

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

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), sensors, a diagnosis 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.**

SEAT BELTS

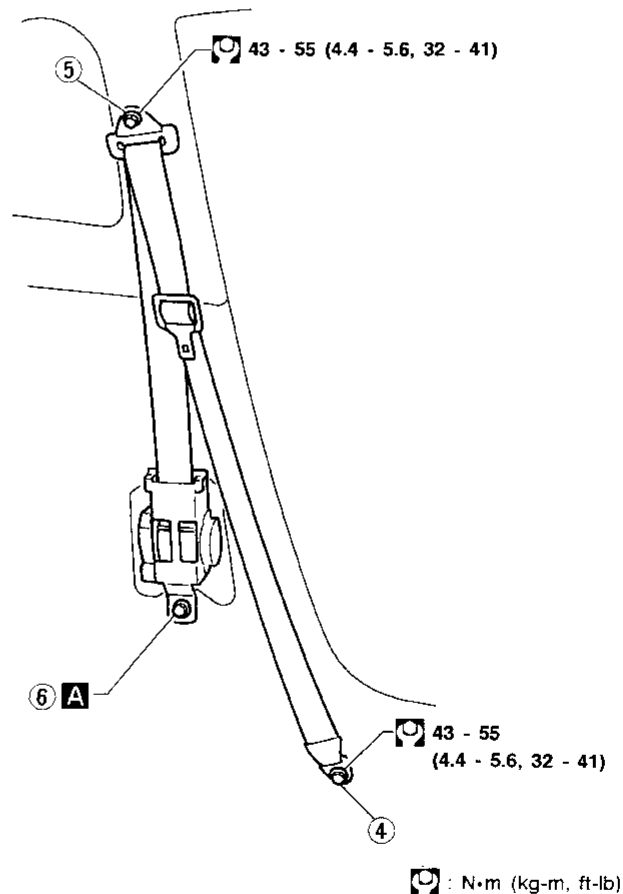
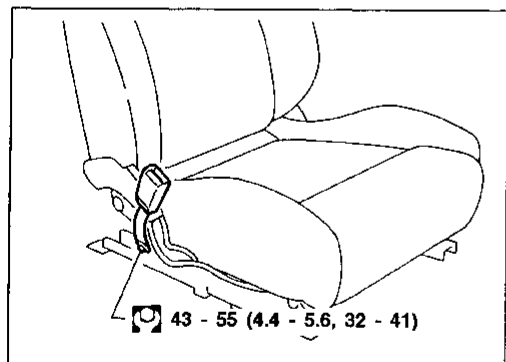
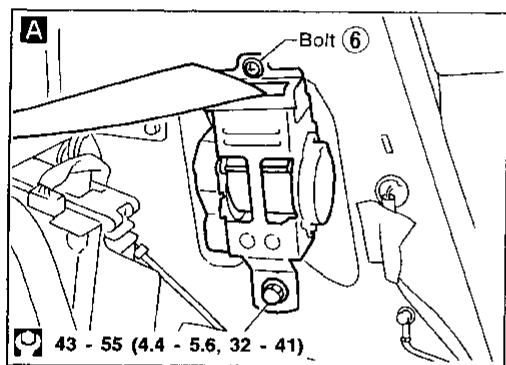
CAUTION:

- 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 as 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).

Front Seat Belt

- ① Remove front seat. Refer to "SEAT" in BT section for details.
- ② Remove rear seat. Refer to "SEAT" in BT section for details.
- ③ Remove rear pillar lower finisher. Refer to "INTERIOR TRIM" in BT section for details.
- ④ Remove floor anchor bolt.
- ⑤ Remove pillar anchor cover, then remove the anchor bolt.
- ⑥ Remove the bolt and the anchor bolt securing retractor assembly.

SEC. 769-868



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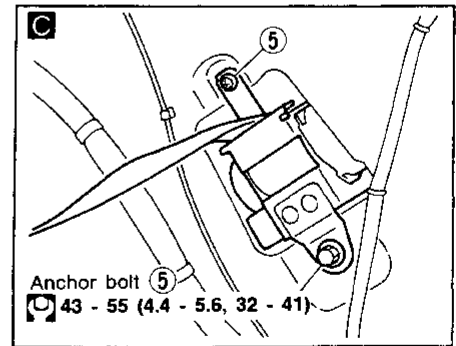
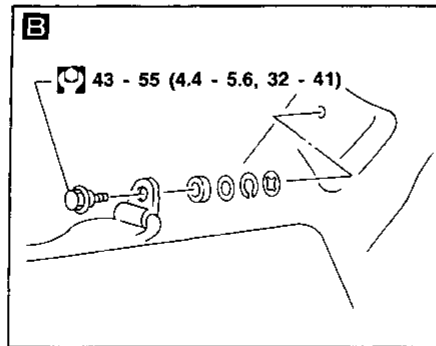
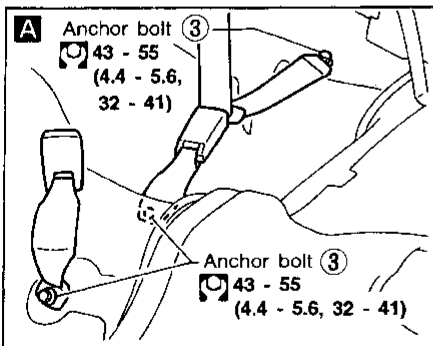
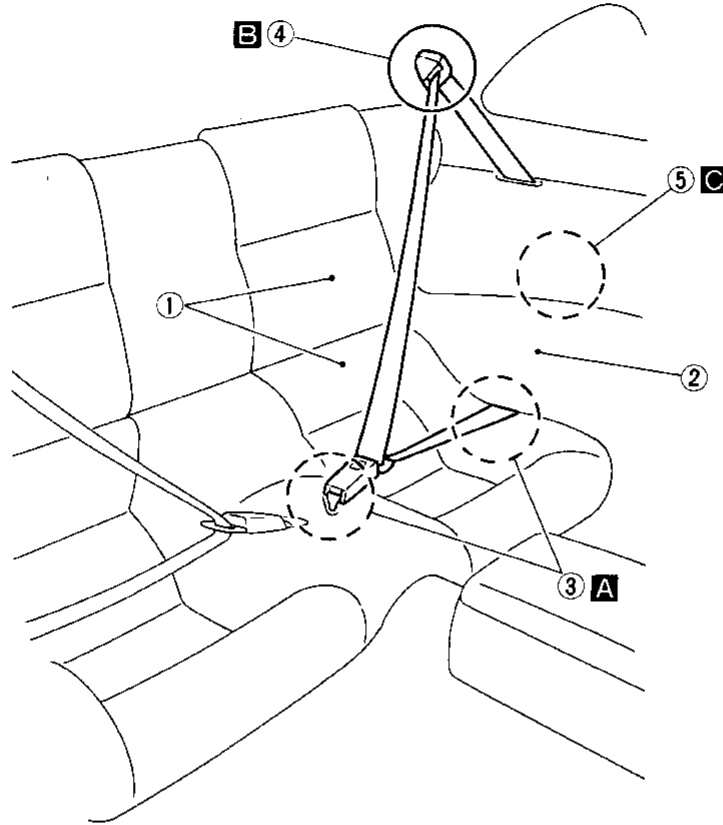
IDX


SEAT BELTS

Rear Seat Belt (2 + 2 model)

- ① Remove rear seat. Refer to "SEAT" in BT section for details.
- ② Remove rear pillar lower finisher. Refer to "INTERIOR TRIM" in BT section for details.
- ③ Remove each anchor bolt.
- ④ Remove anchor cover, then remove the anchor bolt.
- ⑤ Remove the bolt and the anchor bolt securing retractor assembly.

SEC. 869



 : N·m (kg-m, ft-lb)

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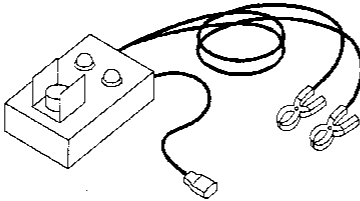
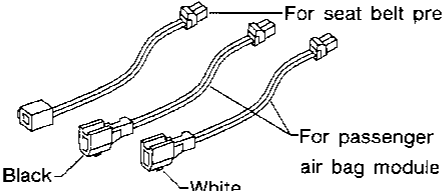
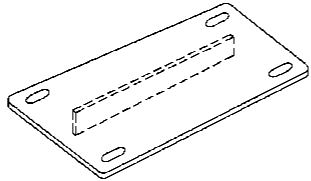
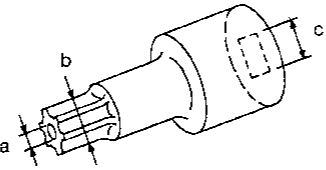
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

Precautions for SRS "Air Bag" Service

- 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 10 minutes after the cables are removed, it is still possible for the air bag to inflate. Therefore, do not work on any air bag system connectors or wires until at least 10 minutes have passed.
- SRS sensors must always be installed with their arrow marks "↖" pointing towards the front of the vehicle for proper operation. Also check sensors 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.
- If front of vehicle is damaged in a collision, always check the crash zone sensor and the wiring harness.
- 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.

Tool number (Kent-Moore No.) Tool name	Description
KV991072S0 (J38381-KIT) Air bag deployment kit KV99106400 (J38381) Deployment tool	Disposing of air bag module  NT357
KV991065S0 (J38381-30) Deployment tool adapters	For seat belt pre-tensioner For passenger air bag module  NT353
KV99105300 (J41246) Passenger air bag bracket	Anchor the passenger air bag module  NT354
HT61961000 and HT62152000 combined (J38219) *Special torx bit	Use for special bolts [TAMPER RESISTANT TORX (Size T50)]  NT361 a: 3.5 (0.138) dia. b: 8.5 - 8.6 (0.335 - 0.339) dia. c: approx. 10 (0.39) sq. Unit: mm (in)

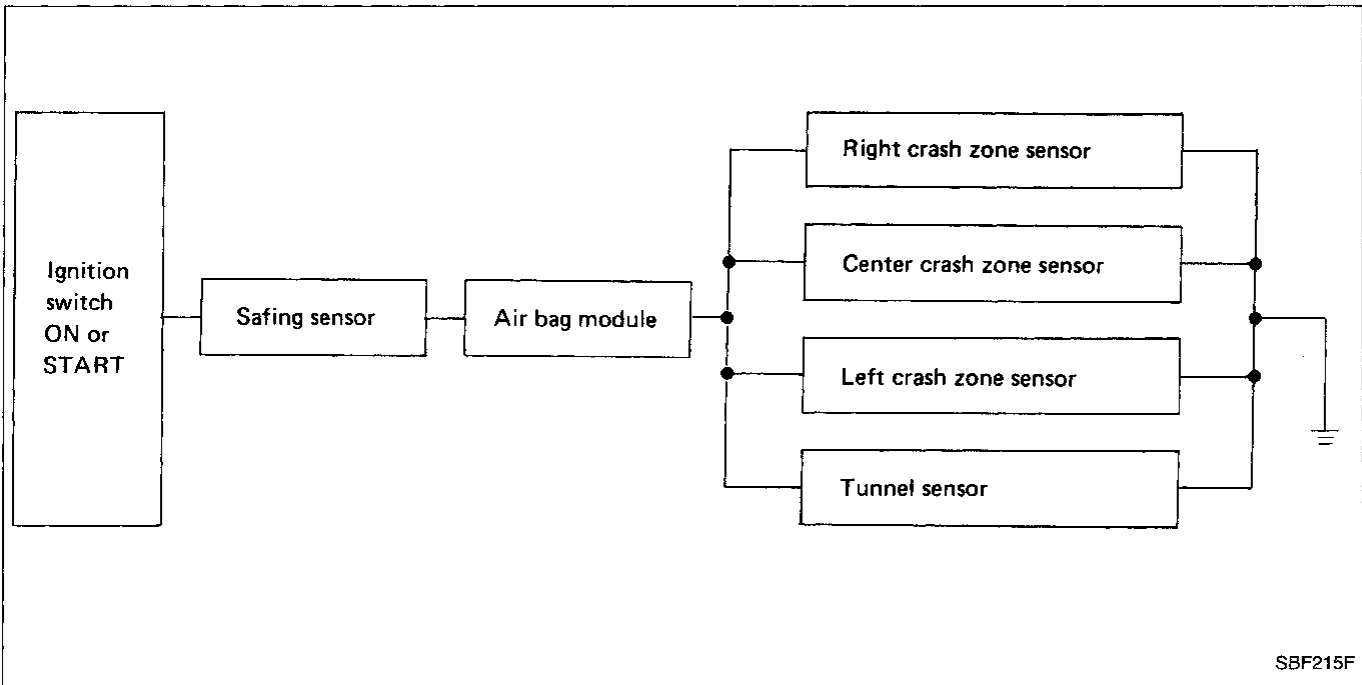
*: Special tool or commercial equivalent

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

Description

The air bag deploys when any of the four sensors (right crash zone sensor, center crash zone sensor, left crash zone sensor or tunnel sensor) and the safing sensor simultaneously activate while the ignition switch is in the "ON" or "START" position.

Ignition	Crash zone sensor			Tunnel sensor	Safing sensor	Air bag signal
	Right	Center	Left			
ON	ON				ON	ON
ON		ON			ON	ON
ON			ON		ON	ON
ON				ON	ON	ON

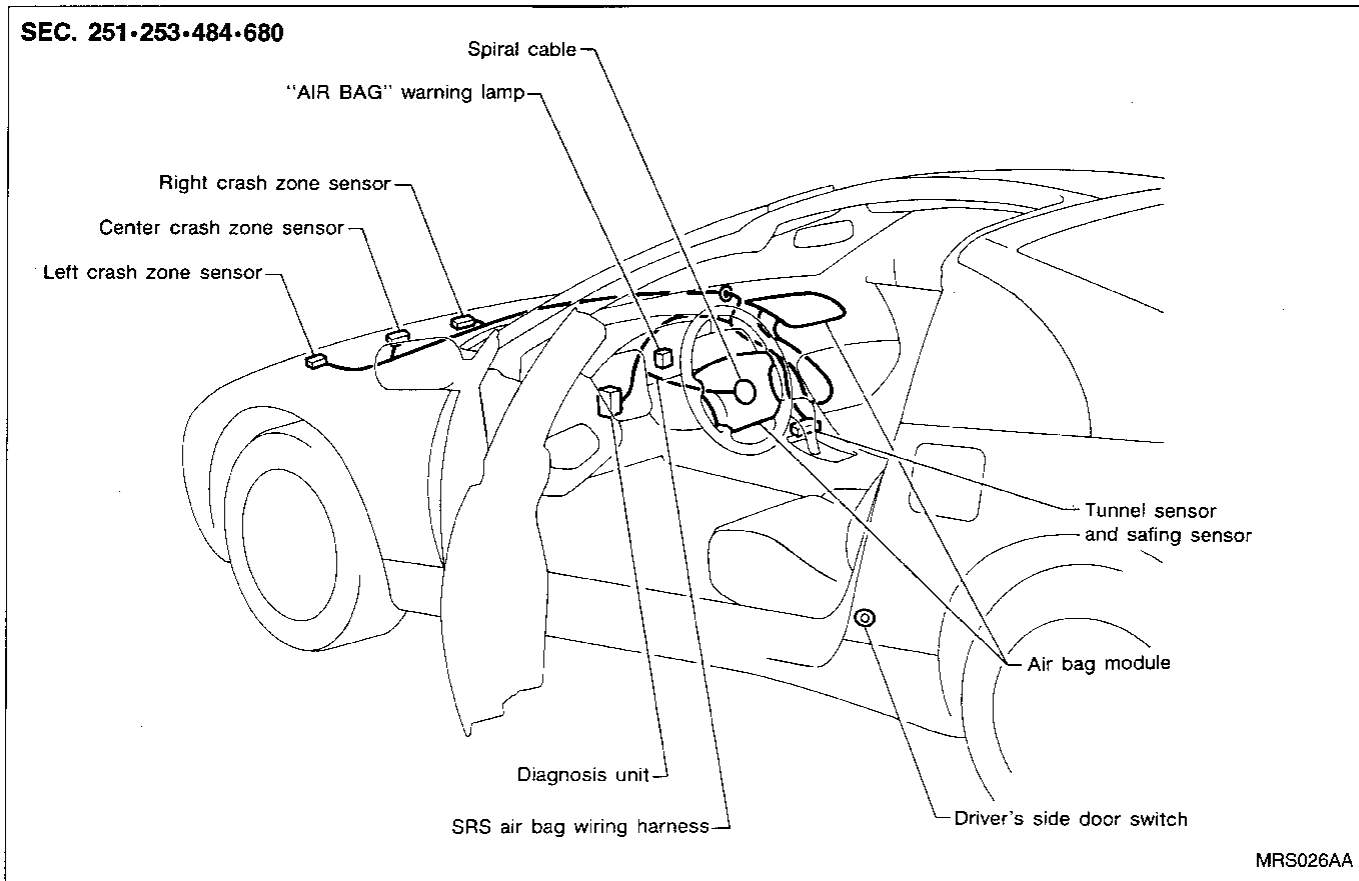


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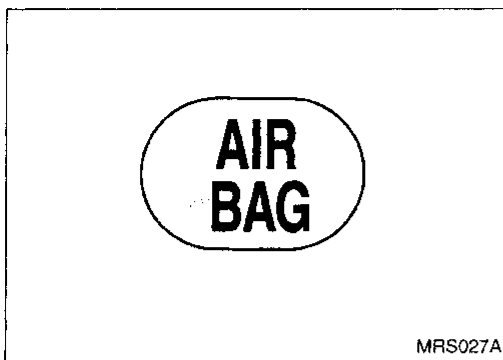
Self-diagnosis

The diagnosis unit diagnoses the SRS circuit. After turning the ignition key to "ON" or "START" position, the "AIR BAG" warning lamp illuminates. The "AIR BAG" warning lamp will turn off after about 7 seconds if no malfunction is detected.

SRS Component Parts Location



- GI
- MA
- EM
- LC
- EC
- FE
- CL
- MT
- AT
- PD
- FA
- RA
- BR
- ST
- RS**
- BT
- HA
- EL
- IDX



Maintenance Items

1. 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-23 for details.
 - 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 turns off about 7 seconds after the ignition switch is turned "ON", but it turns on or flashes again.

2. Visually check SRS components
 - (1) Sensors
 - Check sensors to ensure the arrow marks face the front of the vehicle.
 - Check body and sensor brackets for deformities or rust.
 - Check sensor case for dents, cracks, deformities or rust.
 - Check sensor harness for binds, connector for damage, and terminals for deformities.

 - (2) Diagnosis unit
 - Check diagnosis unit and bracket for dents, cracks or deformities.
 - Check connectors for damage, and terminals for deformities.

 - (3) 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 side 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 side air bag module to instrument panel to check fit or alignment with the instrument panel.

 - (4) 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.

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

CAUTION:

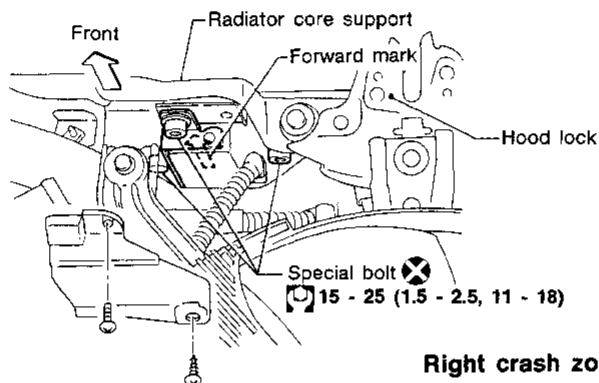
Replace previously used screws with new ones.

Removal and Installation — Diagnosis Unit and Sensors

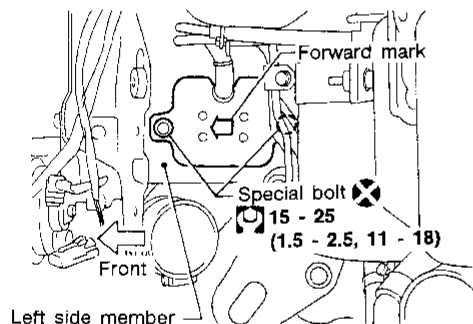
CAUTION:

- 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 sensors and diagnosis unit for proper installation.
- Check sensors and diagnosis 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 sensor and diagnosis unit brackets to ensure they are free of deformities or rust.
- Replace sensors and diagnosis unit if they have been dropped or sustained an impact.
- Do not attempt to disassemble sensors and diagnosis unit.

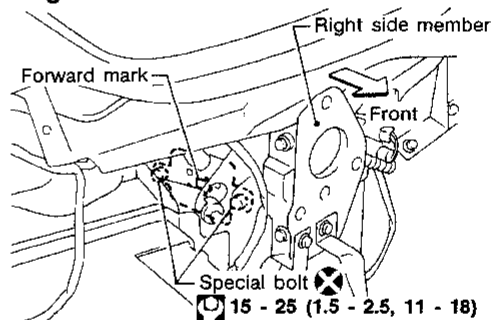
Center crash zone sensor



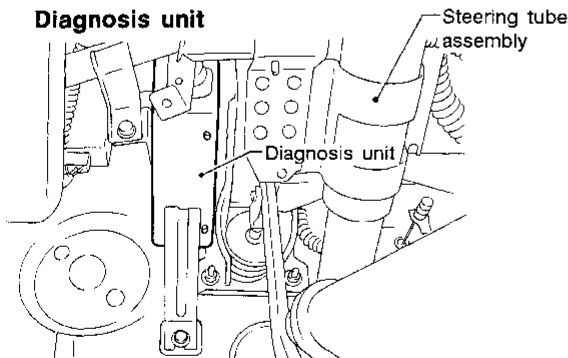
Left crash zone sensor



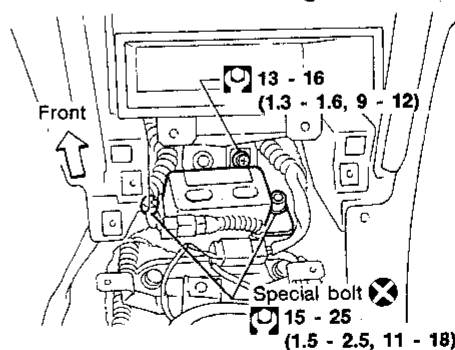
Right crash zone sensor



Diagnosis unit



Tunnel sensor and safing sensor



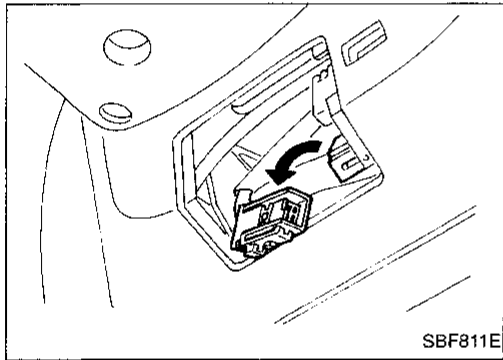
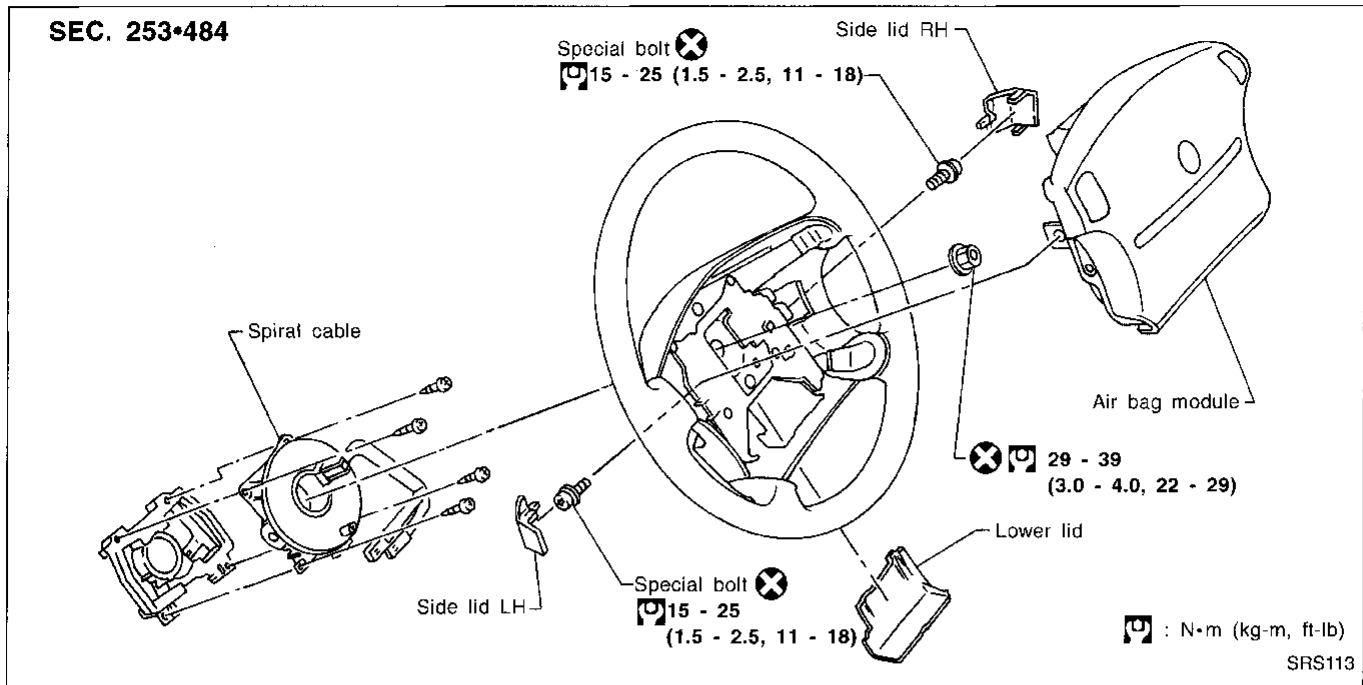
: N·m (kg-m, ft-lb)

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Removal — Air Bag Module and Spiral Cable

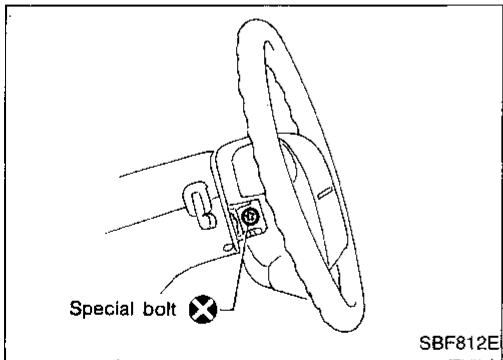
SEC. 253•484



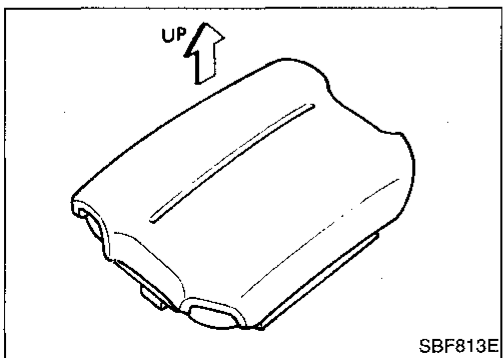
CAUTION:

- 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.

1. Remove lower lid from steering wheel, and disconnect air bag module connector.



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

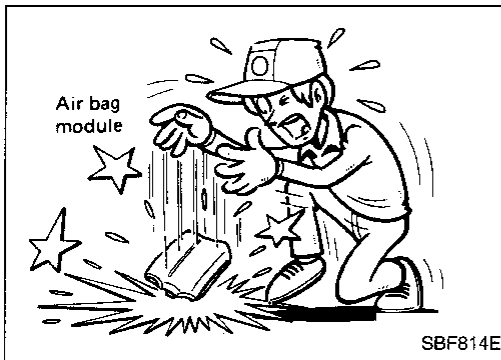


CAUTION:

- 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.

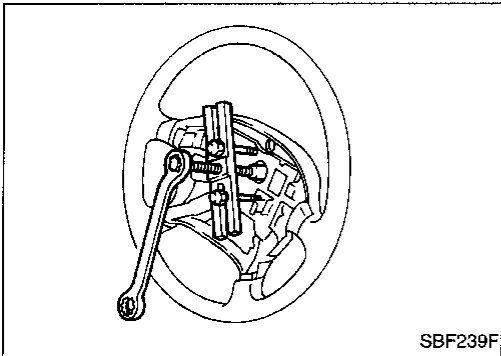
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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



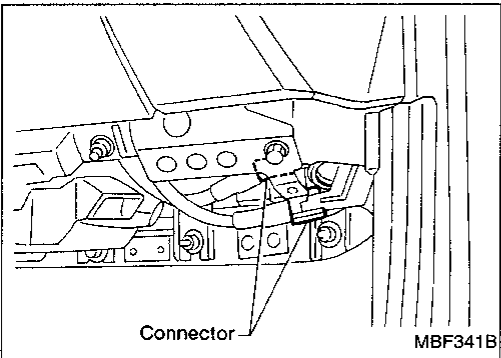
- Replace air bag module if it has been dropped or sustained an impact.
- Do not expose the air bag module to temperatures exceeding 90°C (194°F).
- Do not allow oil, grease or water to come in contact with the air bag module.

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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.
6. Remove steering column cover.
7. Disconnect connector and remove the four screws. The spiral cable can then be removed.

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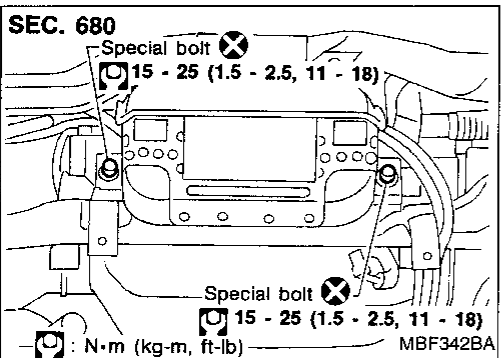


Removal — Front Passenger Air Bag Module

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 or under air bag module.
1. Remove instrument lower cover on passenger side.
 2. Remove connector bracket from air bag module and disconnect inflator connector from body harness air bag connector.

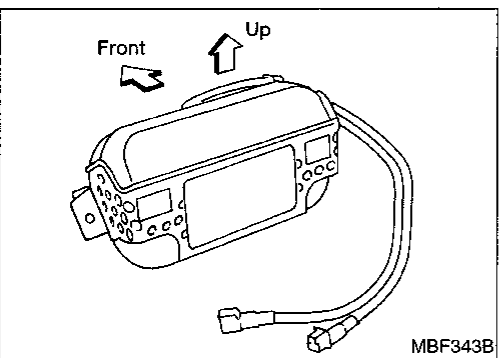
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3. Remove instrument panel.
 4. Remove the special bolt from left and right sides of front passenger air bag module and remove the air bag module from the steering member.
- Air bag module is heavy and should be supported using both hands during removal.

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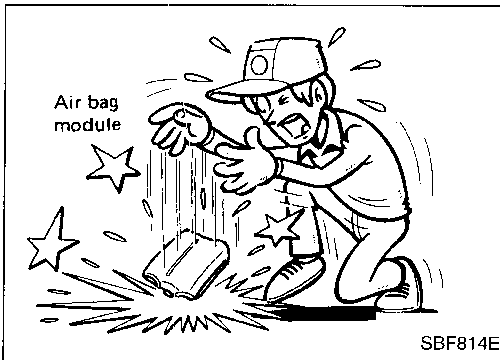
CAUTION:

- 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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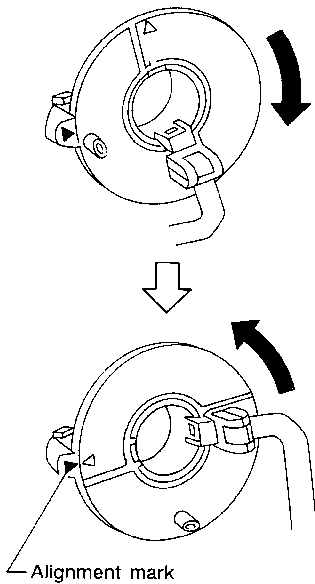
SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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



- 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.

SEC. 253

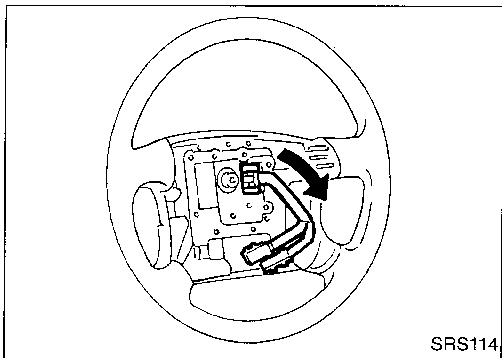


Installation — Air Bag Module and Spiral Cable

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:

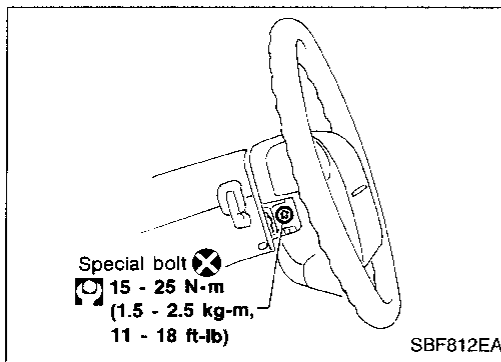
- The spiral cable may snap due to steering operation if the cable is installed in an improper position. Also, with the steering linkage disconnected, the cable may snap by turning the steering wheel beyond the limited number of turns. (The spiral cable can be turned up to 2.5 turns from the neutral position to both the right and left.)
 - Always work from the side of air bag module.
3. Connect spiral cable connector and tighten with screws. Install steering column cover.



4. Install steering wheel setting 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 opener.
6. Tighten nut.
ⓘ: 29 - 39 N·m (3.0 - 4.0 kg·m, 22 - 29 ft·lb)

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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



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.) Refer to RS-23 or 26. Before performing self-diagnosis, connect both battery cables.
11. Turn steering wheel to the left fully and then to the right fully to make sure that spiral cable is set in the neutral position. If air bag warning lamp blinks (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 check). If a malfunction is detected, replace the spiral cable with a new one.

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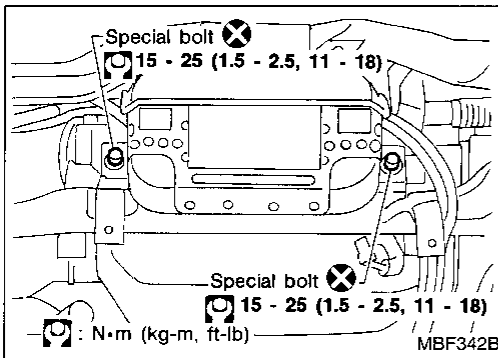
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Installation — Front Passenger Air Bag Module

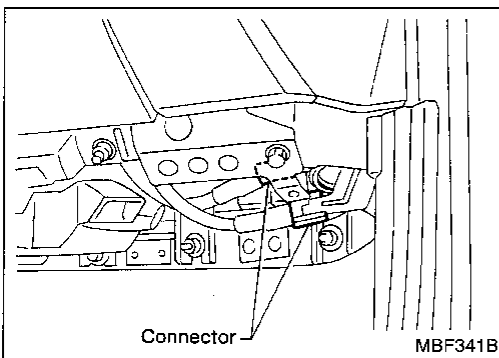
- Always work from the side of or under air bag module.
1. Install front passenger air bag module on steering member.
 - Ensure harness is not caught between rear of air bag module and steering member.
 2. Install instrument panel.

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3. Connect air bag module connector to body harness connector.
4. Install air bag module connector on connector bracket.
5. Install connector bracket on air bag module, then install instrument lower cover on passenger side.
6. Conduct self-diagnosis to ensure entire SRS operates properly. (Use CONSULT or warning lamp check.) Refer to RS-23 or 26. Before performing self-diagnosis, connect both battery cables.

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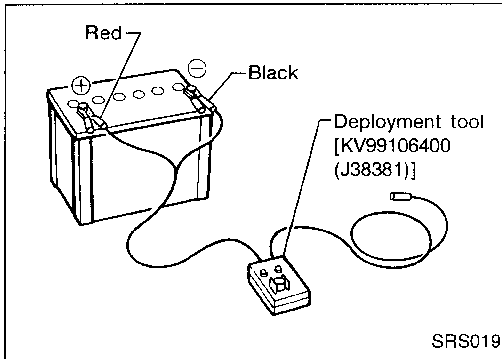
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Disposal of Air Bag Module

- Before disposing of air bag module or vehicle 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 the section “DISPOSING OF AIR BAG MODULE” (RS-17).
- Do not dispose of the air bag module un-deployed.
- 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 air bag module.
- 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.



CHECKING DEPLOYMENT TOOL

Connecting to battery

- Place the vehicle outdoors in 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.

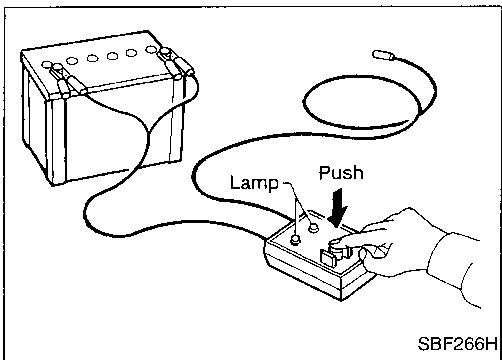
CAUTION:

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)

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.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

Disposal of Air Bag Module (Cont'd)

DEPLOYMENT PROCEDURES FOR AIR BAG MODULE (OUTSIDE OF VEHICLE)

Deploying air bag module while it is mounted in vehicle may damage vehicle. Deploy air bag module as a unit except when disposing of vehicle.

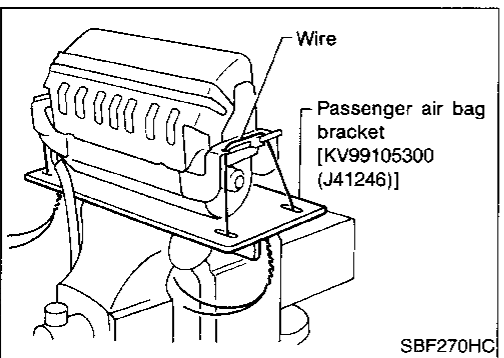
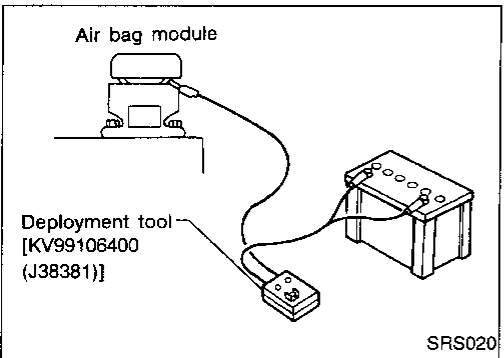
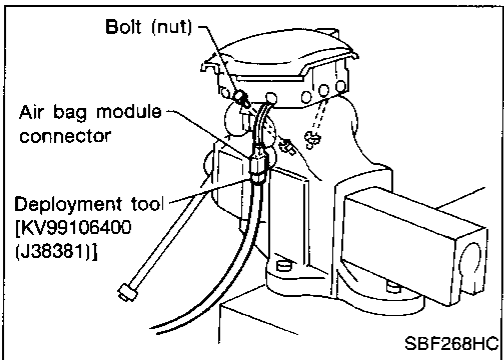
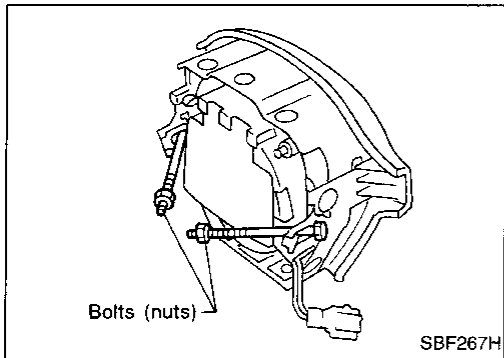
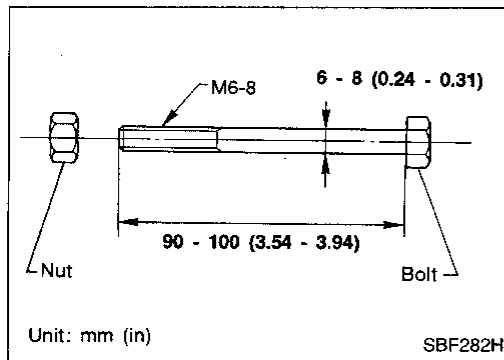
Anchor air bag module in a vise secured to a firm foundation during deployment.

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.
2. Install one set of nuts and bolts to each side of the air bag module.

CAUTION:

Make sure to install two bolts and nuts 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.

4. Connect deployment tool [SST: KV99106400 (J38381)] to air bag module connector.

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.

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)

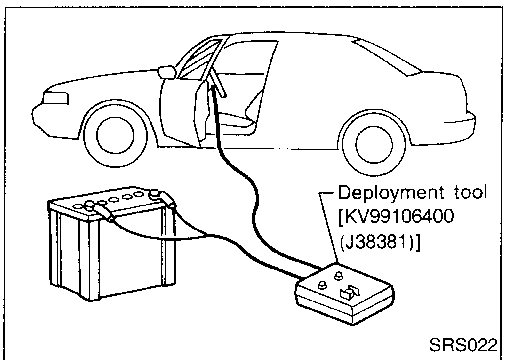
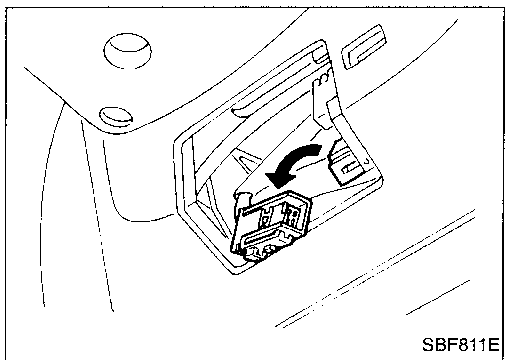
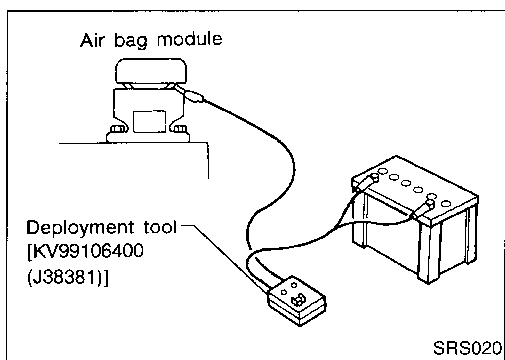
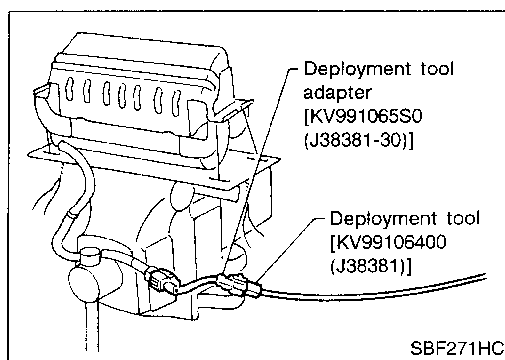
1. Using wire, secure air bag module to passenger air bag bracket [SST: KV99105300 (J41246)] at two places.

CAUTION:

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

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SUPPLEMENTAL RESTRAINT SYSTEM (SRS)



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.

7. Activate the other inflator.

CAUTION:

Always activate one inflator at a time.

DEPLOYMENT OF AIR BAG MODULE WHILE MOUNTED IN VEHICLE

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

CAUTION:

When deploying air bag module, ensure vehicle is empty.

1. Disconnect the vehicle battery ground cable and wait 10 minutes.
2. Disconnect air bag module connector.
3. 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.

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. Then the air bag module will deploy.

CAUTION:

Activate only one passenger air bag module inflator at a time.

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

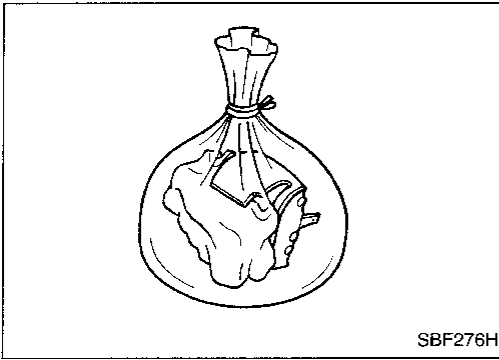
Disposal of Air Bag Module (Cont'd)

DISPOSING OF AIR BAG MODULE

Deployed air bag module is very hot. Before disposing of air bag module, 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 cannot be re-used.
- Wash your hands clean after finishing work.



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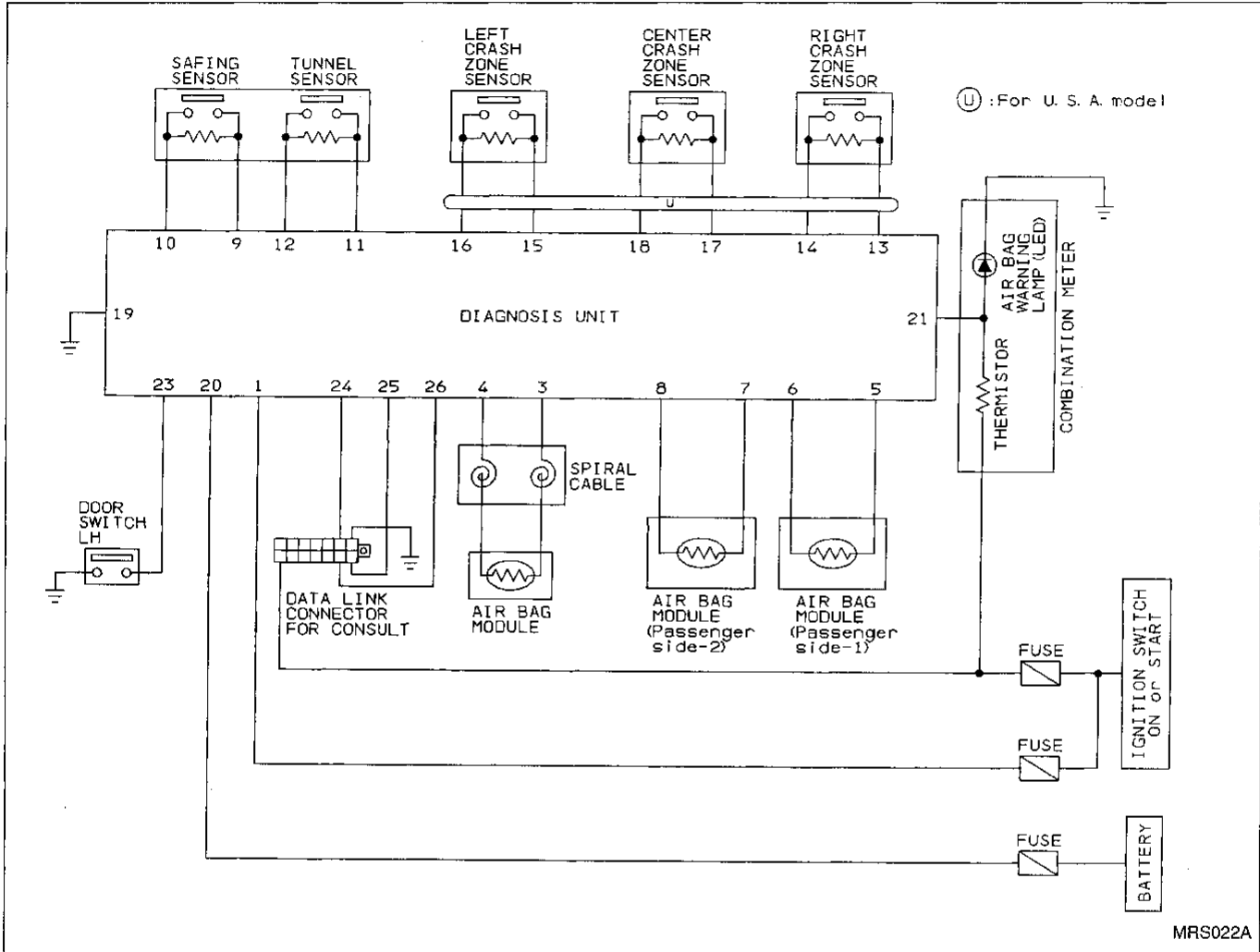
IDX

TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

CAUTION:

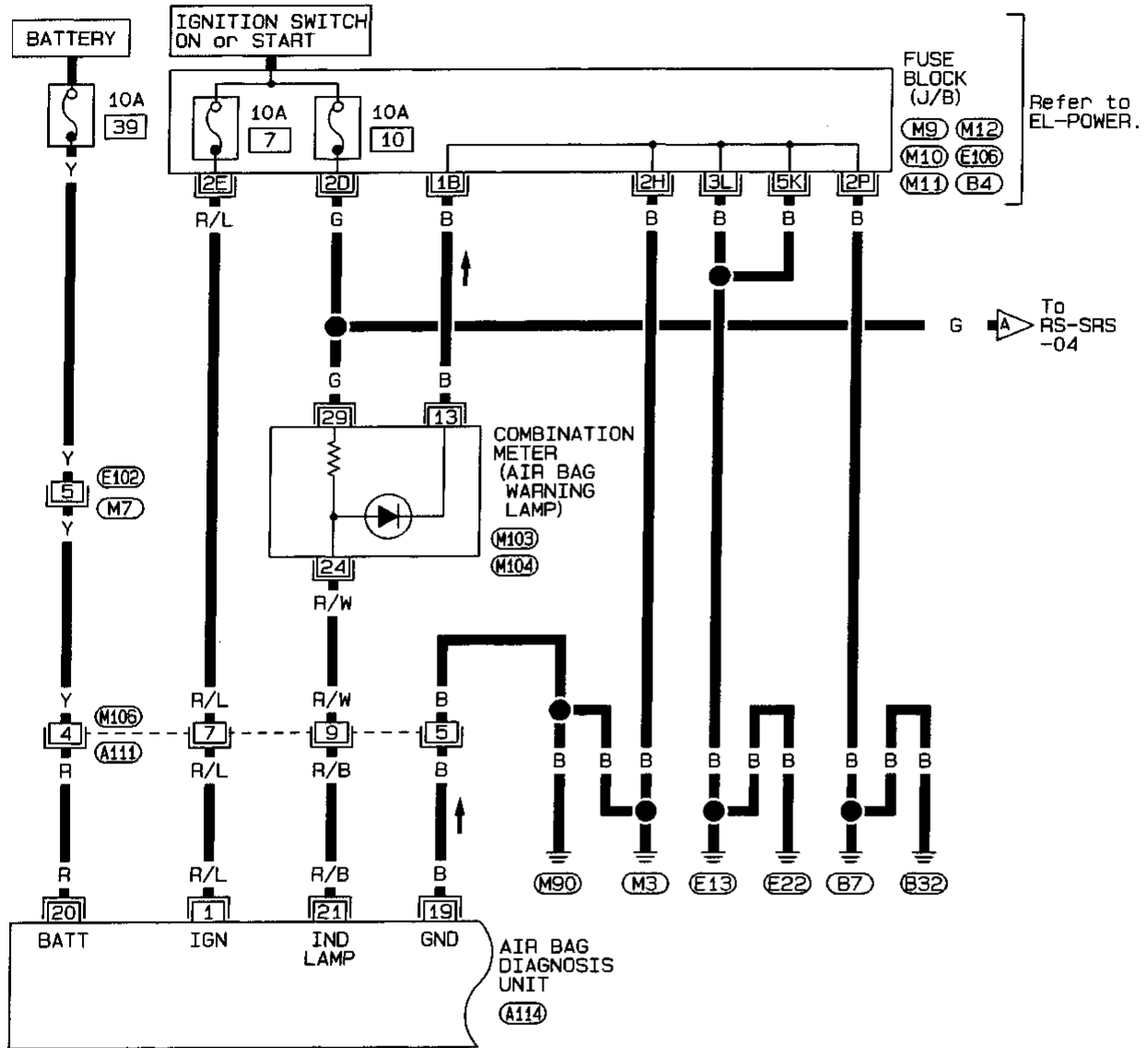
- Do not use electrical test equipment on any circuit related to the SRS unless instructed to in this Service Manual. SRS wiring harnesses are covered with yellow insulation either just before the harness connectors or for the complete harness, for easy identification.
- Do not attempt to repair, splice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

Schematic



Wiring Diagram

RS-SRS-01



1	2	○	3	4	5	(M7), (A111)	
6	7	8	9	10	11	12	W, W

17					22	(M103)	23	24	25	26	27	28	(M104)		
11	12	13	○	14	15	16	B	29	30	31	○	32	33	34	W

19	12	18	10	17	6			15	20	26	25	24	14	16	(A114)
7	5	3	11	9	8	4	○	1	13	21			23	22	Y

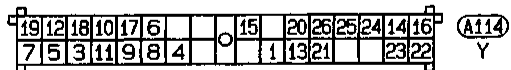
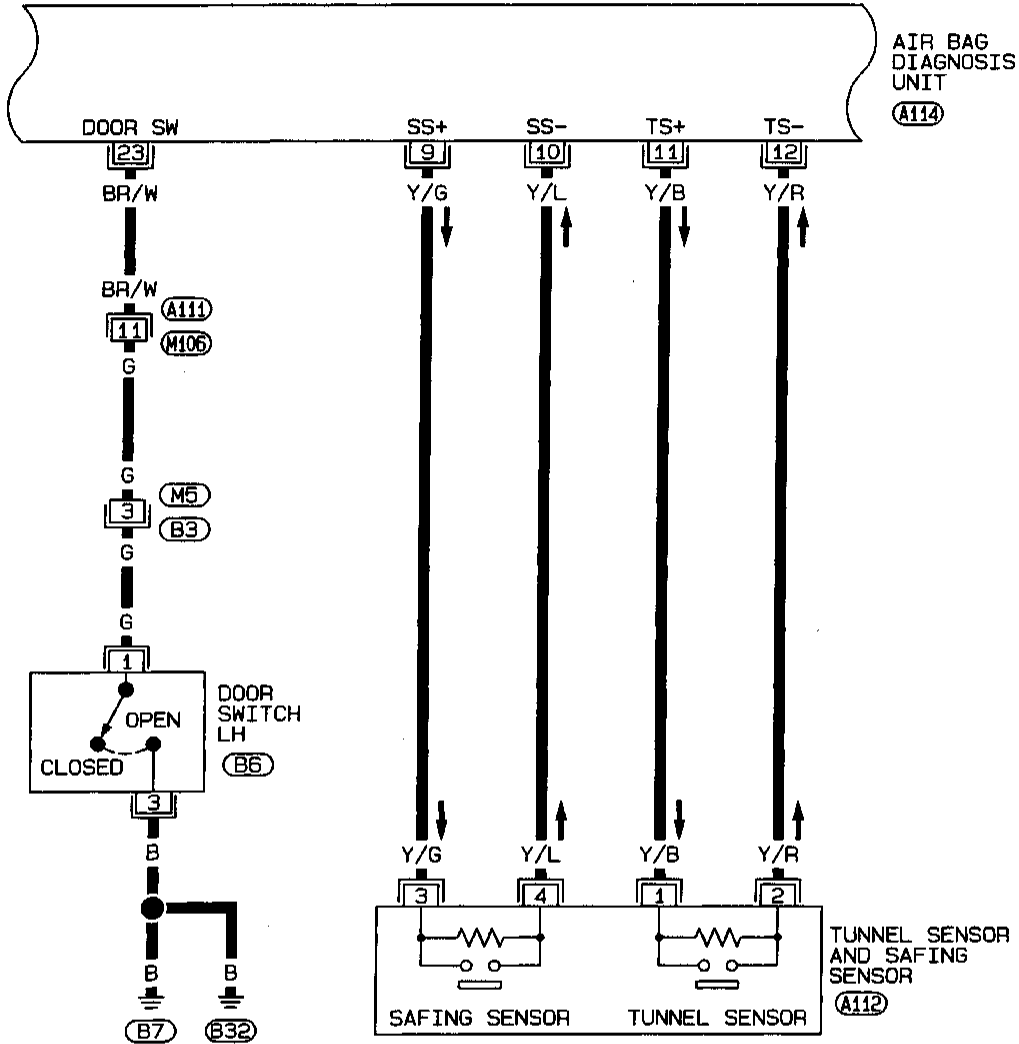
Refer to last page (Foldout page).

- (M9), (M10), (M11), (M12), (E104), (B4)

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TROUBLE DIAGNOSES — Supplemental Restraint System (SRS) Wiring Diagram (Cont'd)

RS-SRS-02

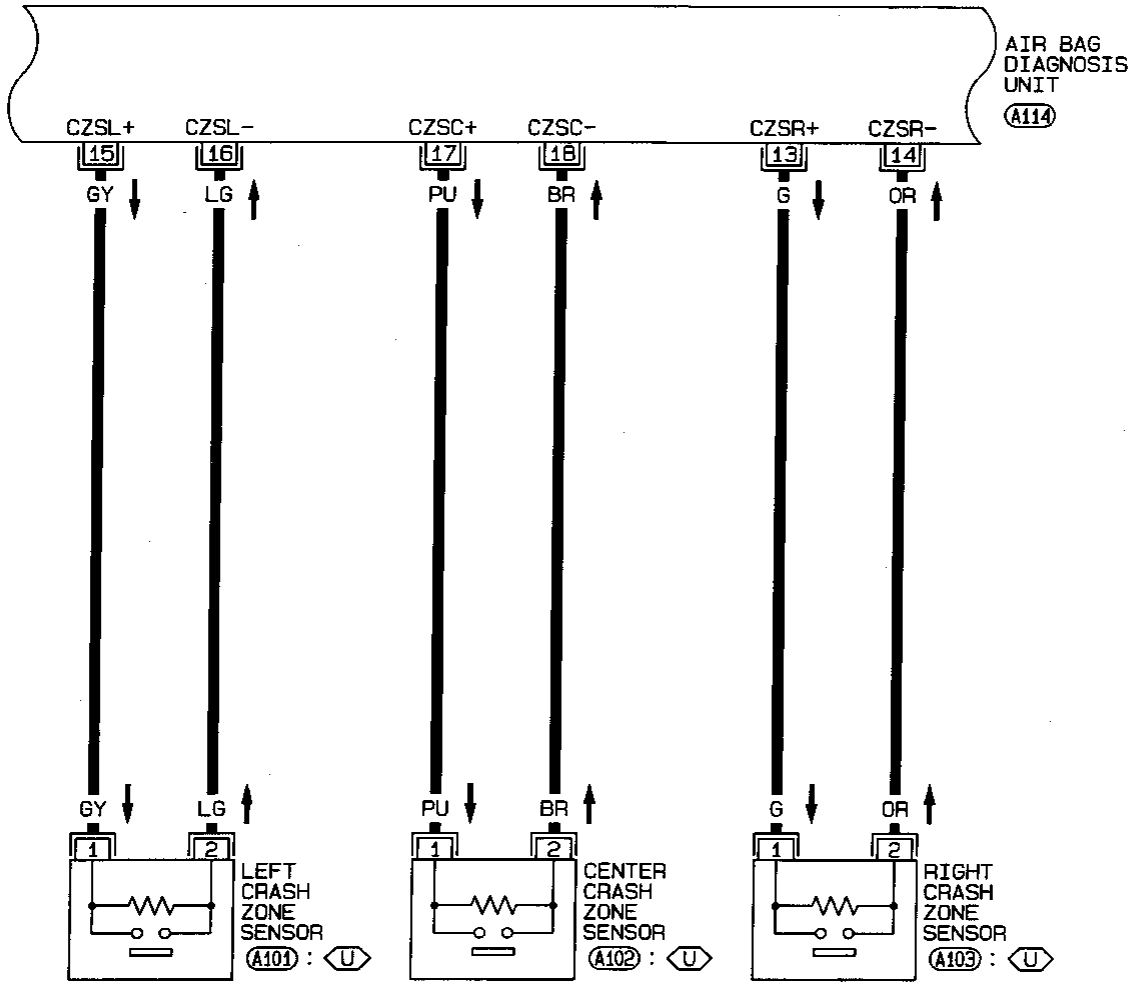


TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

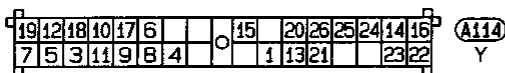
Wiring Diagram (Cont'd)

RS-SRS-03

(U) : U.S.A. models



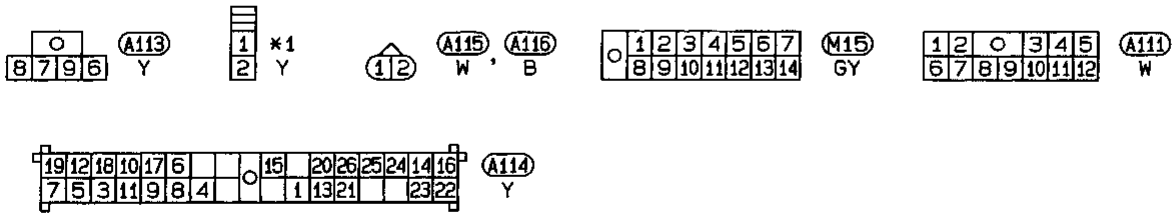
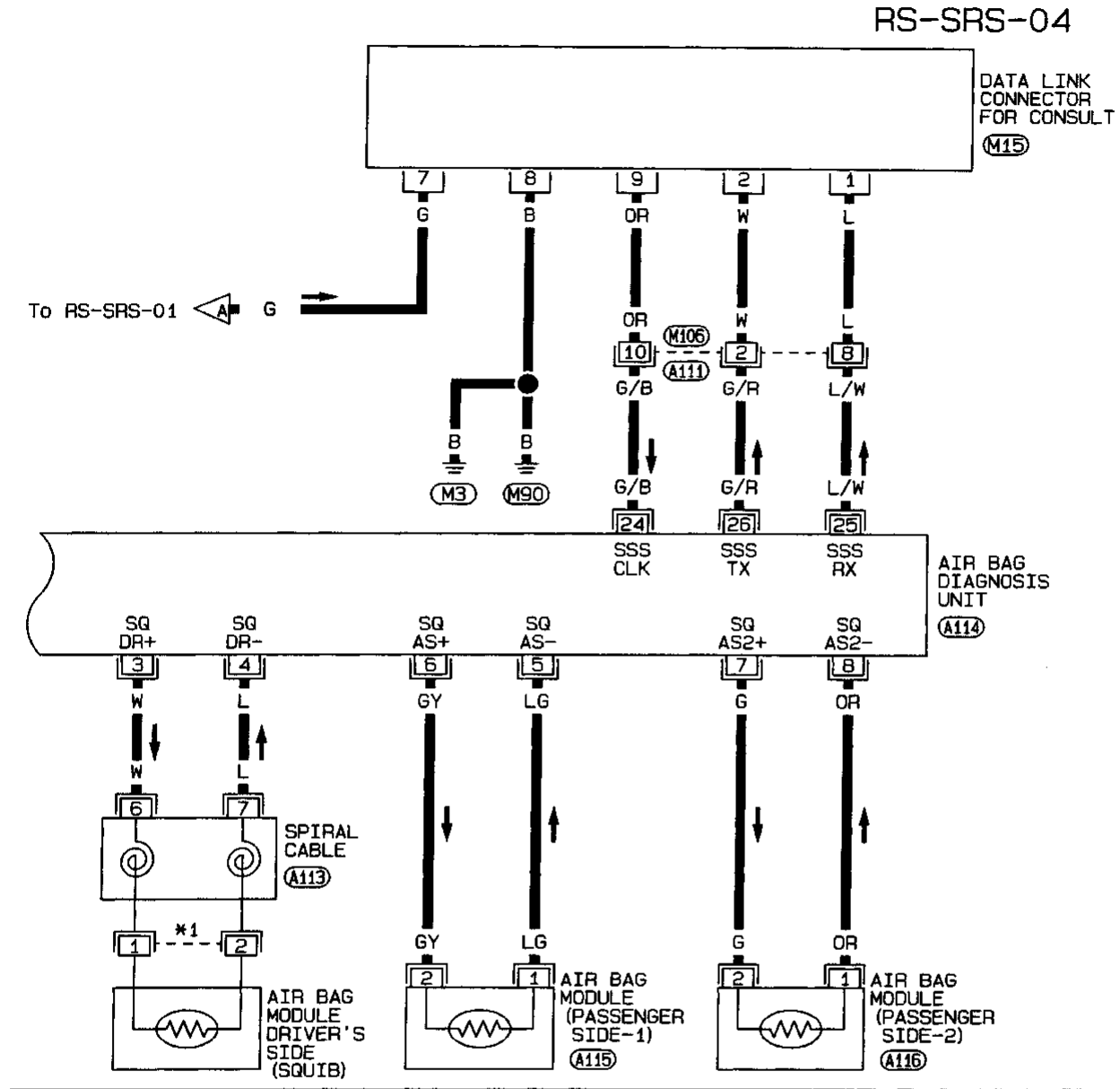
(1) X (2) (A101) (A102) (A103)
 Y Y Y

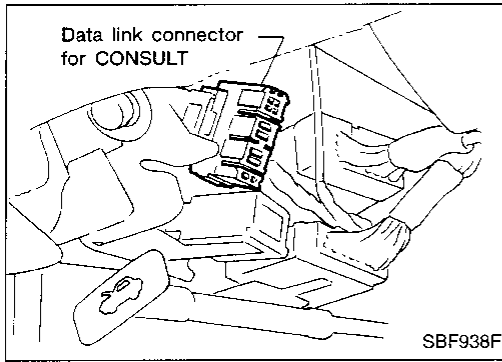


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TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

Wiring Diagram (Cont'd)





Self-diagnosis

USING CONSULT

The self-diagnosis results can be read by CONSULT, as follows:

1. Connect "CONSULT" to data link connector for CONSULT. GI
- ↓
2. Turn ignition switch to "ON". (When CONSULT is connected, the "AIR BAG" warning lamp will be turned to present diagnosis mode.) MA
- ↓
3. Touch "START" to operate "CONSULT". EM
- ↓
4. Touch "AIRBAG" to choose air bag system. LC
- ↓
5. Touch "SELF-DIAG RESULTS" to read self-diagnosis results. EC
- ↓
6. Problem codes are displayed on "SELF-DIAG RESULT 1" (first page — present mode). The problem code last indicated is displayed on "SELF-DIAG RESULT 2" (second page — initial mode). FE
- ↓
7. When "PRINT" is pressed, information displayed on "SELF-DIAG RESULTS 1 and 2" is printed out. CL

WARNING:

- While CONSULT is displaying this "SELF-DIAG RESULTS" information, do not disconnect CONSULT from data link connector. MT
- When finishing air bag diagnosis by CONSULT, make sure to change CONSULT display to SELECT SYSTEM mode by using BACK KEY. AT

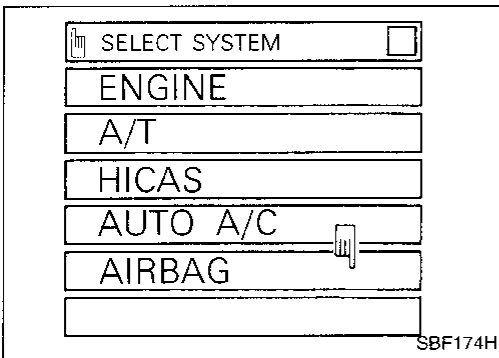
8. After repairing malfunctioning parts, press "ERASE" to clear self-diagnosis results. PD
- After repairing malfunctioning parts, attempt to clear self-diagnosis results from memory. FA

9. Push Back Key of CONSULT until SELECT SYSTEM mode appears to make "SELF-DIAGNOSIS" user mode. RA
- If malfunctioning parts are not completely repaired, self-diagnosis results remain stored in memory. BR

10. Push the power off switch. ST

11. Turn off ignition switch and disconnect CONSULT. RS

12. Turn ignition switch to "ON". "AIR BAG" warning lamp should turn on for about 7 seconds and then turn off. BT



TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

Self-diagnosis (Cont'd)

Self-diagnosis results

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement.
NO SELF DIAGNOSTIC FAILURE INDICATED.	No malfunction is detected.	—
SAFING SENSOR [OPEN/UPR-VB-SHORT]	Safing sensor circuit is open. Wire from the diagnosis unit (terminal No. 3) to the safing sensor is shorted to power supply circuit.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace safing sensor. (safing sensor and tunnel sensor unit) 3. Replace diagnosis unit. 4. Replace air bag harness.
SAFING SENSOR [SHORT/UPR-GND-SHORT]	Both safing sensor wires are shorted. Wire from the diagnosis unit (terminal No. 3) to the safing sensor is shorted to ground.	
AIRBAG MODULE [OPEN]	Driver's air bag module circuit is open (including spiral cable).	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace spiral cable. 3. Replace driver's air bag module. (Before disposing of it, it must be deployed.) 4. Replace diagnosis unit. 5. Replace air bag harness.
AIRBAG MODULE [VB-SHORT]	Driver's air bag module circuit is shorted to power supply circuit (including 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.	
ASSIST A/B MODULE 1 [OPEN]	Front passenger air bag module circuit 1 is open.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace front passenger air bag module. (Before disposing of it, it must be deployed.) 3. Replace diagnosis unit. 4. Replace air bag harness.
ASSIST A/B MODULE 1 [VB-SHORT]	Front passenger air bag module circuit 1 is shorted to some power supply circuit.	
ASSIST A/B MODULE 1 [GND-SHORT]	Front passenger air bag module circuit 1 is shorted to ground.	
ASSIST A/B MODULE 1 [SHORT]	Front passenger air bag module circuits 1 are shorted to each other.	
ASSIST A/B MODULE 2 [OPEN]	Front passenger air bag module circuit 2 is open.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace front passenger air bag module. (Before disposing of it, it must be deployed.) 3. Replace diagnosis unit. 4. Replace air bag harness.
ASSIST A/B MODULE 2 [VB-SHORT]	Front passenger air bag module circuit 2 is shorted to some power supply circuit.	
ASSIST A/B MODULE 2 [GND-SHORT]	Front passenger air bag module circuit 2 is shorted to ground.	
ASSIST A/B MODULE 2 [SHORT]	Front passenger air bag module circuits 2 are shorted to each other.	

*** 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.**

TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

Self-diagnosis (Cont'd)

Diagnostic item	Explanation	Repair order Recheck SRS at each replacement.	
TUNNEL SENSOR [OPEN/UPR-VB-SHORT]	Tunnel sensor circuit is open. Wire from the diagnosis unit (terminal No. 6) to the tunnel sensor is shorted to power supply circuit.	1. Visually check wiring harness connections. 2. Replace tunnel sensor. (safing sensor and tunnel sensor unit) 3. Replace diagnosis unit. 4. Replace air bag harness.	GI
TUNNEL SENSOR [SHORT/UPR-GND-SHORT]	Both tunnel sensor wires are shorted or the wire from the diagnosis unit (terminal No. 6) to the tunnel sensor is shorted to ground.		MA
CRASH ZONE SEN-RH [OPEN/UPR-VB-SHORT]	Crash zone sensor circuit is open. Wire from the diagnosis unit (terminal for the crash zone sensor RH: No. 7, LH: No. 8, CTR: No. 9) to the crash zone sensor is shorted to power supply circuit.	1. Visually check wiring harness connections. 2. Replace crash zone sensor. 3. Replace diagnosis unit. 4. Replace air bag harness.	EM
CRASH ZONE SEN-LH [OPEN/UPR-VB-SHORT]			LC
CRASH ZONE SEN-CTR [OPEN/UPR-VB-SHORT]			EC
CRASH ZONE SEN-RH [SHORT]	Crash zone sensor circuits are shorted to each other.		FE
CRASH ZONE SEN-LH [SHORT]			CL
CRASH ZONE SEN-CTR [SHORT]			GL
CONTROL UNIT	Diagnosis unit is out of order.	1. Visually check wiring harness connections. 2. Replace diagnosis unit. 3. Replace air bag harness. 4. Replace main harness.	MT
INDEFINITE FAILURES [AIR BAG]	A problem cannot be specified because more than two parts except seat belt pre-tensioners are out of order.	1. Visually check wiring harness connections. 2. Replace diagnosis unit. 3. Replace all sensors, spiral cable and air bag modules and seat belts. 4. Replace air bag harness. 5. Replace main harness.	AT PD

* 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.

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TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

Self-diagnosis (Cont'd)

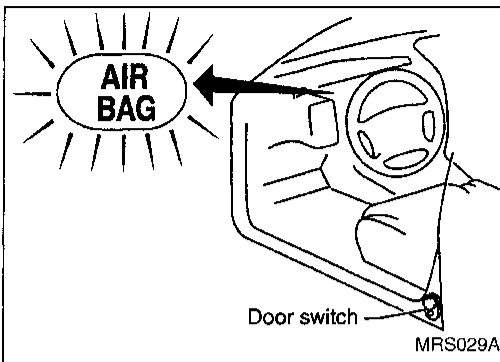
USING THE WARNING LAMP

Self-diagnosis results can be also read by using the "AIR BAG" warning lamp.

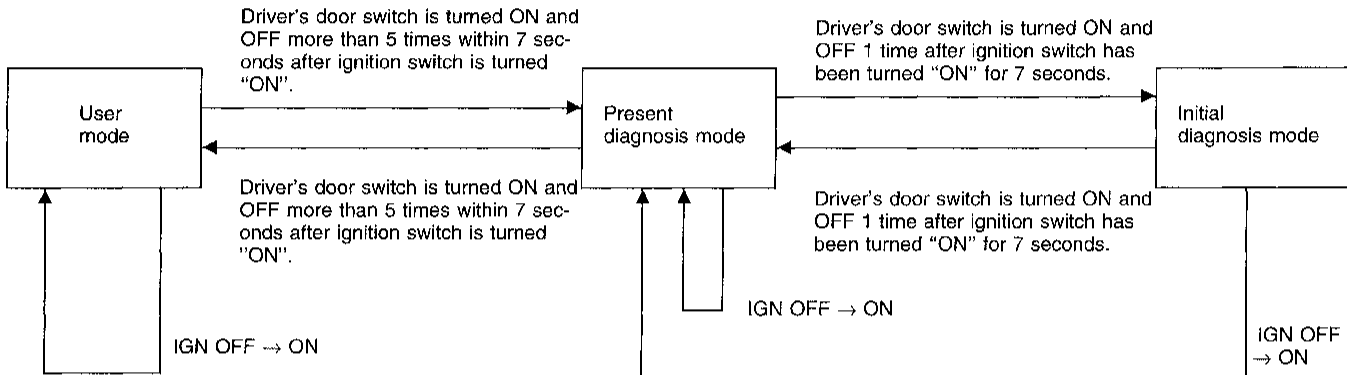
The "AIR BAG" warning lamp operates as shown below:

NOTE:

- If the "AIR BAG" warning lamp does not illuminate, refer to RS-29 for details.
- If the "AIR BAG" warning lamp does not turn off, refer to RS-30 for details.



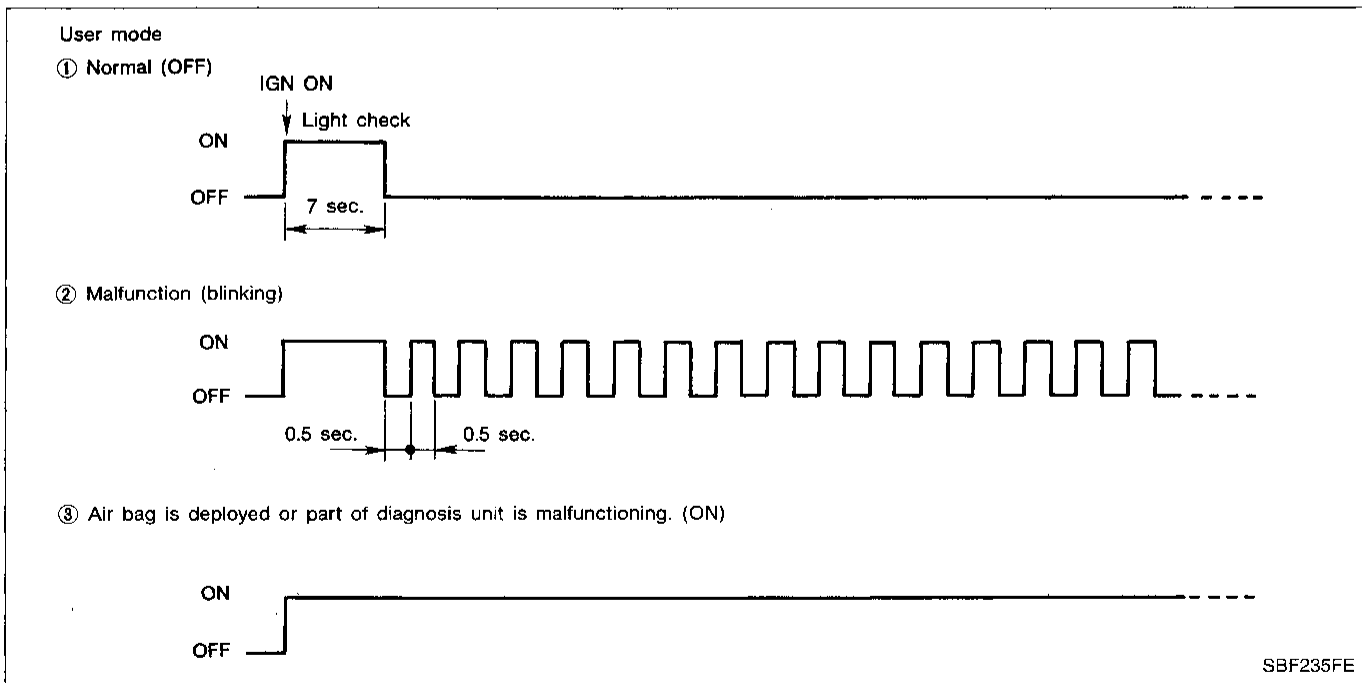
How to alternate self-diagnosis



Problem codes are displayed in present diagnosis mode (self-diagnosis result 1). The problem code last indicated is displayed in initial diagnosis mode (self-diagnosis result 2).

Warning lamp indication

- After repairing malfunctioning part, use driver's door switch to return the system to user mode. This will clear self-diagnosis results from memory.
- If a malfunctioning part is not completely repaired, self-diagnosis results will not be cleared.



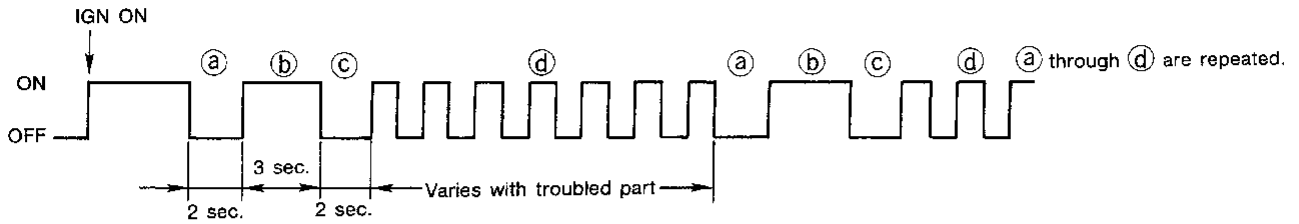
TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

Self-diagnosis (Cont'd)

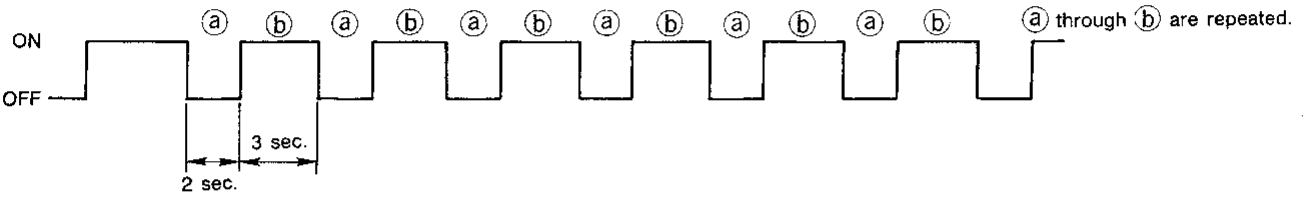
Present diagnosis mode (Self-diagnosis result 1)

① Indicates malfunctioning part. — The system needs to be repaired.

② Start signal; Start signal identifies display modes.



② No trouble (or intermittent trouble/repair completion)

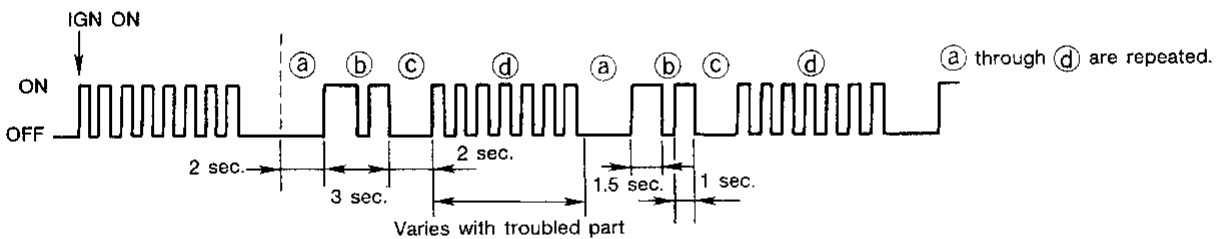


SRS033

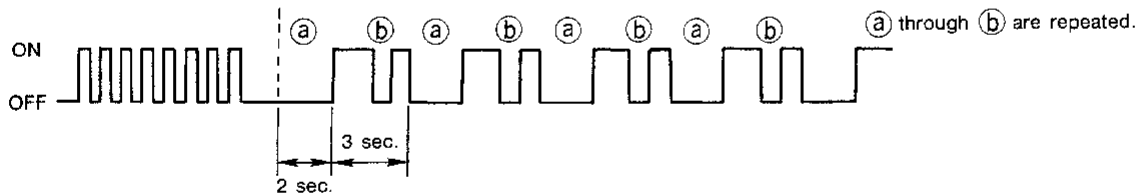
Initial diagnosis mode (Self-diagnosis result 2)

① Indicates past malfunctioning part.

② Start signal; Start signal identifies display modes.



② No trouble



SRS034

Self-diagnosis results in present- and initial-diagnosis modes can be identified by number of flashes ①. Refer to Table on next page for troubled parts.

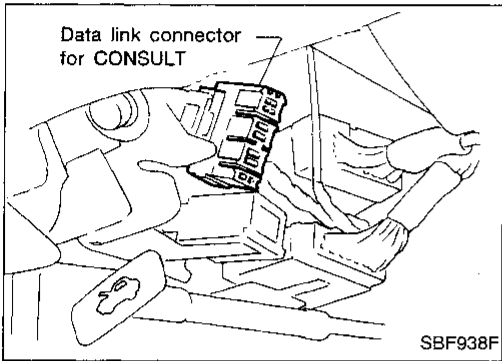
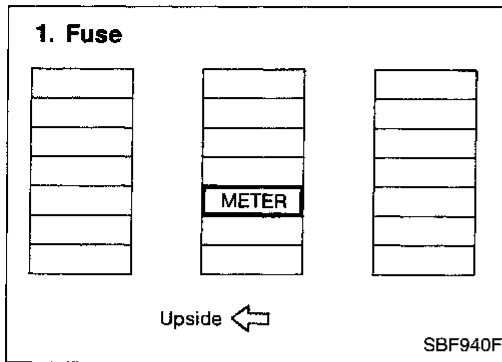
TROUBLE DIAGNOSES — Supplemental Restraint System (SRS)

Self-diagnosis (Cont'd)

Warning lamp flashing times and repair

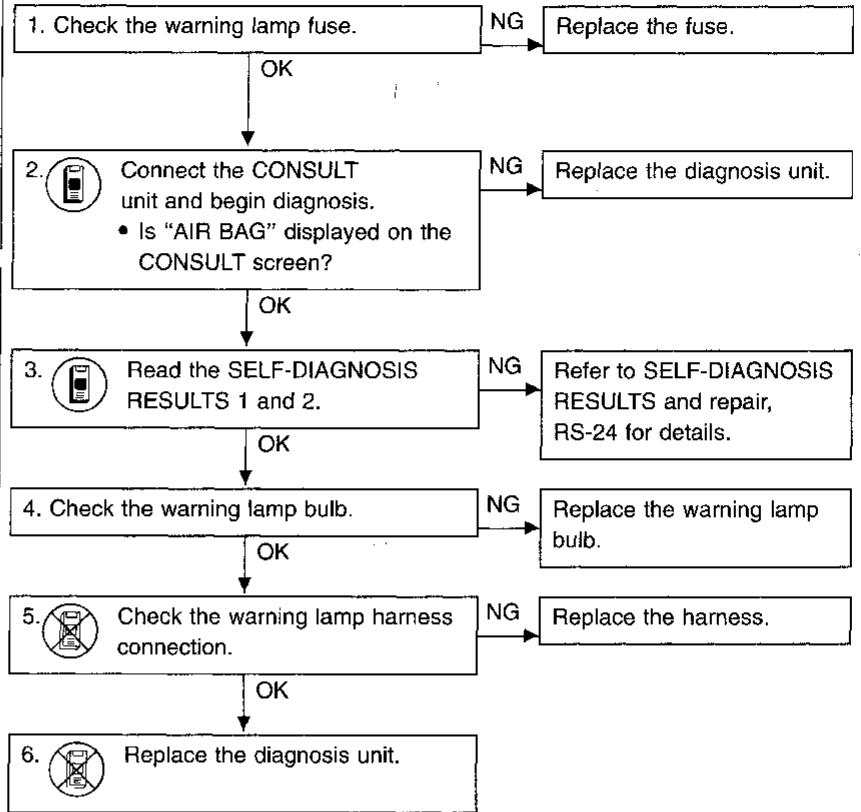
Warning lamp	Flash code ④ (# of flashes)	Explanation	Repair order * Recheck SRS at each replacement.
"AIR BAG" warning lamp	0	No malfunction is detected.	—
	1	Safing sensor circuit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace safing sensor. (safing sensor and tunnel sensor unit) 3. Replace diagnosis unit. 4. Replace air bag harness.
	2	Driver's air bag module circuit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace spiral cable. 3. Replace the driver's air bag module. (Before disposing of it, it must be deployed.) 4. Replace diagnosis unit. 5. Replace air bag harness.
	3	Tunnel sensor circuit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace tunnel sensor. (safing sensor and tunnel sensor unit) 3. Replace diagnosis unit. 4. Replace air bag harness.
	4	Right crash zone sensor circuit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace right crash sensor. 3. Replace diagnosis unit. 4. Replace air bag harness.
	5	Left crash zone sensor circuit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace left crash zone sensor. 3. Replace diagnosis unit. 4. Replace air bag harness.
	6	Center crash zone sensor circuit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace center crash zone sensor. 3. Replace diagnosis unit. 4. Replace air bag harness.
	7	Diagnosis unit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace diagnosis unit. 3. Replace air bag harness. 4. Replace main harness.
	8	Front passenger air bag module circuit is out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace front passenger air bag module. (Before disposing of it, it must be deployed.) 3. Replace diagnosis unit. 4. Replace air bag harness.
	9	More than two parts groups are out of order.	<ol style="list-style-type: none"> 1. Visually check wiring harness connections. 2. Replace diagnosis unit. 3. Replace all sensors, spiral cable and air bag module. 4. Replace air bag harness. 5. Replace main harness.

* 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.



Diagnostic Procedure 1

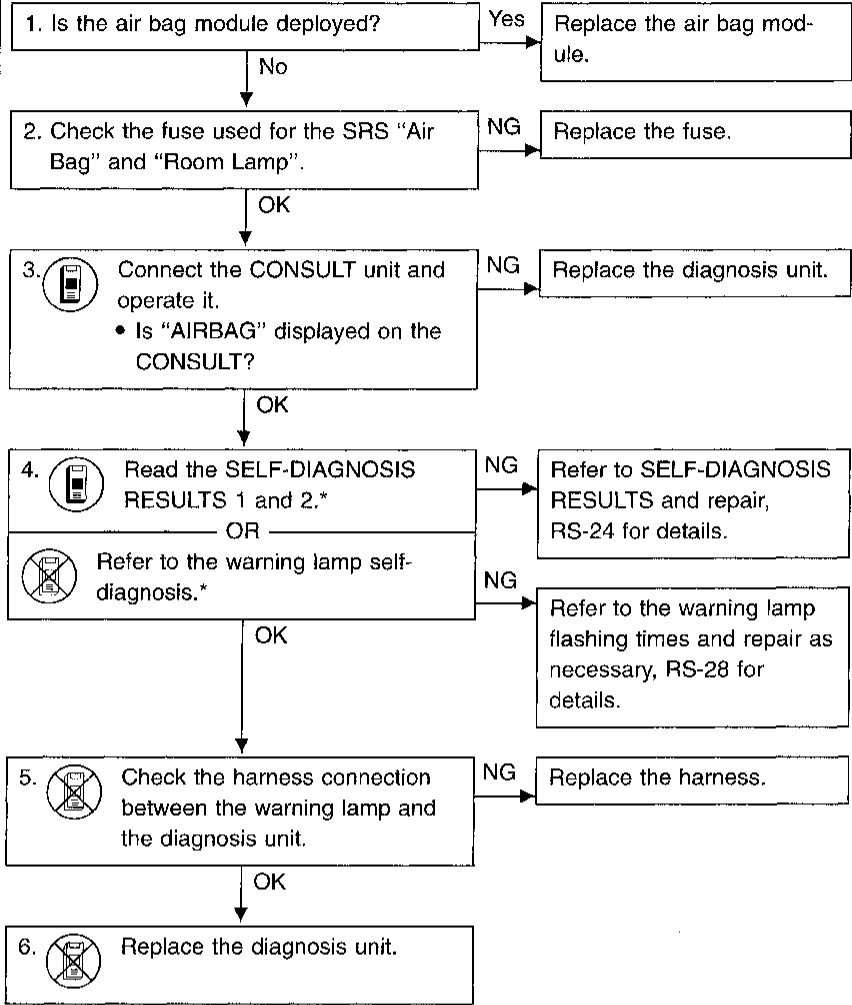
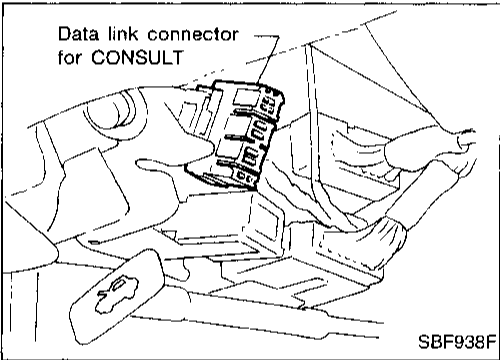
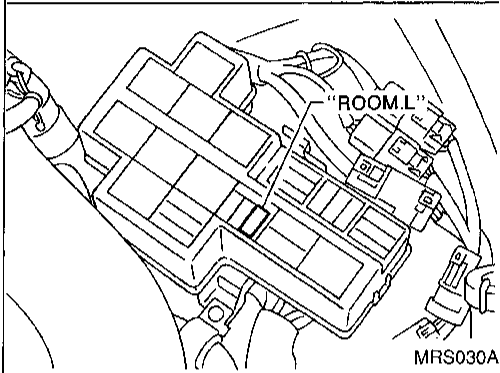
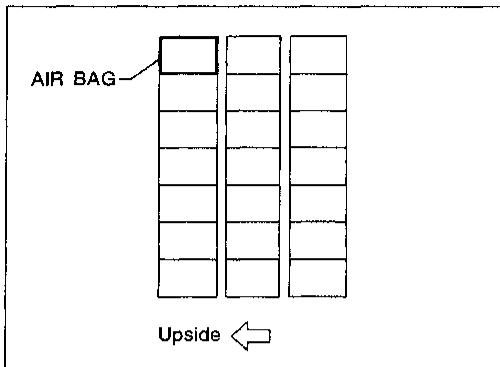
SYMPTOM: Warning lamp does not turn on.



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Diagnostic Procedure 2

SYMPTOM: Warning lamp does not turn off.



* Recheck SRS after each replacement.

Collision Diagnosis

To repair the SRS "AIR BAG", perform the following steps.

When air bag deployed in a collision:

- ① Replace the diagnosis unit.
- ② Remove the air bag module.
- 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. Ensure the remainder of the SRS is operating properly. Refer to "Self-diagnosis" (RS-23) for details.
- ⑤ Install new air bag module.
- ⑥ Conduct self-diagnosis again.

When air bag did not deploy 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 or "AIR BAG" warning lamp to ensure entire SRS operates properly.

SRS inspection

Part	Air bag deployed	Air bag did NOT deploy
Air bag module (driver and passenger side)	REPLACE Install with new bolts.	1. Remove air bag module. Check harness cover and connectors for damage, terminals for deformities, and harness for binding. 2. Install air bag module into the steering wheel to check fit and alignment with the wheel. 3. No damage found, reinstall with new bolts. 4. If damaged—REPLACE. Air bag must be deployed before discarding.
Instrument panel	REPLACE Install with new bolts.	1. Check instrument panel for bending, deformities, or cracks. 2. If no damage is found, reinstall with new bolts. 3. If damaged—REPLACE.
Diagnosis unit	REPLACE Install with new bolts.	1. Check case and bracket for dents, cracks or deformities. 2. Check connectors for damage, and terminals for deformities. 3. If no damage is found, reinstall with new bolts. 4. If damaged—REPLACE.
Sensors	1. Check body and sensor brackets for deformities or rust. 2. Check sensor case for dents, cracks, scratches, deformities or rust. 3. Check sensor harness, connector, and terminals for binding, damage, or deformities. 4. If no damage is found, reinstall with new bolts. 5. If damaged—REPLACE.	
Steering wheel	1. Check harness (built into steering wheel) and connectors for damage, and terminals for deformities. 2. Install air bag module to check fit or alignment with steering wheel. 3. Check steering wheel for excessive free play. 4. If no damage is found, reinstall with new bolts. 5. If damaged—REPLACE.	
Spiral cable	1. Visually check spiral cable and combination switch for damage. 2. Check connectors, flat cable and protective tape for damage. 3. Check steering wheel for noise, binding or heavy operation. 4. If no damage is found, reinstall with new bolts. 5. If damaged—REPLACE.	
Harness and Connectors	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 harness and connectors. 4. Damaged—REPLACE damaged section of harness. Do not attempt to repair, splice or modify any SRS harness.	

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