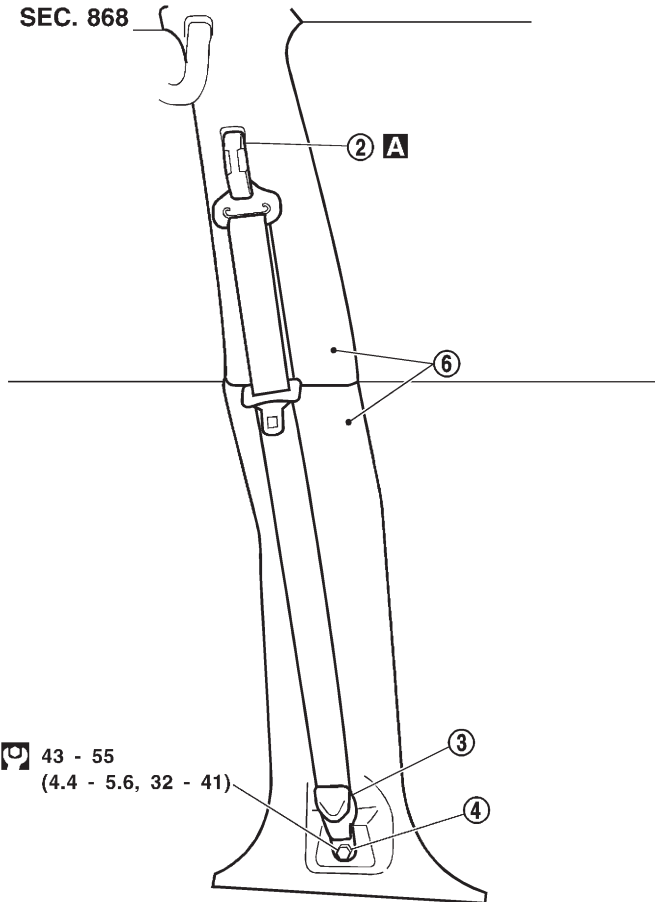
# SEAT BELTS

## Front Seat Belt

### REMOVAL (WAGON)

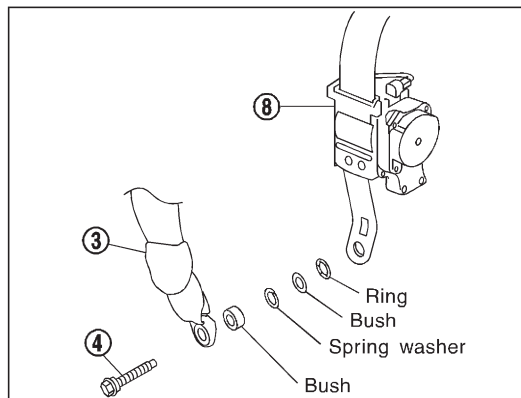
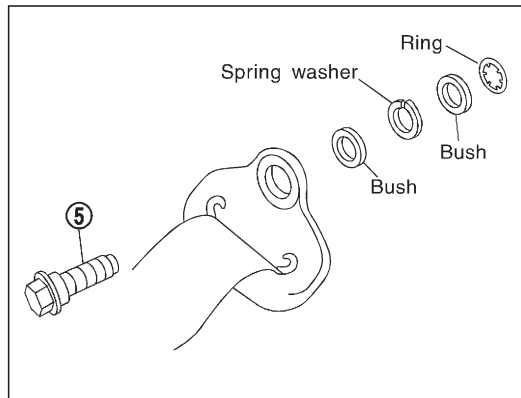
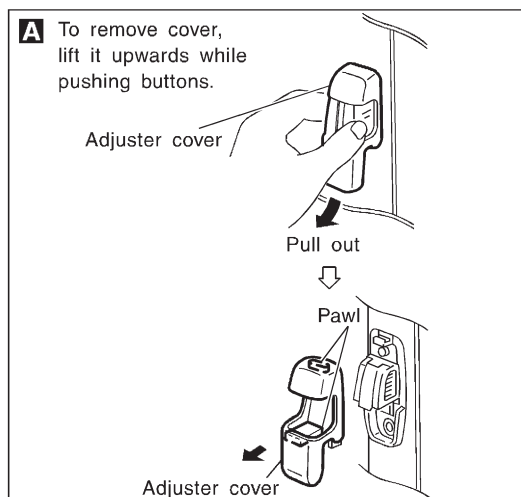
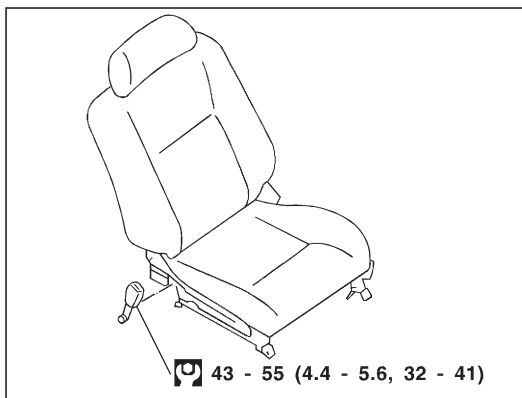
- ① Remove front seat. Refer to "SEAT" in BT section for details.
- ② Remove adjuster cover. **A**
- ③ Slide floor anchor cover.
- ④ Remove floor anchor bolt.
- ⑤ Remove shoulder anchor bolt.
- ⑥ Remove center pillar upper and lower garnish. Refer to "Side and Floor Trim" in BT section for details.
- ⑦ Remove bolts securing second sash guide, then remove second sash guide.
- ⑧ Remove the bolt securing seat belt pre-tensioner retractor, then remove seat belt and seat belt pre-tensioner retractor.
- ⑨ Remove bolts securing seat belt adjuster, then remove seat belt adjuster.

SEC. 868



**43 - 55**  
(4.4 - 5.6, 32 - 41)

**43 - 55** : N·m (kg-m, ft-lb)



SRS446

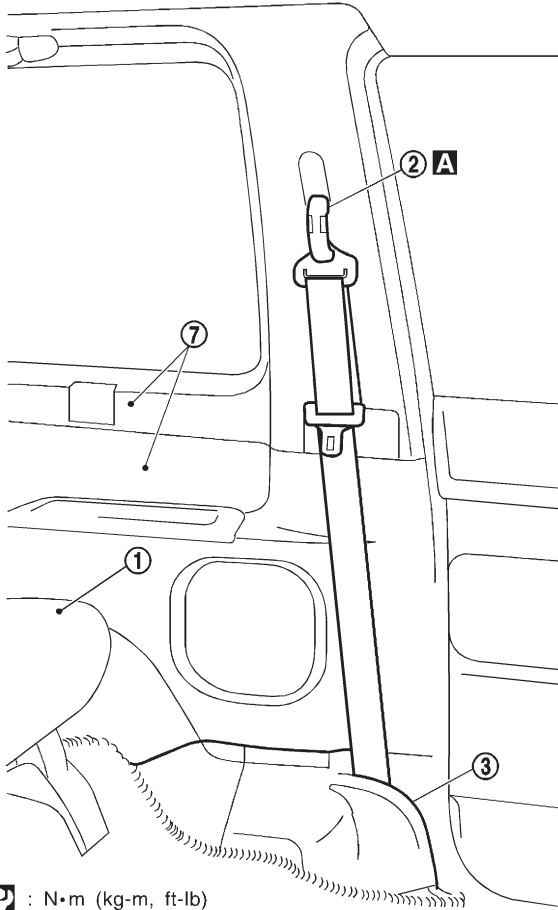
# SEAT BELTS

## Front Seat Belt (Cont'd)

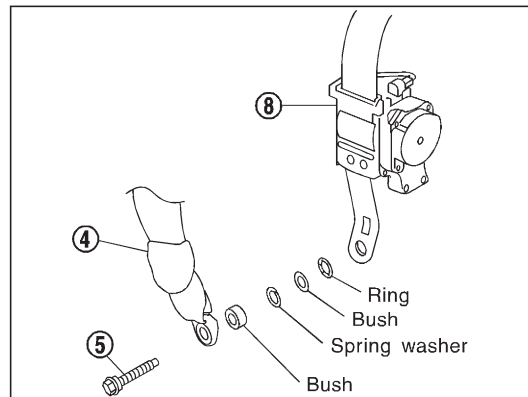
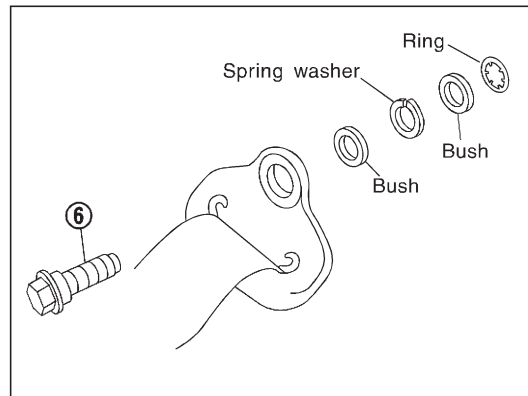
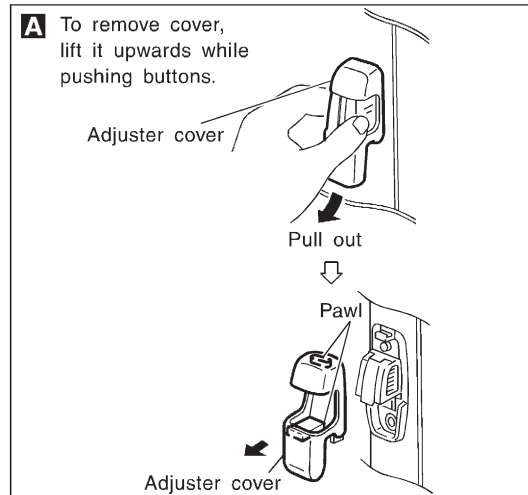
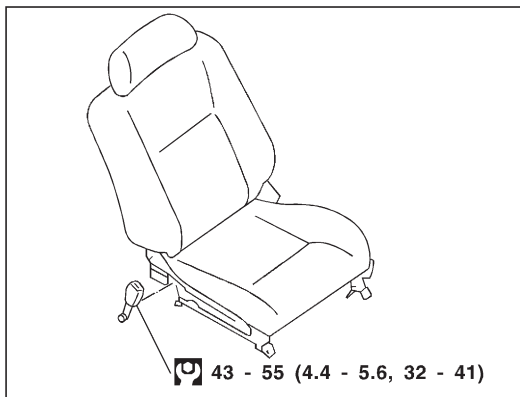
### REMOVAL (HARDTOP)

- ① Remove front seat. Refer to "SEAT" in BT section for details.
- ② Remove adjuster cover. **A**
- ③ Remove lap outer cover. Refer to "Side and Floor Trim" in BT section for details.
- ④ Slide floor anchor cover.
- ⑤ Remove floor anchor bolt.
- ⑥ Remove shoulder anchor bolt.
- ⑦ Remove luggage side upper and lower finisher. Refer to "Side and Floor Trim" in BT section for details.
- ⑧ Remove the bolt securing seat belt pre-tensioner retractor, then remove seat belt and seat belt pre-tensioner retractor.
- ⑨ Remove bolts securing seat belt adjuster, then remove seat belt adjuster.

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: N·m (kg-m, ft-lb)



SRS447

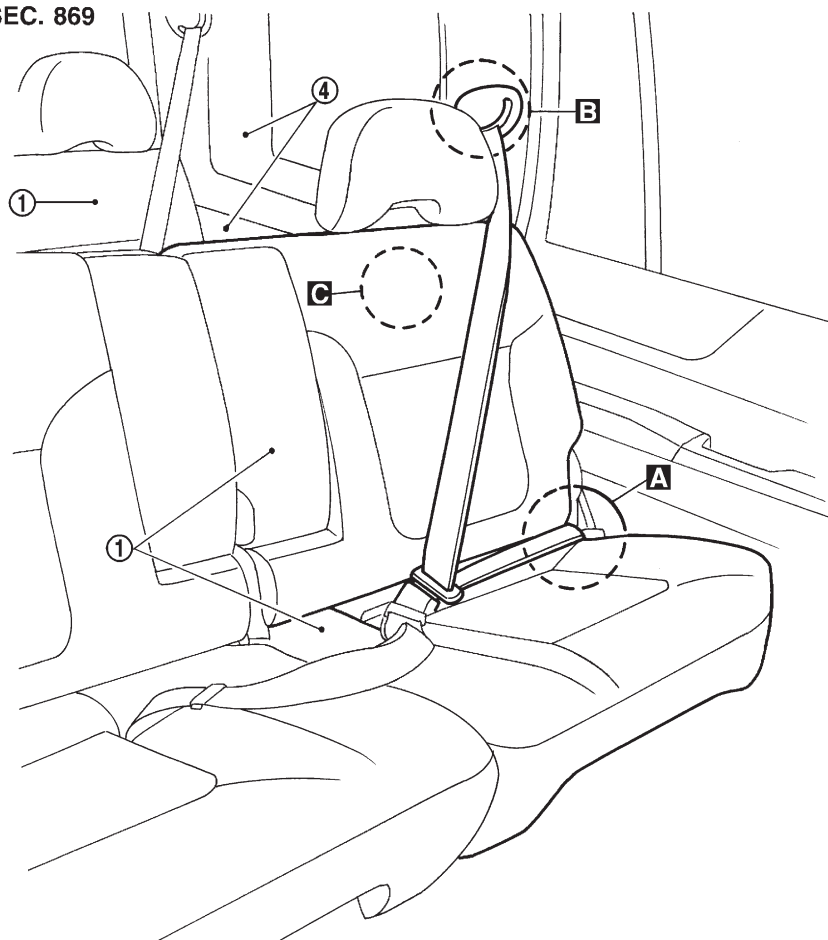
# SEAT BELTS

## Rear Seat Belt

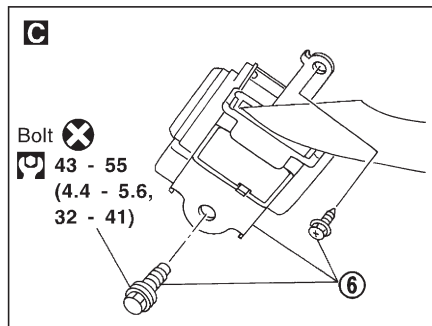
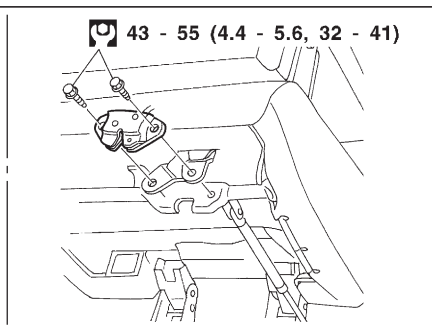
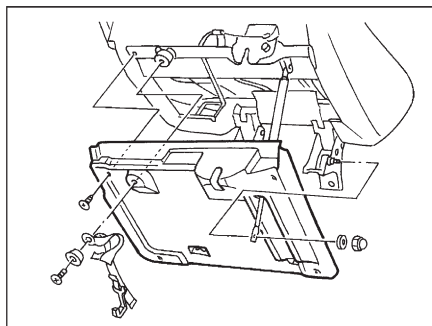
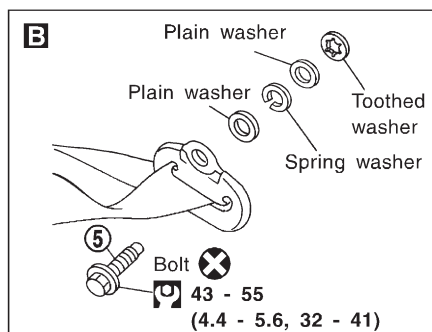
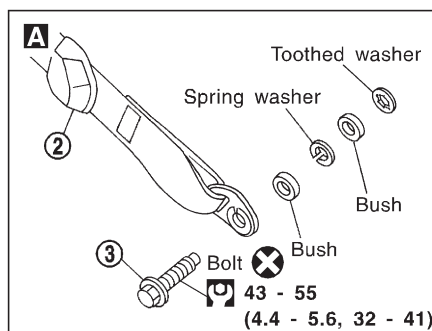
### REMOVAL (WAGON)

- ① Remove rear and 3rd seats. Refer to "SEAT" in BT section for details.
- ② Slide anchor cover. **A**
- ③ Remove anchor bolt. **A**
- ④ Remove luggage upper and lower finishers. Refer to "Side and Floor Trim" in BT section for details.
- ⑤ Remove shoulder anchor bolt. **B**
- ⑥ Remove the bolt and anchor bolt securing seat belt retractor, then remove seat belt and seat belt retractor. **C**

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: N·m (kg-m, ft-lb)



SRS448

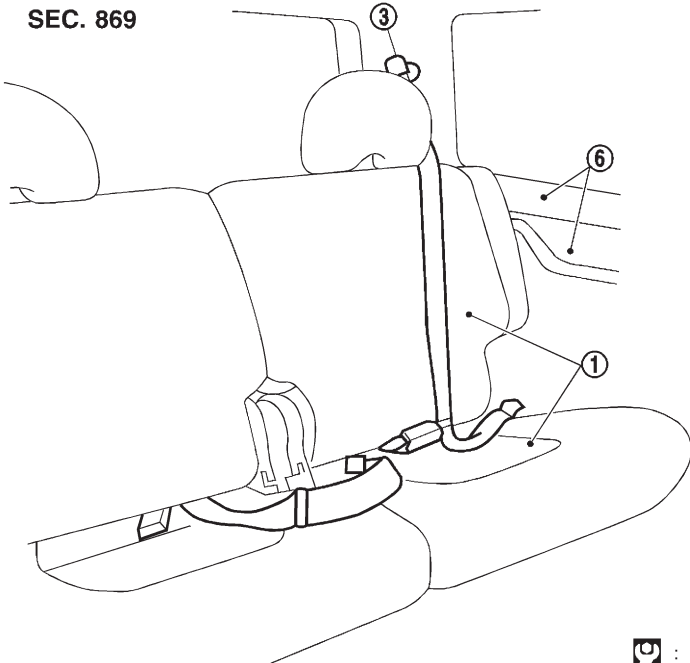
# SEAT BELTS

## Rear Seat Belt (Cont'd)

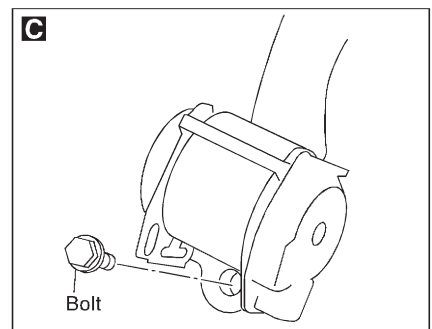
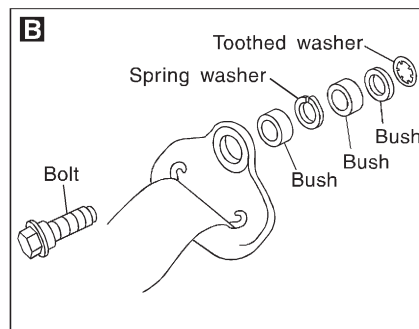
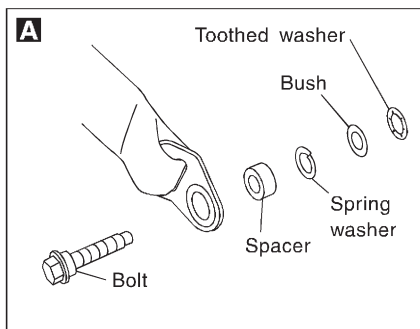
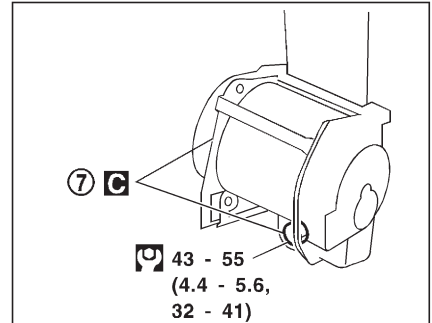
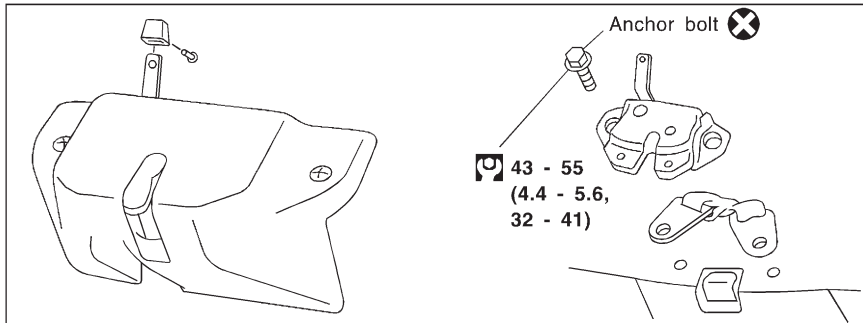
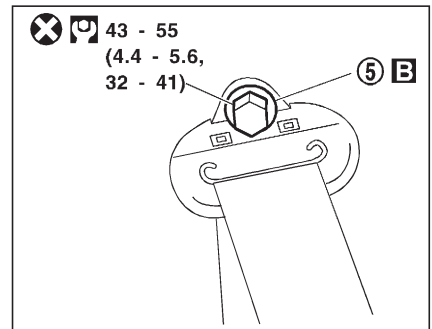
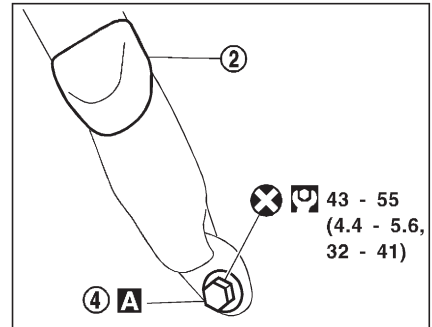
### REMOVAL (HARDTOP)

- ① Fold the rear seat forward.
- ② Slide anchor cover.
- ③ Remove shoulder anchor cover.
- ④ Remove anchor bolt. **A**
- ⑤ Remove shoulder anchor bolt. **B**
- ⑥ Remove luggage upper and lower finishers. Refer to "Side and Floor Trim" in BT section for details.
- ⑦ Remove anchor bolt securing seat belt retractor, then remove seat belt and seat belt retractor. **C**

SEC. 869



: N·m (kg-m, ft-lb)



SRS449

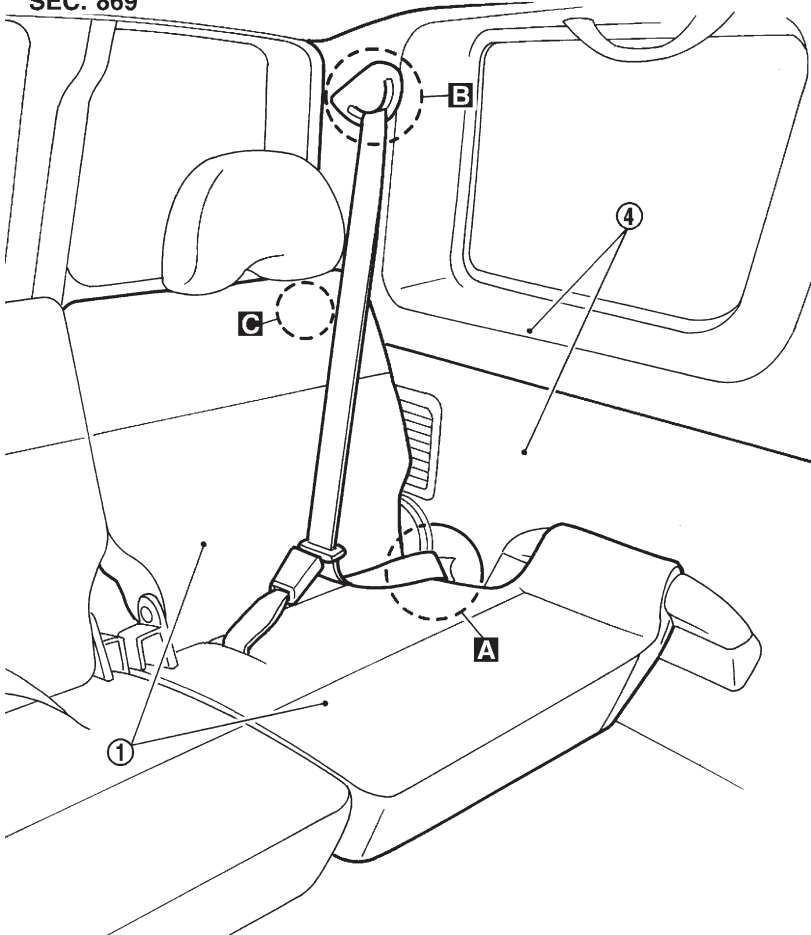
# SEAT BELTS

## 3rd Seat Belt

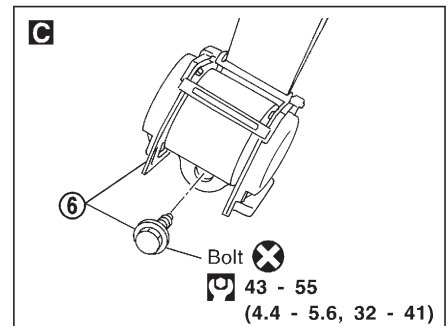
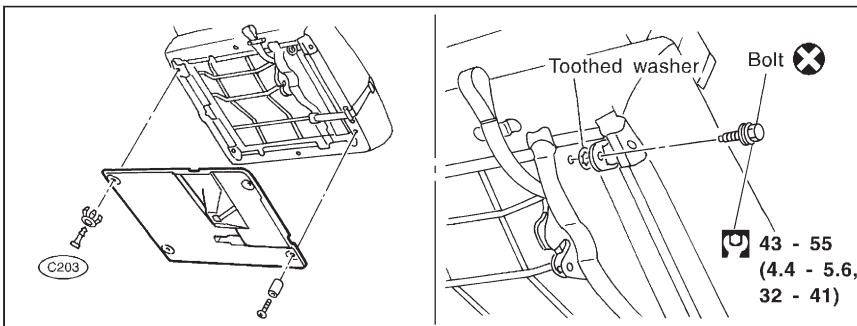
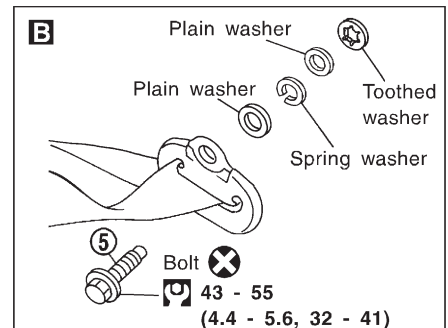
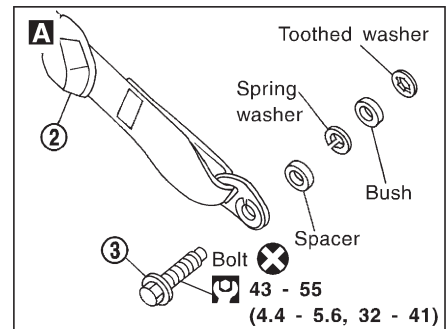
### REMOVAL (WAGON)

- ① Remove rear and 3rd seats. Refer to "SEAT" in BT section for details.
- ② Slide anchor cover. **A**
- ③ Remove anchor bolt. **A**
- ④ Remove luggage upper and lower finishers. Refer to "Side and Floor Trim" in BT section for details.
- ⑤ Remove shoulder anchor bolt. **B**
- ⑥ Remove anchor bolt securing seat belt retractor, then remove seat belt and seat belt retractor. **C**

SEC. 869



: N·m (kg-m, ft-lb)



SRS450

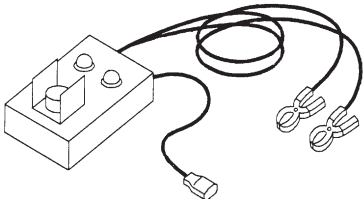
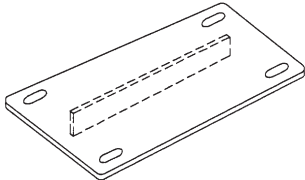
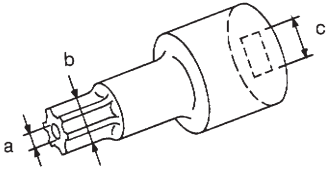
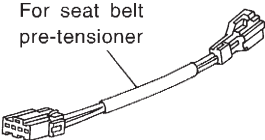


## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

### Precautions for SRS “AIR BAG” and “Seat Belt Pre-tensioner” Service

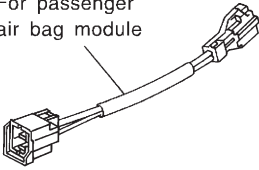
- Do not use a circuit tester to check SRS circuits unless instructed to in this Service Manual.
- Before servicing the SRS, turn ignition switch “OFF”, disconnect both battery cables and wait for at least 3 minutes.  
For approximately 3 minutes after the cables are removed, it is still possible for 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 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.
- Conduct self-diagnosis to check entire SRS for proper function after replacing any components.
- Instrument panel assembly should be replaced after air bag inflates if damaged.

### Special Service Tools

Tool number Tool name	Description	Application		
		Seat belt pre-tensioner	Air Bag System	
KV99106400 Deployment tool	 NT357	Disposing of air bag module	X	X
KV99105300 Air bag module bracket	 NT354	Anchoring air bag module	—	X
Special torx bit	 NT361	Use for special bolts [TAMPER RESISTANT TORX (Size T50)]  <b>a: 3.5 (0.138) dia.</b> <b>b: 8.5 - 8.6 (0.335 - 0.339) dia.</b> <b>c: approx. 10 (0.39) sq.</b> Unit: mm (in)	—	X
KV999R0020 Deployment tool adapters for seat belt pre-tensioner	 NT721		X	—

**SUPPLEMENTAL RESTRAINT SYSTEM (SRS)**

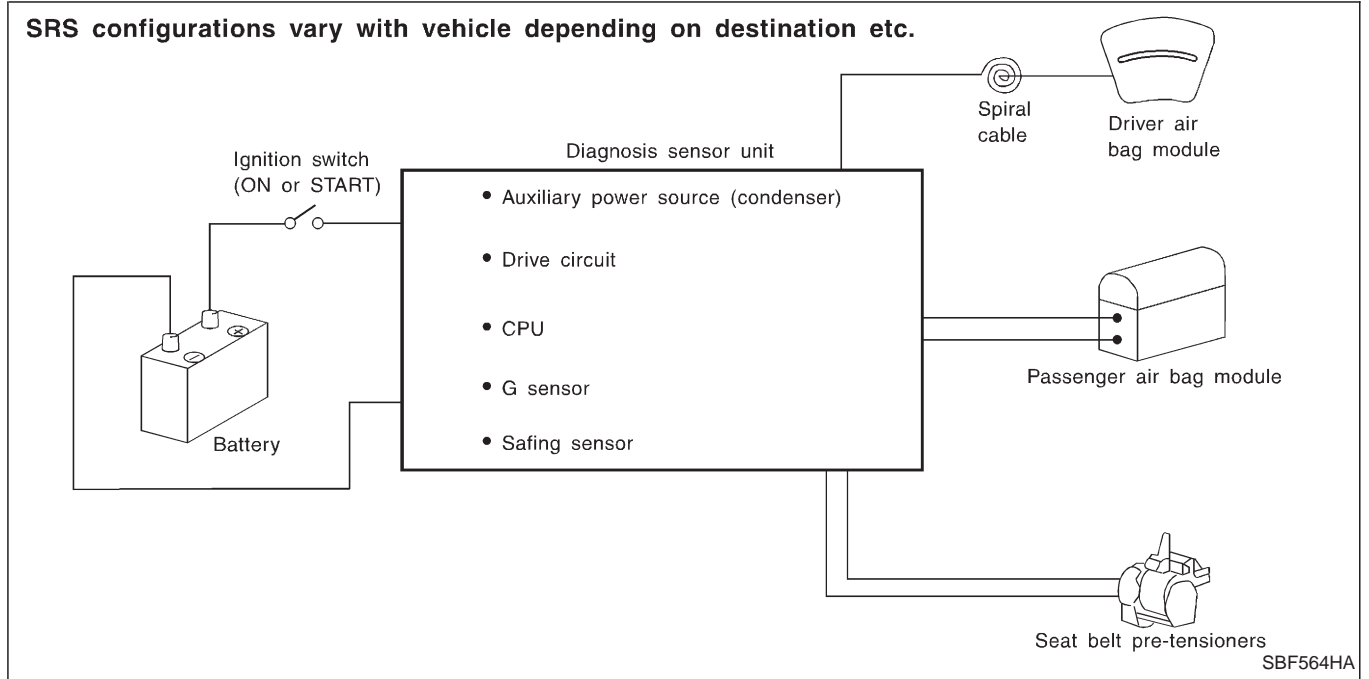
**Special Service Tools (Cont'd)**

Tool number Tool name	Description	Application	
		Seat belt pre-tensioner	Air Bag System
KV99108300 Deployment tool adapters for passenger air bag	<p align="center">For passenger air bag module</p>  <p align="left">NT722</p>	—	X

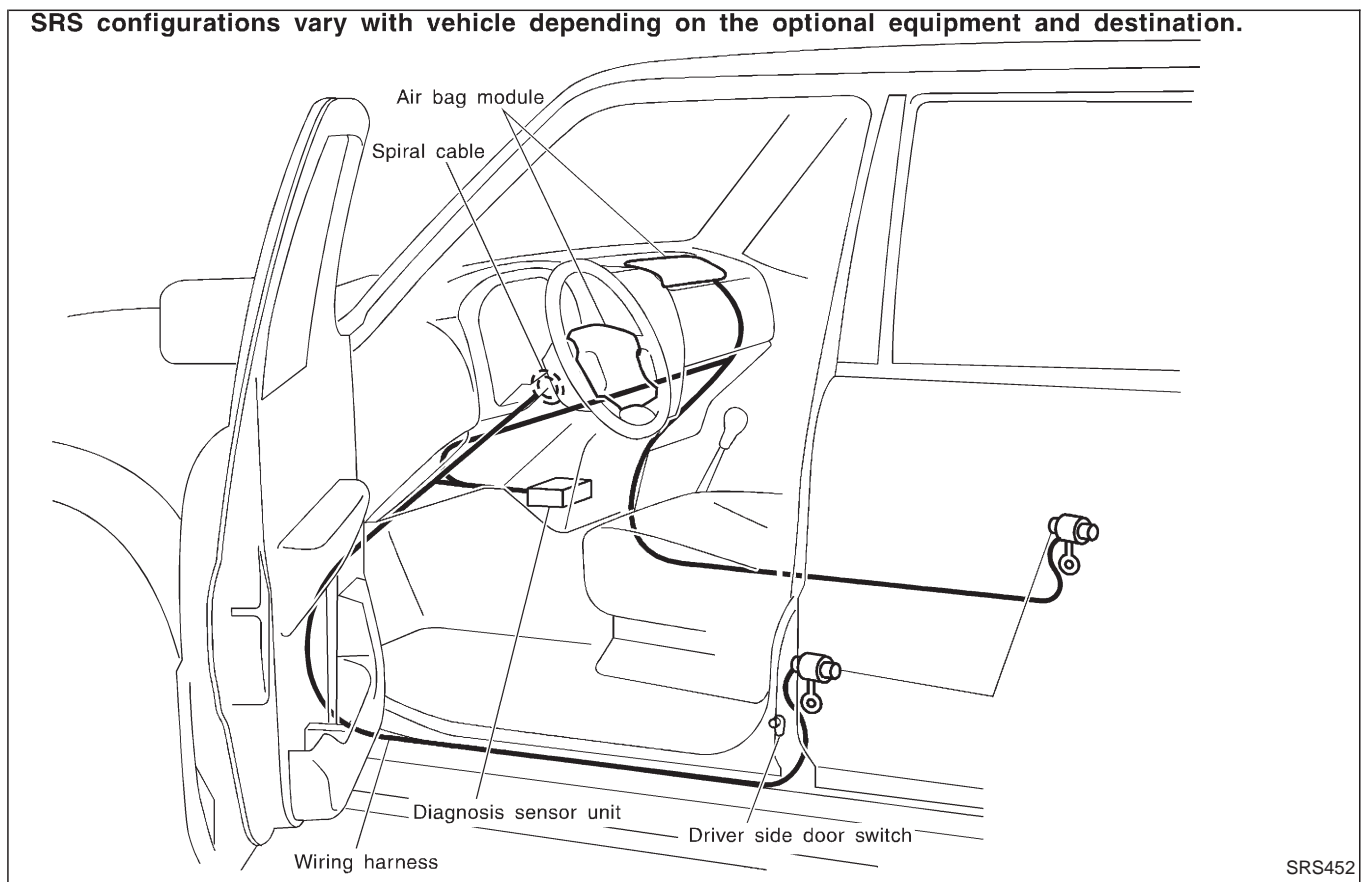
# SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

## 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

#### CAUTION:

**Do not use a circuit tester to check SRS circuit.**

1. Check operation of "AIR BAG" warning lamp.  
After turning ignition key to "ON" position, both warning lamps illuminate. The "AIR BAG" warning lamp will go off after about 7 seconds if no malfunction is detected.  
If any of the following warning lamp conditions occur, immediately check the air bag or seat belt pre-tensioner system. Refer to RS-30 for details.
  - The "AIR BAG" warning lamp does not illuminate when the ignition switch is turned "ON".
  - The "AIR BAG" warning lamp does not go off about 7 seconds after the ignition switch is turned "ON".
  - The "AIR BAG" warning lamp blinks about 7 seconds after the ignition switch is turned "ON".
2. 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.
  - (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.
    - Install driver air bag module to steering wheel to check fit or alignment with the wheel.
    - Check steering wheel for excessive free play.
    - For dual air bag system, install passenger air bag module to instrument panel to check fit or alignment with the instrument panel.
  - (3) Spiral cable
    - Check spiral cable for dents, cracks, or deformities.
    - Check connectors and protective tape for damage.
    - Check steering wheel for noise, binding or heavy operation.
  - (4) Harness related to SRS
    - Check connectors for poor connections, damage, and terminals for deformities.
    - Check harnesses for binding, chafing or cut.
  - (5) Seat belt pre-tensioner
    - Check harness cover and connectors for damage, terminals for deformities, and harness for binding.
    - Check belts for damage and anchors for loose mounting.
    - Check retractor for smooth operation.
    - Perform self-diagnosis for seat belt pre-tensioner using bulb or CONSULT. Refer to "SRS Operation Check" for details. (RS-30)

#### CAUTION:

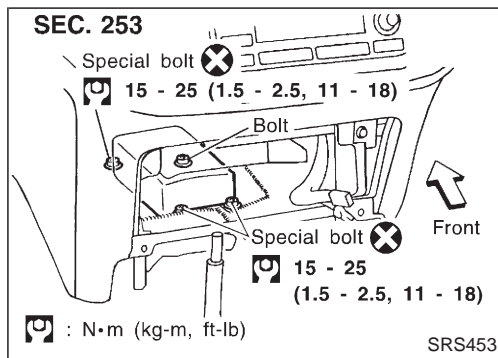
**Replace previously used special bolts, ground bolt and anchor bolt with new ones.**

## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

### Removal and Installation — Diagnosis Sensor Unit and Seat Belt Pre-tensioner

#### CAUTION:

- Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait for at least 3 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 and seat belt pre-tensioner 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 diagnosis sensor unit and seat belt pre-tensioner if they have been dropped or sustained an impact.
- After replacement of diagnosis sensor unit and seat belt pre-tensioner, check SRS function and perform self-diagnosis for SRS. Refer to “SRS Operation Check” for details (RS-30).
- Do not attempt to disassemble diagnosis sensor unit and seat belt pre-tensioner.
- Do not expose seat belt pre-tensioner to temperatures exceeding 80°C (176°F).

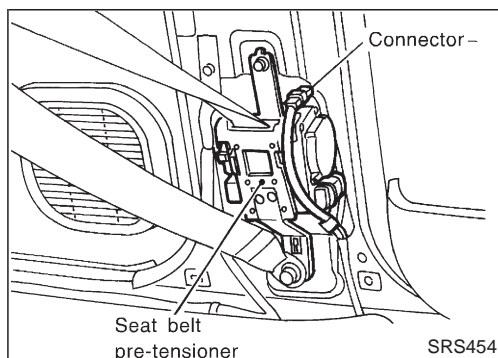


#### REMOVAL OF DIAGNOSIS SENSOR UNIT

1. Disconnect driver and passenger air bag module connectors. Also, disconnect seat belt pre-tensioner connector.
2. Remove console finisher, console box assembly and instrument panel stay cover. Refer to “INSTRUMENT PANEL” in BT section.
3. Remove rear heater duct and foot duct. (If equipped with rear heater duct and foot duct.)
4. Remove bolt and also remove special bolts using the TAMPER RESISTANT TORX (Size T50), from diagnosis sensor unit.
5. Disconnect diagnosis sensor unit connector. Then remove the diagnosis sensor unit.

#### NOTE:

- To install, reverse the removal procedure sequence.



#### REMOVAL OF SEAT BELT PRE-TENSIONER

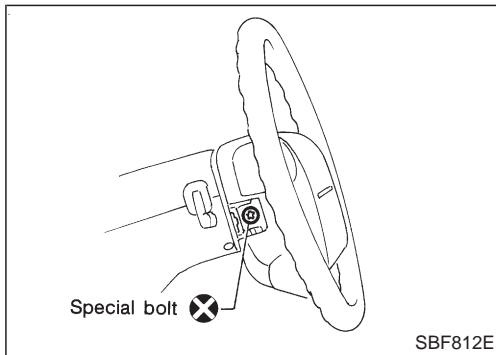
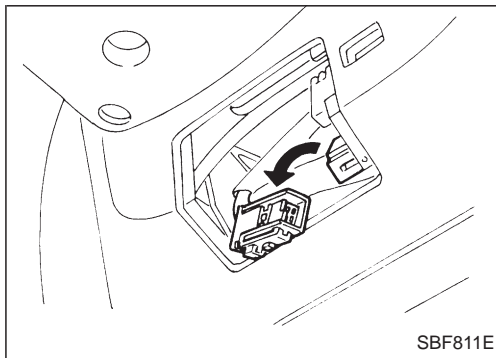
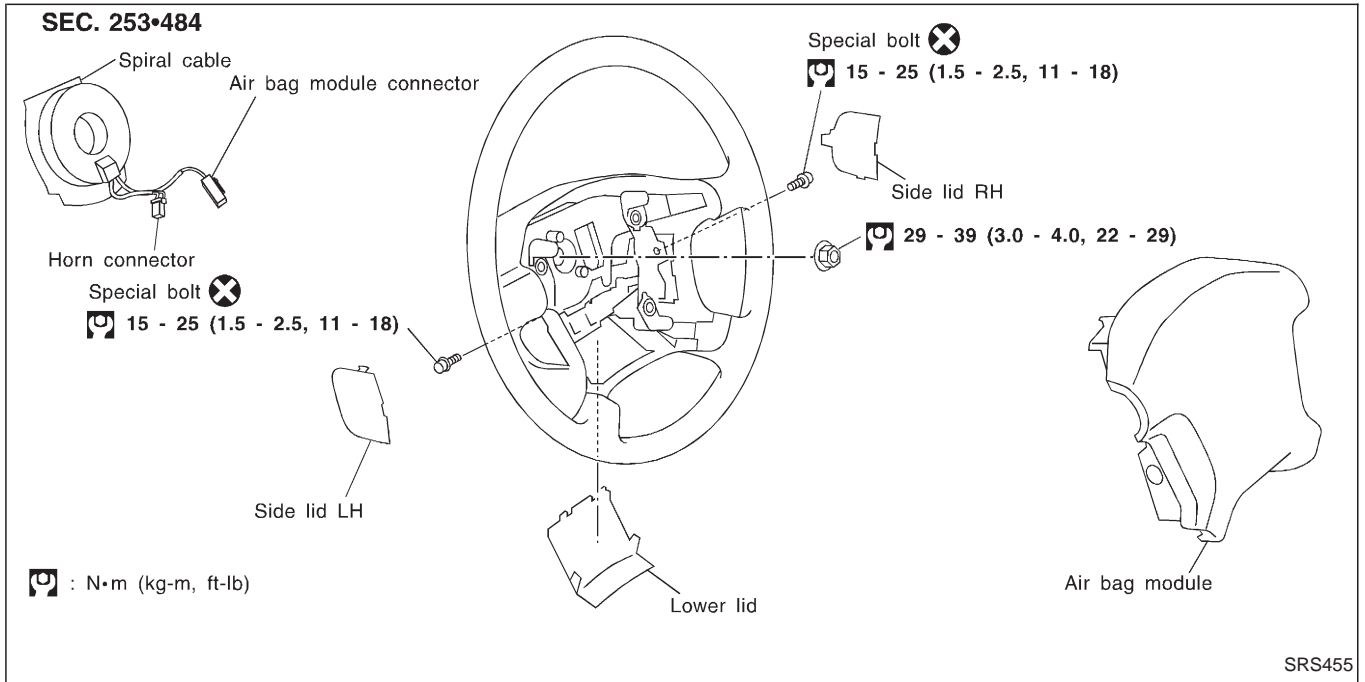
For removal of seat belt pre-tensioner, refer to “Front Seat Belt” for details. (RS-3)

#### NOTE:

- To install, reverse the removal procedure sequence.

# SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

## 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 3 minutes.
- Always work from the side of air bag module.

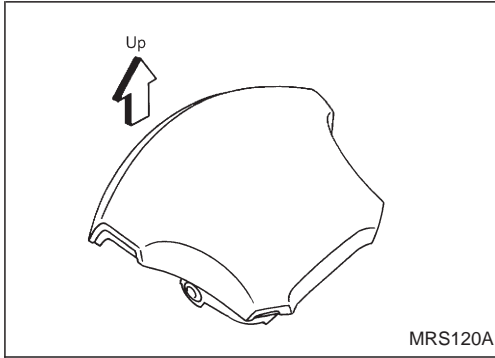
1. Remove lower lid from steering wheel, and disconnect air bag module connector.
2. Remove side lids. Using the TAMPER RESISTANT TORX (Size T50), remove left and right special bolts. Air bag module can then be removed.

## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

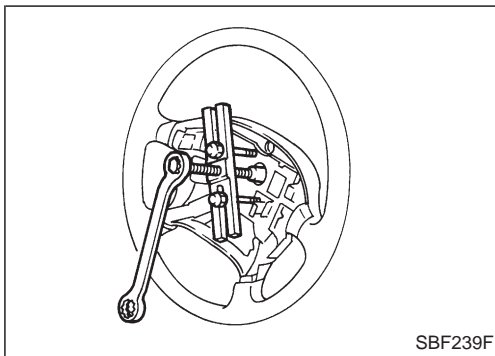
### Removal — Air Bag Module and Spiral Cable (Cont'd)

#### 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.



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

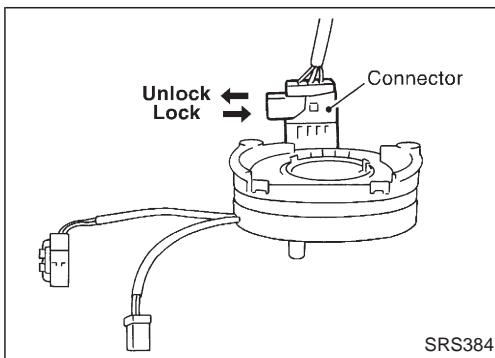


3. Set steering wheel in the neutral position.
4. Disconnect horn connector and remove nuts.
5. Using steering wheel puller, remove steering wheel. Be careful not to over-tighten puller bolt on steering wheel.

#### CAUTION:

Do not tap or bump the steering wheel.

6. Remove steering column cover.



7. Remove four screws securing the spiral cable. Unlock the spiral cable connector. Then disconnect the spiral cable connector. The spiral cable can then be removed.

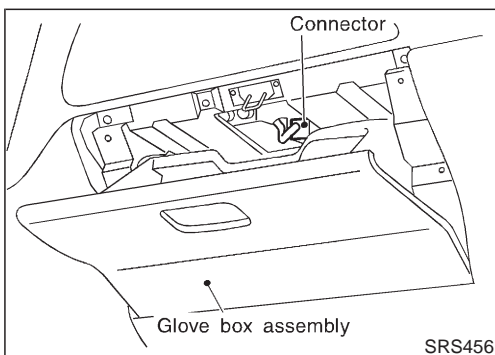
#### CAUTION:

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

### Removal — Front Passenger Air Bag Module

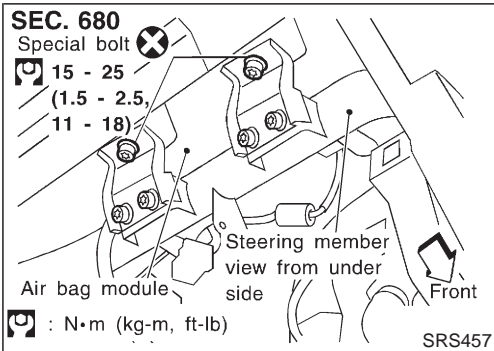
#### CAUTION:

- Before servicing SRS, turn the ignition switch off, disconnect both battery cables and wait for at least 3 minutes.
  - Always work from the side of or under air bag module.
1. Remove glove box assembly. Refer to "INSTRUMENT PANEL" in BT section for details.



## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

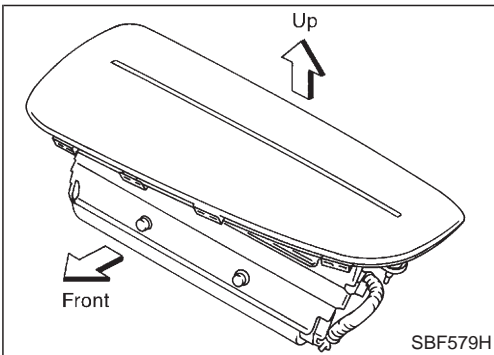
### Removal — Front Passenger Air Bag Module (Cont'd)



2. Remove clips securing inflator connector.
  3. Disconnect inflator connector from body harness air bag connector.
  4. Remove the nuts and special bolts using the TAMPER RESISTANT 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 bolt 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 foreign objects (screwdriver, etc.) into air bag module connector.
- Do not use a circuit tester to check the air bag module harness connector.

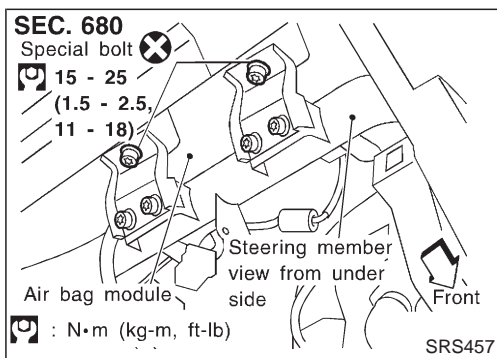
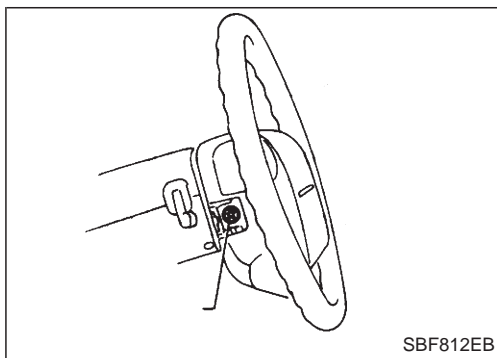
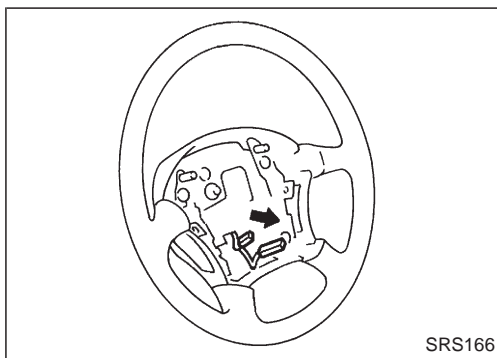
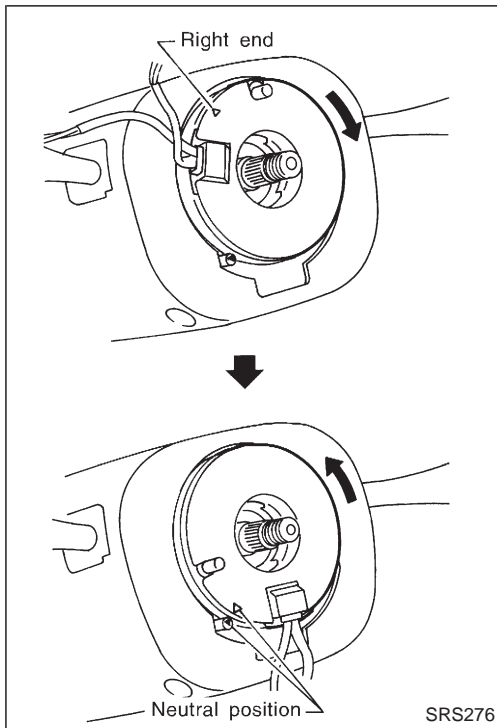


- Replace air bag module if it has been dropped or sustained an impact.
- Do not expose the air bag module to temperatures exceeding 90°C (194°F).
- Do not allow oil, grease or water to come in contact with the air bag module.





## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)



### Installation — Air Bag Module and Spiral Cable

1. Set the front wheels in the straight-ahead position.
2. 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).

#### CAUTION:

- 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 to the left about 2.5 turns from the right end position.

3. Connect and lock spiral cable connector and tighten with screws. Install steering column cover.
4. Install steering wheel, aligning with spiral cable pin guides, and pull spiral cable through.
5. Connect horn connector and engage spiral cable with pawls in steering wheel. Move air bag module connector away from steering wheel lower lid opening.
6. Tighten nut.

: 29 - 39 N·m (3.0 - 4.0 kg-m, 22 - 29 ft-lb)

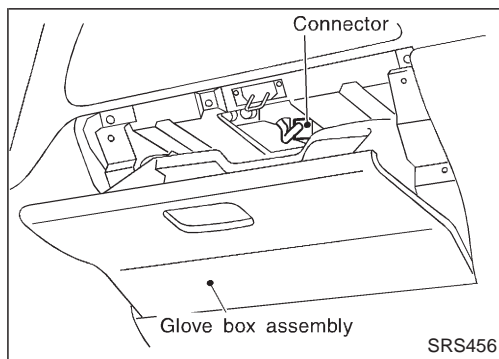
7. Position air bag module and tighten with new special bolts.
8. Connect air bag module connector.
9. Install all lids.
10. Conduct self-diagnosis to ensure entire SRS operates properly. (Use CONSULT or warning lamp check.)  
Before performing self-diagnosis, connect both battery cables.
11. Turn steering 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.
12. Perform self-diagnosis again to check that no malfunction is detected.

### Installation — Front Passenger Air Bag Module

- Always work from the side of 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. Connect inflator connector to body harness connector.
  3. Install inflator connector on steering member.

## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

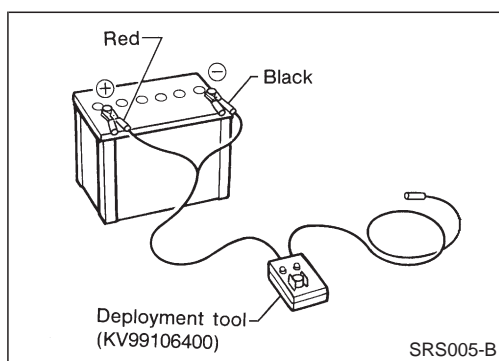
### Installation — Front Passenger Air Bag Module (Cont'd)



4. Install glove box assembly. (Glove box lid is open.)
5. Close the glove box lid.

### Disposal of Air Bag Module and Seat Belt Pre-tensioner

- Before disposing of air bag module and seat belt pre-tensioner, or vehicles equipped with such systems, deploy the systems. If such systems have already been deployed due to an accident, dispose of as indicated in "DISPOSING OF AIR BAG MODULE AND SEAT BELT PRE-TENSIONER" (RS-21).
- When deploying the air bag module, always use the Special Service Tool; Deployment tool KV99106400, KV99108200 and KV99108300.
- When deploying the air bag module and seat belt pre-tensioner, stand at least 5 m (16 ft) away from the deployment component.
- When deploying air bag module and seat belt pre-tensioner, a fairly loud noise is made, followed by smoke being released. The smoke is not poisonous, however, be careful not to inhale smoke since it irritates throat and can cause choking.
- Always activate one air bag module at a time.
- Due to heat, leave air bag module unattended for more than 30 minutes after deployment. Also leave seat belt pre-tensioner unattended for more than 10 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.
- Place the vehicle outdoors with an open space of at least 6 m (20 ft) on all sides when deploying the air bag module while mounted in vehicle.
- Use a voltmeter to make sure the vehicle battery is fully charged.



### CHECKING DEPLOYMENT TOOL Connecting to battery

#### 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 3 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.**

## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

### Disposal of Air Bag Module and Seat Belt Pre-tensioner (Cont'd)

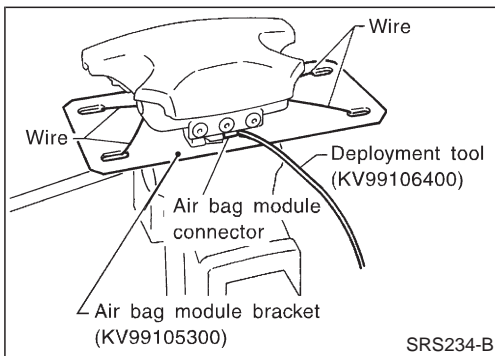
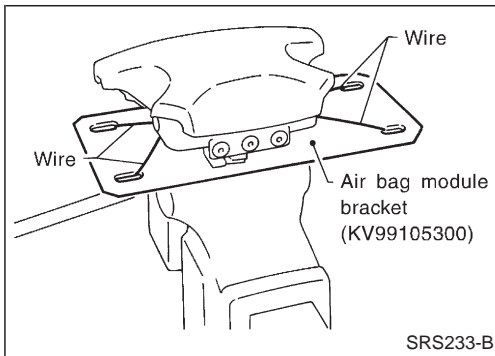
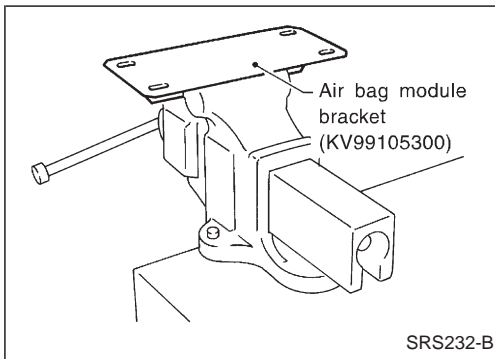
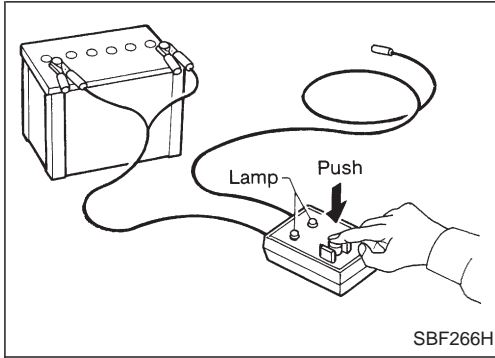
#### Deployment tool check

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)

Switch operation	Left side lamp, green* "AIR BAG CONNECTOR VOLTAGE"	Right side lamp, green* "DEPLOYMENT TOOL POWER"
OFF	OFF	ON
ON	ON	ON

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



### 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. Using wire, secure air bag module to air bag module bracket (SST: KV99105300).

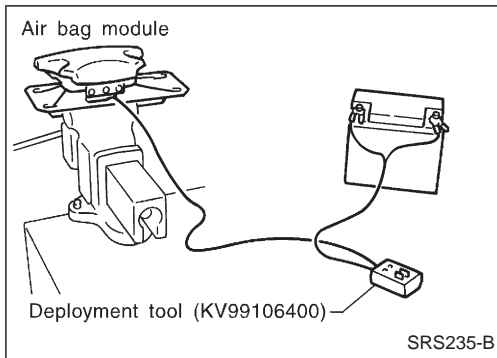
#### CAUTION:

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

2. Firmly secure air bag module bracket (SST: KV99105300) with air bag module attached, in a vise.

3. Connect deployment tool (SST: KV99106400) to air bag module connector.

## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

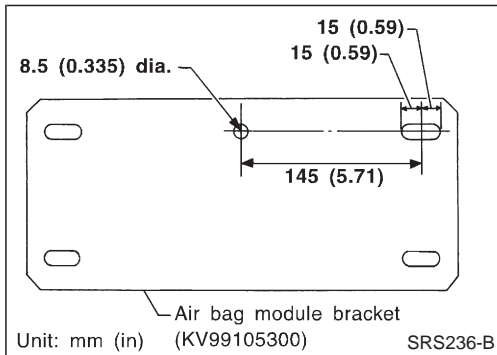


### Disposal of Air Bag Module and Seat Belt Pre-tensioner (Cont'd)

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.

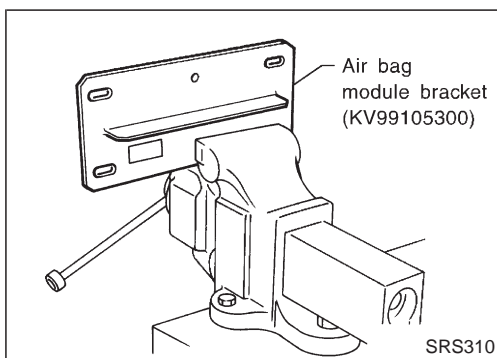
#### CAUTION:

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

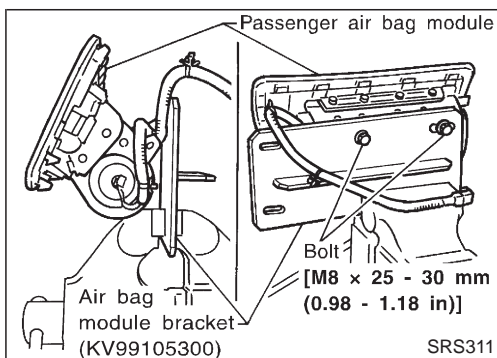


### Deployment of passenger air bag module (outside of vehicle)

1. Make an 8.5 mm (0.335 in) diameter hole in air bag module bracket (SST: KV99105300) at the position shown in figure at left.



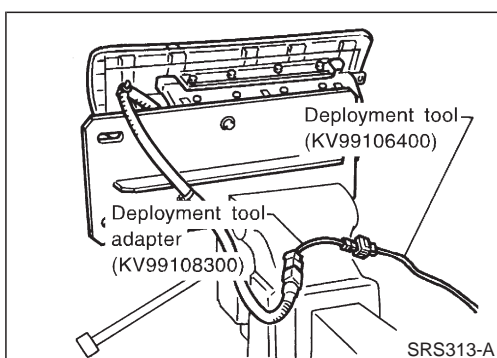
2. Firmly secure air bag module bracket (SST: KV99105300) in a vise.



3. Match the two holes in air bag module bracket (held in vise) and passenger air bag module and fix them with two bolts [M8 x 25 - 30 mm (0.98 - 1.18 in)].

#### CAUTION:

**If a gap exists between passenger air bag module and air bag module bracket, use a piece of wood inserted in the gap to stabilize the air bag module.**



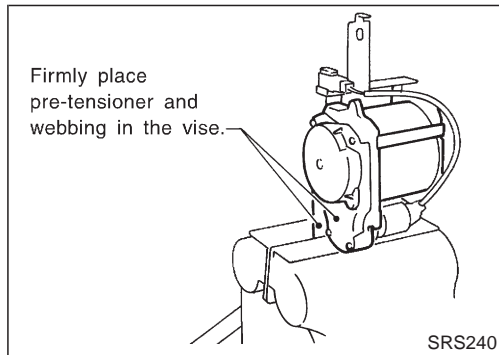
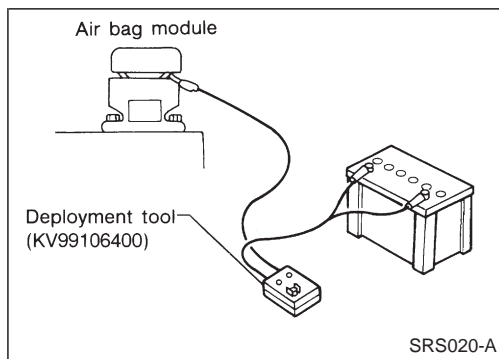
4. Connect deployment tool adapter (SST: KV99108300) to deployment tool (SST: KV99106400) connector and connector on either side of air bag module.
5. Connect red clip of deployment tool to battery positive terminal and black clip to negative terminal.
6. The lamp on the right side of the tool, marked "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.

## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

### Disposal of Air Bag Module and Seat Belt Pre-tensioner (Cont'd)

#### CAUTION:

- When deploying the air bag module, do not stand on the deploying side.
- Stand at least 5 m (16 ft) away from the air bag module.

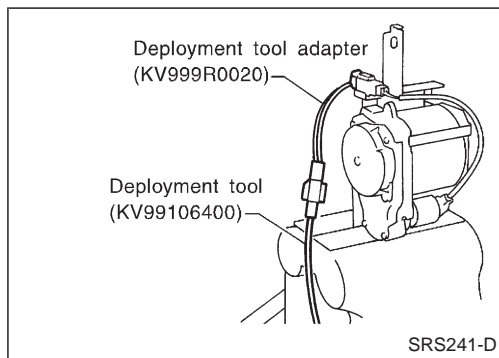


### Deployment of seat belt pre-tensioner (outside of vehicle)

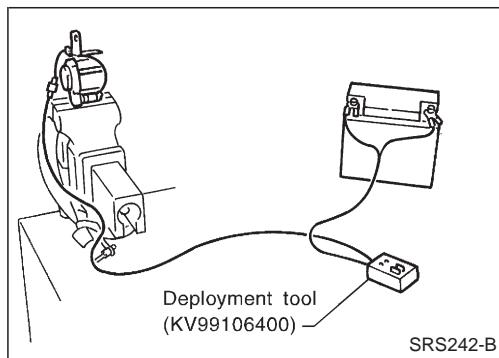
1. Firmly anchor seat belt pre-tensioner in a vise.

#### CAUTION:

Ensure bracket and webbing are placed in the vise.



2. Connect deployment tool adapter (SST: KV999R0020) to deployment tool (SST: KV99106400) connector and seat belt pre-tensioner connector.

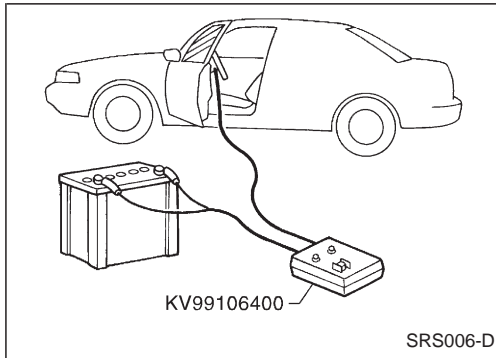


3. Connect red clip of deployment tool to battery positive terminal and black clip to negative terminal.
4. The lamp on the right side of the tool, marked "deployment tool power", should glow green, not red.
5. Press the button on the deployment tool. The left side lamp on the tool, marked "seat belt pre-tensioner connector voltage", will illuminate and the seat belt pre-tensioner will deploy.

#### CAUTION:

When deploying the seat belt pre-tensioner, stand at least 5 m (16 ft) away from the seat belt pre-tensioner.

## SUPPLEMENTAL RESTRAINT SYSTEM (SRS)



### Disposal of Air Bag Module and Seat Belt Pre-tensioner (Cont'd)

#### DEPLOYMENT OF AIR BAG MODULE AND SEAT BELT PRE-TENSIONER WHILE MOUNTED IN VEHICLE

When disposing of a vehicle, deploy air bag modules and seat belt pre-tensioners while they are mounted in vehicle.

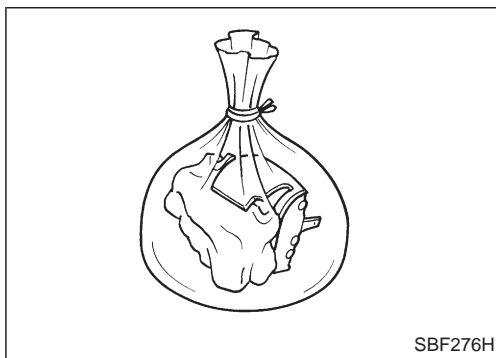
#### CAUTION:

**When deploying air bag module or seat belt pre-tensioner, ensure vehicle is empty.**

1. Disconnect both the vehicle battery cables and wait 3 minutes.
2. Disconnect air bag modules and seat belt pre-tensioners connector.
3. Connect deployment tool (SST: KV99106400) to air bag module or seat belt pre-tensioner.  
For front passenger air bag module and seat belt pre-tensioner, attach deployment tool adapter (SST: KV99108300 and KV999R0020) to the tool connector.
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 or seat belt pre-tensioner will deploy.

#### CAUTION:

**Activate only one passenger air bag module or seat belt pre-tensioner at a time.**



#### DISPOSING OF AIR BAG MODULE AND SEAT BELT PRE-TENSIONER

Deployed air bag modules and seat belt pre-tensioners are very hot. Before disposing of air bag module, and seat belt pre-tensioner, wait at least 30 minutes, and 10 minutes, respectively. Seal them in a plastic bag before disposal.

#### CAUTION:

- Never apply water to a deployed air bag module and seat belt pre-tensioner.
- Be sure to wear gloves when handling a deployed air bag module and seat belt pre-tensioner.
- 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 and seat belt pre-tensioner.
- Air bag module and seat belt pre-tensioner cannot be re-used.
- Wash your hands clean after finishing work.

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

## Trouble Diagnoses Introduction

### CAUTION:

- Do not use a circuit tester to check SRS harness connectors unless instructed to in this Service Manual. SRS wiring harnesses except for “SEAT BELT PRE-TENSIONER” can be identified with yellow harness protector or yellow insulation tape before the harness connectors.
- 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.

### DIAGNOSIS FUNCTION

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

System		Using CONSULT	Using warning lamp
Seat belt pre-tensioner		X	—
Air bag	Driver air bag	X	X
	Front passenger air bag	X	X

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.

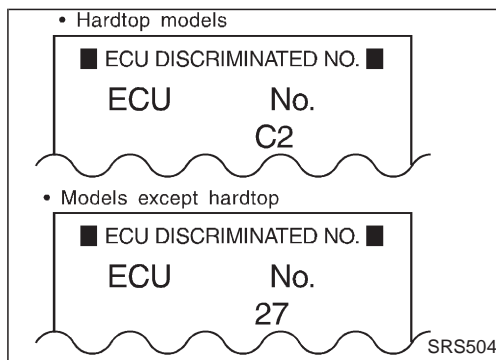
The Diagnosis mode allows the technician to locate and inspect the malfunctioning part.

The mode applications for the “AIR BAG” warning lamp and CONSULT are as follows:

	User mode	Diagnosis mode	Display type
“AIR BAG” warning lamp	X	X	ON-OFF operation
CONSULT	—	X	Monitoring

### DIAGNOSIS MODE FOR CONSULT

- “SELF-DIAG [CURRENT]”  
A current Self-diagnosis result (also indicated by the 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 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.



- “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 Y61, the diagnosis sensor unit classification numbers assigned are C2 (Hardtop models) and 27 (Models except Hardtop).**

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

## Trouble Diagnoses Introduction (Cont'd)

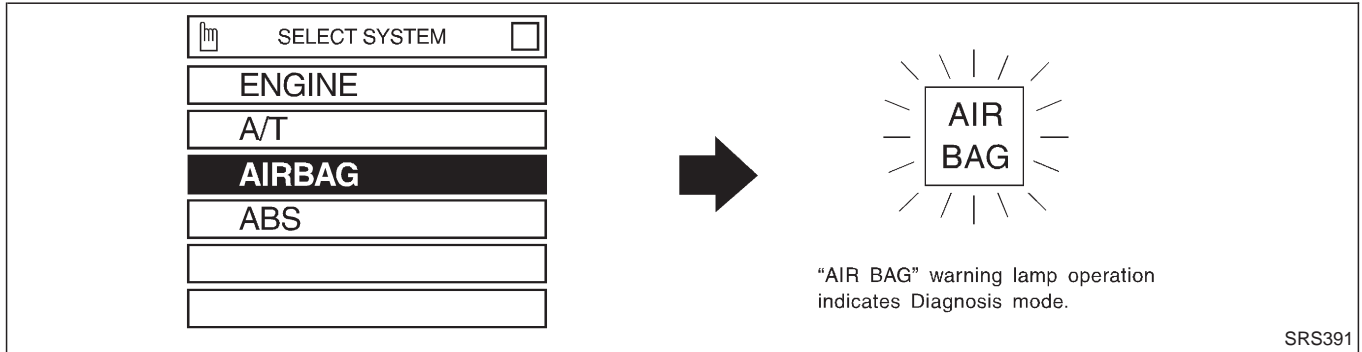
### HOW TO CHANGE SELF-DIAGNOSIS MODE



With CONSULT

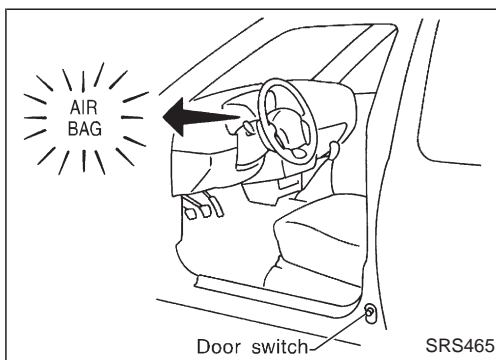
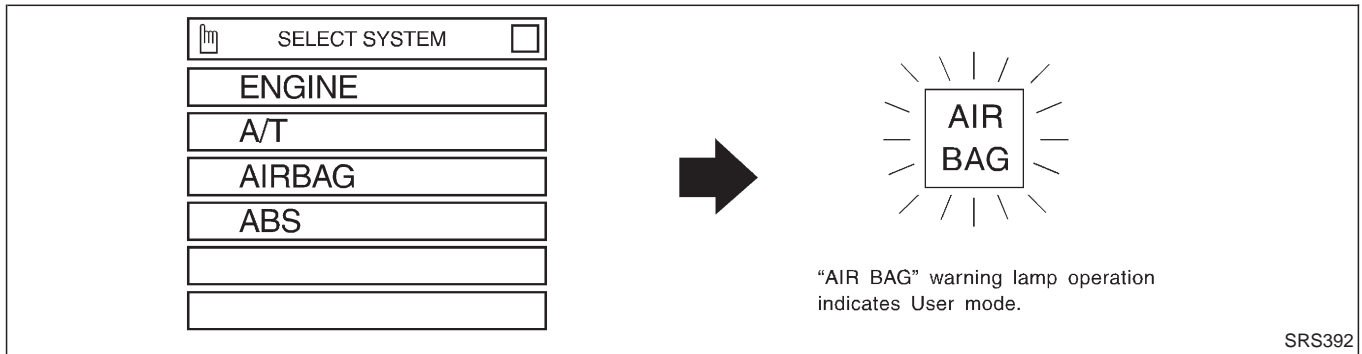
#### From User mode to Diagnosis mode

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 until “SELECT SYSTEM” appears. Diagnosis mode automatically changes to User mode.



Without CONSULT

#### From User mode to Diagnosis mode

Diagnosis mode activates only when a malfunction is detected, by pressing the driver's door switch at least 5 times within 7 seconds after turning the ignition “ON”. SRS will not enter Diagnosis mode if no malfunction is detected.

#### From Diagnosis mode to User mode

After a malfunction is repaired, switch the ignition “OFF” for at least 1 second, then back “ON”. Diagnosis mode returns to User mode. If switching from Diagnosis mode to User mode is required while malfunction is being detected, switch the ignition “OFF”, then back “ON” and press the driver's door switch at least 5 times within 7 seconds.



# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

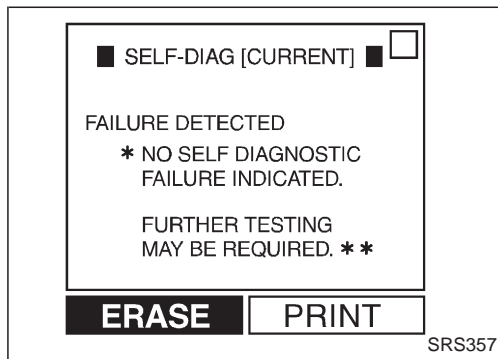
## Trouble Diagnoses Introduction (Cont'd)

### HOW TO ERASE SELF-DIAGNOSIS RESULTS



#### With CONSULT

- “SELF-DIAG [CURRENT]”  
A current Self-diagnosis result is displayed on the CONSULT 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 screen by pushing “BACK” key of CONSULT 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.



#### Without CONSULT

After a malfunction is repaired, return to User mode from Diagnosis mode by switching the ignition “OFF” for at least 1 second, then back “ON”. At that time, the problem code is cleared.

## 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

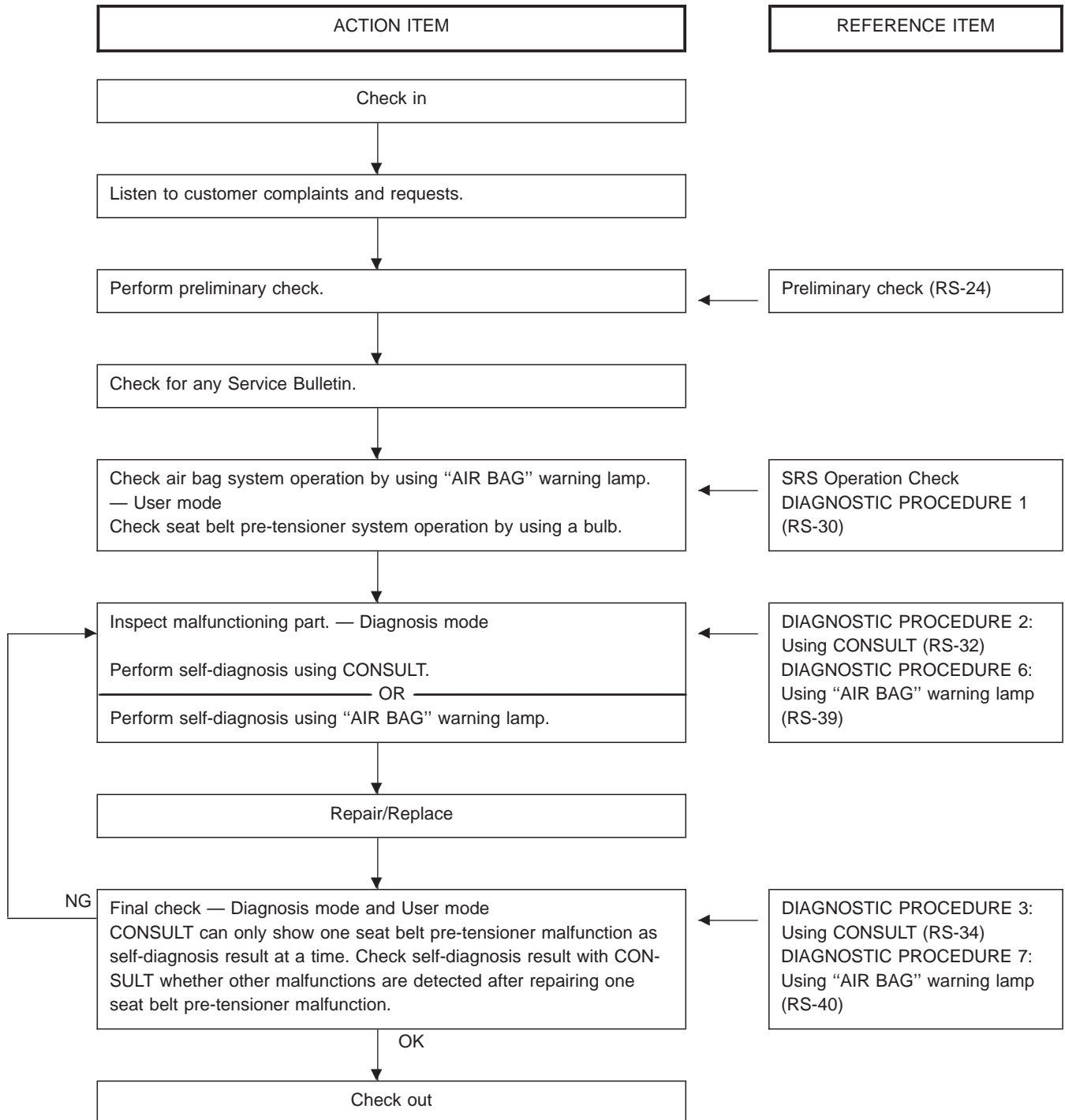
Check that the following parts are in good order.

- Battery [Refer to EL section (“BATTERY”).]
- Fuse [Refer to EL section (“Fuse”, “POWER SUPPLY ROUTING”).]
- System component-to-harness connections

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

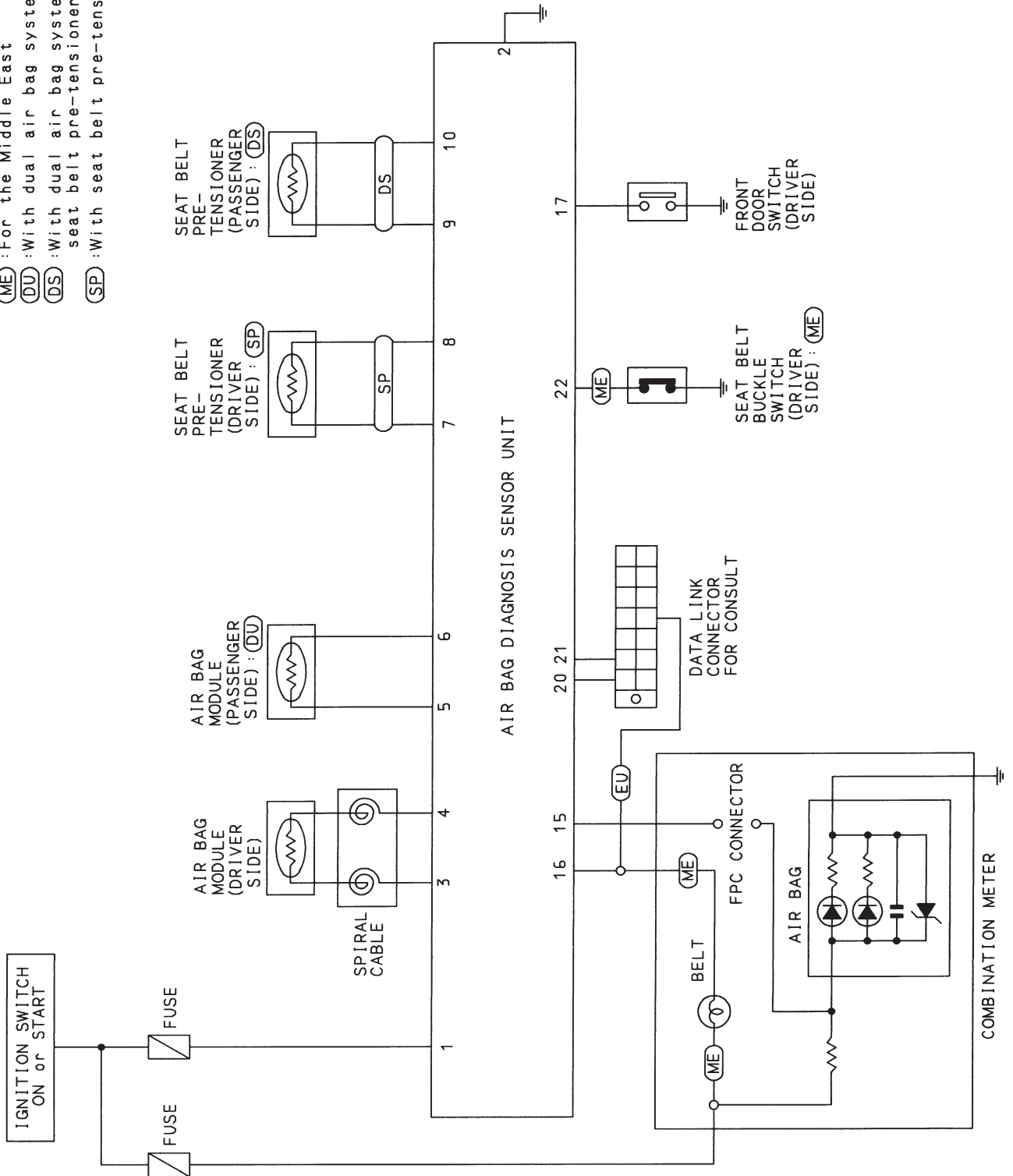
## How to Perform Trouble Diagnoses for Quick and Accurate Repair (Cont'd)

### WORK FLOW



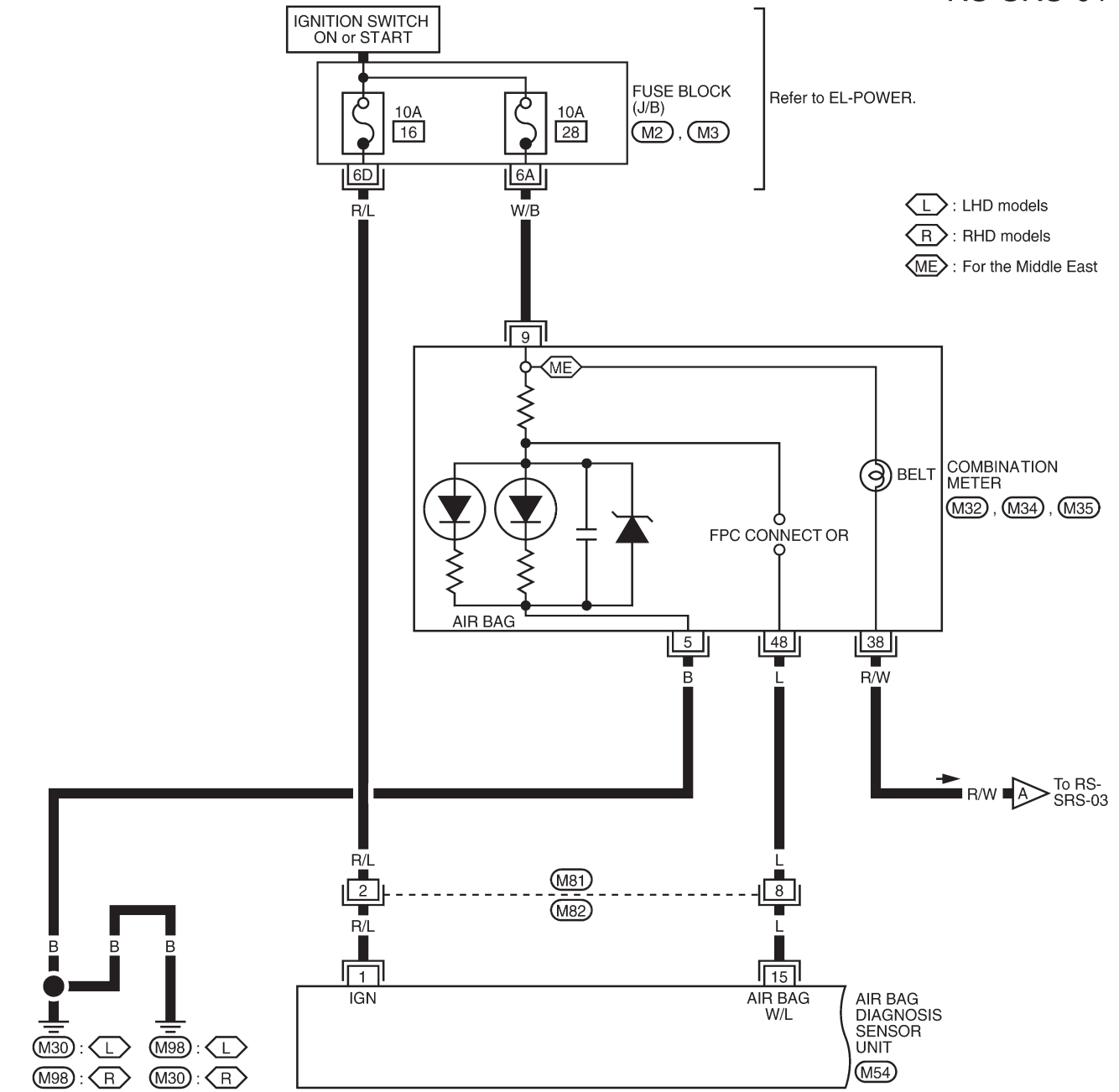
## Schematic

- (EU) : For Europe
- (ME) : For the Middle East
- (DU) : With dual air bag system
- (DS) : With dual air bag system and seat belt pre-tensioner
- (SP) : With seat belt pre-tensioner

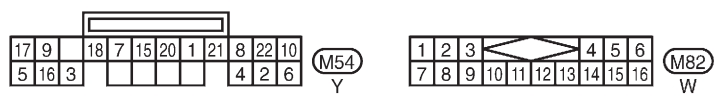
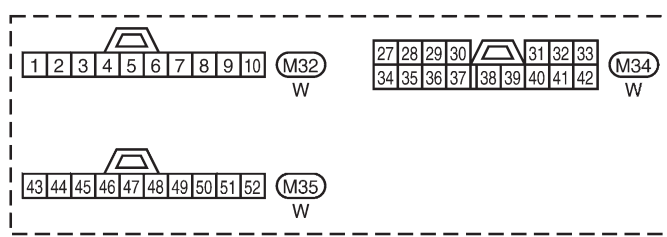


Wiring Diagram — SRS —

RS-SRS-01



(L) : LHD models  
 (R) : RHD models  
 (ME) : For the Middle East

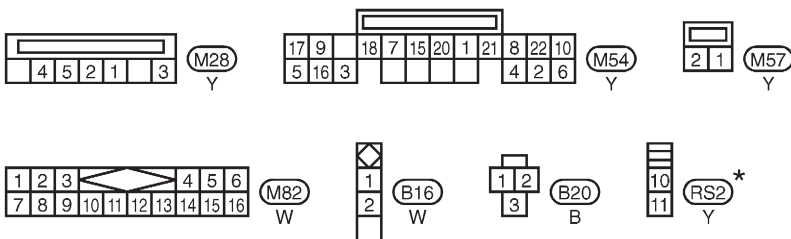
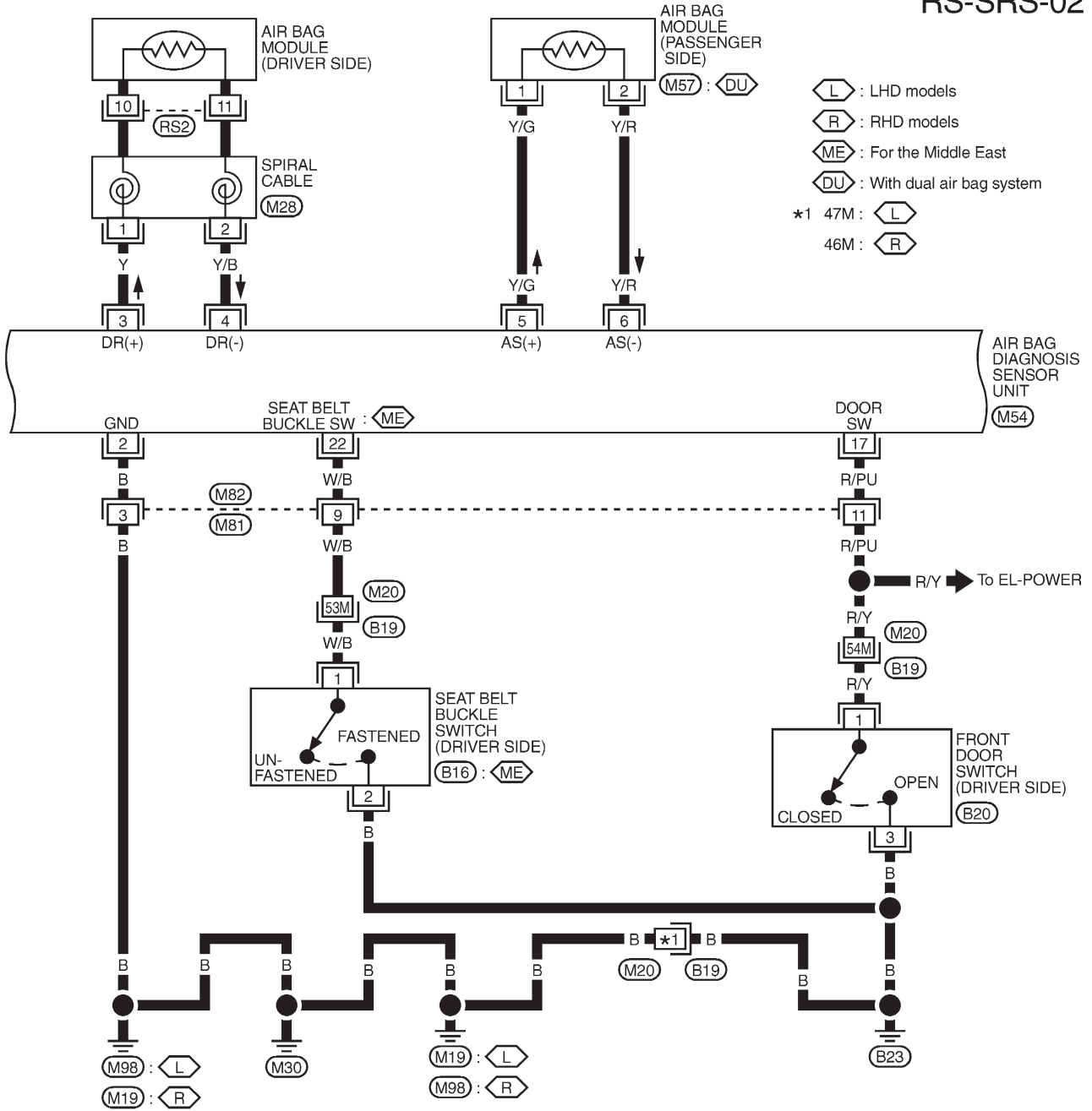


Refer to last page (Foldout page).  
(M2), (M3)

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

## Wiring Diagram — SRS — (Cont'd)

RS-SRS-02



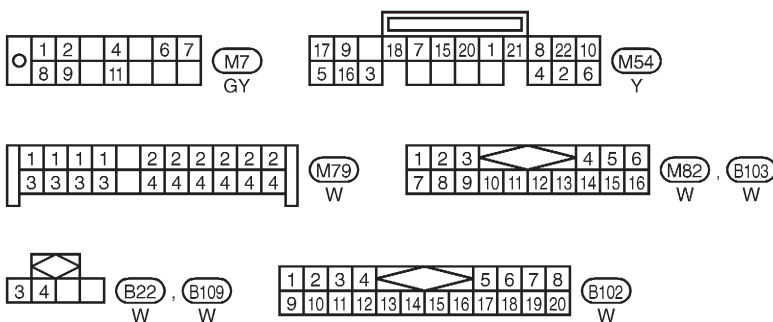
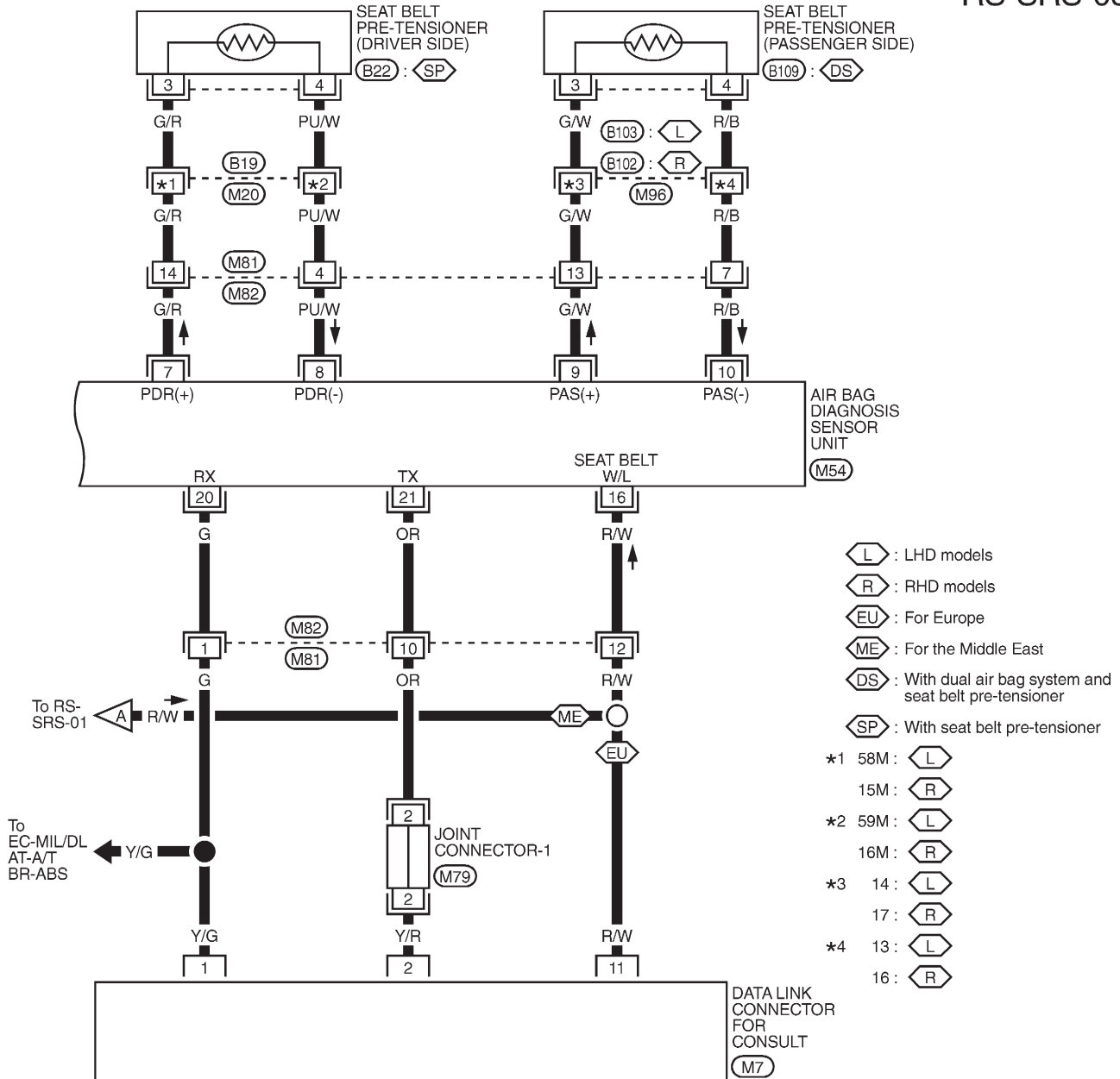
Refer to last page (Foldout page).  
 M20, B19

\* : This connector is not shown in "HARNESS LAYOUT", EL section.

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

## Wiring Diagram — SRS — (Cont'd)

RS-SRS-03



Refer to last page (Foldout page).  
 (M20), (B19)

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)



SRS466

## SRS Operation Check

### DIAGNOSTIC PROCEDURE 1

#### 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
<p>MRS095A</p>	No malfunction is detected. No further action is necessary.	—
<p>MRS096A</p>	The system has problem and needs to be repaired as indicated.	Go to DIAGNOSTIC PROCEDURE 2 or 6 (RS-32 or RS-39).
<p>MRS097A</p>	Air bag is deployed.	Go to COLLISION DIAGNOSIS (RS-45).
<p>MRS097A</p>	Air bag fuse, diagnosis sensor unit or harness is malfunctioning and needs to be repaired.	Go to DIAGNOSTIC PROCEDURE 9 (RS-43).
<p>MRS098A</p>	One of the following has occurred and needs to be repaired. <ul style="list-style-type: none"> <li>• Meter fuse is blown.</li> <li>• “AIR BAG” warning lamp circuit has open or short.</li> <li>• Diagnosis sensor unit is malfunctioning.</li> </ul>	Go to DIAGNOSTIC PROCEDURE 10 (RS-43).

#### NOTE:

If “AIR BAG” warning lamp operates differently from the operations shown above, refer to “AIR BAG” warning lamp operation — Diagnosis mode —, DIAGNOSTIC PROCEDURE 6 (step 4), RS-39.

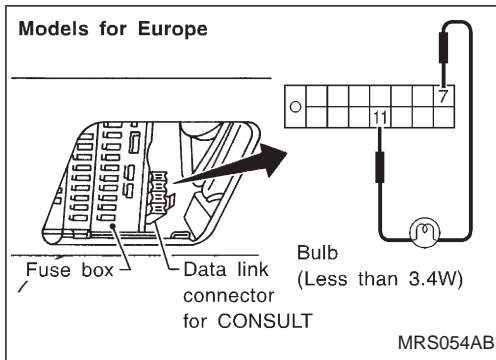
# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

## SRS Operation Check (Cont'd)

### Checking seat belt pre-tensioner system operation

Check seat belt pre-tensioner system operation using a bulb as follows:

1. Connect a bulb of less than 3.4W between data link connector terminals ⑦ and ⑪.
2. After turning ignition switch from "OFF" to "ON", the bulb operates.
3. Compare the bulb operation to the chart below.

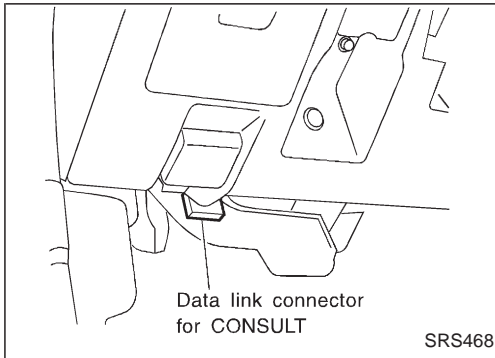


Lighting condition of the bulb	SRS condition	Reference item
<p>MRS095A</p>	No malfunction is detected. No further action is necessary.	—
<p>MRS096A</p>	<ul style="list-style-type: none"> <li>• Seat belt pre-tensioner circuit is opened, or</li> <li>• Seat belt pre-tensioner power supply or ground circuit is shorted.</li> </ul>	<ul style="list-style-type: none"> <li>• If CONSULT is available, go to DIAGNOSTIC PROCEDURE 2 (RS-32).</li> <li>• If CONSULT is not available, repair the system as follows.*                             <ol style="list-style-type: none"> <li>1. Visually check the wiring harness connections.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. Replace driver's and front passenger seat belt assemblies. (Before disposing, they must be deactivated.)</li> <li>4. Replace diagnosis sensor unit.</li> </ol> </li> </ul>
<p>MRS097A</p>	Seat belt pre-tensioner (and air bag) is deployed.	Go to COLLISION DIAGNOSIS (RS-45).

\* Follow the procedures in numerical order when repairing malfunctioning parts. Confirm whether malfunction is eliminated using a bulb 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.



# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

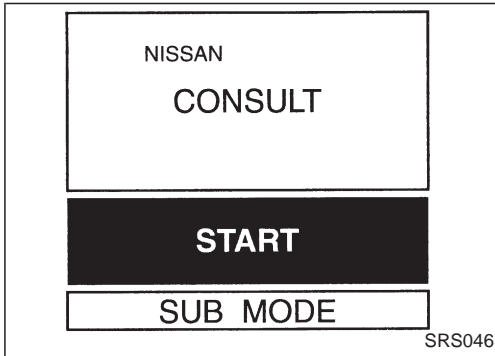


## Trouble Diagnoses with CONSULT

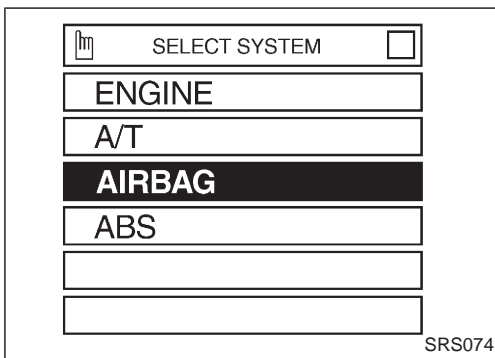
### DIAGNOSTIC PROCEDURE 2

#### Inspecting SRS malfunctioning parts by using CONSULT — Diagnosis mode

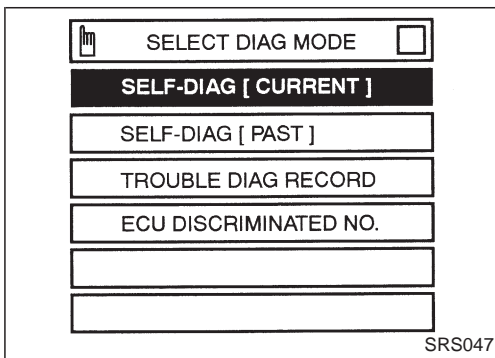
1. Turn ignition switch "OFF".
2. Connect "CONSULT" to Data link connector.



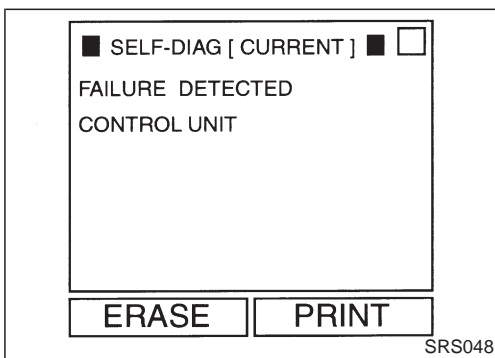
3. Turn ignition switch "ON".
4. Touch "START".



5. Touch "AIRBAG".



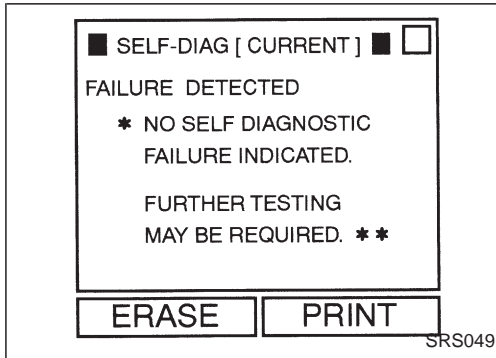
6. Touch "SELF-DIAG [CURRENT]".



7. Diagnostic codes are displayed on "SELF-DIAG [CURRENT]".

## TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

### Trouble Diagnoses with CONSULT (Cont'd)



If no self-diagnostic failure is detected on “SELF-DIAG [CURRENT]” even though malfunction is detected in SRS Operation Check (User mode), check the battery voltage. If the battery voltage is less than 9V, charge the battery. Then go to DIAGNOSTIC PROCEDURE 3, page RS-34. If the battery voltage is OK, go to DIAGNOSTIC PROCEDURE 4, page RS-36, to diagnose the following cases:

- Self-diagnostic failure “SELF-DIAG [PAST]” (previously stored in the memory) might not be erased after repair.
  - The SRS system malfunctions intermittently.
8. Touch “PRINT”.
  9. Compare diagnostic codes to “CONSULT DIAGNOSTIC CODE CHART”, page RS-33.
  10. Touch “BACK” key of CONSULT until “SELECT SYSTEM” appears in order to return to User mode from Diagnosis mode, 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 “CONSULT DIAGNOSTIC CODE CHART”, that corresponds to the problem code. For replacement procedure of component parts, refer to RS-12.
  13. After repairing the system, go to DIAGNOSTIC PROCEDURE 3, page RS-34 for final checking.

CONSULT can only show one seat belt pre-tensioner malfunction as self-diagnosis result at a time. Check self-diagnosis result with CONSULT whether other malfunctions are detected after repairing one seat belt pre-tensioner malfunction.

### CONSULT DIAGNOSTIC CODE CHART (“SELF-DIAG [CURRENT]”)

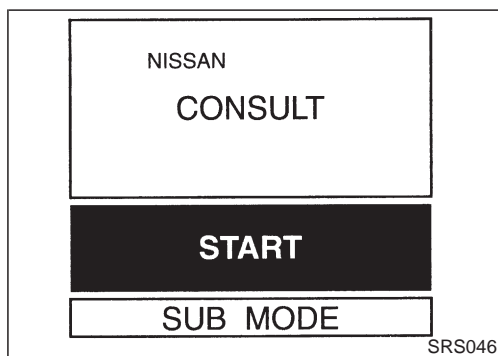
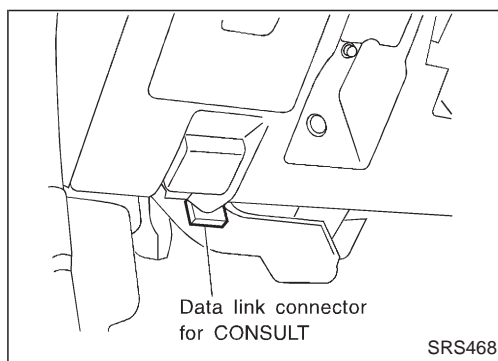
Diagnostic item	Explanation	Repair order “Recheck SRS at each replacement.”	
NO SELF DIAGNOSTIC FAILURE INDICATED.	When malfunction is indicated by the “AIR BAG” warning lamp in User mode	<ul style="list-style-type: none"> <li>● Low battery voltage (Less than 9V)</li> </ul>	● Go to DIAGNOSTIC PROCEDURE 3 (RS-34) after charging battery.
		<ul style="list-style-type: none"> <li>● Self-diagnostic failure “SELF-DIAG [PAST]” (previously stored in the memory) might not be erased after repair.</li> <li>● Intermittent problem has been detected in the past.</li> </ul>	● Go to DIAGNOSTIC PROCEDURE 4 (RS-36).
	● No malfunction is detected.	● Go to DIAGNOSTIC PROCEDURE 3 (RS-34).	
AIRBAG MODULE [OPEN]	● Driver’s air bag module circuit is open. (including the spiral cable)	<ol style="list-style-type: none"> <li>1. Visually check the wiring harness connection.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. Replace the spiral cable.</li> <li>4. Replace driver’s air bag module. (Before disposal of it, it must be deployed.)</li> <li>5. Replace the diagnosis sensor unit.</li> <li>6. Replace the harness.</li> </ol>	
AIRBAG MODULE [VB-SHORT]	● Driver’s air bag module circuit is shorted to some power supply circuit. (including the spiral cable)		
AIRBAG MODULE [GND-SHORT]	● Driver’s air bag module circuit is shorted to ground. (including the spiral cable)		
AIRBAG MODULE [SHORT]	● Driver’s air bag module circuits are shorted to each other.		

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

## Trouble Diagnoses with CONSULT (Cont'd)

Diagnostic item	Explanation	Repair order “Recheck SRS at each replacement.”
ASSIST A/B MODULE [VB-SHORT]	● Front passenger air bag module circuit is shorted to some power supply circuit.	1. Visually check the wiring harness connection. 2. Replace the harness if it has visible damage. 3. Replace front passenger air bag module. (Before disposal of it, it must be deployed.) 4. Replace the diagnosis sensor unit. 5. Replace the harness.
ASSIST A/B MODULE [OPEN]	● Front passenger air bag module circuit is open.	
ASSIST A/B MODULE [GND-SHORT]	● Front passenger air bag module circuit is shorted to ground.	
ASSIST A/B MODULE [SHORT]	● Front passenger air bag module circuits are shorted to each other.	
DRIVE PRE-TENSIONER [OPEN/VB-SHORT]	● The circuit for the driver's pre-tensioner is open or shorted to some power supply circuit.	1. Visually check the wiring harness connections. 2. Replace the harness if it has visible damage. 3. Replace the driver's seat belt. (Before disposing, it must be deactivated.) 4. Replace the diagnosis sensor unit. 5. Replace the harness.
DRIVE PRE-TENSIONER [GND-SHORT]	● The circuit for the driver's pre-tensioner is shorted to ground.	
ASSIST PRE-TENSIONER [OPEN/VB-SHORT]	● The circuit for the front passenger pre-tensioner is open or shorted to some power supply circuit.	1. Visually check the wiring harness connections. 2. Replace the harness if it has visible damage. 3. Replace the front passenger seat belt. (Before disposing, it must be deactivated.) 4. Replace the diagnosis sensor unit. 5. Replace the harness.
ASSIST PRE-TENSIONER [GND-SHORT]	● The circuit for the front passenger pre-tensioner is shorted to ground.	
CONTROL UNIT	● Diagnosis sensor unit is malfunctioning.	1. Visually check the wiring harness connections. 2. Replace the harness if it has visible damage. 3. Replace the diagnosis sensor unit. 4. Replace the harness.

\* Follow the procedures in numerical order when repairing malfunctioning parts. Confirm whether malfunction is eliminated using the air bag warning lamp 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. CONSULT can only show one seat belt pre-tensioner malfunction as self-diagnosis result at a time. Check self-diagnosis result with CONSULT whether other malfunctions are detected after repairing one seat belt pre-tensioner malfunction.



### DIAGNOSTIC PROCEDURE 3

#### 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”.

## TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

### Trouble Diagnoses with CONSULT (Cont'd)

SELECT SYSTEM

ENGINE

A/T

**AIRBAG**

ABS

SRS074

5. Touch "AIRBAG".

SELECT DIAG MODE

**SELF-DIAG [ CURRENT ]**

SELF-DIAG [ PAST ]

TROUBLE DIAG RECORD

ECU DISCRIMINATED NO.

SRS047

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

■ SELF-DIAG [ CURRENT ] ■

FAILURE DETECTED

\* NO SELF DIAGNOSTIC FAILURE INDICATED.

FURTHER TESTING MAY BE REQUIRED. \*\*

ERASE PRINT

SRS049

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

If any problem code is 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-32, and repair malfunctioning part completely.

■ SELF-DIAG [ CURRENT ] ■

FAILURE DETECTED CONTROL UNIT

ERASE PRINT

SRS365

8. 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.

SELECT DIAG MODE

SELF-DIAG [ CURRENT ]

**SELF-DIAG [ PAST ]**

TROUBLE DIAG RECORD

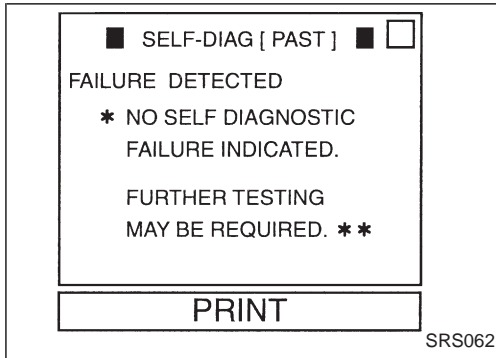
ECU DISCRIMINATED NO.

SRS050

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

## TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

### Trouble Diagnoses with CONSULT (Cont'd)



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

**NOTE:**

**Past malfunction for seat belt pre-tensioner system will not be displayed on “SELF-DIAG [PAST]”.**

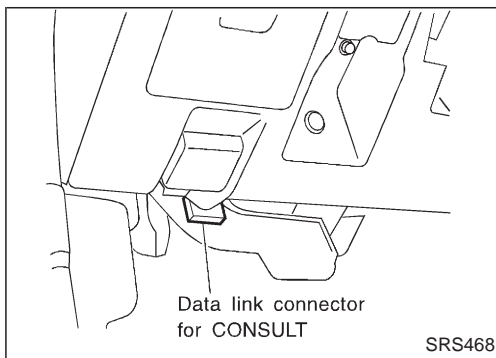
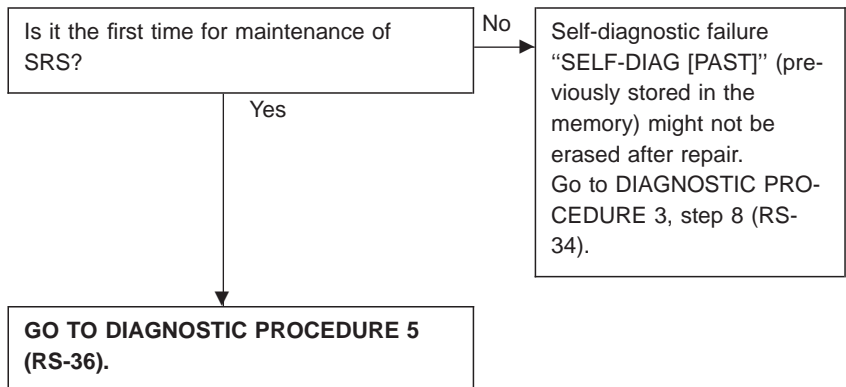
11. Touch “BACK” key of CONSULT until “SELECT SYSTEM” appears in order to return to User mode from Diagnosis mode, turn off CONSULT, then disconnect CONSULT.

12. Turn ignition switch “OFF”.

13. Go to “SRS Operation Check”, page RS-30 to check SRS operation by using “AIR BAG” warning lamp with User mode.

### DIAGNOSTIC PROCEDURE 4 (Continued from DIAGNOSTIC PROCEDURE 2) (CONSULT with CONSULT)

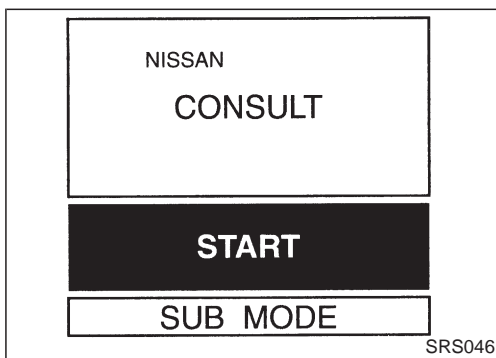
#### Inspecting SRS malfunctioning record



### DIAGNOSTIC PROCEDURE 5

#### 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”.

## TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

### Trouble Diagnoses with CONSULT (Cont'd)

SELECT SYSTEM

ENGINE

A/T

**AIRBAG**

ABS

SRS074

5. Touch "AIRBAG".

SELECT DIAG MODE

SELF-DIAG [ CURRENT ]

**SELF-DIAG [ PAST ]**

TROUBLE DIAG RECORD

ECU DISCRIMINATED NO.

SRS050

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

■ SELF-DIAG [ PAST ] ■

FAILURE DETECTED  
CONTROL UNIT

PRINT

SRS054

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

■ 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".

**NOTE:**

**Past malfunction for seat belt pre-tensioner system will not be displayed on "SELF-DIAG [PAST]".**

SELECT DIAG MODE

SELF-DIAG [ CURRENT ]

SELF-DIAG [ PAST ]

**TROUBLE DIAG RECORD**

ECU DISCRIMINATED NO.

SRS055

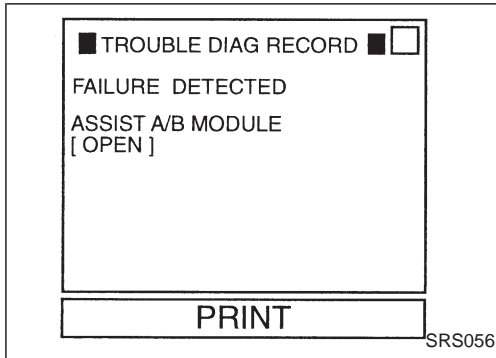
8. Touch "TROUBLE DIAG RECORD".

**NOTE:**

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

## TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

### Trouble Diagnoses with CONSULT (Cont'd)



9. Diagnostic code is displayed on “TROUBLE DIAG RECORD”.

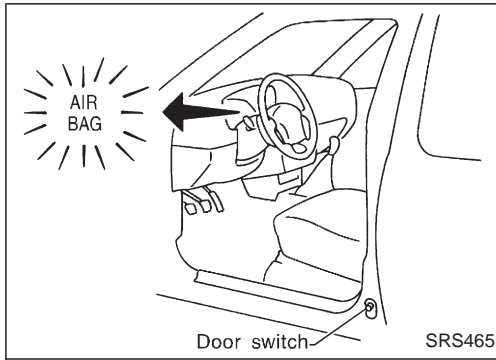
10. Touch “PRINT”.
11. Compare diagnostic codes to “INTERMITTENT PROBLEM DIAGNOSTIC CODE CHART”, page RS-38.
12. Touch “BACK” key of CONSULT until “SELECT SYSTEM” appears, then turn off CONSULT.
13. Turn ignition switch “OFF”, then disconnect CONSULT and both battery cables.
14. Repair the system as outlined by the “Repair order” in “INTERMITTENT PROBLEM DIAGNOSTIC CODE CHART”, that corresponds to the problem code. For replacement procedure of component parts, refer to RS-12.
15. Go to DIAGNOSTIC PROCEDURE 3, page RS-34, for final checking.

### INTERMITTENT PROBLEM DIAGNOSTIC CODE CHART (“SELF-DIAG [PAST]” or “TROUBLE DIAG RECORD”)

Diagnostic item	Explanation	Repair order
NO SELF DIAGNOSTIC FAILURE INDICATED.	When malfunction is indicated by the “AIR BAG” warning lamp in User mode <ul style="list-style-type: none"> <li>● Low battery voltage (Less than 9V)</li> </ul>	● Go to DIAGNOSTIC PROCEDURE 3 (RS-34) after charging battery.
	<ul style="list-style-type: none"> <li>● No malfunction is detected.</li> </ul>	● Go to DIAGNOSTIC PROCEDURE 3 (RS-34).
AIRBAG MODULE [OPEN]	<ul style="list-style-type: none"> <li>● Driver’s air bag module circuit is open. (including the spiral cable)</li> </ul>	<ol style="list-style-type: none"> <li>1. Visually check the wiring harness connection.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. If the harness check result is OK, replace driver’s air bag module (Before disposal of it, it must be deployed.), diagnosis sensor unit and spiral cable.</li> </ol>
AIRBAG MODULE [VB-SHORT]	<ul style="list-style-type: none"> <li>● Driver’s air bag module circuit is shorted to some power supply circuit. (including the spiral cable)</li> </ul>	
AIRBAG MODULE [GND-SHORT]	<ul style="list-style-type: none"> <li>● Driver’s air bag module circuit is shorted to ground. (including the spiral cable)</li> </ul>	
AIRBAG MODULE [SHORT]	<ul style="list-style-type: none"> <li>● Driver’s air bag module circuits are shorted to each other.</li> </ul>	
ASSIST A/B MODULE [VB-SHORT]	<ul style="list-style-type: none"> <li>● Front passenger air bag module circuit is shorted to some power supply circuit.</li> </ul>	<ol style="list-style-type: none"> <li>1. Visually check the wiring harness connection.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. If the harness check result is OK, replace front air bag module (Before disposal of it, it must be deployed.), and diagnosis sensor unit.</li> </ol>
ASSIST A/B MODULE [OPEN]	<ul style="list-style-type: none"> <li>● Front passenger air bag module circuit is open.</li> </ul>	
ASSIST A/B MODULE [GND-SHORT]	<ul style="list-style-type: none"> <li>● Front passenger air bag module circuit is shorted to ground.</li> </ul>	
ASSIST A/B MODULE [SHORT]	<ul style="list-style-type: none"> <li>● Front passenger air bag module circuits are shorted to each other.</li> </ul>	
CONTROL UNIT	<ul style="list-style-type: none"> <li>● Diagnosis sensor unit is malfunctioning.</li> </ul>	<ol style="list-style-type: none"> <li>1. Visually check the wiring harness connection.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. If the harness check result is OK, replace diagnosis sensor unit.</li> </ol>

\*Intermittent problem areas cannot be easily located. For this reason, perform the procedures outlined under the repair order, then make the final system check.

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)



## Trouble Diagnoses without CONSULT

### DIAGNOSTIC PROCEDURE 6

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.

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

**NOTE:**

If SRS does not enter Diagnosis mode even though malfunction is detected in User mode, go to DIAGNOSTIC PROCEDURE 11, page RS-44.

No.	“AIR BAG” warning lamp operation — Diagnosis mode —	SRS condition
1	<p style="text-align: right;">(a) through (b) are repeated.</p> <p style="text-align: center;">MRS100A</p>	<ul style="list-style-type: none"> <li>● Diagnosis results (previously stored in the memory) might not be erased after repair.</li> <li>● Intermittent problem has been detected in the past.</li> </ul> <p>Go to DIAGNOSTIC PROCEDURE 8 (RS-42).</p>
2	<p style="text-align: right;">(a) through (b) are repeated.</p> <p><b>NOTE:</b></p> <ul style="list-style-type: none"> <li>(a) — Interval I</li> <li>(b) — Start signal (Start signal identifies display modes)</li> <li>(c) — Interval II</li> <li>(d) — Indicates malfunctioning part (0.5 sec. ON and 0.5 sec. OFF is counted as one flash.)</li> </ul> <p style="text-align: center;">MRS099A</p>	<p>The system has a problem and needs to be repaired.</p>

5. Malfunctioning part is indicated by the number of flashes (part (d)). Compare the number of flashes to “AIR BAG WARNING LAMP FLASH CODE CHART”, page RS-40, and locate malfunctioning part.
6. Turn ignition switch “OFF”, and disconnect both battery cables.
7. Repair the system as outlined by the “Repair order” in “AIR BAG WARNING LAMP FLASH CODE CHART” that corresponds to the flash code. For replacement procedure of component parts, refer to RS-12.
8. After repairing the system, go to DIAGNOSTIC PROCEDURE 7, page RS-40.



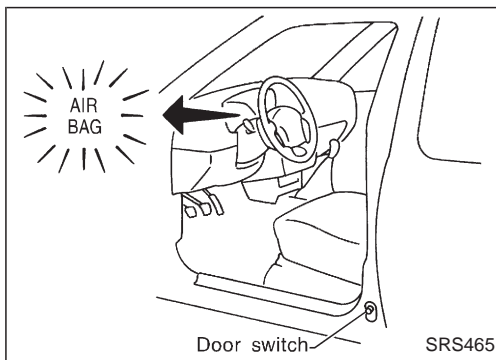
## TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

### Trouble Diagnoses without CONSULT (Cont'd)

#### AIR BAG WARNING LAMP FLASH CODE CHART

Warning lamp	Flash code ④ (# of flashes)	Explanation	Repair order "Recheck SRS at each replacement."
"AIR BAG" warning lamp	0	<ul style="list-style-type: none"> <li>● Diagnosis results (previously stored in the memory) might not be erased after repair.</li> <li>● Intermittent problem has been detected in the past.</li> </ul>	Go to DIAGNOSTIC PROCEDURE 8 (RS-42).
	2	The driver's air bag module circuit is malfunctioning.	<ol style="list-style-type: none"> <li>1. Visually check the wiring harness connections.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. Replace the spiral cable.</li> <li>4. Replace the driver's air bag module. (Before disposing of it, it must be deployed.)</li> <li>5. Replace the diagnosis sensor unit.</li> <li>6. Replace the harness.</li> </ol>
	7	The diagnosis sensor unit is malfunctioning.	<ol style="list-style-type: none"> <li>1. Visually check the wiring harness connections.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. Replace the diagnosis sensor unit.</li> <li>4. Replace the harness.</li> </ol>
	8	The front passenger air bag module circuit is malfunctioning.	<ol style="list-style-type: none"> <li>1. Visually check the wiring harness connections.</li> <li>2. Replace the harness if it has visible damage.</li> <li>3. Replace the front passenger air bag module. (Before disposing of it, it must be deployed.)</li> <li>4. Replace the diagnosis sensor unit.</li> <li>5. Replace the harness.</li> </ol>

\* Follow the procedures in numerical order when repairing malfunctioning parts. Confirm whether malfunction is eliminated using the air bag warning lamp 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.



#### DIAGNOSTIC PROCEDURE 7

##### Final checking after repairing SRS by using "AIR BAG" warning lamp — Diagnosis mode and User mode

1. After repairing SRS connect both battery cables.
2. Open driver's door.
3. Turn ignition switch from "OFF" to "ON".
4. "AIR BAG" warning lamp operates in Diagnosis mode as follows:

# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

## Trouble Diagnoses without CONSULT (Cont'd)

No.	"AIR BAG" warning lamp operation — Diagnosis mode —	SRS condition
1	<p style="text-align: right;">(a) through (b) are repeated.</p> <p style="text-align: right;">MRS100A</p>	<p>No malfunction is detected or repair is completed. No further action is necessary.</p>
2	<p style="text-align: right;">(a) through (d) are repeated.</p> <p style="text-align: right;">NOTE:                  (a) — Interval I                  (b) — Start signal (Start signal identifies display modes)                  (c) — Interval II                  (d) — Indicates malfunctioning part (0.5 sec. ON and 0.5 sec. OFF is counted as one flash.)</p> <p style="text-align: right;">MRS099A</p>	<p>The system has a problem and needs to be repaired.</p>

**NOTE:**

When diagnosis sensor unit is replaced with new one, "AIR BAG" warning lamp will operate in User mode. Checking "AIR BAG" warning lamp operation in Diagnosis mode is not required. Go to step 6.

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 and to erase the memory of the malfunction. Then go to step 6.

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 6, page RS-39, 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.

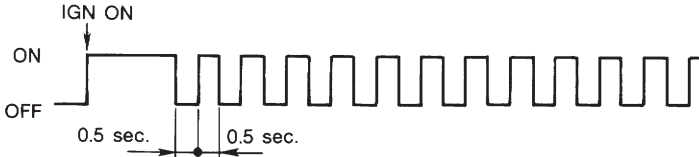

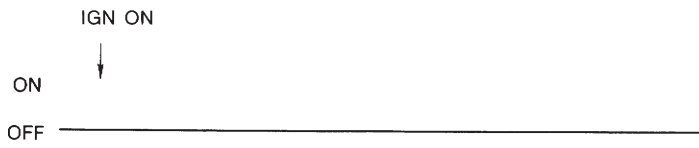
**NOTE:**

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
<p style="text-align: right;">MRS095A</p>	<p>No malfunction is detected. No further action is necessary.</p>	<p>—</p>

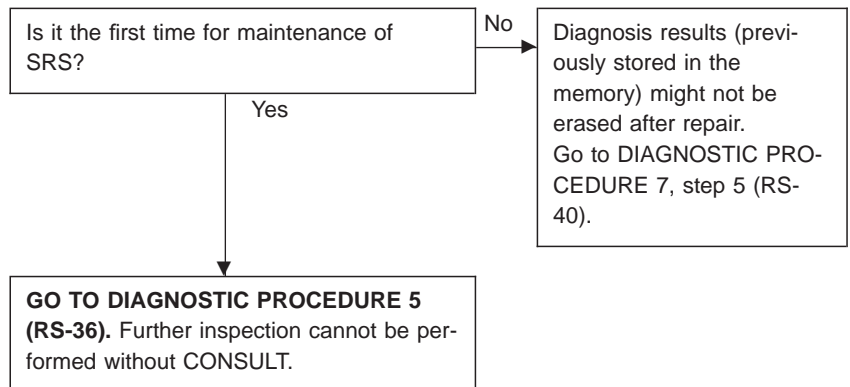
# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

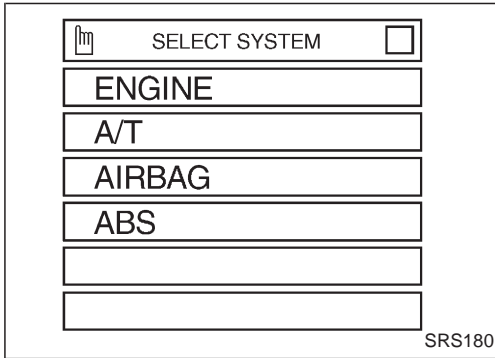
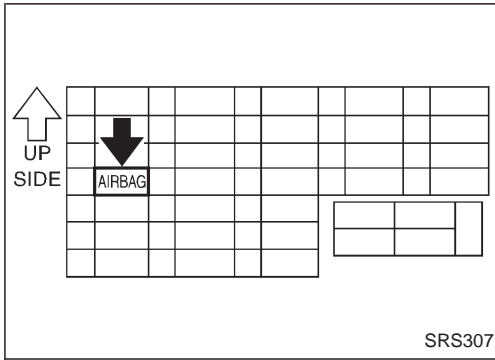
## Trouble Diagnoses without CONSULT (Cont'd)

"AIR BAG" warning lamp operation — User mode —	SRS condition	Reference item
 <p>MRS096A</p>	The system has a problem and needs to be repaired as indicated.	Go to DIAGNOSTIC PROCEDURE 2 or 6 (RS-32 or RS-39).
 <p>MRS097A</p>	<p>Air bag is deployed.</p> <p>Air bag fuse, diagnosis sensor unit or harness is malfunctioning and needs to be repaired.</p>	Go to COLLISION DIAGNOSIS (RS-45).
 <p>MRS098A</p>	One of the following has occurred and needs to be repaired. <ul style="list-style-type: none"> <li>• Meter fuse is blown.</li> <li>• "AIR BAG" warning lamp circuit has open or short.</li> <li>• Diagnosis sensor unit is malfunctioning.</li> </ul>	Go to DIAGNOSTIC PROCEDURE 10 (RS-43).

### DIAGNOSTIC PROCEDURE 8 (Continued from DIAGNOSTIC PROCEDURE 6) (⌚ without CONSULT)

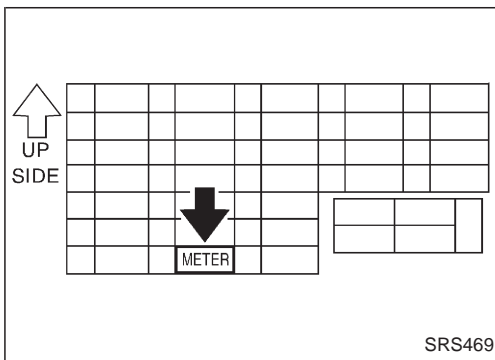
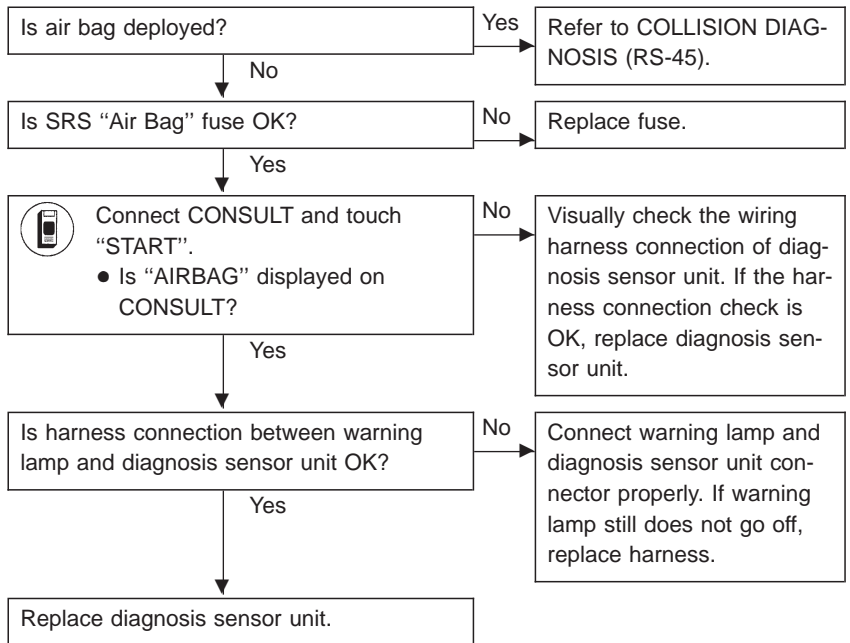
#### Inspecting SRS malfunctioning record





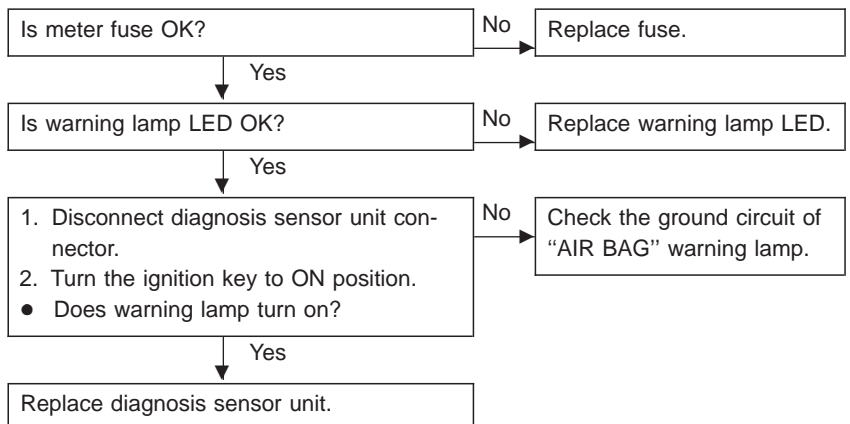
## Trouble Diagnoses: "AIR BAG" Warning Lamp Does Not Turn Off

### DIAGNOSTIC PROCEDURE 9

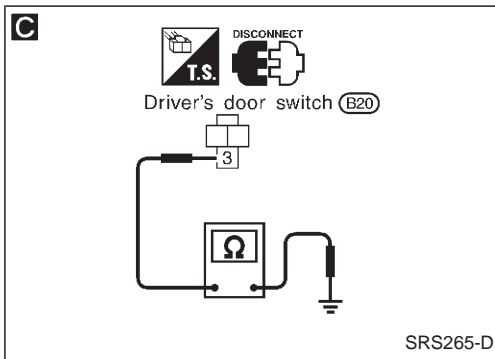
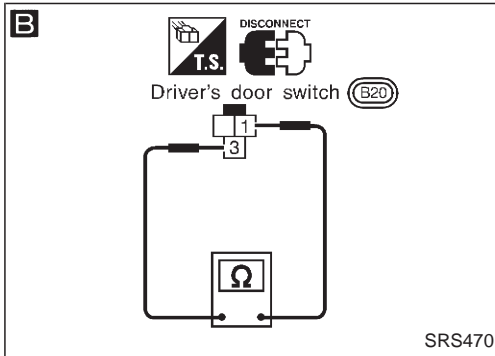
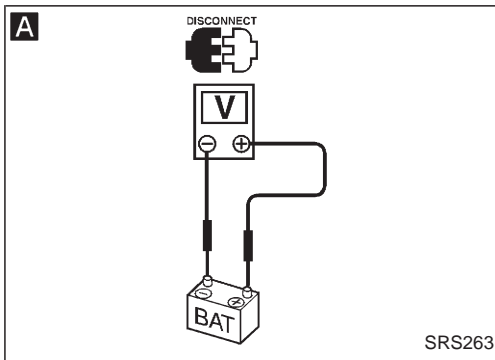


## Trouble Diagnoses: "AIR BAG" Warning Lamp Does Not Turn On

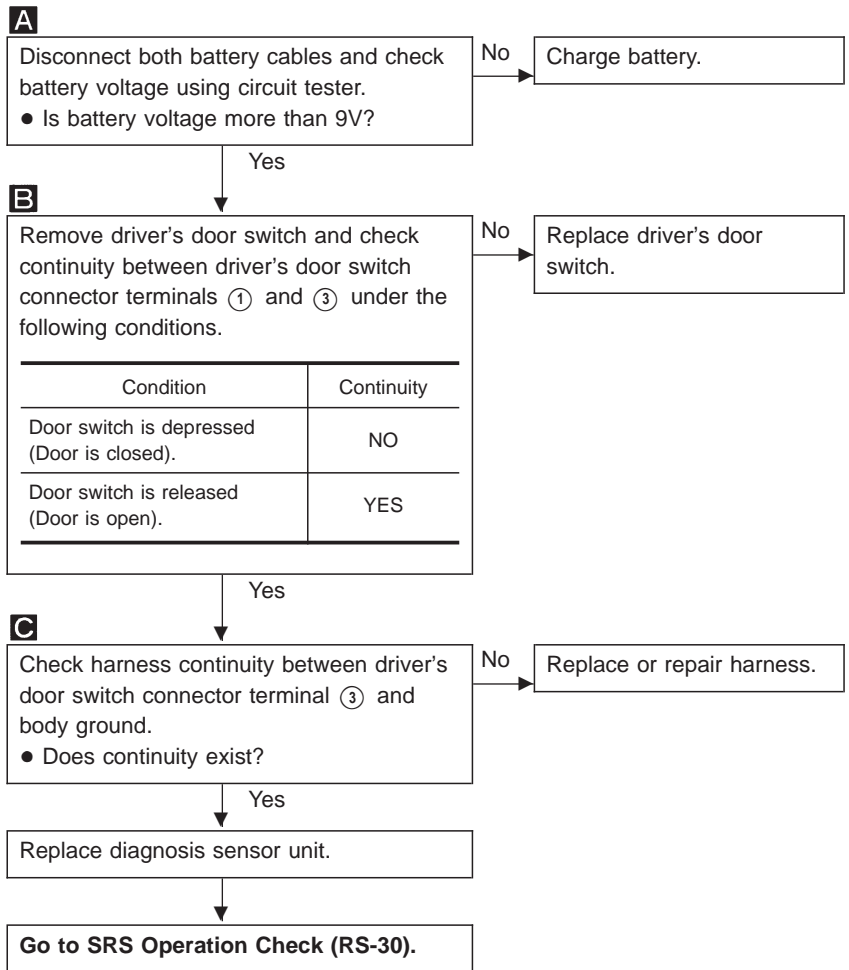
### DIAGNOSTIC PROCEDURE 10



# TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)



## Trouble Diagnoses: SRS Does Not Enter Diagnosis Mode Using Door Switch DIAGNOSTIC PROCEDURE 11



## COLLISION DIAGNOSIS

To repair the SRS for a frontal collision, perform the following steps.

### When SRS (except the side air bag) 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 Install new air bag modules.
- ⑤ Conduct self-diagnosis using CONSULT and “AIR BAG” warning lamp. Refer to “SRS Operation Check” for details (RS-30). Ensure entire SRS operates properly.

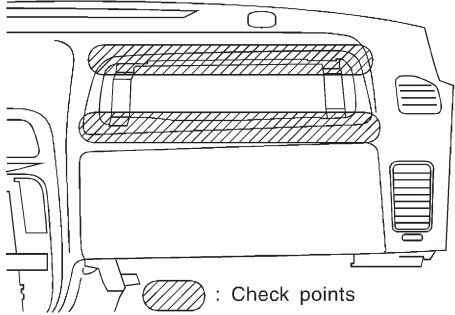
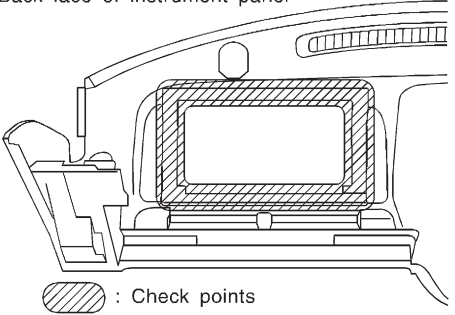
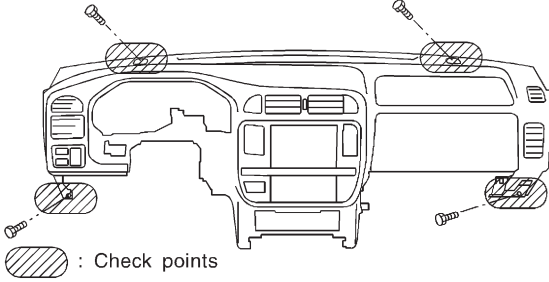
### When SRS is not activated in a collision:

- 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 “SRS Operation Check” for details (RS-30). Ensure entire SRS operates properly.

### SRS inspection

Part	SRS (except the side air bag) is activated	SRS is NOT activated
Air bag module (driver and passenger side)	REPLACE Install air bag module with new bolts coated with bonding agent.	<ol style="list-style-type: none"> <li>1. Remove air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.</li> <li>2-1. Install driver air bag module into the steering wheel to check fit and alignment with the wheel.</li> <li>2-2. Install passenger air bag module into the instrument panel to check fit with the instrument panel.</li> <li>3. No damage found, reinstall with new bolts coated with bonding agent.</li> <li>4. If damaged—REPLACE. Air bag must be deployed before discarding.</li> </ol>
Diagnosis sensor unit	REPLACE Install diagnosis sensor unit with new bolts coated with bonding agent.	<ol style="list-style-type: none"> <li>1. Check case and bracket for dents, cracks or deformities.</li> <li>2. Check connectors for damage, and terminals for deformities.</li> <li>3. If no damage is found, reinstall with new bolts coated with bonding agent.</li> <li>4. If damaged—REPLACE. Install diagnosis sensor unit with new bolts coated with bonding agent.</li> </ol>
Seat belt pre-tensioner assembly	REPLACE Install seat belt pre-tensioner with new bolts coated with bonding agent.	<ol style="list-style-type: none"> <li>1. Remove seat belt pre-tensioners. Check harness cover and connectors for damage, terminals for deformities, and harness for binding.</li> <li>2. Check belts for damage and anchors for loose mounting.</li> <li>3. Check retractor for smooth operation.</li> <li>4. If no damage is found, reinstall with new bolts coated with bonding agent.</li> <li>5. If damaged—REPLACE. Install the seat belt pre-tensioners with new bolts coated with bonding agent. Seat belt pre-tensioners must be deployed before discarding.</li> </ol>
Steering wheel		<ol style="list-style-type: none"> <li>1. Visually check steering wheel for deformities.</li> <li>2. Check harness (built into steering wheel) and connectors for damage, and terminals for deformities.</li> <li>3. Install air bag module to check fit or alignment with steering wheel.</li> <li>4. Check steering wheel for excessive free play.</li> <li>5. If no damage is found, reinstall the steering wheel.</li> <li>6. If damaged—REPLACE.</li> </ol>
Spiral cable		<ol style="list-style-type: none"> <li>1. Visually check spiral cable and combination switch for damage.</li> <li>2. Check connectors, flat cable and protective tape for damage.</li> <li>3. Check steering wheel for noise, binding or heavy operation.</li> <li>4. If no damage is found, reinstall the spiral cable.</li> <li>5. If damaged—REPLACE.</li> </ol>
Harness and Connectors		<ol style="list-style-type: none"> <li>1. Check connectors for poor connection, damage, and terminals for deformities.</li> <li>2. Check harness for binding, chafing, cuts, or deformities.</li> <li>3. If no damage is found, reinstall harness and connectors.</li> <li>4. Damaged—REPLACE damaged section of harness. Do not attempt to repair, splice or modify any SRS harness.</li> </ol>
Instrument panel		Refer to the table on the next page.

# COLLISION DIAGNOSIS

Part	SRS (except the side air bag) is activated	SRS is NOT activated
Instrument panel	<p>1. When passenger air bag inflates, check the following points for bending, deformities or cracks.</p> <ul style="list-style-type: none"> <li>● Opening portion for passenger air bag</li> </ul>	<p style="text-align: right;">SRS472</p>  <p style="text-align: center;">: Check points</p> <ul style="list-style-type: none"> <li>● Passenger air bag module brackets</li> </ul> <p style="text-align: center;">Back face of instrument panel</p>  <p style="text-align: center;">: Check points</p> <p style="text-align: right;">SRS473</p> <ul style="list-style-type: none"> <li>● The portions securing the instrument panel</li> </ul>  <p style="text-align: center;">: Check points</p> <p style="text-align: right;">SRS474</p>
	<p>2. If no damage is found, reinstall the instrument panel.            3. If damaged—REPLACE the instrument panel with bolts.</p>	