INTERIOR AND SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

CONTENTS

GROUP 52A
INTERIOR

GENERAL

OUTLINE OF CHANGES

The following maintenance service points have been added to correspond to the addition of an SRS side air bag. Maintenance service points not listed below are the same as those given in the '96 CARISMA Basic Manual (Pub. No. PWDE9502).

SEAT

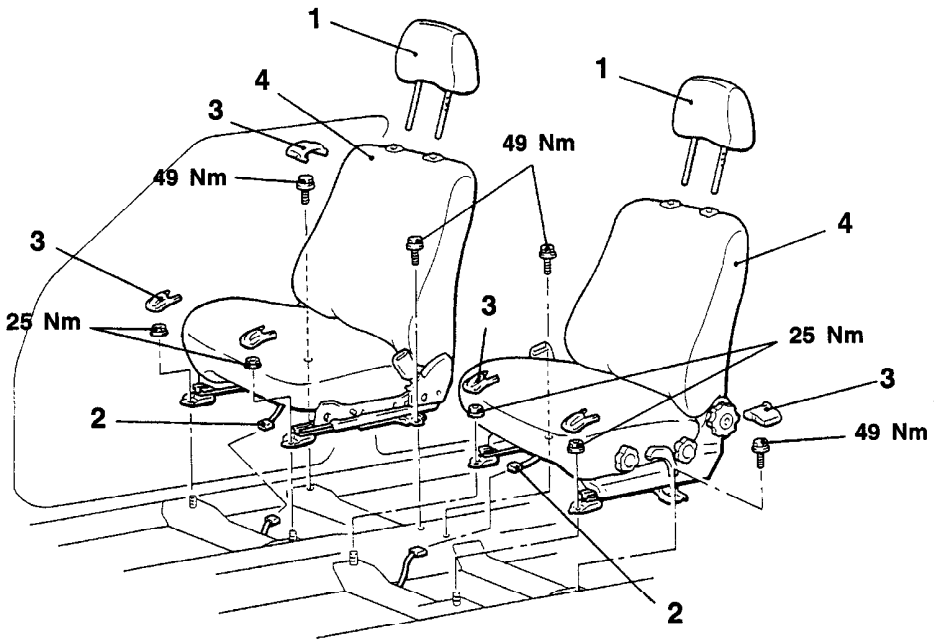
FRONT SEAT

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation
- Rear Floor Console Assembly Removal and Installation (Refer to '96 CARISMA Basic Manual.)

CAUTION: SRS
When removing and installing the rear floor console (vehicles equipped with SRS), do not let it bump against the SRS-ECU.

- Before removal of the seat equipped with the side air bag module, refer to GROUP 52B – SRS Service Precautions and Air Bag Module.



A19U0134

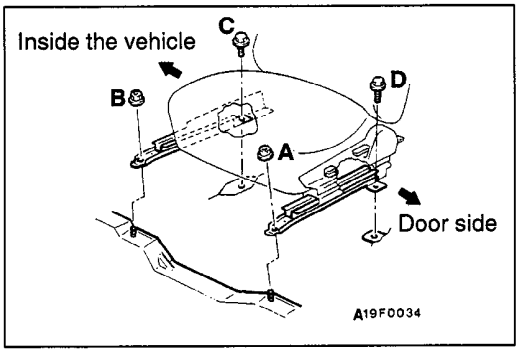
1. Headrestraint

Front seat assembly removal steps

2. Harness connector
3. Seat anchor cover
4. Front seat assembly

▶A◀

NOTE
After provisionally tightening the seat assembly mounting nuts and bolts in every installation location, fully tighten them to the specified torque.



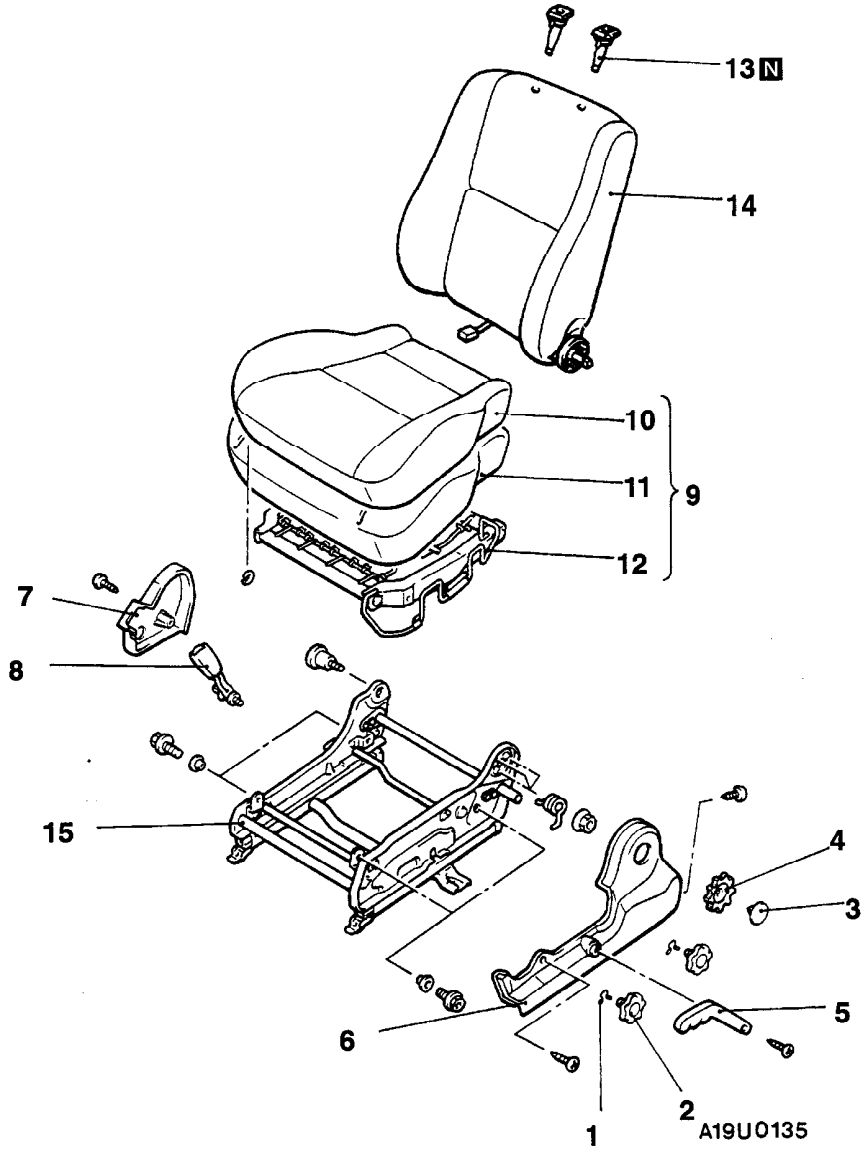
INSTALLATION SERVICE POINT

▶A◀ FRONT SEAT ASSEMBLY INSTALLATION

Tighten the front seat mounting bolts in the order A, B, C, and D.

DISASSEMBLY AND REASSEMBLY

Caution
Do not disassemble the front seatback assembly with built-in side air bag module.



Seat disassembly steps

1. Shaft snap ring
2. Height adjuster knob
3. Cap
4. Reclining knob
5. Seat adjuster lever
6. Front seat side shield cover
7. Front seat hinge cover
8. Inner seat belt
9. Front seat cushion assembly
10. Front seat cushion cover
11. Front seat cushion pad
12. Front seat cushion frame
13. Headrestraint guide
14. Front seatback assembly

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

CONTENTS

CAUTION

- **Carefully read and observe the information in the SERVICE PRECAUTIONS (P.52B-2.) prior to any service.**
- **For information concerning troubleshooting or maintenance, always observe the procedures in the Troubleshooting (P.52B-6.) section.**
- **If any SRS components are removed or replaced in connection with any service procedures, be sure to follow the procedures in the INDIVIDUAL COMPONENT SERVICE section (P.52B-20.) for the components involved.**
- **If you have any questions about the SRS, please contact your local distributor.**

GENERAL

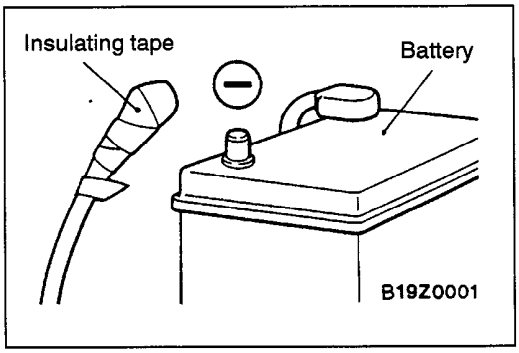
OUTLINE OF CHANGES

The following maintenance service points have been established to correspond to the addition of an SRS side air bag and changes in the SRS-ECU (vehicles without SRS side air bag). Maintenance service points not listed below are the same as those given in the '96 CARISMA Basic Manual (Pub. No. PWDE9502).

SRS SERVICE PRECAUTIONS

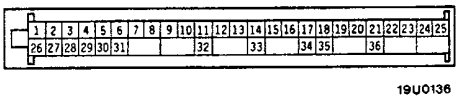
1. In order to avoid injury to yourself or others from accidental deployment of the air bag and accidental operation of the seat belt with pre-tensioner during servicing, read and carefully follow all the precautions and procedures described in this manual.
2. Do not use any electrical test equipment on or near SRS components, except those specified on P.52B-5. <Refer to '96 CARISMA Basic Manual (Pub. No. PWDE9502)>
3. **Never Attempt to Repair the Following Components:**
   - Side air bag module
   - Side impact sensor

   NOTE
   If any of these components are diagnosed as faulty, they should only be replaced, in accordance with the INDIVIDUAL COMPONENTS SERVICE procedures in this manual, starting at page 52B-20.



4. **After disconnecting the battery cable, wait 60 seconds or more before proceeding with the following work. The SRS system is designed to retain enough voltage to deploy the air bag for a short time even after the battery has been disconnected, so serious injury may result from unintended air bag deployment if work is done on the SRS system immediately after the battery cables are disconnected.**

SRS-ECU connector

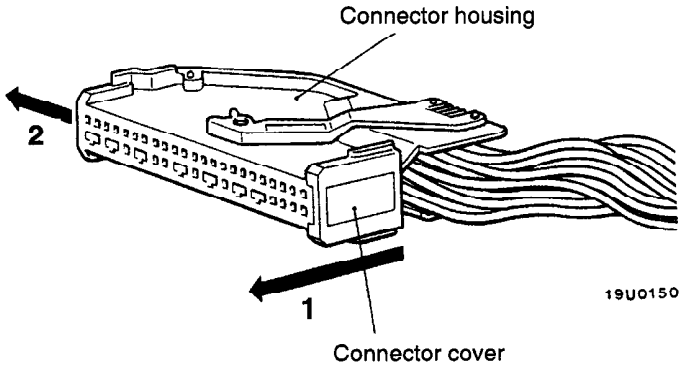


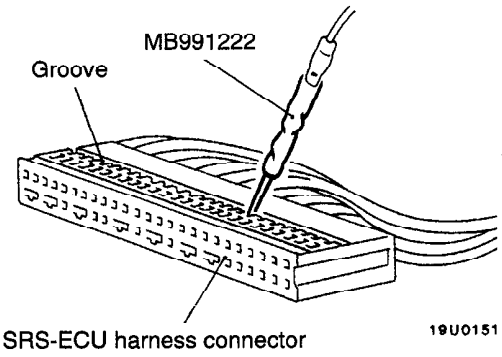
19U0136

5. Do not attempt to repair the wiring harness connectors of the SRS. If any of the connectors are diagnosed as faulty, replace the wiring harness. If the wires are diagnosed as faulty, replace or repair the wiring harness according to the following table.

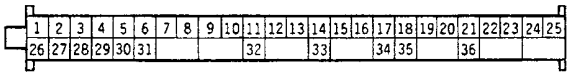
SRS-ECU Terminal No.	Destination of harness	Corrective action
1 to 4	–	–
5, 14	Body wiring harness → Side impact sensor (RH)	Correct or replace each wiring harness.
6, 34	Body wiring harness → Side impact sensor (LH)	
7, 8	Body wiring harness → Side air bag module (RH)	
9, 10	Body wiring harness → Side air bag module (LH)	
11	–	–
12, 13	Body wiring harness → Air bag module (Front passenger's side)	Correct or replace each wiring harness.
15, 16	Body wiring harness → Clock spring → Air bag module (Driver's side)	Correct or replace the dash wiring harness. Replace the clock spring.
17	Body wiring harness → Diagnosis connector	Correct or replace each wiring harness.
18	Body wiring harness → Junction block (fuse No.4)	
19	Body wiring harness → Combination meter (SRS warning lamp)	
20, 35	Body wiring harness → Earth	
21	Body wiring harness → Junction block (fuse No.11)	
22, 23	Body wiring harness → Seat belt with pre-tensioner (Front passenger's side)	
24, 25	Body wiring harness → Seat belt with pre-tensioner (Driver's side)	
26 to 33, 36	–	–

6. Inspection of the SRS-ECU harness connector should be carried out by the following procedure.
After removing the harness connector cover by sliding it in the direction of the arrow 1 in the illustration, remove the connector housing by sliding it in the direction of the arrow 2.
Insert the special tool (ultra-fine probe in harness set) into the groove in the SRS-ECU harness connector and connect this to the tester in order to carry out inspection. If any tool other than the designated special tool is used, it will damage the harness and other parts. In addition, do not take the measurements by touching the probe directly to any terminals other than the groove shown in the illustration. The connector terminals are plated in order to increase their conductivity, so that if they are touched by the probe, it could cause the plating to peel off, which will adversely affect the reliability of the connector performance.





SRS-ECU harness connector (seen from the rear)

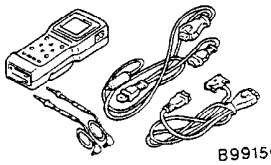
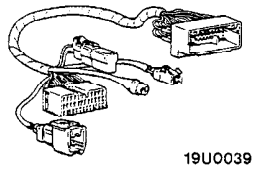
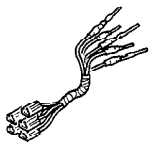
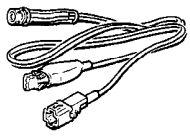
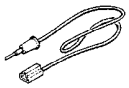
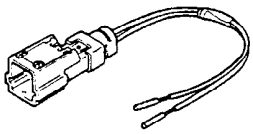


19U0137
00006542

7. SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS-ECU, air bag module (driver's side and front passenger's side), clock spring, side impact sensors, front seat assemblies (side air bag module), and seat belts with pre-tensioner before drying or baking the vehicle after painting.
   - SRS-ECU, air bag module, clock spring, side impact sensor: 93°C or more
   - Seat belt with pre-tensioner: 90°C or more
8. Whenever you finish servicing the SRS, check warning lamp operation to make sure that the system functions properly. (Refer to '96 CARISMA Basic Manual.)
9. Make certain that the ignition switch is OFF when the MUT-II is connected or disconnected.
10. If you have any questions about the SRS, please contact your local distributor.

NOTE
SERIOUS INJURY CAN RESULT FROM UNINTENDED AIR BAG DEPLOYMENT, SO USE ONLY THE PROCEDURES AND EQUIPMENT SPECIFIED IN THIS MANUAL.

SPECIAL TOOLS

Tool	Number	Name	Use
 B991502	MB991502	MUT-II sub assembly	• Reading diagnosis codes • Erasing diagnosis code • Reading trouble period • Reading erase times
 19U0039	MB991613	SRS check harness	Checking the SRS electrical circuitry
A  B  C  D  C991223	MB991223 A: MB991219 B: MB991220 C: MB991221 D: MB991222	Harness set A: Check harness B: LED harness C: LED harness adapter D: Probe	Checking the continuity and measuring the voltage at the SRS-ECU harness connector
 B686560	MB686560	SRS air bag adapter harness A	Deployment of side air bag module outside the vehicle

TROUBLESHOOTING

INSPECTION CHART FOR DIAGNOSIS CODES

Inspect according to the inspection chart that is appropriate for the malfunction code.

Code No.	Diagnosis Item		Reference page
14*	Analog G-sensor system in the SRS-ECU		–
15*, 16*	Front impact safing G sensor system inside SRS-ECU		–
17	Side impact safing G sensor system inside SRS-ECU		52B-7
21, 22, 61, 62	Driver's side air bag module (squib) system		52B-8
24, 25, 64, 65	Front passenger's side air bag module (squib) system		52B-9
26*, 27*	Driver's side pre-tensioner (squib) system		–
28*, 29*	Front passenger's side pre-tensioner (squib) system		–
31*, 32*	SRS-ECU capacitor system		–
35*	SRS-ECU (deployed air bag) system		–
41*[1]	IG_1 (A) power circuit system		52B-9
42*[1]	IG_1 (B) power circuit system		52B-10
43	SRS warning lamp drive circuit system	Lamp does not illuminate.*[1]	52B-10
		Lamp does not switch off.	52B-10
44*	SRS warning lamp drive circuit system		–
45*	Internal circuit system of non-volatile memory (EEPROM) inside SRS-ECU		–
51*, 52*	Driver's side air bag module (squib ignition drive circuit) system		–
54*, 55*	Front passenger's side air bag module (squib ignition drive circuit) system		–
56*, 57*	Driver's side pre-tensioner (squib ignition drive circuit) system		–
58*, 59*	Passenger's side pre-tensioner (squib ignition drive circuit) system		–
66, 67	Driver's side pre-tensioner (squib) system		52B-11
68, 69	Front passenger's side pre-tensioner (squib) system		52B-12
71, 72, 75, 76	Side air bag module (L.H) (squib) system		52B-13
73, 74	Side air bag module (L.H.) (squib) ignition drive circuit system		52B-13
81, 82, 85, 86	Side air bag module (R.H.) (squib) system		52B-14
83, 84	Side air bag module (R.H.) (squib) ignition drive circuit system		52B-14

Code No.	Diagnosis Item	Reference page
91*1	Side impact sensor (L.H.) power supply circuit system	52B-14
92	Side impact sensor (L.H.) system	52B-15
93	Side impact sensor (L.H.) communication system	52B-15
94*1	Side impact sensor (R.H.) power supply circuit system	52B-15
95	Side impact sensor (R.H.) system	52B-15
96	Side impact sensor (R.H.) communication system	52B-16

NOTE
(1) *: Refer to '96 CARISMA Basic Manual (Pub. No. PWDE9502).
(2) *1: If the vehicle condition returns to normal, the diagnosis code will be automatically erased, and the SRS warning lamp will return to normal.
(3) If the vehicle has a discharged battery it will store the fault codes 41 or 42. When these diagnosis codes are displayed, check the battery.

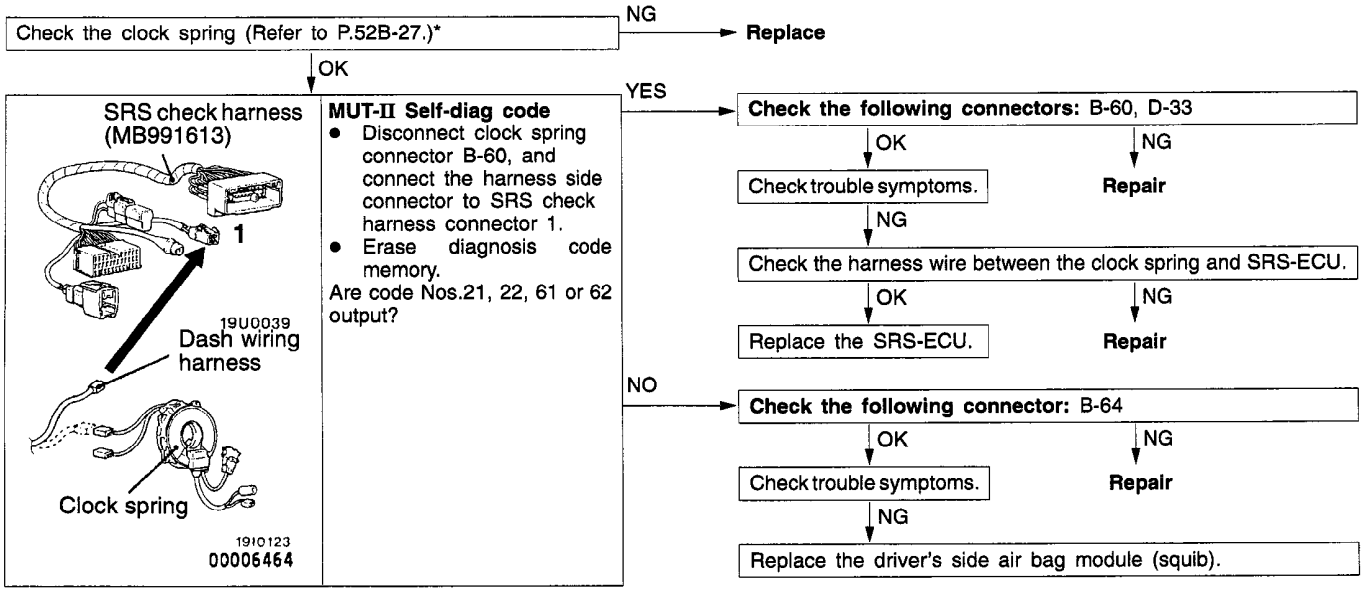
INSPECTION PROCEDURE CLASSIFIED BY DIAGNOSIS CODE

Code No.17 Side impact safing G sensor system inside SRS-ECU	**Probable cause**
This code is output if the following are detected from the side impact safing G sensor output. ● Safing G sensor is not operating ● Safing G sensor characteristics are abnormal ● Safing G sensor output is abnormal	Malfunction of SRS-ECU

Replace the SRS-ECU.

Code No.21, 22, 61 or 62 Driver's side air bag module (squib) system	Probable cause
These diagnosis codes are output if there is abnormal resistance between the input terminals of the driver's side air bag module (squib). The trouble causes for each diagnosis code No. are as follows.	• Malfunction of clock spring • Partial disconnection due to incorrect clock spring neutral position • Malfunction of wiring harnesses or connectors • Malfunction of driver's side air bag module (squib) • Malfunction of SRS-ECU

Code No.	Trouble cause
21	• Short in driver's side air bag module (squib) or harness short • Short in clock spring
22	• Open circuit in driver's side air bag module (squib) or open harness • Open circuit in clock spring • Disconnected driver's side air bag module (squib) connector • Partial disconnection due to incorrect clock spring neutral position • Malfunction of connector contact
61	• Short in driver's side air bag module (squib) harness leading to the power supply
62	• Short in driver's side air bag module (squib) harness leading to the earth

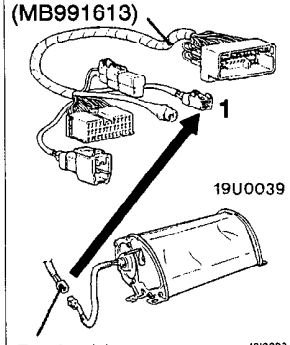


NOTE
*: Refer to '96 CARISMA Basic Manual (Pub. No. PWDE9502)

Code No.24, 25, 64 or 65 Front passenger's side air bag module (squib) system	Probable cause
These diagnosis codes are output if there is abnormal resistance between the input terminals of the front passenger's side air bag module (squib). The trouble causes for each diagnosis code No. are as follows.	• Malfunction of wiring harnesses or connectors • Malfunction of front passenger's side air bag module (squib) • Malfunction of SRS-ECU

Code No.	Trouble cause
24	• Short in front passenger's side air bag module (squib) or harness short
25	• Open circuit in front passenger's side air bag module (squib) or open harness • Malfunction of connector contact
64	• Short in front passenger's side air bag module (squib) harness leading to the power supply
65	• Short in front passenger's side air bag module (squib) harness leading to the earth

SRS check harness (MB991613)



MUT-II Self-diag code
- Disconnect front passenger's side air bag module connector B-12, and connect the harness side connector to SRS check harness connector 1.
- Erase diagnosis code memory.

Are code Nos.24, 25, 64 or 65 output?

YES → **Check the following connectors:** D-33, B-12
- OK → Check trouble symptoms.
  - NG → Check the harness wire between the front passenger's side air bag module (squib) and SRS-ECU.
    - OK → Replace the SRS-ECU.
    - NG → **Repair**
  - NG → **Repair**
- NG → **Repair**

NO → Replace the front passenger's side air bag module (squib).

Code No.41 IG_1 (A) power circuit system	Probable cause
This diagnosis code is output if the voltage between the IG_1 (A) terminal and the earth is lower than the specified value for a continuous period of 5 seconds or more. However, if the vehicle condition returns to normal, diagnosis code No.41 will be automatically erased, and the SRS warning lamp will switch off.	• Malfunction of wiring harnesses or connectors • Malfunction of SRS-ECU

Measure at SRS-ECU connector D-33.
- Disconnect the connector, and measure at the harness side connector.
- Connect the battery (–) terminal.
- Ignition switch: ON
- Voltage between terminal 18 and body earth

OK: 9 V or more

NG → **Check the following connectors:** D-33, B-88, B-86
- OK → Check trouble symptoms.
  - NG → Check the harness wire between the SRS-ECU and ignition switch IG_1, and repair if necessary.
  - NG → **Repair**
- NG → **Repair**

OK → Replace the SRS-ECU.

Code No.42 IG_1 (B) power circuit system	Probable cause
This diagnosis code is output if the voltage between the IG_1 (B) terminal and the earth is lower than the specified value for a continuous period of 5 seconds or more. However, if the vehicle condition returns to normal, diagnosis code No.42 will be automatically erased, and the SRS warning lamp will switch off.	• Malfunction of wiring harnesses or connectors • Malfunction of SRS-ECU

Measure at SRS-ECU connector D-33.
- Disconnect the connector, and measure at the harness side connector.
- Connect the battery (–) terminal.
- Ignition switch: ON
- Voltage between terminal 21 and body earth

OK: 9 V or more

NG → **Check the following connectors:** D-33, B-88, B-86
- OK → Check trouble symptoms.
  - NG → **Repair**
  - NG → Check the harness wire between the SRS-ECU and ignition switch IG_1, and repair if necessary.
- NG → **Repair**

OK → Replace the SRS-ECU.

Code No.43 SRS warning lamp drive circuit system (Lamp does not illuminate.)	Probable cause
This diagnosis code is output when an open circuit occurs for a continuous period of 5 seconds while the SRS-ECU in monitoring the SRS warning lamp and the lamp is OFF (transistor OFF). However, if this code is output due to an open circuit, if the vehicle condition returns to normal, this diagnosis code No.43 will be automatically erased, and the SRS warning lamp will return to normal.	• Malfunction of wiring harnesses or connectors • Blown bulb • Malfunction of SRS-ECU • Malfunction of combination meter

Measure at SRS-ECU connector D-33.
- Disconnect the connector, and measure at the harness side connector.
- Connect the battery (–) terminal.
- Ignition switch: ON
- Connect terminal 19 to the body earth.

OK: Lamp illuminates

NG → Blown bulb inspection
- OK → **Check the following connectors:** D-33, B-05, B-88
  - OK → Check trouble symptoms.
    - NG → **Repair**
    - NG → Check the harness wire between the SRS-ECU, combination meter and ignition switch IG_1.
      - OK → Replace the combination meter.
      - NG → **Repair**
  - NG → **Repair**
- NG → **Repair**

OK → Replace the SRS-ECU.

Code No.43 SRS warning lamp drive circuit system (Lamp does not switch off.)	Probable cause
This diagnosis code is output when a short to earth occurs in the harness between the lamp and the SRS-ECU while SRS-ECU is monitoring the SRS warning lamp and the lamp is ON.	• Malfunction of wiring harnesses or connectors • Malfunction of SRS-ECU • Malfunction of combination meter

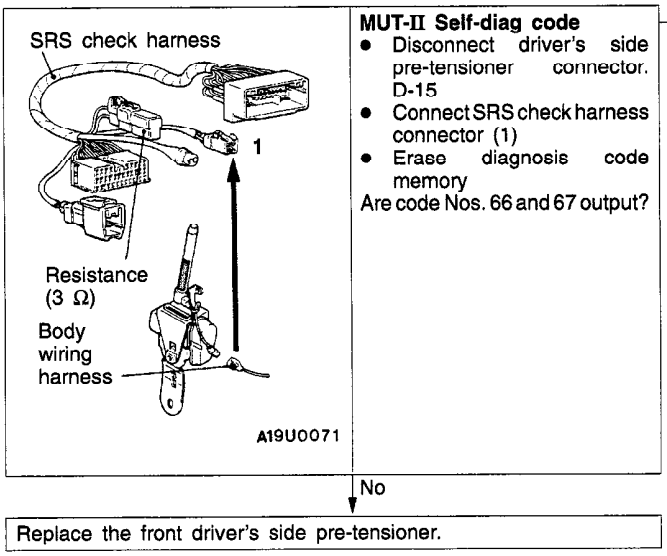
SRS warning lamp inspection
- Connect the battery (–) terminal.
- Ignition switch: ON
- Does lamp switch off when SRS-ECU connector D-33 is disconnected?

NO → **Check the following connectors:** D-33, B-05, B-88
- NG → **Repair**
- OK → Check trouble symptoms.
  - NG → Check the harness wire between the SRS-ECU and combination meter.
    - OK → Replace the combination meter.
    - NG → **Repair**

YES → Replace the SRS-ECU.

Code No. 66 or 67 Driver's side pre-tensioner (squib) system	Probable cause
These diagnosis codes are output if there is abnormal resistance between the input terminals of the driver's side pre-tensioner (squib). The trouble causes for each code No. are as follows.	• Malfunction of harnesses or connectors • Malfunction of driver's side pre-tensioner (squib) • Malfunction of SRS-ECU

Code No.	Trouble cause
66	• Short in driver's side pre-tensioner (squib) harness leading to the power supply
67	• Open circuit in driver's side pre-tensioner (squib) harness leading to the earth



MUT-II Self-diag code
- Disconnect driver's side pre-tensioner connector. D-15
- Connect SRS check harness connector (1)
- Erase diagnosis code memory

Are code Nos. 66 and 67 output?

Yes → **Check the following connector:** D-15, D-33 → NG → **Repair**

OK → Check trouble symptom.

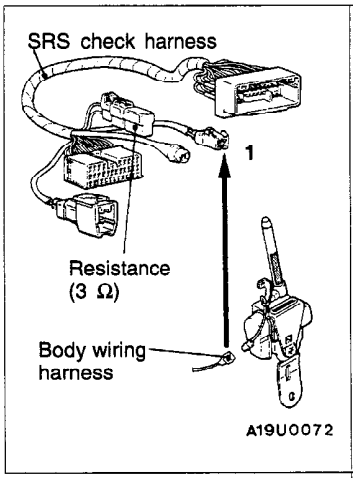
NG → Check the harness between the SRS-ECU and driver's side pre-tensioner. → NG → **Repair**

OK → Replace the SRS-ECU.

No → Replace the front driver's side pre-tensioner.

Code No. 68 or 69 Front passenger's side pre-tensioner (squib) system	Probable cause
These diagnosis codes are output if there is abnormal resistance between the input terminals of the front passenger's side pre-tensioner (squib). The trouble causes for each code No. are as follows.	• Malfunction of harnesses or connectors • Malfunction of front passenger's side pre-tensioner (squib) • Malfunction of SRS-ECU

Code No.	Trouble cause
68	• Short in front passenger's side pre-tensioner (squib) harness leading to the power supply
69	• Open circuit in front passenger's side pre-tensioner (squib) harness leading to the earth



MUT-II Self-diag code
- Disconnect front passenger's side pre-tensioner connector D-03.
- Connect SRS check harness connector (1)
- Erase diagnosis code memory

Are code Nos. 68 and 69 output?

Yes → **Check the following connector:** D-03, D-33 → NG → **Repair**

Check the following connector: D-03, D-33 → OK → Check trouble symptom.

Check trouble symptom. → NG → Check the harness between the SRS-ECU and front passenger's side pre-tensioner. → NG → **Repair**

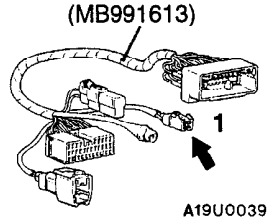
Check the harness between the SRS-ECU and front passenger's side pre-tensioner. → OK → Replace the SRS-ECU.

No → Replace the front passenger's side pre-tensioner.

Code No.71, 72, 75 or 76 Side air bag module (L.H.) (squib) system	Probable cause
These diagnosis codes are output if the resistance value between the side air bag module (L.H.) (squib) input terminals of the SRS-ECU is abnormal. The problems which cause these codes to be output are as follows.	• Malfunction of wiring harnesses or connectors • Malfunction of side air bag module (L.H.) (squib) • Malfunction of SRS-ECU

Code No.	Trouble cause
71	Short in side air bag module (L.H.) (squib) or harness short
72	• Open circuit in side air bag module (L.H.) (squib) or open harness • Malfunction of connector contact
75	Short in side air bag module (L.H.) (squib) harness leading to the power supply
76	Short in side air bag module (L.H.) (squib) harness leading to the earth

SRS check harness (MB991613)



MUT-II Self-diag code
- Disconnect side air bag module (squib) connector D-32, and connect the harness side connector to SRS check harness connector 1.
- Erase diagnosis code memory.

Are code Nos.71, 72, 75 or 76 output?

YES → **Check the following connectors:** D-33, D-32

OK → Check trouble symptoms.

NG → **Repair**

NG → Check the harness wire between the side air bag module (L.H.) (squib) and SRS-ECU.

OK → Replace the SRS-ECU.

NG → **Repair**

NO → Replace the seat back assembly of the front seat (L.H.).

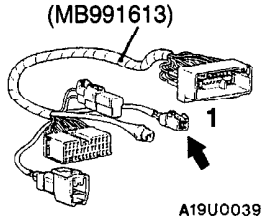
Code No.73 or 74 Side air bag module (L.H.) (squib) ignition drive circuit system	Probable cause
These diagnosis codes are output if there is a short-circuit (code No.73) or an open circuit (code No.74) in the squib ignition drive circuit.	Malfunction of SRS-ECU

Replace the SRS-ECU.

Code No.81, 82, 85 or 86 Side air bag module (R.H.) (squib) system	Probable cause
These diagnosis codes are output if the resistance value between the side air bag module (R.H.) (squib) input terminals of the SRS-ECU is abnormal. The problems which cause these codes to be output are as follows.	• Malfunction of wiring harnesses or connectors • Malfunction of side air bag module (R.H.) (squib) • Malfunction of SRS-ECU

Code No.	Trouble cause
81	Short in side air bag module (R.H.) (squib) or harness short
82	• Open circuit in side air bag module (R.H.) (squib) or open harness • Malfunction of connector contact
85	Short in side air bag module (R.H.) (squib) harness leading to the power supply
86	Short in side air bag module (R.H.) (squib) harness leading to the earth

SRS check harness (MB991613)



MUT-II Self-diag code
- Disconnect side air bag module (R.H.) (squib) connector D-29, and connect the harness side connector to SRS check harness connector 1.
- Erase diagnosis code memory.

Are code Nos.81, 82, 85 or 86 output?

YES → **Check the following connectors:** D-33, D-29
- OK → Check trouble symptoms.
  - OK → Check the harness wire between the side air bag module (R.H.) (squib) and SRS-ECU.
    - OK → Replace the SRS-ECU.
    - NG → **Repair**
  - NG → **Repair**
- NG → **Repair**

NO → Replace the seat back assembly of the front seat (R.H.).

Code No.83 or 84 Side air bag module (R.H.) (squib) ignition drive circuit system	Probable cause
These diagnosis codes are output if there is a short-circuit (code No.83) or an open circuit (code No.84) in the squib ignition drive circuit.	Malfunction of SRS-ECU

Replace the SRS-ECU.

Code No.91 Side impact sensor (L.H.) power supply circuit system	Probable cause
This diagnosis code is output if the power supply voltage of the side impact sensor (L.H.) drops below the rated value for a continuous period of 5 seconds or more. However, code No.91 will be automatically cleared and the SRS warning lamp will switch off if the condition returns to normal.	• Malfunction of wiring harnesses or connectors • Malfunction of side impact sensor (L.H.) • Malfunction of SRS-ECU

Measure at side impact sensor (L.H.) connector D-31.
- Disconnect the connector, and measure at the harness side connector.
- Voltage between terminal 3 and body earth

OK: 9 V or more

Continuity between terminal 1 and body earth

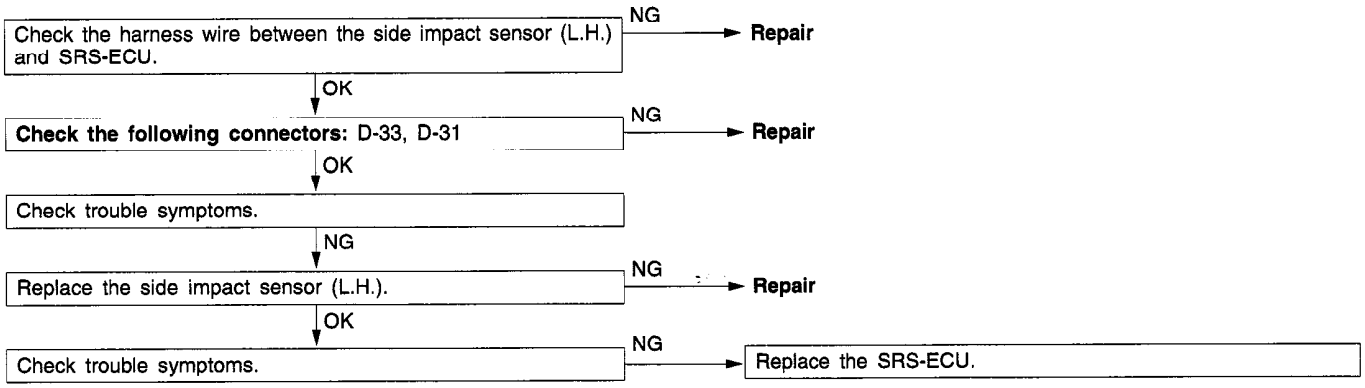
NG → **Check the following connectors:** D-33, D-31
- OK → Check trouble symptoms.
  - OK → Check the harness wire between the side impact sensor (L.H.) and SRS-ECU.
    - OK → Replace the SRS-ECU.
    - NG → **Repair**
  - NG → **Repair**
- NG → **Repair**

OK → Replace the side impact sensor (L.H.).

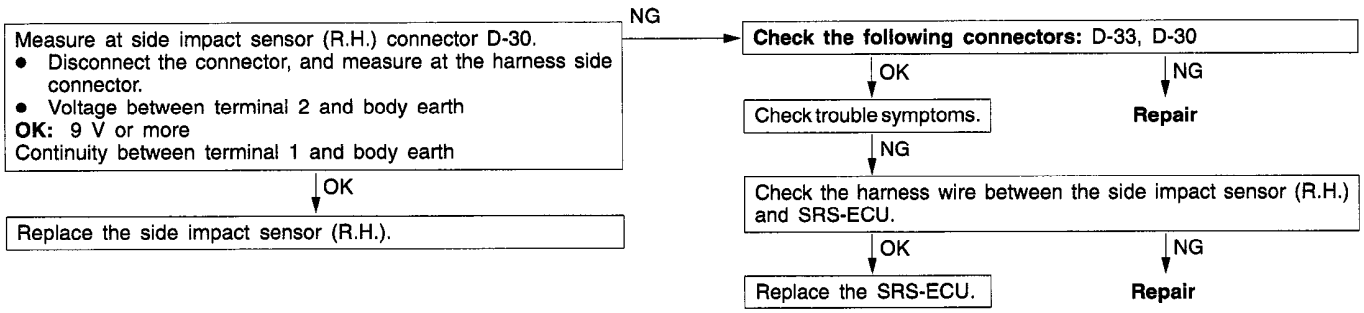
Code No.92 Side impact sensor (L.H.) system	Probable cause
This diagnosis code is output if the following are detected from the analog G-sensor output. • Analog G-sensor is not operating. • Analog G-sensor characteristics are abnormal. • Analog G-sensor output is abnormal.	• Malfunction of side impact sensor (L.H.)

Replace the side impact sensor (L.H.).

Code No.93 Side impact sensor (L.H.) communication system	Probable cause
This diagnosis code is output if communication between the side impact sensor (L.H.) and the SRS-ECU is abnormal.	• Malfunction of wiring harnesses or connectors • Malfunction of side impact sensor (L.H.) • Malfunction of SRS-ECU



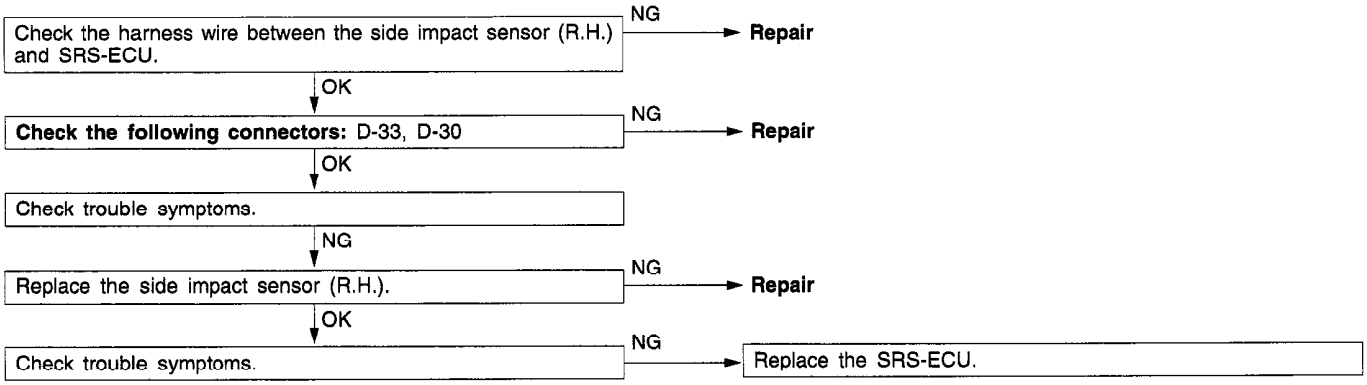
Code No.94 Side impact sensor (R.H.) power supply circuit system	Probable cause
This diagnosis code is output if the power supply voltage of the side impact sensor (R.H.) drops below the rated value for a continuous period of 5 seconds or more. However, code No.94 will be automatically cleared and the SRS warning lamp will switch off if the condition returns to normal.	• Malfunction of wiring harnesses or connectors • Malfunction of side impact sensor (R.H.) • Malfunction of SRS-ECU



Code No.95 Side impact sensor (R.H.) system	Probable cause
This diagnosis code is output if the following are detected from the analog G-sensor output. • Analog G-sensor is not operating. • Analog G-sensor characteristics are abnormal. • Analog G-sensor output is abnormal.	• Malfunction of side impact sensor (R.H.)

Replace the side impact sensor (R.H.).

Code No.96 Side impact sensor (R.H.) communication system	Probable cause
This diagnosis code is output if communication between the side impact sensor (R.H.) and the SRS-ECU is abnormal.	• Malfunction of wiring harnesses or connectors • Malfunction of side impact sensor (R.H.) • Malfunction of SRS-ECU



INSPECTION CHART FOR TROUBLE SYMPTOMS

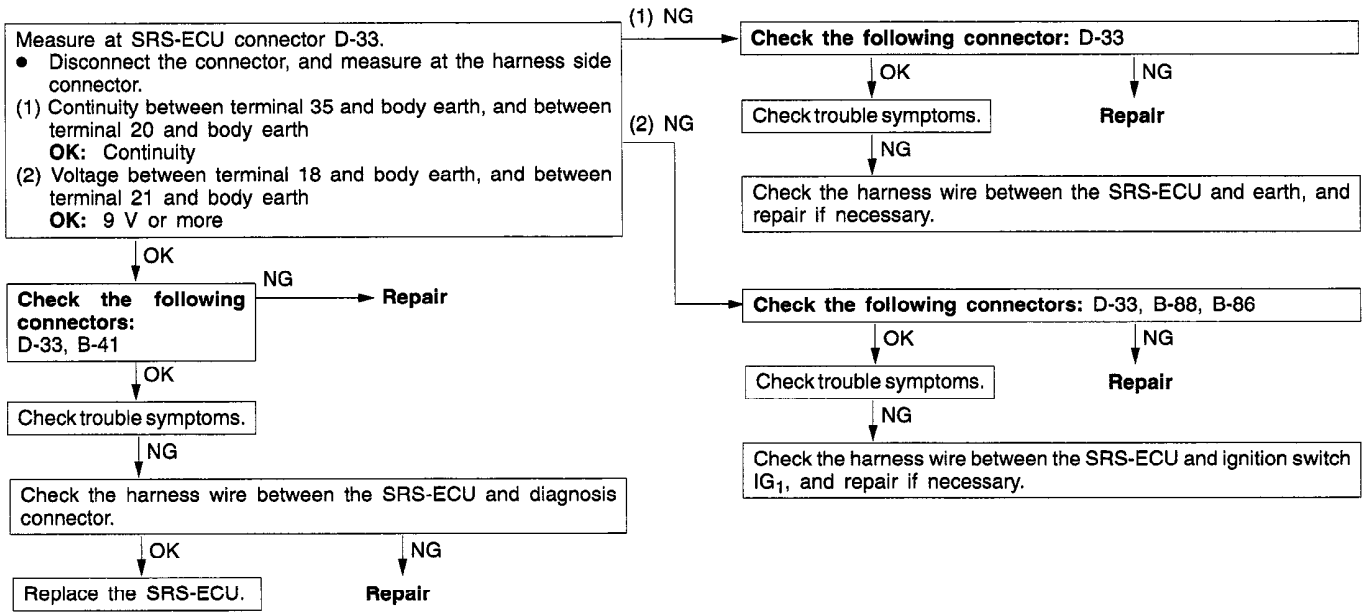
Get an understanding of the trouble symptoms and check according to the inspection procedure chart.

Trouble symptom		Inspection procedure No.	Reference page
Communication with MUT-II is not possible.	Communication with all systems is not possible.	1	Refer to '96 CARISMA Basic Manual
	Communication is not possible with SRS only.	2	52B-17
When the ignition key is turned to ON (engine stopped), the SRS warning lamp does not illuminate.		Refer to diagnosis code No.43.	52B-10
After the ignition switch is turned to ON, the SRS warning lamp is still on after approximately 7 seconds have passed.		Refer to diagnosis code No.43.	52B-10
		Refer to diagnosis code No.44.	Refer to '96 CARISMA Basic Manual

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

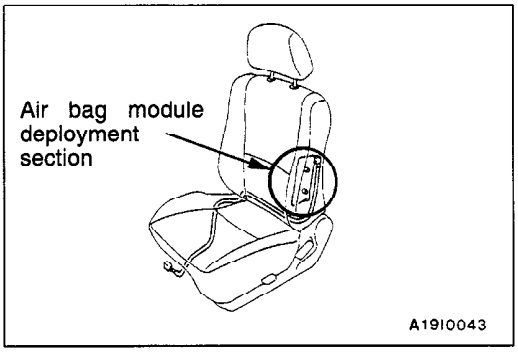
Inspection Procedure 2

Communication with MUT-II is not possible. (Communication is not possible with SRS only.)	**Probable cause**
If communication is not possible with the SRS only, the cause is probably an open circuit in the diagnosis output circuit of the SRS or in the power circuit (including earth circuit).	• Malfunction of wiring harnesses or connectors • Malfunction of SRS-ECU



SRS MAINTENANCE

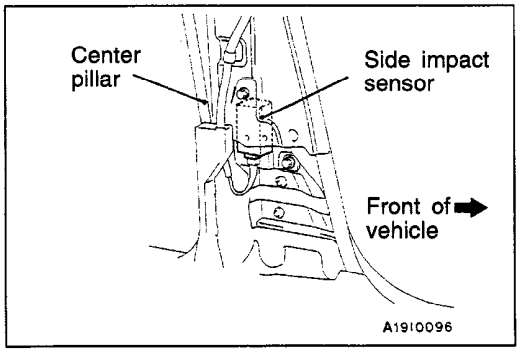
The SRS must be inspected by an authorized dealer 10 years after the date of vehicle registration.



SRS COMPONENT VISUAL CHECK

FRONT SEAT BACK ASSEMBLY (SIDE AIR BAG MODULE)

1. Check that there is no abnormality in the seat air bag module deployment section.
2. Check that there is no connector damage, bent terminals or clamping of the harness.



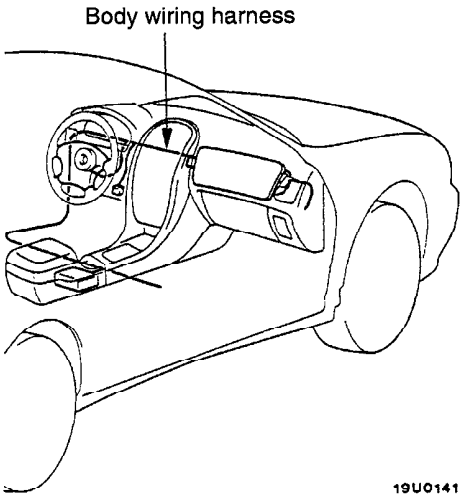
SIDE IMPACT SENSORS

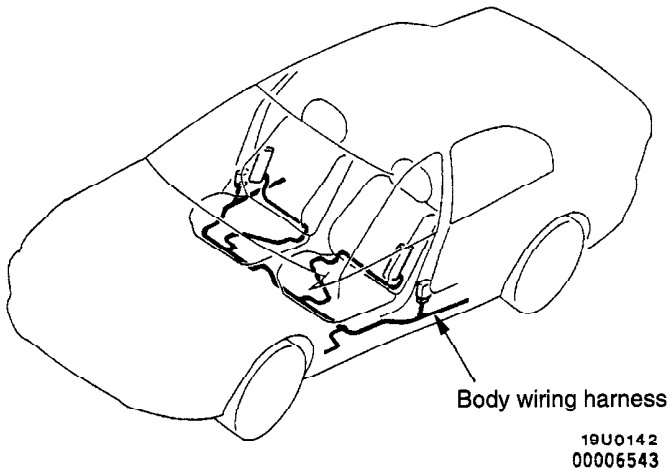
1. Check that there is no bending or corrosion in the center pillar.
2. Check that there is no denting, breakage, bending or corrosion of the side impact sensor.
3. Check that there is no clamping of the harness, connector damage or bent terminals.

NOTE
The illustration at left shows the side impact sensor (L.H.). The position of the side impact sensor (R.H.) is symmetrical to this.

Caution
The SRS may not activate if the side impact sensors are not installed properly, which could result in serious injury or death to the vehicle's driver or front passenger.

BODY WIRING HARNESS/FLOOR WIRING HARNESS





1. Check connector for poor connection.
2. Check harnesses for binds, connectors for damage, and terminals for deformation.
   REPLACE ANY CONNECTORS OR HARNESSES THAT FAIL THE VISUAL INSPECTION. (Refer to P.52B-3.)
   Caution
   The SRS may not activate if SRS harnesses or connectors are damaged or improperly connected, which could result in serious injury or death to the vehicle's driver or front passenger.

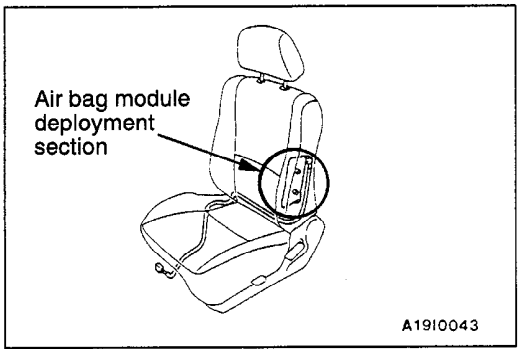
POST-COLLISION DIAGNOSIS

To inspect and service the SRS after a collision (whether or not the air bags have deployed), perform the following steps.

REPAIR PROCEDURE

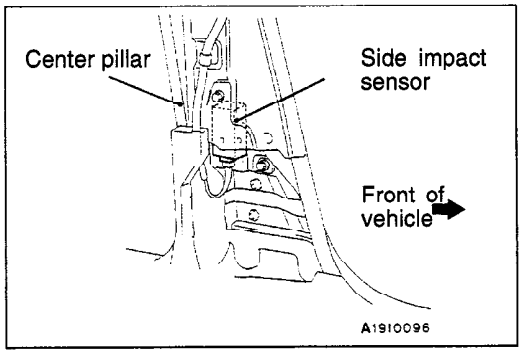
WHEN SRS SIDE AIR BAG DEPLOYS OR SEAT BELT PRE-TENSIONER OPERATES IN A COLLISION

1. Replace the following parts with new ones.
   - SRS-ECU (Refer to '96 CARISMA Basic Manual.)
   - Side impact sensor (Refer to P.52B-22.)
   - Front seat back assembly (Refer to GROUP 52A – Seat.)
2. Check harnesses for binding, connectors for damage, poor connections, and terminals for deformation. (Refer to P.52B-3.)



Front seat back assembly (Side air bag module)

1. Check that there is no abnormality in the seat air bag module deployment section.
2. Check that there is no connector damage, bent terminals or clamping of the harness.



Side impact sensor

1. Check that there is no bending or corrosion in the center pillar.
2. Check that there is no denting, breakage or bending of the side impact sensor.
3. Check that there is no clamping of the harness, connector damage or bent terminals.
   NOTE
   The illustration at left shows the side impact sensor(L.H.). The position of the side impact sensor (R.H.) is symmetrical to this.

INDIVIDUAL COMPONENT SERVICE

If the SRS components are to be removed or replaced as a result of maintenance, troubleshooting, etc., follow each procedure (P.52B-20 – P.52B-23).

Caution

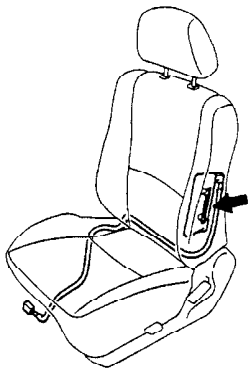
1. **SRS components should not be subjected to heat, so remove the SRS-ECU, front seat assemblies (side air bag module) and side impact sensors before drying or baking the vehicle after painting.**
   - **SRS-ECU, side impact sensor: 93°C or more**

   Recheck SRS system operability after re-installing them.
2. **If the SRS components are removed for the purpose of check, sheet metal repair, painting, etc., they should be stored in a clean, dry place until they are reinstalled.**

WARNING/CAUTION LABELS

A number of caution labels relating to the SRS are found in the vehicle, as shown in the following illustration. Follow label instructions when servicing SRS. If labels are dirty or damaged, replace them with new ones.

Side air bag module (driver's seat and front passenger's seat)



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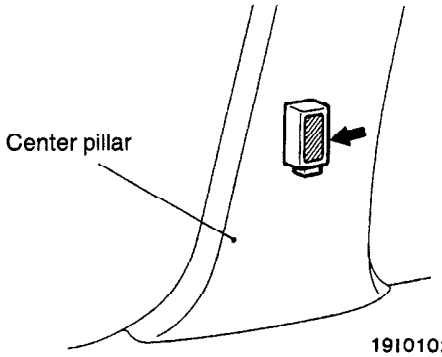
Side impact sensor



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AIR BAG MODULES

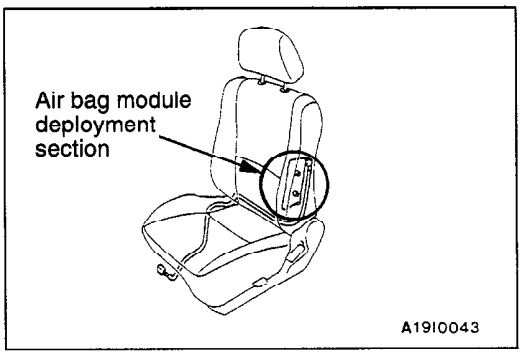
Caution

1. **When a side air bag has been deployed, the front seat back assembly (driver's seat or passenger's seat) should be replaced with a new assembly.**
2. **An undeployed air bag module should only be disposed of in accordance with the procedures (Refer to P.52B-24.)**

REMOVAL AND INSTALLATION

<Side air bag module>

For removal and installation of the front seat back assembly with side air bag module, refer to GROUP 52A – Front Seat.



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INSPECTION

FRONT SEAT BACK ASSEMBLY WITH SIDE AIR BAG MODULE CHECK

If any improper part is found during the following inspection, replace the front seat back assembly with a new one. Dispose the old one according to the specified procedure. (Refer to P.52B-24.)

Caution
Never attempt to measure the circuit resistance of the air bag module (squib) even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental air bag deployment will result in serious personal injury.

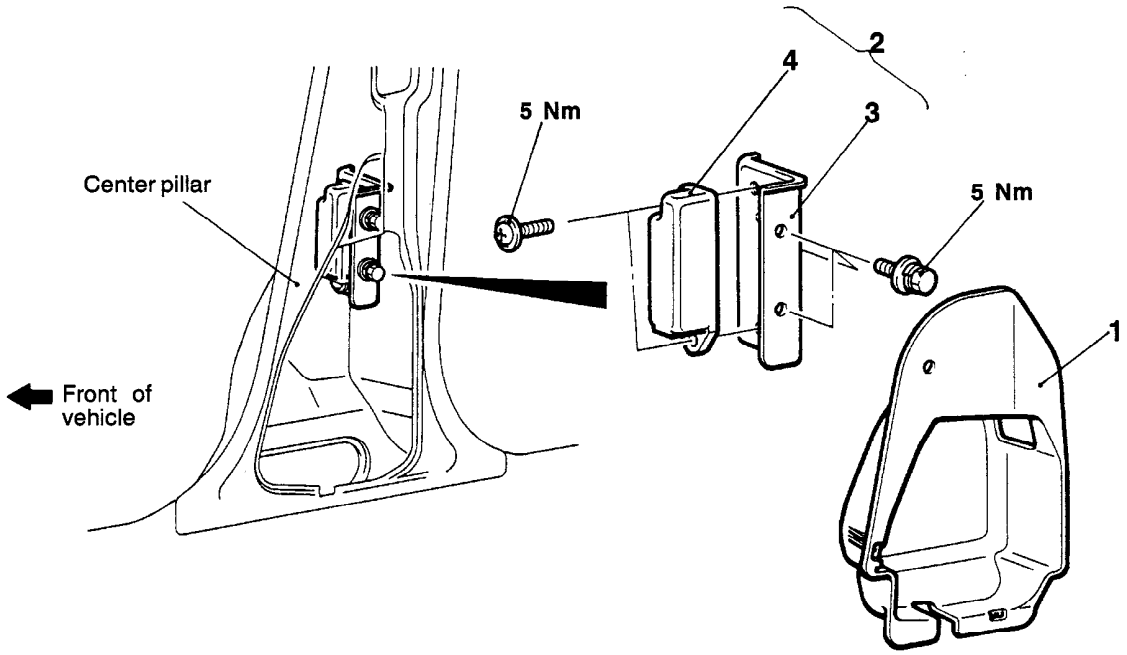
1. Check the air bag module deployment section for dents or deformation.
2. Check connector for damage, terminals for deformation, and harness for binds.

SIDE IMPACT SENSOR

Caution
1. **Disconnect the battery (–) terminal and wait for 60 seconds or more before starting work. Furthermore, the disconnected battery terminal should be covered with tape to insulate it. (Refer to P.52B-2.)**
2. **Never attempt to disassemble or repair the side impact sensor. If faulty, replace it.**
3. **Do not drop or subject the side impact sensor to impact or vibration. If denting, cracking, deformation, or rust are discovered in the side impact sensor, replace it with a new side impact sensor. Discard the old one.**
4. **After deployment of an air bag, replace the side impact sensor with a new one.**

REMOVAL AND INSTALLATION

Pre-removal Operation
Turn the ignition key to the "LOCK" position.



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Removal steps

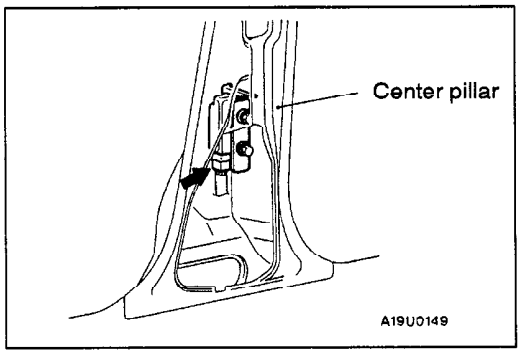
▶C◀ ● Post-installation inspection
● Negative (–) battery cable connection
● Center pillar lower trim (Refer to '96 CARISMA Basic Manual.)
● Seat belt with pre-tensioner (Refer to '96 CARISMA Basic Manual.)
1. Water proof cover
2. Side impact sensor and bracket
3. Bracket
▶B◀ 4. Side impact sensor
▶A◀ ● Pre-installation inspection

NOTE
The illustration above shows the side impact sensor (L.H.). The position of the side impact sensor (R.H.) is symmetrical to this.

INSTALLATION SERVICE POINTS

▶A◀ PRE-INSTALLATION INSPECTION

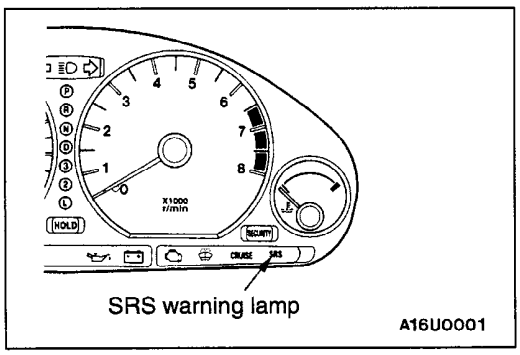
Check the side impact sensor for dents, breakage and bending and measure the resistance between the terminals, even when installing a new side impact sensor.



▶B◀ SIDE IMPACT SENSOR INSTALLATION

Securely connect the connector.

Caution
If the side impact sensor is not installed securely and correctly, the side air bag may not operate normally.



▶C◀ POST-INSTALLATION INSPECTION

1. Reconnect the negative battery terminal.
2. Turn the ignition key to the "ON" position.
3. Does the SRS warning lamp illuminate for about 7 seconds, and then remain extinguished for at least 5 seconds after turning the ignition key to "OFF" position?
4. If yes, SRS system is functioning properly. If no, consult page 52B-6.

INSPECTION

- Check the side impact sensor and bracket for dents, cracks or deformation.
- Check connector for damage, and terminals for deformation.

  Caution
  If a dent, crack, deformation or rust is discovered, replace the side impact sensor with a new one.

  NOTE
  For checking of the side impact sensor other than described above, refer to the section concerning troubleshooting. (Refer to P.52B-6.)
- Check that there is no bending or corrosion in the center pillar.

AIR BAG MODULE DISPOSAL PROCEDURES

Before disposing of a vehicle which is equipped with air bags or when disposing of the air bags themselves, the following procedures must be used to deploy the air bags before disposal.

UNDEPLOYED AIR BAG MODULE DISPOSAL

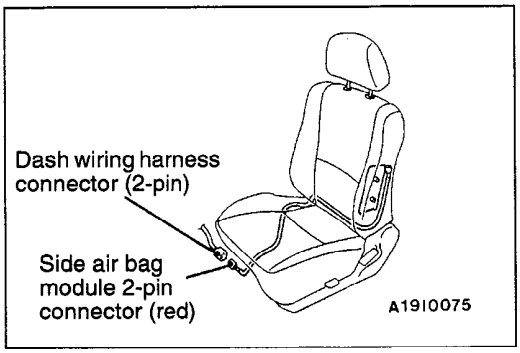
Caution

1. **If the vehicle is to be scrapped or otherwise disposed of, deploy the air bags inside the vehicle.**
2. **If the vehicle will continue to be operated and only the front seat back assembly is to be disposed of, deploy the air bag outside the vehicle.**
3. **Since a large amount of smoke is produced when the air bag is deployed, avoid residential areas whenever possible.**
4. **Since there is a loud noise when the air bags are deployed, avoid residential areas whenever possible. If anyone is nearby, give warning of the impending noise.**
5. **Suitable ear protection should be worn by personnel performing these procedures or by people in the immediate area.**

Deployment Inside The Vehicle

1. Move the vehicle to an isolated spot.
2. Disconnect the negative (–) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.

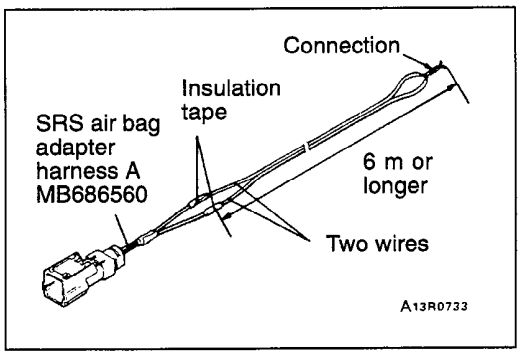
   Caution
   Wait at least 60 seconds after disconnecting the battery cables before doing any further work. (Refer to P.52B-2.)



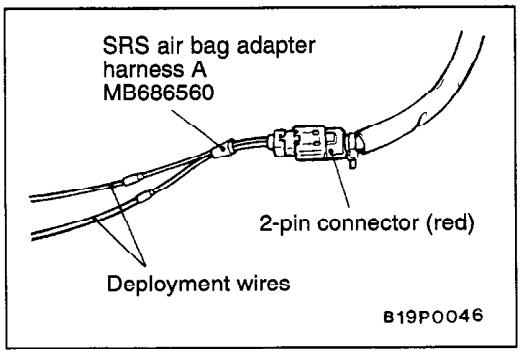
3. To deploy the side air bag module:
   Remove the connection between the side air bag module connector (red 2-pin) and the dash wiring harness connector.

   Caution
   The side air bag modules for both the driver's-side and passenger's-side should be deployed.

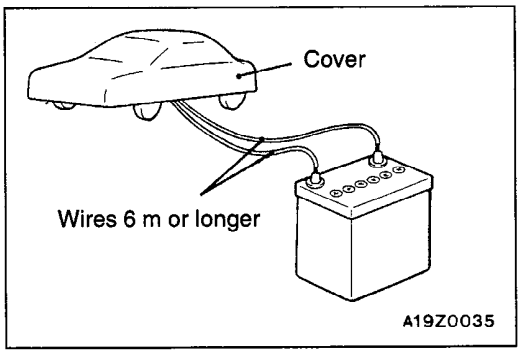
   NOTE
   If the side air bag module connector is disconnected from the dash wiring harness, both electrodes of the side air bag module connector will be automatically shorted to prevent unintended deployment of the side air bag due to static electricity, etc.



4. Connect two wires, each six meters or longer, to the two leads of SRS air bag adapter harness A and cover the connections with insulation tape. The other ends of the two wires should be connected to each other (short-circuited), to prevent sudden unexpected deployment of the air bag.



5. Connect the side air bag module 2-pin connector (red) to SRS air bag adapter harness A and pass the deployment wires out of the vehicles.



6. Fully close all door windows, close the doors and place a cover over the vehicle to minimize the amount of noise.

   Caution
   If the glass is damaged, it may break, so the car must be covered.

7. At a location as far away from the vehicle as possible, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.

   Caution
   (1) Before deploying the air bag in this manner, first check to be sure that there is no one in or near the vehicle. Wear safety glasses.
   (2) The inflator will be quite hot immediately following the deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from air bag deployment.
   See Deployed Air Bag Module Disposal Procedures (P.52B-27.) for post-deployment handling instructions.
   (3) If the air bag module fails to deploy when the procedures above are followed, do not go near the module. Contact your local distributor.

8. After deployment, dispose of air bag module according to the Deployed Air Bag Module Disposal Procedures. (Refer to P.52B-27.)

Deployment Outside the Vehicle

Caution

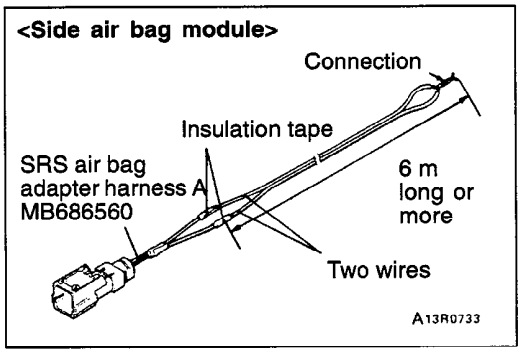
1. **This should be carried out in a wide, flat area at least 6 m away from obstacles and other people.**
2. **Do not perform deployment outside, if a strong wind is blowing, and if there is even a slight breeze, the air bag module should be placed and deployed downwind from the battery.**

1. Disconnect the negative (–) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.

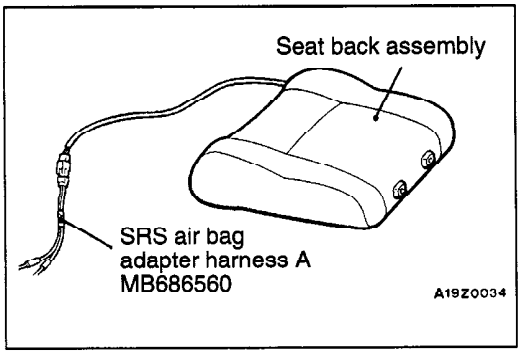
   Caution
   Wait at least 60 seconds after disconnecting the battery cables before doing any further work. (Refer to P.52B-2.)

2. Remove the front seat back assemblies with built-in side air bag module from the vehicle. (Refer to GROUP 52A – Front Seat.)

   Caution
   The air bag modules should be stored on flat surface and placed so that the air bag deployment surfaces are facing upward. Do not place anything on top of them.



3. Connect two wires, each six meters or longer, to the two leads of SRS air bag adapter harness A, and cover the connections with insulation tape. The other ends of the two wires should be connected to each other (short-circuited), to prevent sudden unexpected deployment of the air bag module.



4. Set the air bag modules as follows:
   (1) Place the seat back assembly so that the rear of the assembly is lying on the ground.
   (2) Connect SRS air bag adapter harness A (which is connected to the deployment harness) to the side air bag module connector.

5. At a location as far away from the air bag module as possible, and from a shielded position, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.

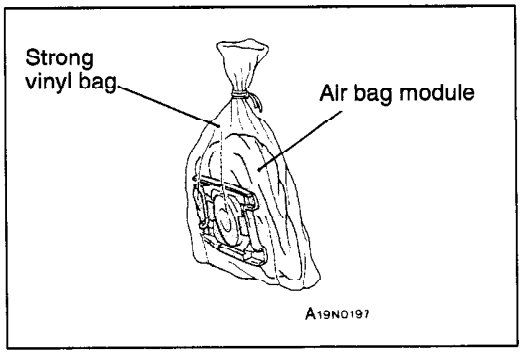
   Caution
   (1) Before deployment, check carefully to be sure that no one is nearby.
   (2) The inflator will be quite hot immediately following deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although the gas resulting from air bag deployment is not poisonous, it should not be inhaled. Refer to the Deployed Air Bag Module Disposal Procedures (P.52B-27) for post-deployment handling instructions.
   (3) If the air bag fails to deploy when the procedures above are followed, do not go near the module. Contact your local distributor.

6. After deployment, dispose of air bag module according to the Deployed Air Bag Module Disposal Procedures. (Refer to P.52B-27.)

DEPLOYED AIR BAG MODULE DISPOSAL PROCEDURES

After deployment or operation, the air bag module should be disposed of in the same manner as any other scrap parts, adhering to local laws and/or legislation that may be in force except that the following points should be carefully noted during disposal.

1. The inflator will be quite hot immediately following deployment, so wait at least 30 minutes to allow it cool before attempting to handle it.
2. Do not put water or oil on the air bag after deployment.
3. There may be, adhered to the deployed air bag module, material that could irritate the eye and/or skin, so wear gloves and safety glasses when handling a deployed air bag module. IF AFTER FOLLOWING THESE PRECAUTIONS, ANY MATERIAL DOES GET INTO THE EYES OR ON THE SKIN, IMMEDIATELY RINSE THE AFFECTED AREA WITH A LARGE AMOUNT OF CLEAN WATER.
   IF ANY IRRITATION DEVELOPS, SEEK MEDICAL ATTENTION.



4. Tightly seal the air bag module in a strong vinyl bag for disposal.

   NOTE
   The side air bag module does not contain any toxic sodium azides, so that the seat back assembly with built-in side air bag module can be disposed of in the same way as a seat without a side air bag.

5. Be sure to always wash your hands after completing this operation.

NOTES