

INTERIOR AND SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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52109000187

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INTERIOR

CONTENTS

52109000194

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WARNINGS REGARDING SERVICING OF SUPPLEMENTAL RESTRAINT SYSTEM (SRS) EQUIPPED VEHICLES

WARNING!

- (1) Improper service or maintenance of any component of the SRS, or any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag) or to the driver and passenger (from rendering the SRS inoperative).
- (2) Service or maintenance of any SRS component or SRS-related component must be performed only at an authorized MITSUBISHI dealer.
- (3) MITSUBISHI dealer personnel must thoroughly review this manual, and especially its GROUP 52B – Supplemental Restraint System (SRS) before beginning any service or maintenance of any component of the SRS or any SRS-related component.

NOTE

The SRS includes the following components: SRS-ECU, SRS warning lamp, air bag module, clock spring and interconnecting wiring. Other SRS-related components (that may have to be removed/installed in connection with SRS service or maintenance) are indicated in the table of contents by an asterisk (*).

SERVICE SPECIFICATIONS

52100030031

Items		Standard value
Seatback heater resistance (between terminals) Ω		Approx. 8
Seat cushion heater resistance (between terminals) Ω	Between terminals 2 and 3	Approx. 8
	Between terminals 1 and 3	0

ADHESIVE

52100050037

Item	Specified adhesive
Roof pad <Vehicles without sunroof>	3M Part No.EC-1368 or equivalent

SPECIAL TOOL

52100060030

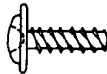
Tool	Number	Name	Use
	MB990784	Ornament remover	Removal of switch, trim, etc.

INSTRUMENT PANEL

52100170122

REMOVAL AND INSTALLATION

For installation of the instrument panel, the bolts and screws described below are used. They are indicated by symbols in the illustration.

Name	Symbol	Size mm (D × L)	Colour	Shape
Tapping screw	A	5 × 12	—	 A00Z0010
	B	5 × 14	—	
	C	5 × 16	—	
	D	5 × 20	Black	
	E	5 × 12	—	 B00Z0010
	F	5 × 16	—	
	G	5 × 20	—	
Washer-assembled screw	H	5 × 16	—	 C00Z0010
Washer-assembled bolt	I	6 × 16	—	 D00Z0010
	J	6 × 20	—	
	K	6 × 16	—	 E00Z0010
	L	6 × 16	Black	
Gimlet bolt	M	6 × 16	—	 F00Z0010

D = Thread diameter

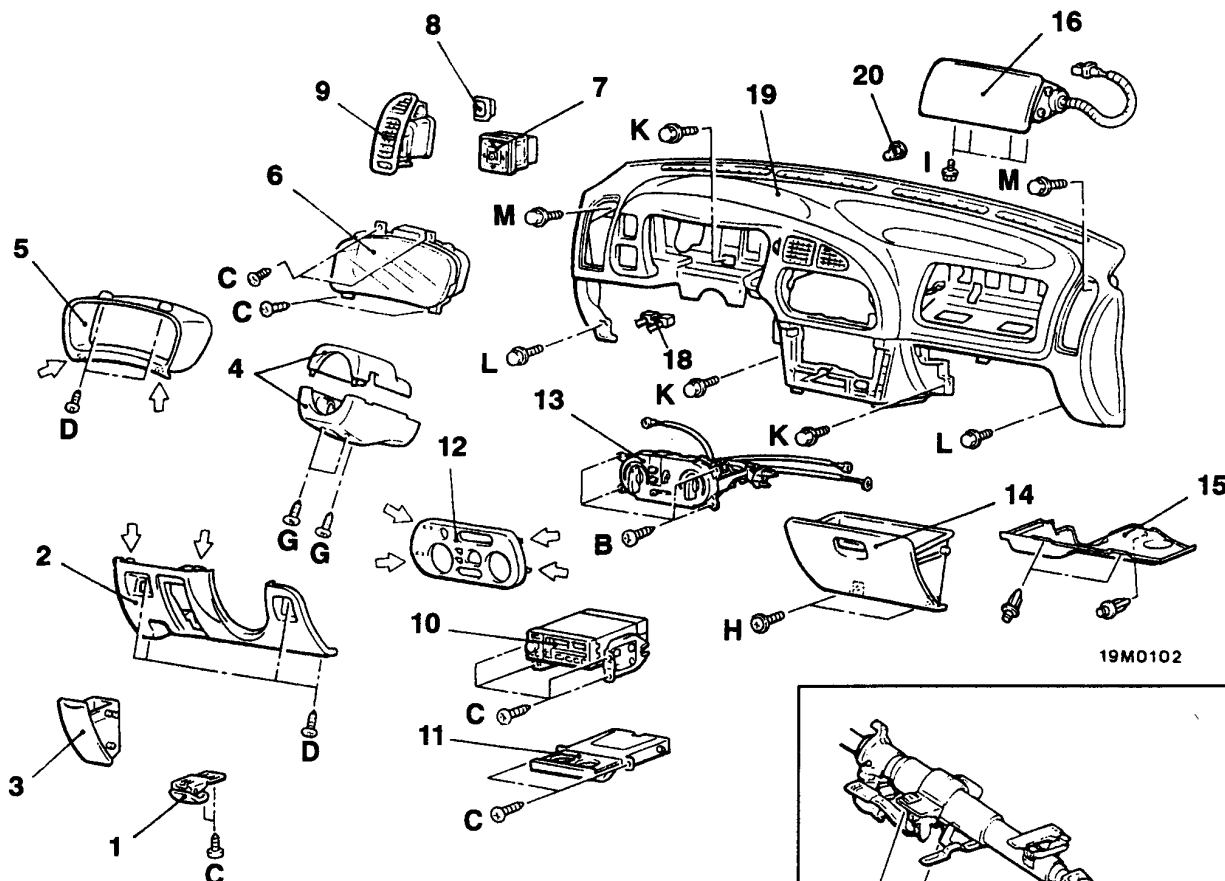
L = Effective thread length

CAUTION: SRS

- When removing and installing the floor console (vehicles equipped with SRS), do not let it bump against the SRS-ECU.
- For the passenger side air bag module removal/installation, always observe the service procedures of GROUP 52B – Air Bag Module and Clock Spring.

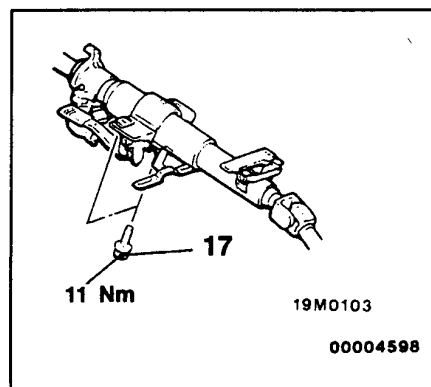
Pre-removal and Post-Installation Operation

- Floor Console Assembly Removal and Installation (Refer to P.52A-7.)



NOTE

↔ : metal clip position

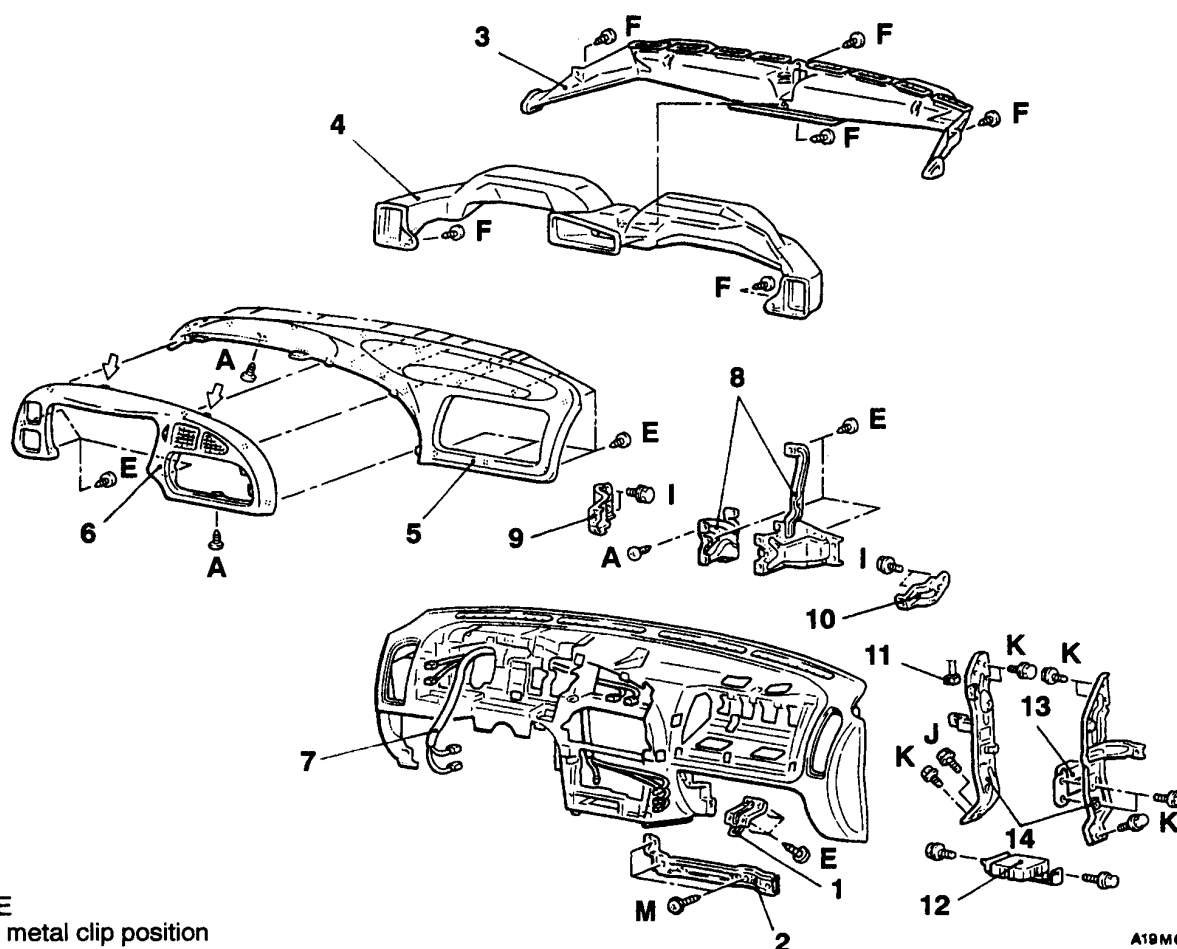


Removal steps

1. Hood lock release handle
2. Driver side lower cover
3. Personal pocket
4. Column cover
5. Meter bezel
6. Combination meter
7. Door mirror control switch or plug
8. Fog lamp switch
9. Side air outlet assembly
10. Radio and tape player or DIN bracket
11. Cup holder or plug
12. Heater control panel
13. Heater control assembly (Refer to GROUP 55.)
14. Glove box
15. Under cover
16. Front passenger's air bag module assembly
17. Steering column assembly installation bolt
18. Harness connector
19. Instrument panel assembly
20. Grommet

DISASSEMBLY AND REASSEMBLY

52100190128

**Disassembly steps**

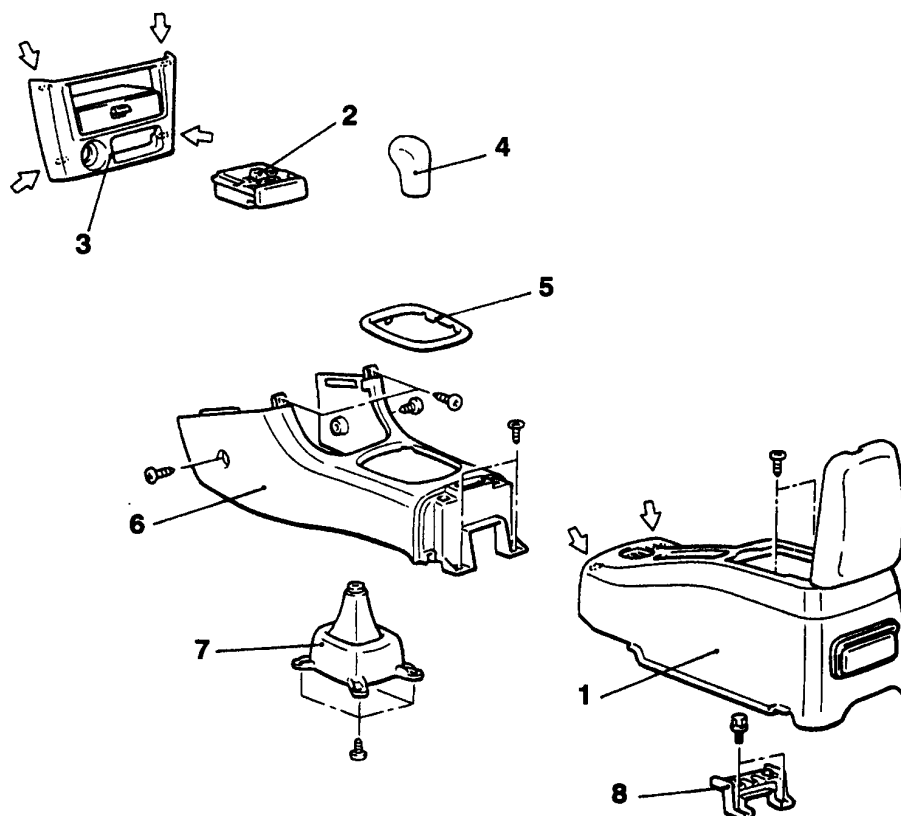
1. Glove box striker
2. Glove box frame
3. Defroster nozzle assembly
4. Distribution duct
5. Instrument pad
6. Cluster panel
7. Instrument panel wiring harness

8. Instrument panel reinforcement
9. Lower bracket (L.H.)
10. Lower bracket (R.H.)
11. Harness connector
12. ABS-ECU
13. Relay
14. Center reinforcement

FLOOR CONSOLE

52100220100

REMOVAL AND INSTALLATION



NOTE

↔ : metal clip position

A19M0107

Removal steps

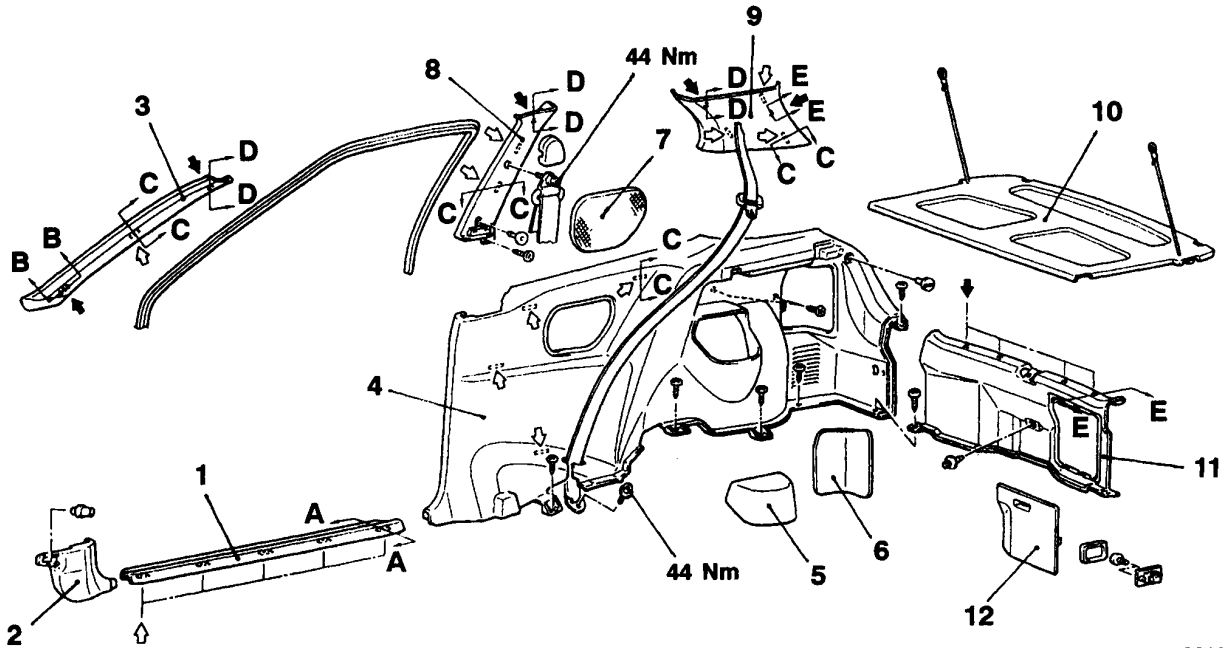
1. Rear floor console assembly
2. Ashtray
3. Audio panel
4. Shift lever knob <M/T>
5. A/T panel
6. Front floor console assembly
7. Shift lever cover <M/T>
8. Rear console bracket

TRIMS

52100110124

REMOVAL AND INSTALLATION

<Hatchback>



19M0062

NOTE

↖ : metal clip position
 ➡ : resin clip position

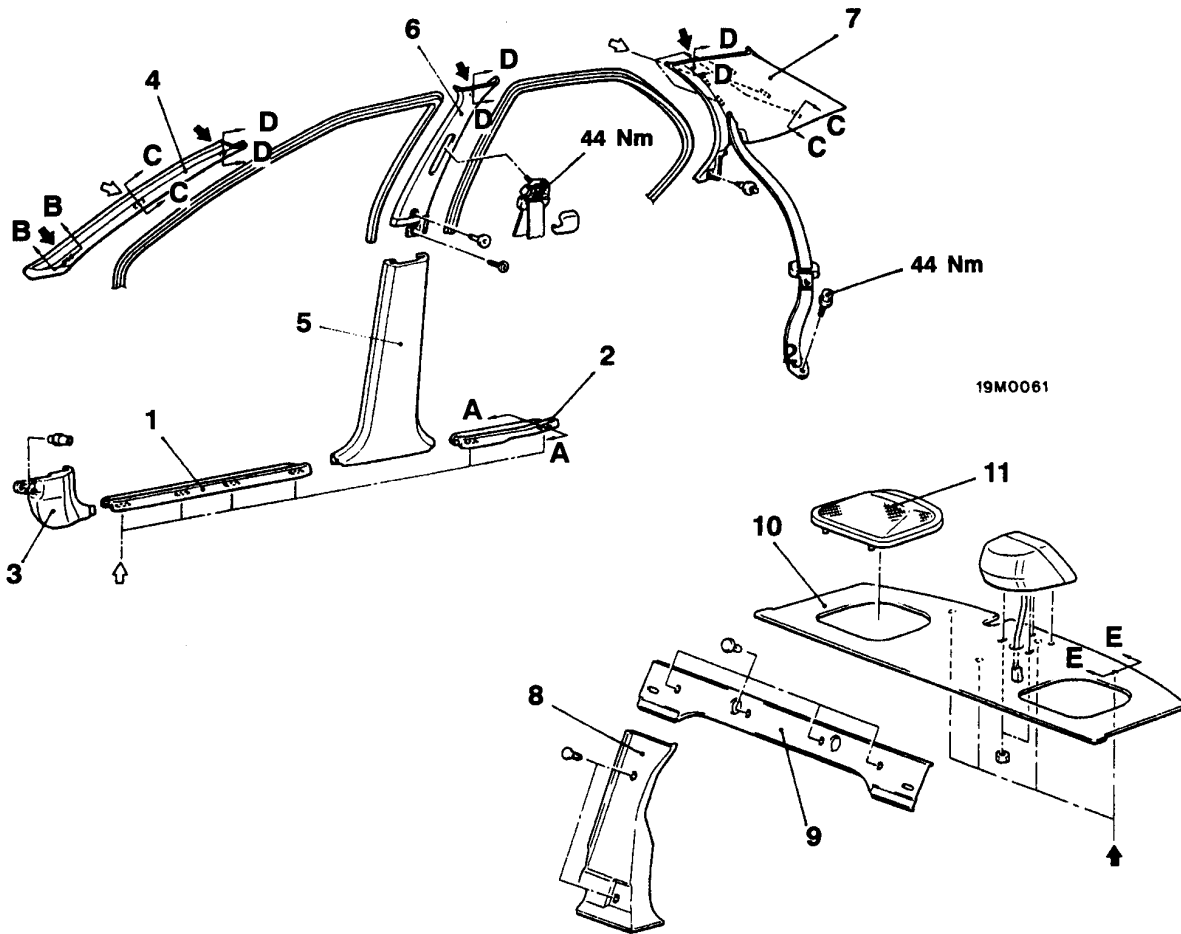
Section A-A	Section B-B	Section C-C	Section D-D	Section E-E
Scuff plate Clip 19S0006	Front pillar trim 19X0029	Trim Clip 19C0010	Headlining Clip Trim 19S0007	Trim Clip 19L0541

00004599

1. Scuff plate
2. Cowl side trim
3. Front pillar trim
4. Quarter trim
5. Quarter trim lid
6. Lamp lid

7. Rear speaker garnish
8. Center pillar trim
9. Rear pillar trim
10. Rear shelf
11. Rear end trim
12. Jack lid

<Sedan>



NOTE

- ↖ : metal clip position
 → : resin clip position

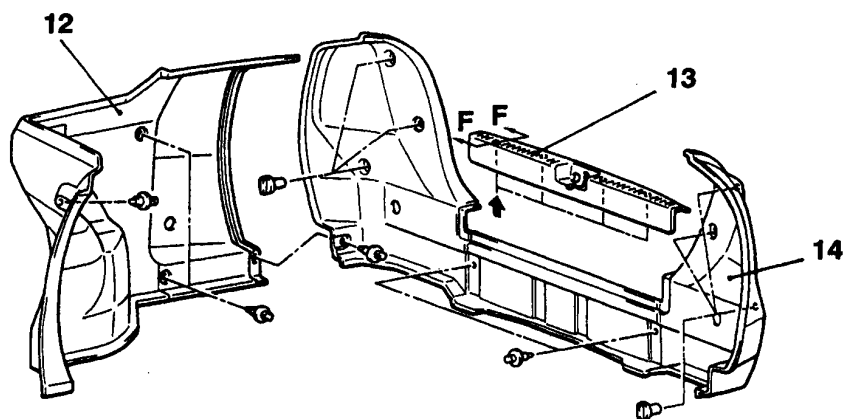
19M0104

Section A-A	Section B-B	Section C-C	Section D-D	Section E-E
Scuff plate Clip 19S0006	Front trim pillar 19X0029	Trim Clip 19C0010	Headlining Clip Trim 19S0007	Rear shelf trim Clip 19L0541

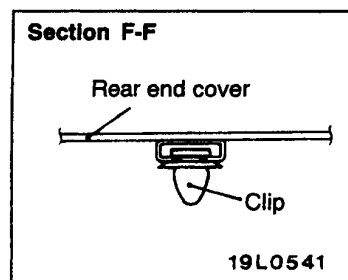
00004600

1. Front scuff plate
2. Rear scuff plate
3. Cowl side trim
4. Front pillar trim
5. Center pillar trim lower
6. Center pillar trim upper

7. Rear pillar trim
8. Rear seatback brace trim
9. Rear seatback trim
10. Rear shelf trim
11. Rear speaker garnish



19M0063

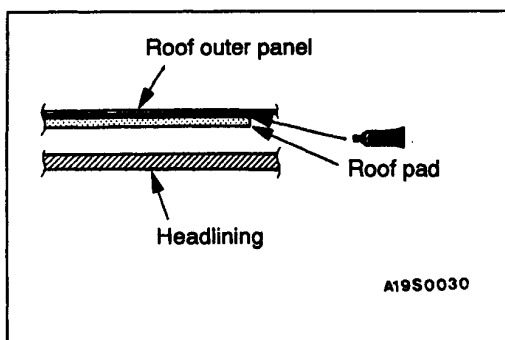


NOTE

← : resin clip position

00004601

- 12. Trunk side trim
- 13. Rear end cover
- 14. Rear end trim



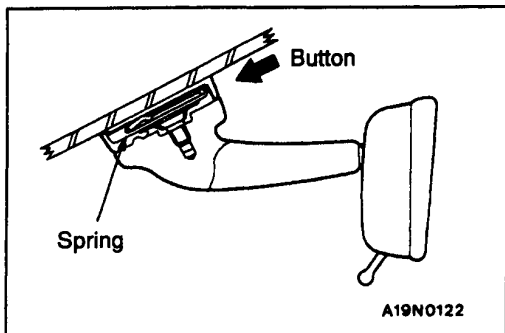
HEADLINING

52100140116

INSTALLATION SERVICE POINT

<Vehicles without sunroof>

Specified adhesive: 3M Part No.EC-1368 or equivalent



INSIDE REAR VIEW MIRROR

52100270051

REMOVAL SERVICE POINT

Remove by pushing in the direction of the arrow in the illustration.

NOTE

1. The mirror spring fits firmly in the groove of the button that is attached to the glass.
2. The mirror breaking load is within 450 N.

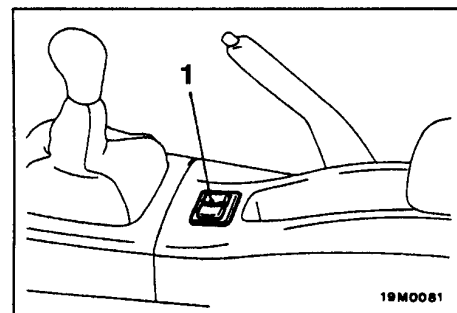
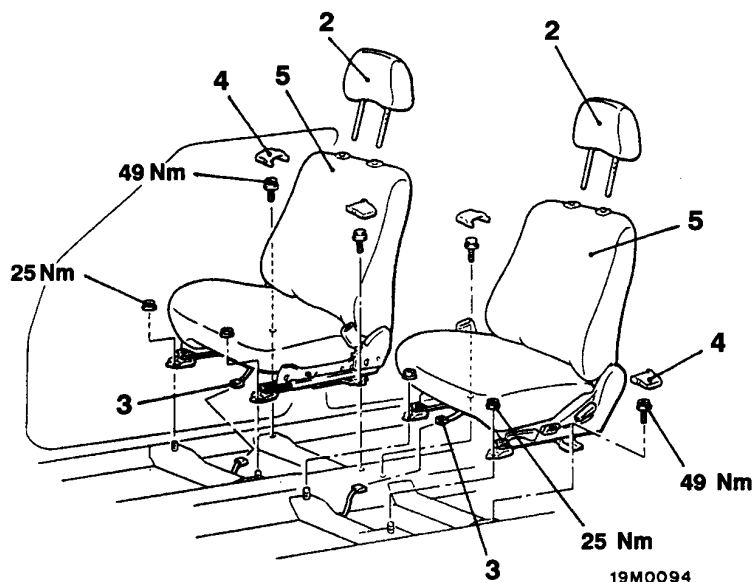
FRONT SEAT

52200130116

REMOVAL AND INSTALLATION

Pre-removal and Post-installation Operation

- Rear Floor Console Assembly Removal and Installation (Refer to P.52A-7).



00004602

1. Heated seat switch
<vehicles with heated seat>
2. Headrest

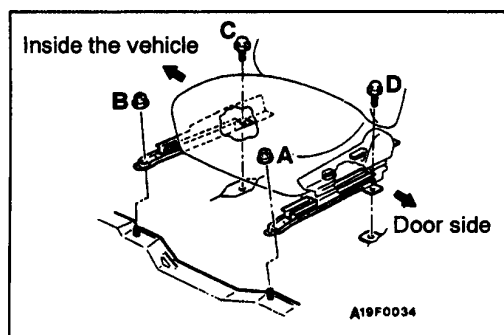
Front seat assembly removal steps

3. Harness connector
<vehicles with heated seat>
4. Seat anchor cover
5. Front seat assembly



NOTE

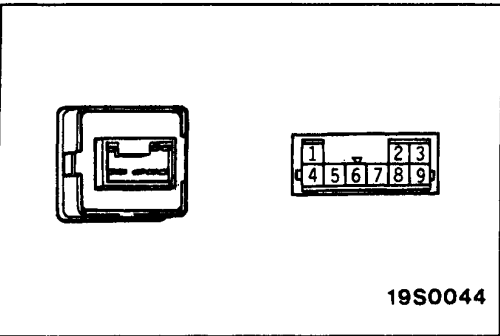
After provisionally tightening the seat assembly mounting nuts and bolts in every installation location, fully tighten them to the specified torque.



INSTALLATION SERVICE POINT

▶A◀FRONT SEAT ASSEMBLY INSTALLATION

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



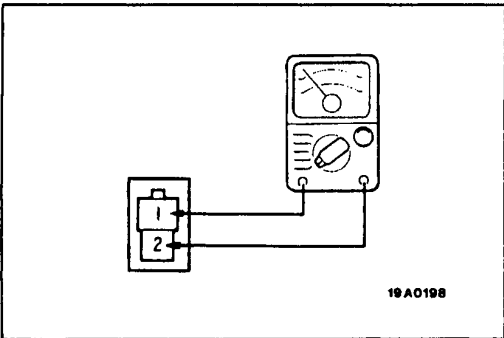
INSPECTION

52200390019

HEATED SEAT SWITCH CONTINUITY CHECK

Switch position		Terminal No.									
		1	3	4	5	-	8	9	2	-	6
Driver's seat switch	HI	○			○						
	LO		○		○						
Passenger's seat switch	HI			○	○			○			
	LO				○			○			

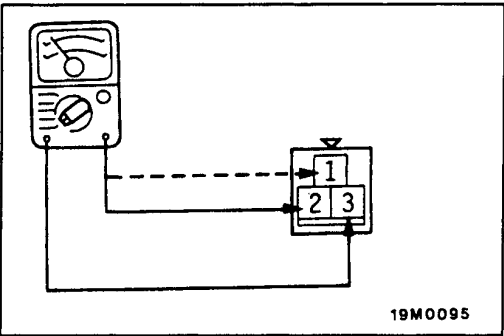
NOTE
To inspect the diode, match the polarity of the circuit tester with the (+) (-) polarities in the table.



SEATBACK HEATER CHECK

Measure the resistance between terminals.

Standard value: Approx. 8 Ω



SEAT CUSHION HEATER CHECK

Measure the resistance between terminals.

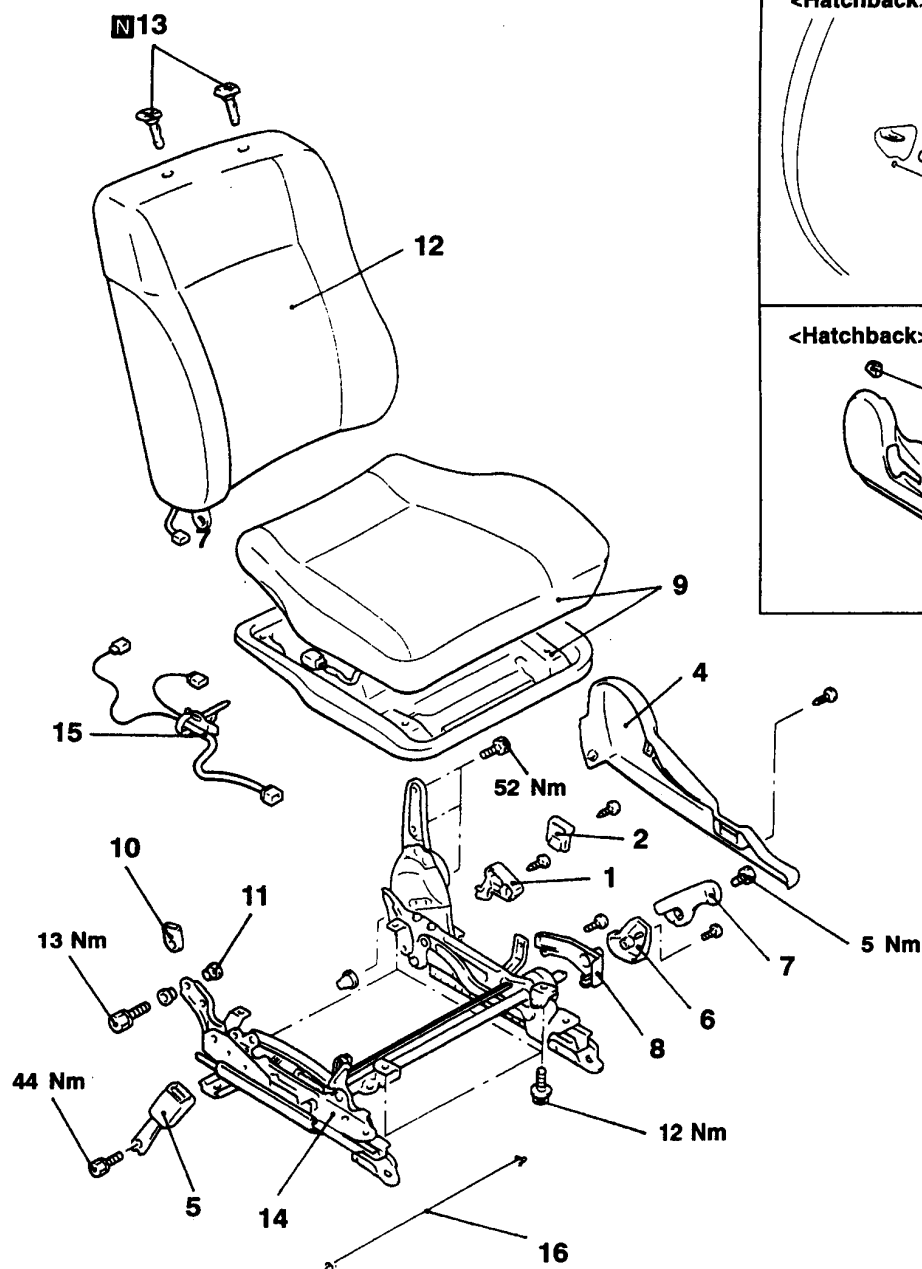
Standard value:

Between terminals 2 and 3: Approx. 8 Ω

Between terminals 1 and 3: 0 Ω

DISASSEMBLY AND REASSEMBLY

52200150150

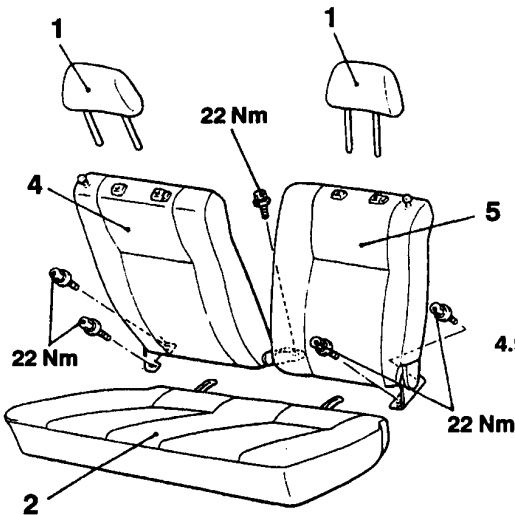


19M0108

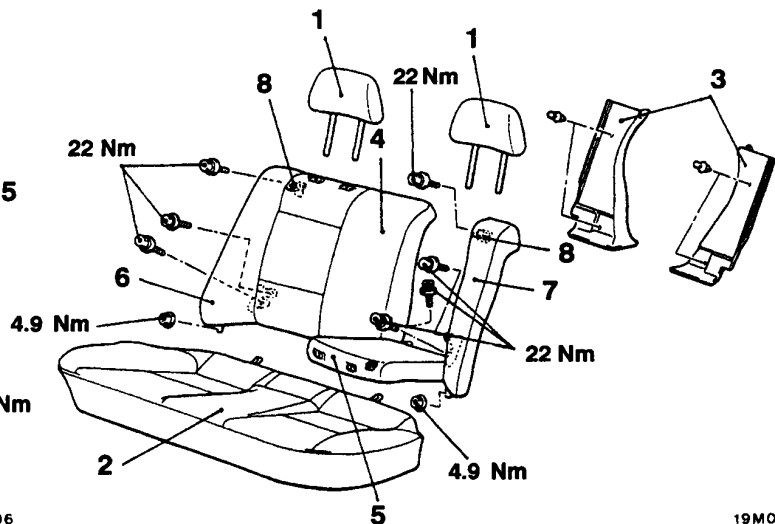
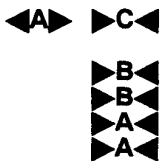
00004694

Disassembly steps

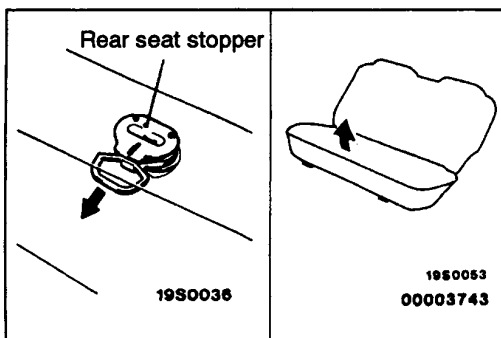
- | | |
|--|--|
| 1. Reclining adjuster knob | 10. Protector |
| 2. Slide adjuster knob | 11. Bushing |
| 3. Walk-in knob <Hatchback> | 12. Seatback assembly |
| 4. Front seat side shield cover | 13. Headrest guide |
| 5. Inner seat belt | 14. Seat adjuster assembly |
| 6. Height adjuster inner lever | 15. Seat heater wiring harness <Vehicles with heated seat> |
| 7. Height adjuster lever | 16. Wire |
| 8. Inner cover | 17. Knob <Hatchback> |
| 9. Seat cushion and seat cushion frame | 18. Cover <Hatchback> |

REAR SEAT**REMOVAL AND INSTALLATION****<Hatchback>**

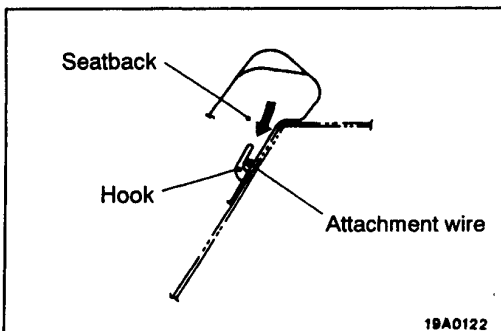
19M0096

<Sedan>19M0097
00004603**Removal steps**

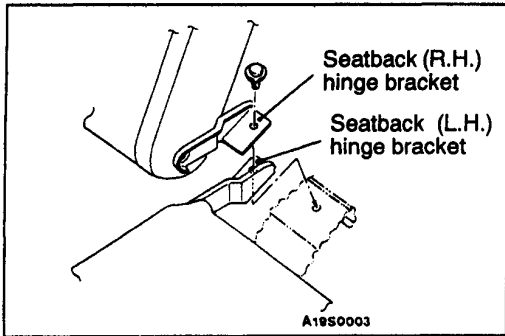
1. Headrest
2. Seat cushion
3. Seatback trim
4. Seatback (R.H.)
5. Seatback (L.H.)
6. Side seatback (R.H.)
7. Side seatback (L.H.)
8. Seat striker

**REMOVAL SERVICE POINT****◀A▶ SEAT CUSHION REMOVAL**

While keeping the rear seat stopper pulled, lift up the seat cushion to remove it.

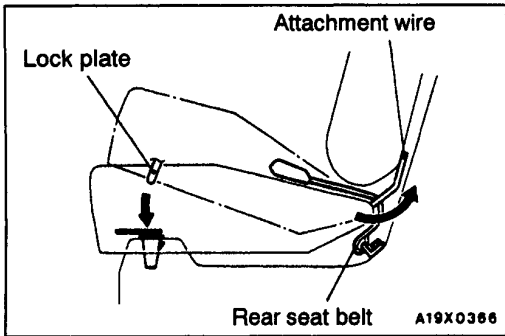
**INSTALLATION SERVICE POINTS****▶A◀ SIDE SEATBACK (L.H.)/SIDE SEATBACK (R.H.) INSTALLATION**

Push the side seatback in the direction indicated in the illustration; then securely attach the attachment wire to the body side hook and install the side seatback.



►B◄ SEATBACK (L.H.)/SEATBACK (R.H.) INSTALLATION

Place the seatback (L.H.) hinge bracket facing downwards and the seatback (R.H.) hinge bracket facing upwards, and then install the bolt.



►C◄ SEAT CUSHION INSTALLATION

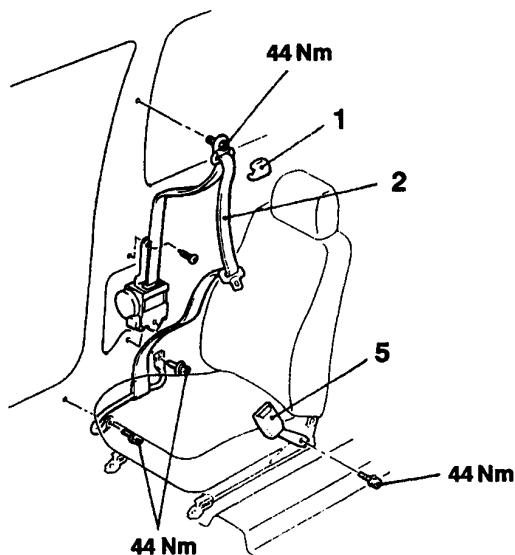
1. Pull the rear seat belt on top of the seat cushion.
2. Insert the seat cushion attachment wire securely below the seatback.
3. Insert the seat cushion lock plate securely into the floor holes.

FRONT SEAT BELT

For removal and installation procedures for the seat belt with pre-tensioner, refer to GROUP 52B – Seat Belt with Pre-tensioner.

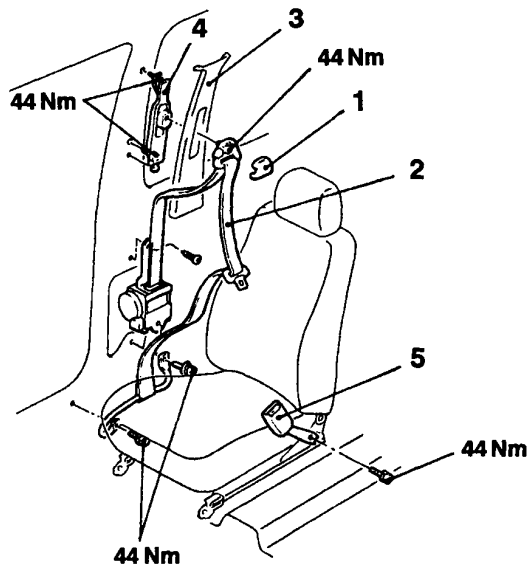
REMOVAL AND INSTALLATION

<Hatchback without adjustable seat belt anchor>



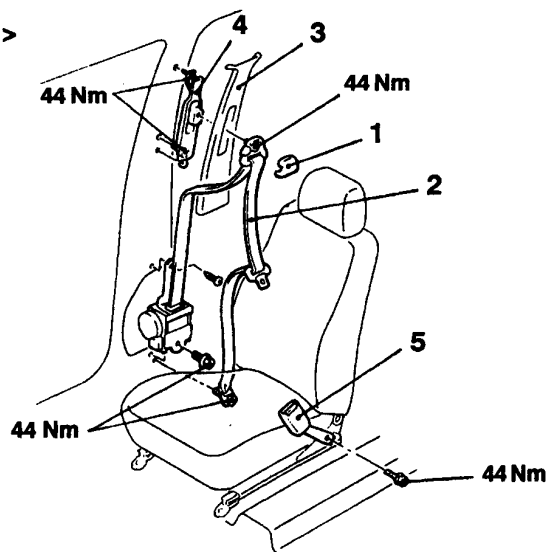
19M0098

<Hatchback with adjustable seat belt anchor>



19M0099

<Sedan>



19M0100

00004604

Outer seat belt removal steps

- Quarter trim <Hatchback> (Refer to P.52A-8.)
- Center pillar trim lower <Sedan> (Refer to P.52A-9.)
- 1. Sash guide cover
- 2. Outer seat belt

- 3. Center pillar trim upper (Refer to P.52A-8, 9.)
- 4. Adjustable seat belt anchor

Inner seat belt removal steps

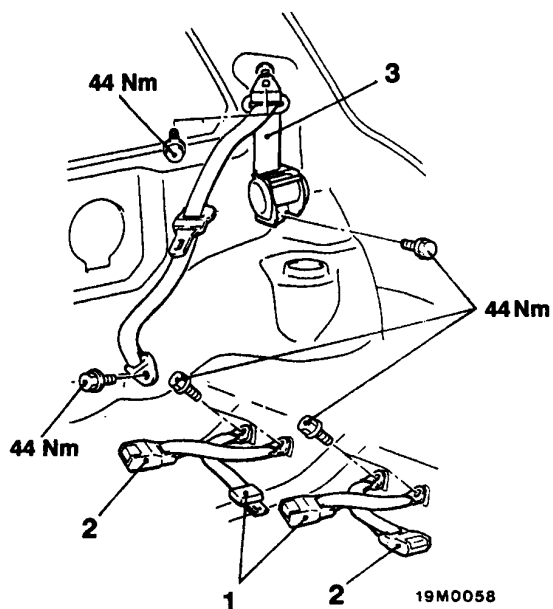
- Front seat (Refer to P.52A-11.)
- 5. Inner seat belt

REAR SEAT BELT

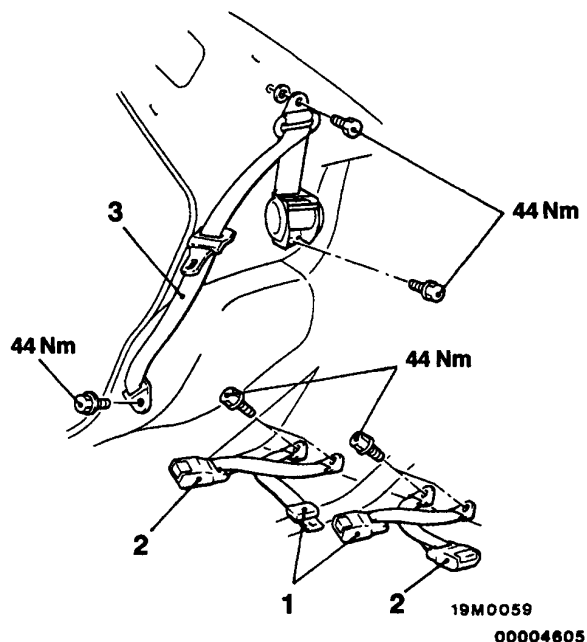
52300160064

REMOVAL AND INSTALLATION

<Hatchback>



<Sedan>



Removal steps

- Rear seat (Refer to P.52A-14.)
- 1. Inner, outer seat belt
(center seat belt)
- 2. Inner seat belt
- Quarter trim <Hatchback>
(Refer to P.52A-8.)
- Rear pillar trim (Refer to P.52A-8, 9.)
- 3. Outer seat belt

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

CONTENTS

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CAUTION

- Carefully read and observe the information in the SERVICE PRECAUTIONS (P.52B-4.) 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-22.) for the components involved.
- If you have any questions about the SRS, please contact your local distributor.

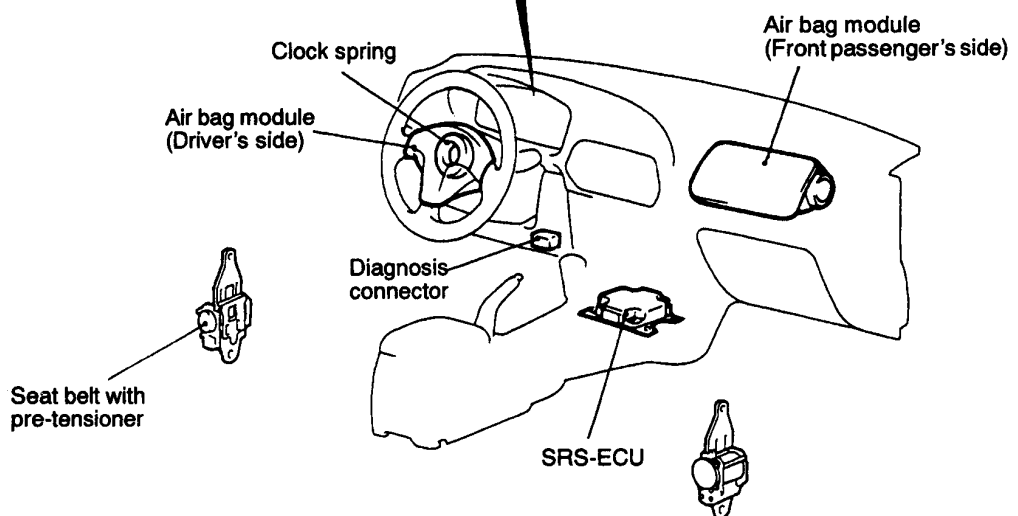
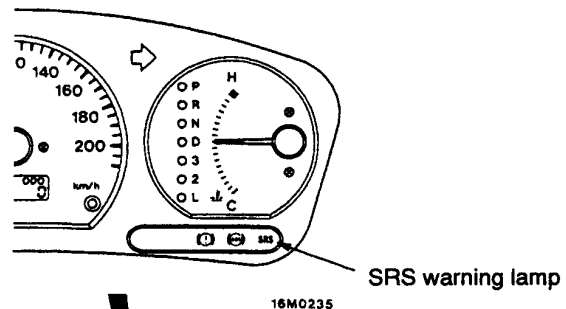
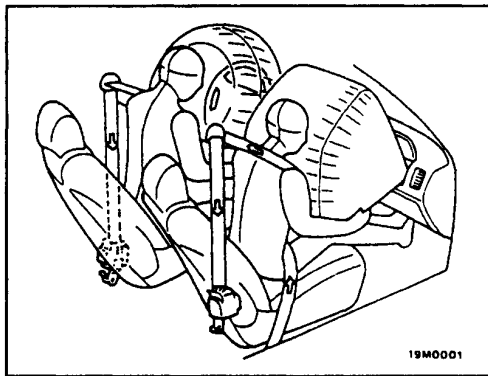
GENERAL INFORMATION

To improve safety, the SRS and seat belts with pre-tensioner are available as optional parts. These systems enhance collision safety by restraining the front passengers in case of an accident. The SRS works with the pre-tensioner simultaneously when a collision is detected.

The SRS consists of two air bag modules, SRS air bag control unit (SRS-ECU), SRS warning lamp and clock spring. One air bag is located in the centre of the steering wheel and another above the glove box. Each air bag has a folded air bag and an inflator unit. The control unit under the floor console monitors the system and has a safing G sensor and an analog G sensor. The warning lamp on the instrument panel indicates the operational status of the SRS. The clock spring is installed in the steering column.

One air bag is located in the centre of the steering wheel and another above the glove box. Each air

bag has a folded air bag and an inflator unit. The control unit under the floor console monitors the system and has a safing G sensor and an analog G sensor. The warning lamp on the instrument panel indicates the operational status of the SRS. The clock spring is installed in the steering column. The seat belt pre-tensioner is built into the front seat belt retractor. Only authorized service personnel should do work on or around the SRS components and seat belt with pre-tensioner. Those service personnel should read this manual carefully before starting any such work. Extreme care must be used when servicing the SRS to avoid injury to the service personnel (by inadvertent deployment of the air bags or inadvertent operation of the seat belt with pre-tensioner or inadvertent operation of the seat belt with pre-tensioner) or the driver (by rendering the SRS or the seat belt with pre-tensioner inoperative).



SEAT BELT WITH PRE-TENSIONER

The seat belt with pre-tensioner has a pre-tensioner operating mechanism and a G-sensor which detects the force from an impact built into the seat belt retractor.

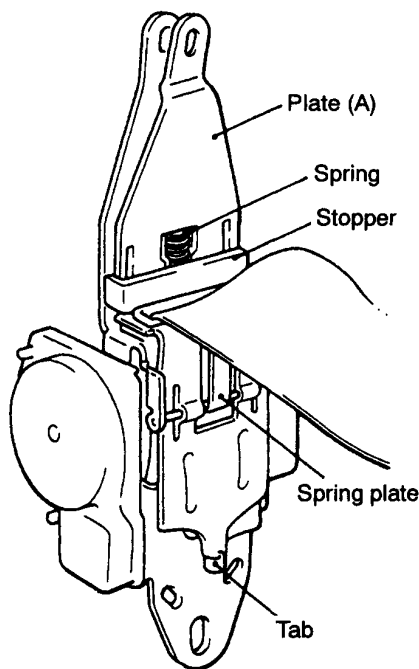
The G-sensor is a mechanical-type sensor which includes components such as a weight which moves as a result of the impact from a collision, and a spike which strikes a charge and causes it to detonate.

Thus the pre-tensioner is equipped with a safety mechanism to prevent mis-operation during maintenance operations such as removal and installation of the seat belt.

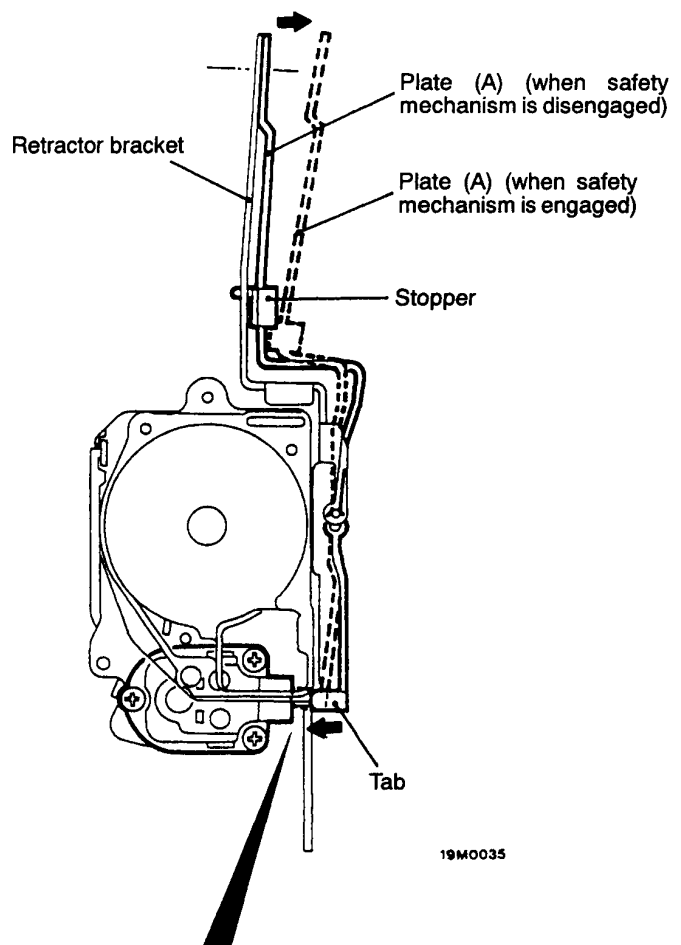
The safety mechanism operates automatically when the retractor top mounting screw is removed during removal of the seat belt.

When the retractor top mounting screw is removed, the force of the spring plate causes the tab at the lower edge of plate (A) to push in the pin of the G-sensor, which prevents the weight inside the G-sensor from moving.

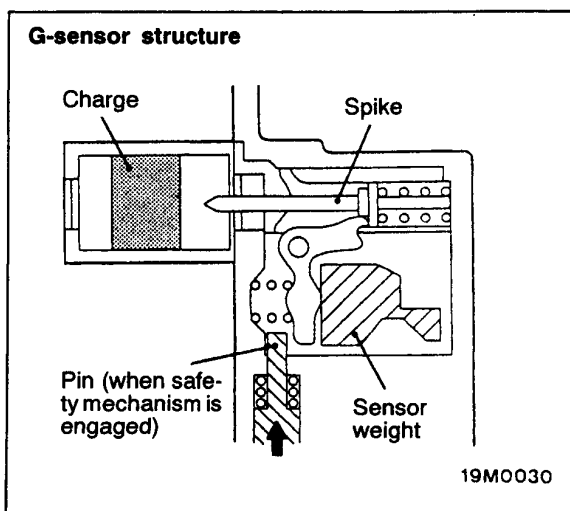
At the same time, the retractor bracket and the top of plate (A) become separated. A stopper is inserted into the gap thus formed by the force from a spring to prevent the tab from being removed from the pin if an outside force is applied to plate (A).



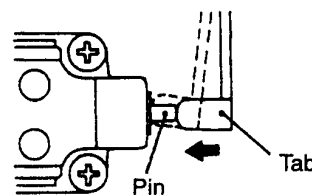
19M0031



19M0035



19M0030



19M0036

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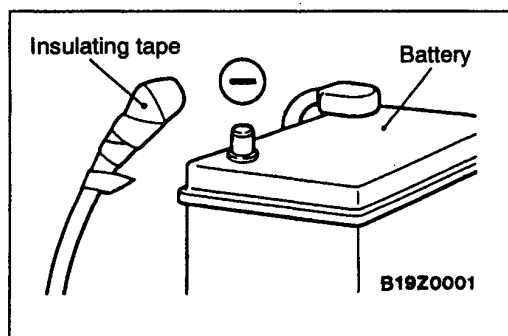
SRS SERVICE PRECAUTIONS

52400030122

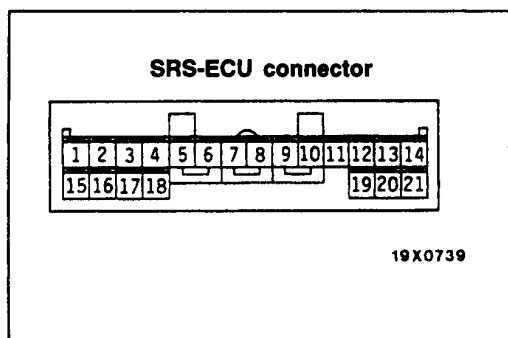
1. In order to avoid injury to yourself or others from accidental deployment of the air bag and accidental operation of the seat belt with pre-tensioner during servicing, read and carefully follow all the precautions and procedures described in this manual.
2. Do not use any electrical test equipment on or near SRS components, except those specified on P.52B-6.
3. **Never Attempt to Repair the Following Components:**
 - SRS air bag control unit (SRS-ECU)
 - Clock Spring
 - Air Bag Module (Driver's side or front passenger's side*)
 - Seat belt with Pre-tensioner

NOTE

*: Vehicles with front passenger's air bag
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-22.



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.



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.	Harness connector (No. of terminals, colour)	Destination of harness	Corrective action
1 to 4	21 pins, yellow	–	–
5		Body wiring harness → Clock spring → Air bag module (Driver's side)	Correct or replace each wiring harness. Replace clock spring.
6			
7*		Body wiring harness → Air bag module (Front passenger's side)	Correct or replace each wiring harness.
8*			
9,10		–	–
11		Body wiring harness → Diagnosis connector	Correct or replace each wiring harness.
12		–	–
13		Body wiring harness → Junction block (fuse No.2)	Correct or replace each wiring harness.
14		Body wiring harness → Junction block (fuse No.4)	
15		Body wiring harness → SRS warning lamp	
16 to 19		–	–
20		Body wiring harness → Earth	Correct or replace body wiring harness.
21			

NOTE

*: Vehicles with front passenger's air bag

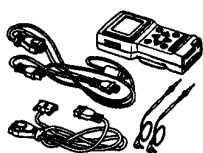
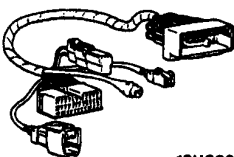
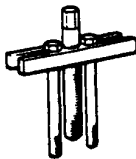
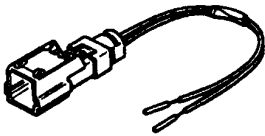
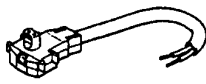
6. SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS-ECU, air bag module, clock spring and seat belt with pre-tensioner before drying or baking the vehicle after painting.
 - SRS-ECU, air bag module, clock spring: 93°C or more
 - Seat belt with pre-tensioner: 90°C or more
7. Whenever you finish servicing the SRS, check warning lamp operation to make sure that the system functions properly. (Refer to P.52B-14.)
8. Make certain that the ignition switch is OFF when the MUT-II is connected or disconnected.
9. 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

52400070117

Tool	Number	Name	Use
	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
	MB990803	Steering wheel puller	Steering wheel removal
	MB686560	SRS air bag adapter harness A	• Deployment of air bag modules and seat belt with pre-tensioner inside the vehicle • Deployment of air bag module (front passenger's side) outside the vehicle
	MR203491 or MB628919	SRS air bag adapter harness B	Deployment of air bag module (driver's side) outside the vehicle

TEST EQUIPMENT

52400080035

Tool	Name	Use
 1080702	Digital multi-meter	Checking the SRS electrical circuitry Use a multi-meter for which the maximum test current is 2 mA or less at the minimum range of resistance measurement

TROUBLESHOOTING

52400310097

STANDARD FLOW OF DIAGNOSTIC TROUBLESHOOTING

Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points.

DIAGNOSIS FUNCTION

52400320083

DIAGNOSIS CODES CHECK

Connect the MUT-II to the diagnosis connector (16-pin) under the instrument under cover, then check diagnosis codes.

(Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points.)

ERASING DIAGNOSIS CODES

Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points.

INSPECTION CHART FOR DIAGNOSIS CODES

52400330093

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	52B-7
15,16	Safing G-sensor system in the SRS-ECU	52B-8
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
31, 32	SRS-ECU capacitor system	52B-9
34*	Connector lock system	52B-9
35	SRS-ECU (deployed air bag) system	52B-10
41*	IG ₁ (A) power circuit system	52B-10
42*	IG ₁ (B) power circuit system	52B-11
43	SRS warning lamp drive circuit system	Lamp does not illuminate.*
		Lamp does not switch off.
44	SRS warning lamp drive circuit system	52B-13
45	SRS-ECU non-volatile memory (EEPROM) and A/D converter system	52B-13
51, 52	Driver's side air bag module (squib ignition drive circuit) system	52B-13
54, 55	Front passenger's side air bag module (squib ignition drive circuit) system	52B-13

NOTE

- (1) *: If the vehicle condition returns to normal, the diagnosis code will be automatically erased, and the SRS warning lamp will return to normal.
- (2) 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.14 Analog G-sensor system In the SRS-ECU	Probable cause
The SRS-ECU monitors the output of the analog G-sensor inside the SRS-ECU. It outputs this code when any of the following are detected. • When the analog G-sensor is not operating • When the characteristics of the analog G-sensor are abnormal • When the output from the analog G-sensor is abnormal	• Malfunction of SRS-ECU

Replace the SRS-ECU.

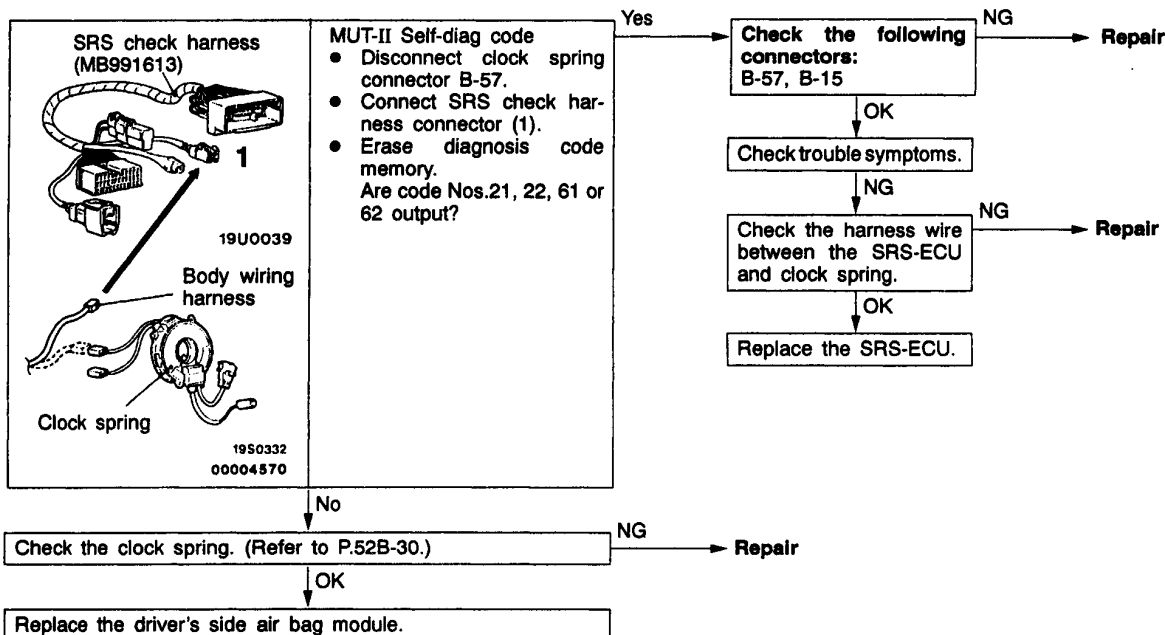
Code No.15 Safing G-sensor system in the SRS-ECU	Probable cause
This code is output if there is a short or open circuit between the terminals of the safing G-sensor inside the SRS-ECU. The trouble causes for each diagnosis code No. are as follows.	• Malfunction of SRS-ECU

Code No.	Trouble symptom
15	Short circuit in the safing G-sensor
16	Open circuit in the safing G-sensor

Replace the SRS-ECU.

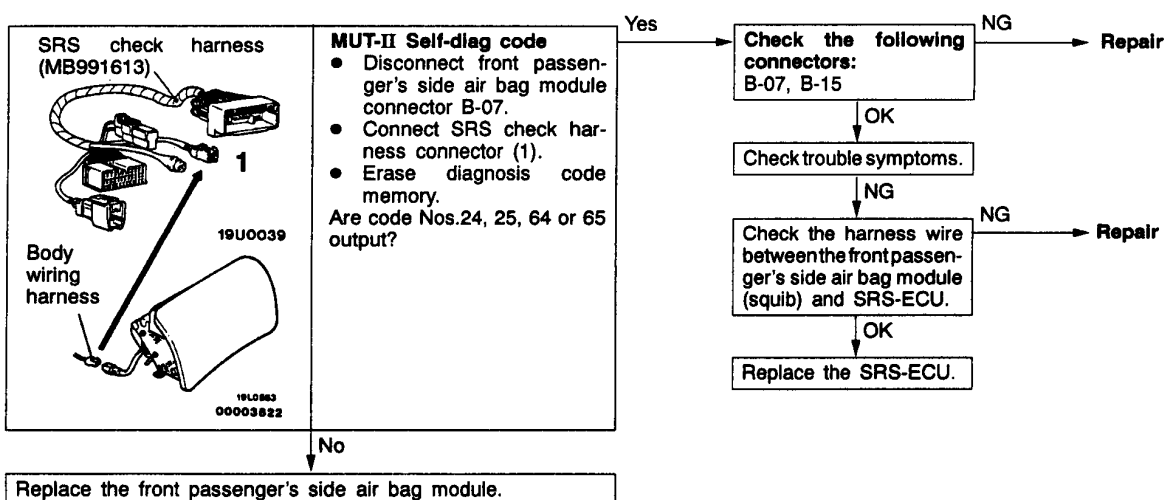
Code No.21, 22, 61 or 62 Driver's side air bag module (squib) system	Probable cause
These diagnosis codes are output if there is abnormal resistance between the input terminals of the driver's side air bag module (squib). The trouble causes for each diagnosis code No. are as follows.	• Malfunction of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

Code No.	Trouble symptom
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 • 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



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 driver'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

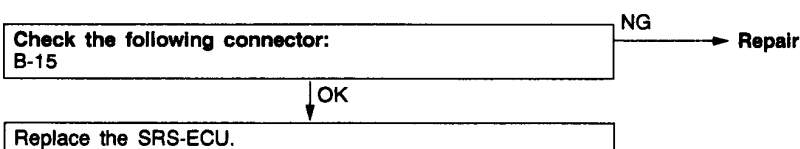
Code No.	Trouble symptom
24	• Short in front passenger's side air bag module (squib) or harness short
25	• Open circuit in front passenger's side air bag module (squib) or open harness • Malfunction of connector contact
64	• Short in front passenger's side air bag module (squib) harness leading to the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



Code No.31 or 32 SRS-ECU capacitor system	Probable cause
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).	• Malfunction of SRS-ECU

Replace the SRS-ECU.

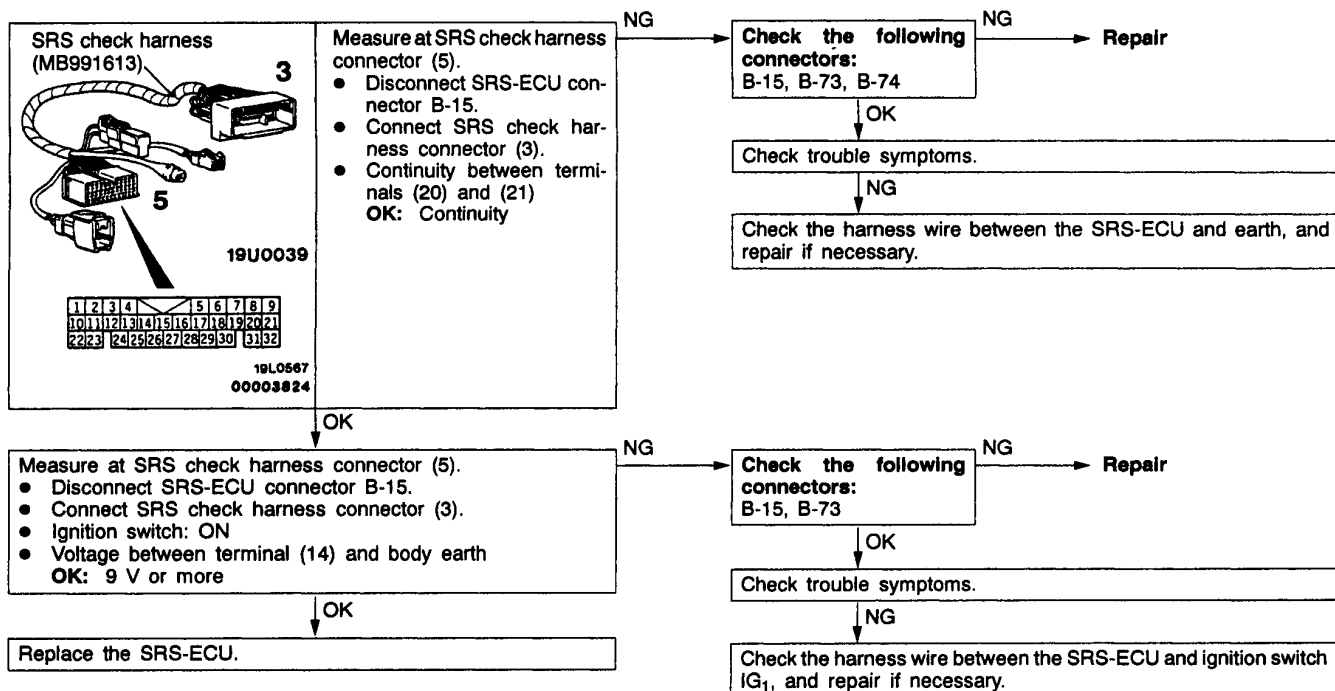
Code No.34 Connector lock system	Probable cause
This diagnosis code is output if a poor connection of the SRS-ECU is detected. However, if the vehicle condition returns to normal, diagnosis code No.34 will be automatically erased, and the SRS warning lamp will switch off.	• Malfunction of connectors • Malfunction of SRS-ECU



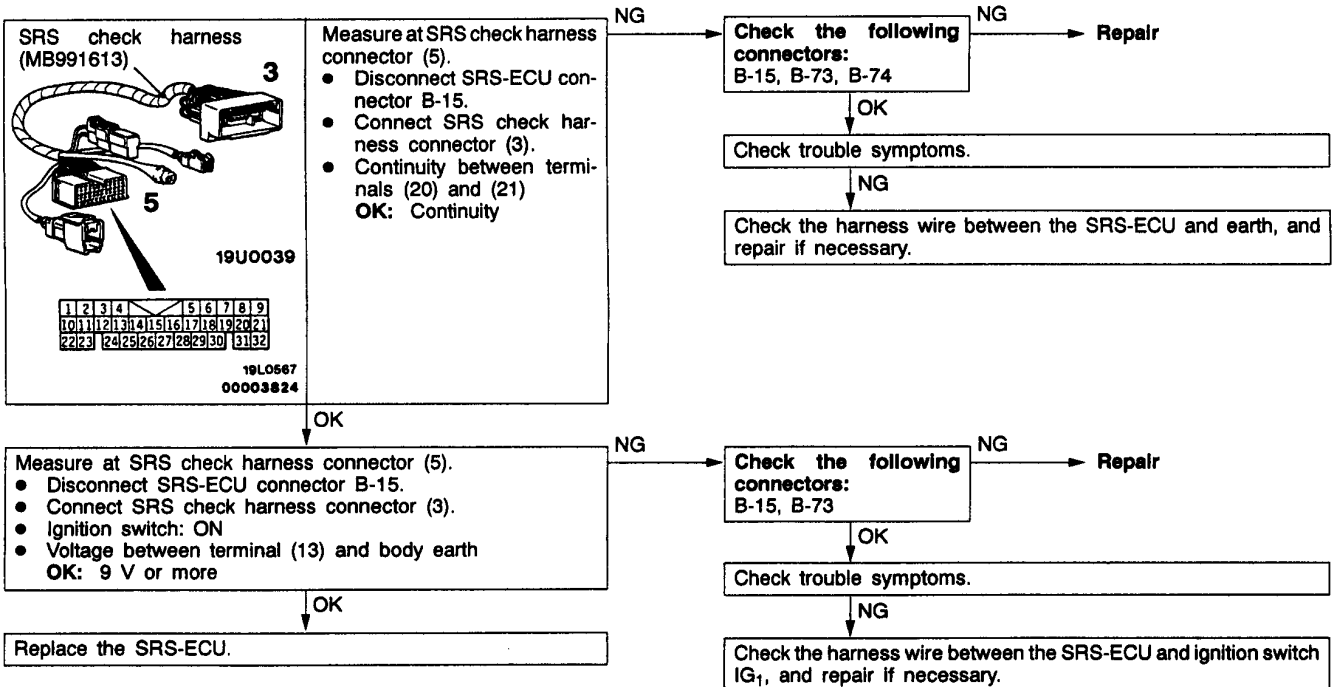
Code No.35 SRS-ECU (deployed air bag) system	Probable cause
This diagnosis code is output after the air bag deploys. If this code is output before the air bag has deployed, the cause is probably a malfunction inside the SRS-ECU.	Malfunction of SRS-ECU

Replace the SRS-ECU.

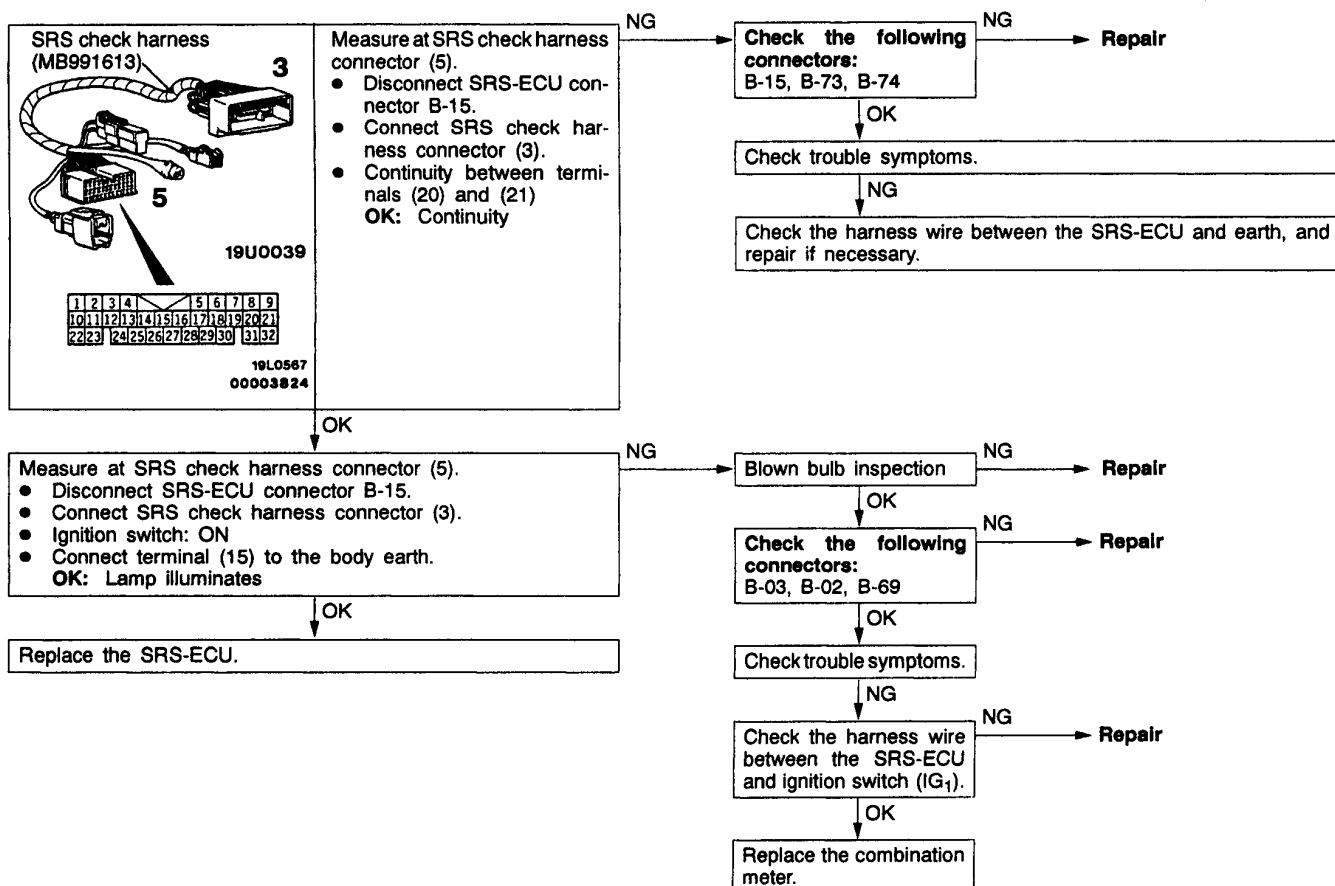
Code No.41 IG ₁ (A) power circuit system	Probable cause
This diagnosis code is output if the voltage between the IG ₁ (A) terminal and the earth is lower than the specified value for a continuous period of 5 seconds or more. However, if the vehicle condition returns to normal, diagnosis code No.41 will be automatically erased, and the SRS warning lamp will switch off.	- Malfunction of wiring harnesses or connectors - Malfunction of SRS-ECU



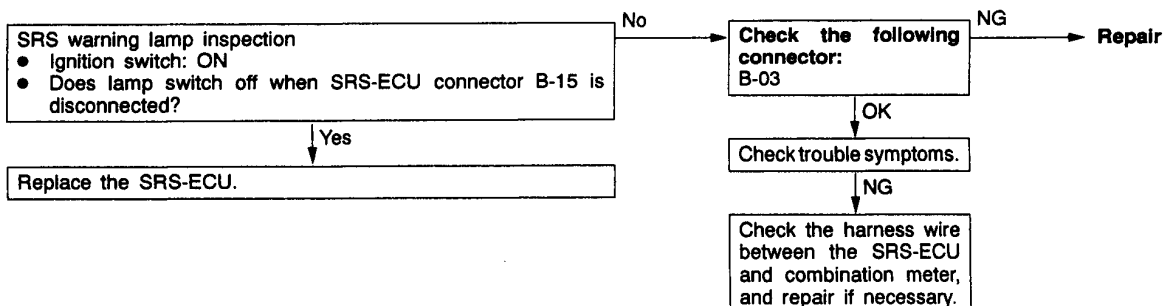
Code No.42 IG ₁ (B) power circuit system	Probable cause
This diagnosis code is output if the voltage between the IG ₁ (B) terminal and the earth is lower than the specified value for a continuous period of 5 seconds or more. However, if the vehicle condition returns to normal, diagnosis code No.42 will be automatically erased, and the SRS warning lamp will switch off.	Malfunction of wiring harnesses or connectors



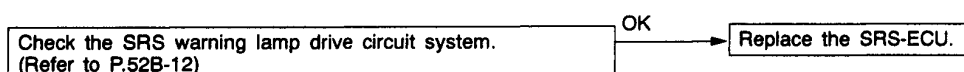
Code No.43 SRS warning lamp drive circuit system (Lamp does not illuminate.)	Probable cause
This diagnosis code is output when an open circuit occurs for a continuous period of 5 seconds while the SRS-ECU is monitoring the SRS warning lamp and the lamp is OFF (transistor OFF). However, if this code is 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



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



Code No.44 SRS warning lamp drive circuit system	Probable cause
This diagnosis code is output when a short occurs in the lamp drive circuit or a malfunction of the output transistor inside the SRS-ECU is detected while the SRS-ECU is monitoring the SRS warning lamp drive circuit.	• Malfunction of wiring harnesses or connectors • Malfunction of SRS-ECU



Code No.45 SRS-ECU non-volatile memory (EEPROM) and A/D converter system	Probable cause
This diagnosis code is output if there is a malfunction in the SRS-ECU non-volatile memory (EEPROM) and A/D converter.	• Malfunction of SRS-ECU

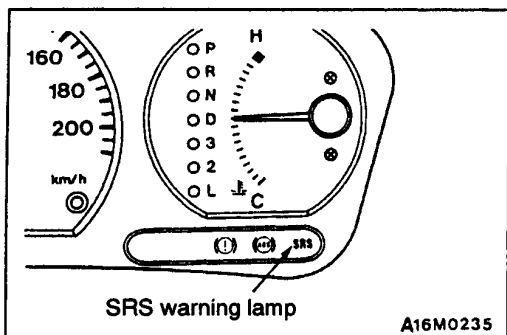
Replace the SRS-ECU.

Code No.51 or 52 Driver's side air bag module (squib ignition drive circuit) system	Probable cause
This diagnosis code is output if a short (No.51) or an open circuit (No.52) is detected in the circuit for the driver's seat.	• Malfunction of SRS-ECU

Replace the SRS-ECU.

Code No.54 or 55 Front passenger's side air bag module (squib ignition drive circuit) system	Probable cause
This diagnosis code is output if a short (No.54) or an open circuit (No.55) is detected in the circuit for the passenger's seat.	• Malfunction of SRS-ECU

Replace the SRS-ECU.



SRS WARNING LAMP INSPECTION

1. Check to be sure that the SRS warning lamp illuminates when the ignition switch is in the ON position.
2. Check to be sure that it illuminates for approximately 7 seconds and then switches off.
3. If the above is not the cause, inspect the diagnosis codes.

INSPECTION CHART FOR TROUBLE SYMPTOMS

52400340096

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	52B-14
	Communication is not possible with SRS only.	2	52B-14
When the ignition key is turned to "ON" (engine stopped), the SRS warning lamp does not illuminate.		Refer to diagnosis code No.43.	52B-12
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-13

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

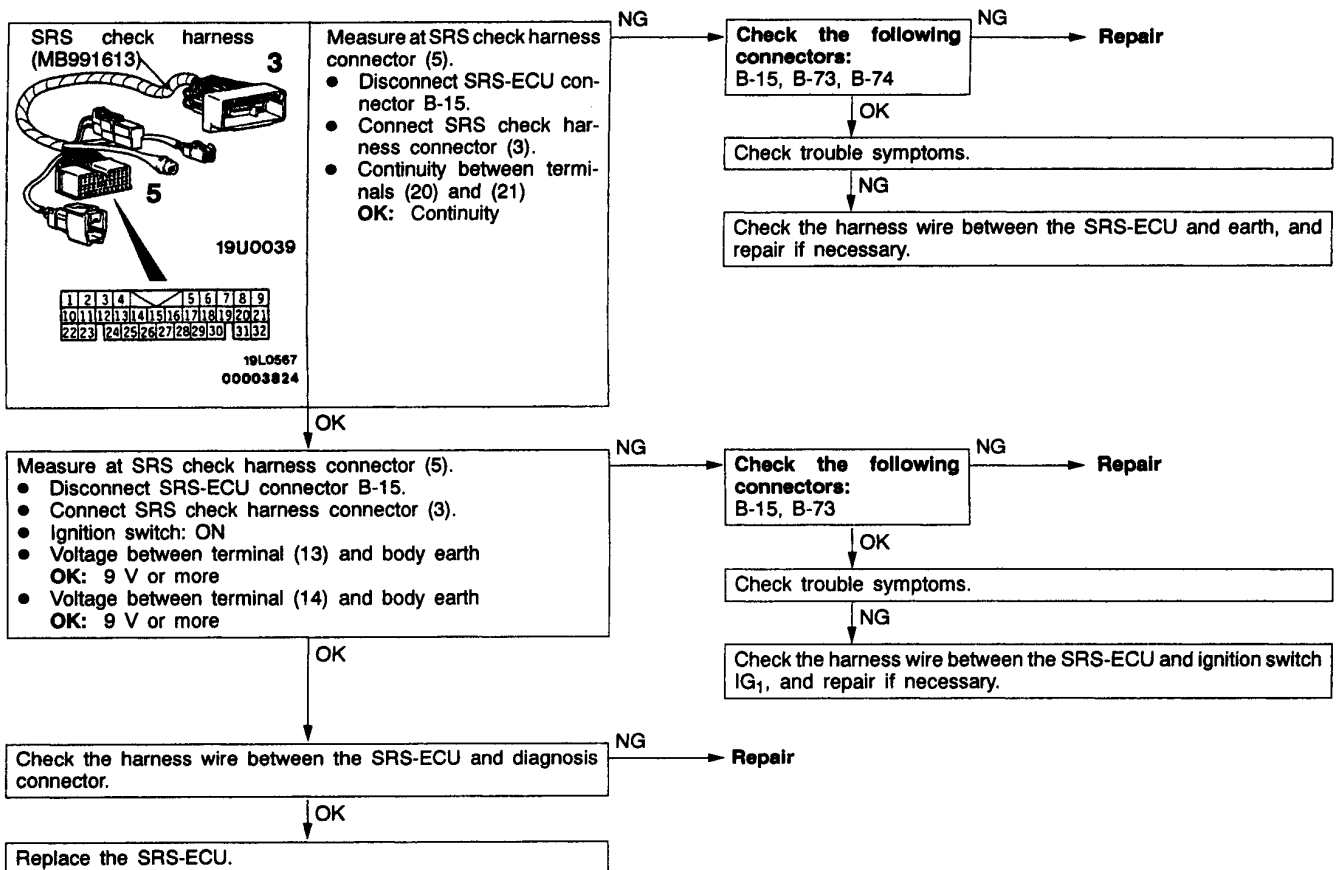
Inspection Procedure 1

Communication with MUT-II is not possible. (Communication with all systems is not possible.)	Probable cause
The cause is probably a power supply system (including earth circuit) of the diagnosis line.	• Malfunction of connectors • Malfunction of wiring harness

Refer to GROUP 13A – Troubleshooting.

Inspection Procedure 2

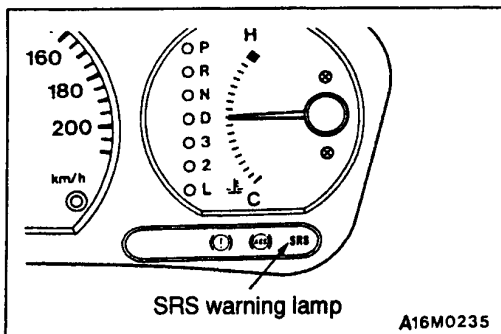
Communication with MUT-II is not possible. (Communication is not possible with SRS only.)	Probable cause
If communication is not possible with the SRS only, the cause is probably an open circuit in the diagnosis output circuit of the SRS or in the power circuit (including earth circuit).	• Malfunction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



SRS MAINTENANCE

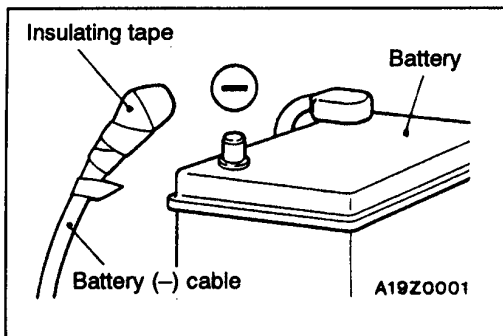
52400390084

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



SRS WARNING LAMP CHECK

Turn the ignition key to the "ON" position. Does the SRS warning lamp illuminate for about 7 seconds, turn off and then remain extinguished for at least 5 seconds? If yes, SRS system is functioning properly. If no, consult page 52B-6.

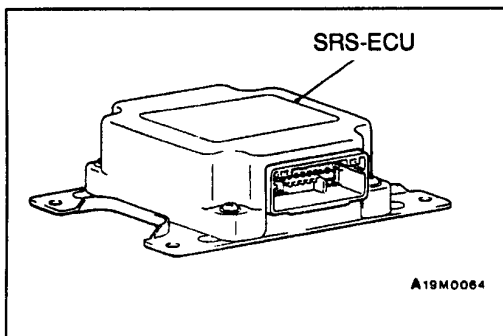


SRS COMPONENT VISUAL CHECK

Turn the ignition key to the "LOCK" position, disconnect the negative battery cable and tape the terminal.

Caution

Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-4.)



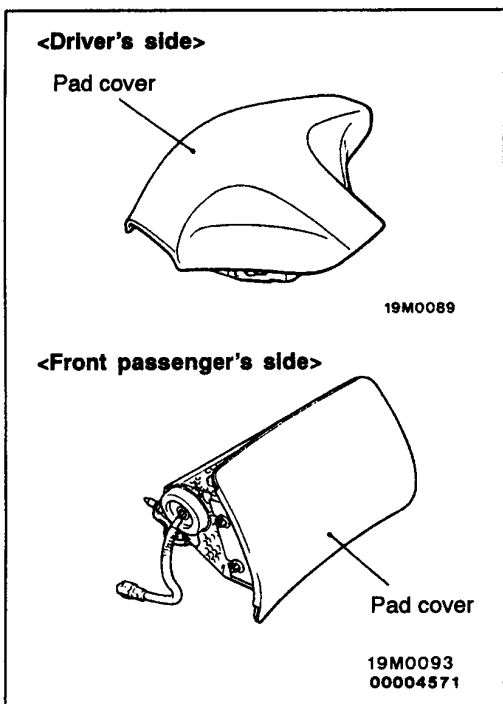
SRS CONTROL UNIT (SRS-ECU)

1. Check SRS-ECU case and brackets for dents, cracks, deformation or rust.

Caution

The SRS may not activate if the SRS-ECU is not installed properly, which could result in serious injury or death to the vehicle's driver or front passenger.

2. Check connector for damage, and terminals for deformation or rust.
Replace SRS-ECU if it fails visual check.
(Refer to P.52B-24.)



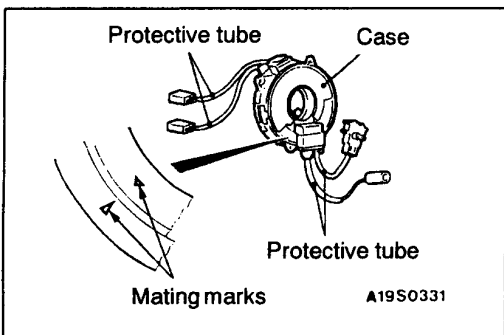
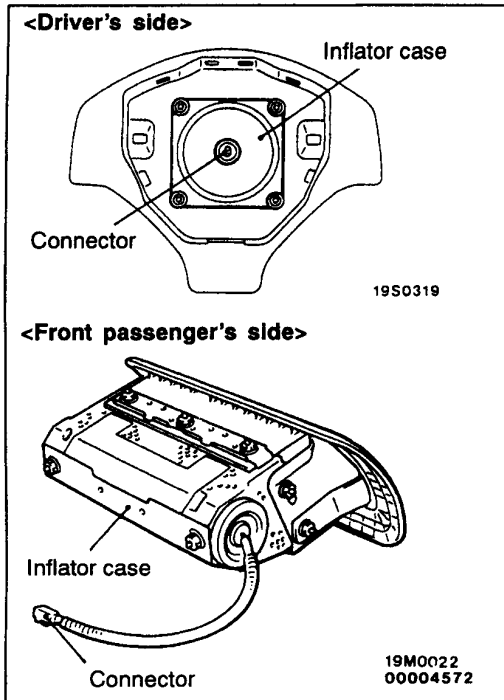
AIR BAG MODULES, STEERING WHEEL AND CLOCK SPRING

1. Remove the air bag modules, steering wheel and clock spring. (Refer to P.52B-25.)

Caution

The removed air bag modules should be stored in a clean, dry place with the pad cover face up.

2. Check pad cover for dents, cracks or deformation.



3. Check connector for damage, terminals deformities, and harness for binds.
4. Check air bag inflator case for dents, cracks or deformities.
5. Check harness and connectors for damage, and terminals for deformation.

6. Check clock spring connectors and protective tube for damage, and terminals for deformation.
7. Visually check the clock spring case for damage.
8. Align the mating marks of the clock spring and, after turning the vehicle's front wheels to straight-ahead position, install the clock spring to the column switch.

Mating Mark Alignment

Turn the clock spring clockwise fully, and then turn back it approx. 3 4/5 turns counterclockwise to align the mating marks.

Caution

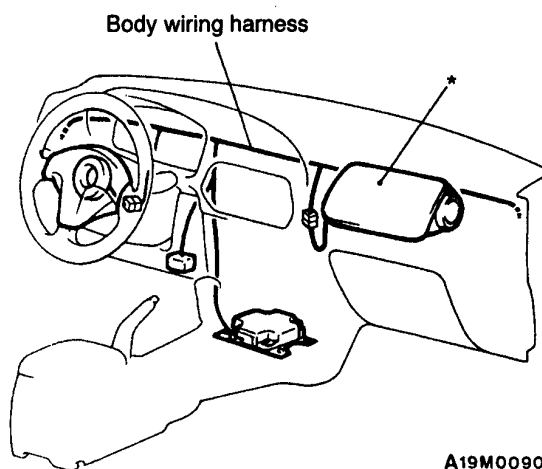
If the clock spring's mating mark is not properly aligned, the steering wheel may not be completely rotational during a turn, or the flat cable within the clock spring may be severed, obstructing normal operation of the SRS and possibly leading to serious injury to the vehicle's driver or front passenger.

9. Install the steering column covers, steering wheel and the air bag module.
 10. Check steering wheel for noise, binds or difficult operation.
 11. Check steering wheel for excessive free play.
- REPLACE ANY VISUALLY INSPECTED PART IF IT FAILS THAT INSPECTION. (Refer to P.52B-25.)**

Caution

The SRS may not activate if any of the above components is not installed properly, which could result in serious injury or death to the vehicle's driver or front passenger.

BODY WIRING HARNESS



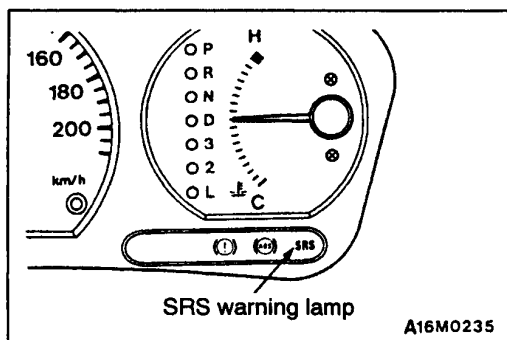
NOTE

*: Vehicles with front passenger's air bag

1. Check connector for poor connection.
 2. Check harnesses for binds, connectors for damage, and terminals for deformation.
- REPLACE ANY CONNECTORS OR HARNESS THAT FAIL THE VISUAL INSPECTION. (Refer to P.52B-4.)

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-INSTALLATION INSPECTION**

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

POST-COLLISION DIAGNOSIS

52400110116

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

SRS-ECU MEMORY CHECK

1. Connect the MUT-II to the diagnosis connector (16-pin).

Caution

Make certain that the ignition switch is OFF when the MUT-II is connected or disconnected.

2. Read (and write down) all displayed diagnosis codes. (Refer to P.52B-7.)

NOTE

If the battery power supply has been disconnected or disrupted by the collision, the MUT-II cannot communicate with the SRS-ECU. Inspect and, if necessary, repair the body wiring harness before proceeding further.

3. Read the data list (fault duration and how many times memories are erased) using the MUT-II.

Data list

No	Service Data Item	Applicability
92	Number indicating how often the memory is cleared	Maximum time to be stored: 250
93	How long a problem has lasted (How long it takes from the occurrence of the problem till the first igniting signal)	Maximum time to be stored: 99999 minutes (approximately 7 days)
94	How long a problem has lasted (How long it takes from the first igniting signal till now)	

4. Erase the diagnosis codes and after waiting 5 seconds or more read (and write down) all displayed diagnosis codes. (Refer to P.52B-7.)

REPAIR PROCEDURE**WHEN AIR BAG DEPLOYS OR SEAT BELT PRE-TENSIONER OPERATES IN A COLLISION.**

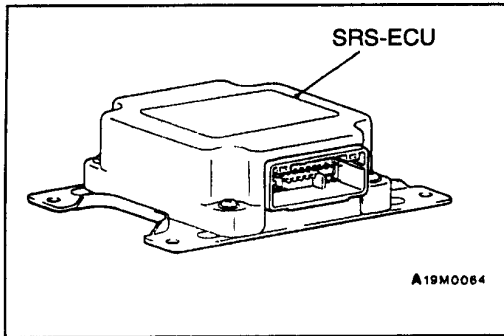
1. Replace the following parts with new ones.
 - SRS-ECU (Refer to P.52B-24.)
 - Air bag module (Refer to P.52B-25.)
 - Seat belt with pre-tensioner (Refer to P.52B-31.)

2. Check the following parts and replace if there are any malfunctions.
 - Clock spring (Refer to P.52B-25.)
 - Steering wheel, steering column and intermediate joint
 - (1) Check wiring harness (built into steering wheel) and connectors for damage, and terminals for deformation.
 - (2) Install air bag module to check fit or alignment with steering wheel.
 - (3) Check steering wheel for noise, binds or difficult operation and excessive free play.

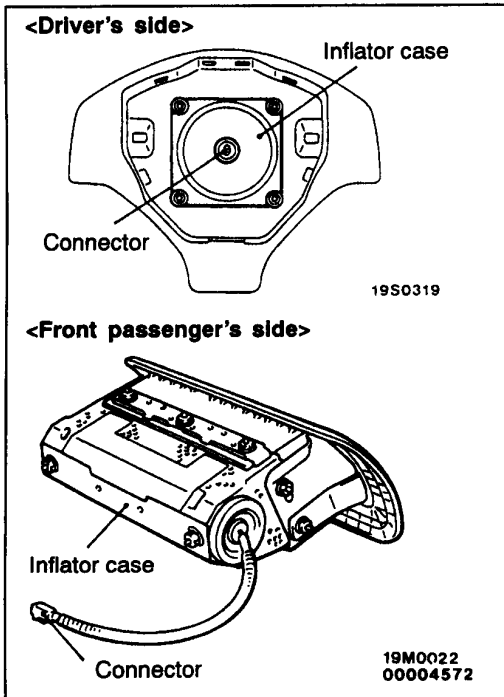
3. Check harnesses for binding, connectors for damage, poor connections, and terminals for deformation. (Refer to P.52B-18.)

WHEN AIR BAG OR SEAT BELT PRE-TENSIONER DOES NOT DEPLOY IN LOW-SPEED COLLISION.

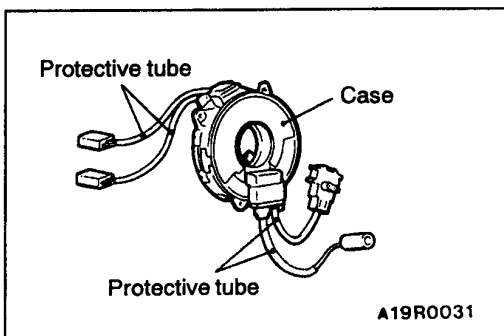
Check the SRS components and seat belt with pre-tensioner. If the SRS components and seat belt with pre-tensioner are showing any visible damage such as dents, cracks, or deformation, replace them with new ones. Concerning parts removed for inspection, replacement with new parts and cautionary points for working, refer to appropriate INDIVIDUAL COMPONENT SERVICE, P. 52B-22.

**SRS-ECU**

1. Check SRS-ECU case and brackets for dents, cracks or deformation.
2. Check connector for damage, and terminals for deformation.

**Air bag modules**

1. Check pad cover for dents, cracks or deformation.
2. Check connector for damage, terminals deformities, and harness for binds.
3. Check air bag inflator case for dents, cracks or deformities.
4. Install air bag module to steering wheel to check fit or alignment with the wheel.

**Clock spring**

1. Check clock spring connectors and protective tube for damage, and terminals for deformation.
2. Visually check the case for damage.

Steering wheel, steering column and Intermediate joint

1. Check wiring harness (built into steering wheel) and connectors for damage, and terminals for deformation.
2. Install air bag module to check fit or alignment with steering wheel.
3. Check steering wheel for noise, binds or difficult operation and excessive free play.

Harness connector (body wiring harness)

Check harnesses for binding, connectors for damage, poor connection, and terminals for deformation. (Refer to P.52B-18.)

Seat belt with pre-tensioner

1. Check the seat belt for damage or deformation.
2. Check the pre-tensioner for cracks or deformation.
3. Check that the unit is installed correctly to the vehicle body.

INDIVIDUAL COMPONENT SERVICE

52400290100

If the SRS components and seat belt with pre-tensioner are to be removed or replaced as a result of maintenance, troubleshooting, etc., follow each procedure (P.52B-24 – P.52B-33.)

Caution

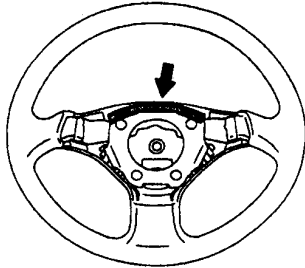
1. **SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS-ECU, air bag module, clock spring and seat belt with pre-tensioner before drying or baking the vehicle after painting.**
 - SRS-ECU, Air bag module, clock spring: 93°C or more
 - Seat belt with pre-tensioner: 90°C or more**Recheck SRS system operability after re-installing them.**
2. **If the SRS components and seat belt with pre-tensioner 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

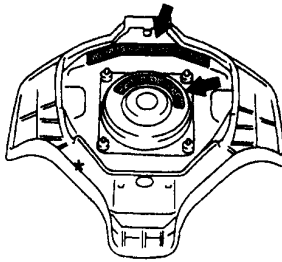
52400300049

A number of caution labels relating to the SRS and seat belt with pre-tensioner are found in the vehicle, as shown in the following illustration. Follow

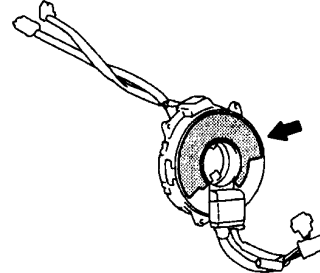
label instructions when servicing SRS and seat belt pre-tensioner. If labels are dirty or damaged, replace them with new ones.

Steering wheel

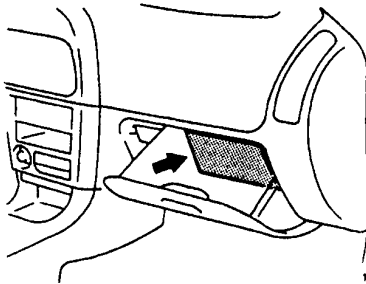
19M0033

Air bag module (driver's side)

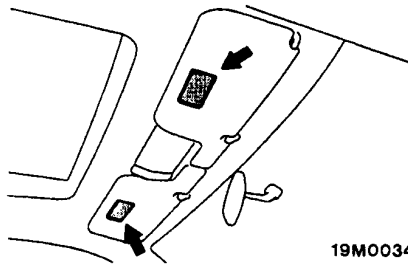
19M0020

Clock spring

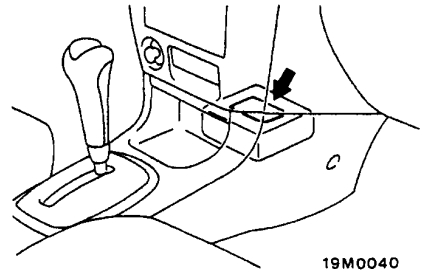
19X0015

Glove box

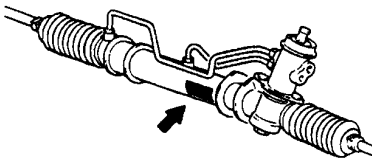
19M0039

Sun visor

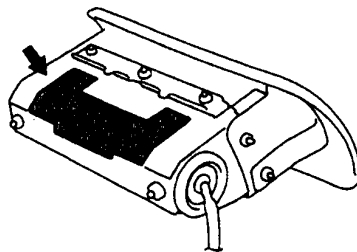
19M0034

SRS-ECU

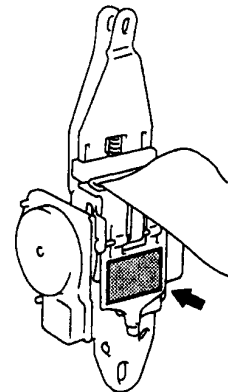
19M0040

Steering gear and linkage

19S0223

Air bag module (front passenger's side)

19M0021

Seat belt pre-tensioner19M0091
00004573

SRS AIR BAG CONTROL UNIT (SRS-ECU)

52400210083

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-4.)
2. Never attempt to disassemble or repair the SRS-ECU. If faulty, replace it.
3. Do not drop or subject the SRS-ECU to impact or vibration.

- If denting, cracking, deformation, or rust are discovered in the SRS-ECU, replace it with a new SRS-ECU. Discard the old one.
4. After deployment of an air bag, replace the SRS-ECU with a new one.
 5. Never use an ohmmeter on or near the SRS-ECU, and use only the special test equipment described on P.52B-6.

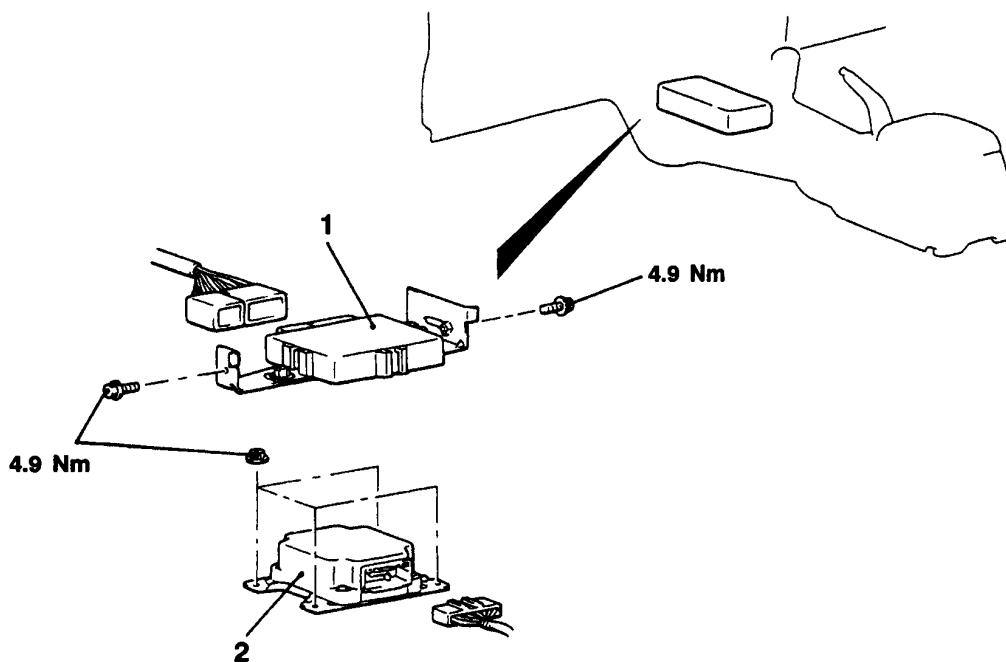
REMOVAL AND INSTALLATION

Pre-removal Operation

- Turn the ignition key to the "LOCK" position.
- Floor Console Removal (Refer to GROUP 52A.)

Post-installation Operation

- Floor Console Installation (Refer to GROUP 52A.)



A19M0065

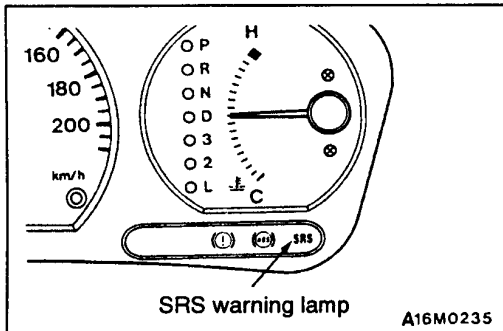
Removal steps

- B◄
- Post-installation inspection
 - Negative (–) battery cable connection
1. ABS-ECU <Vehicles with ABS>

- A◄ 2. SRS-ECU

INSTALLATION SERVICE POINTS**►A◄ SRS-ECU INSTALLATION****Caution**

The SRS may not activate if SRS-ECU is not installed properly, which could result in serious injury or death to the vehicle's driver or front passenger.

**►B◄ 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 OFF?
4. If yes, SRS system is functioning properly.
If no, consult page 52B-6.

INSPECTION

52400220062

- Check the SRS-ECU and brackets 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 SRS-ECU with a new one.

NOTE

For checking of the SRS-ECU other than described above, refer to the section concerning troubleshooting. (Refer to P.52B-6.)

AIR BAG MODULES AND CLOCK SPRING

52400240112

Caution

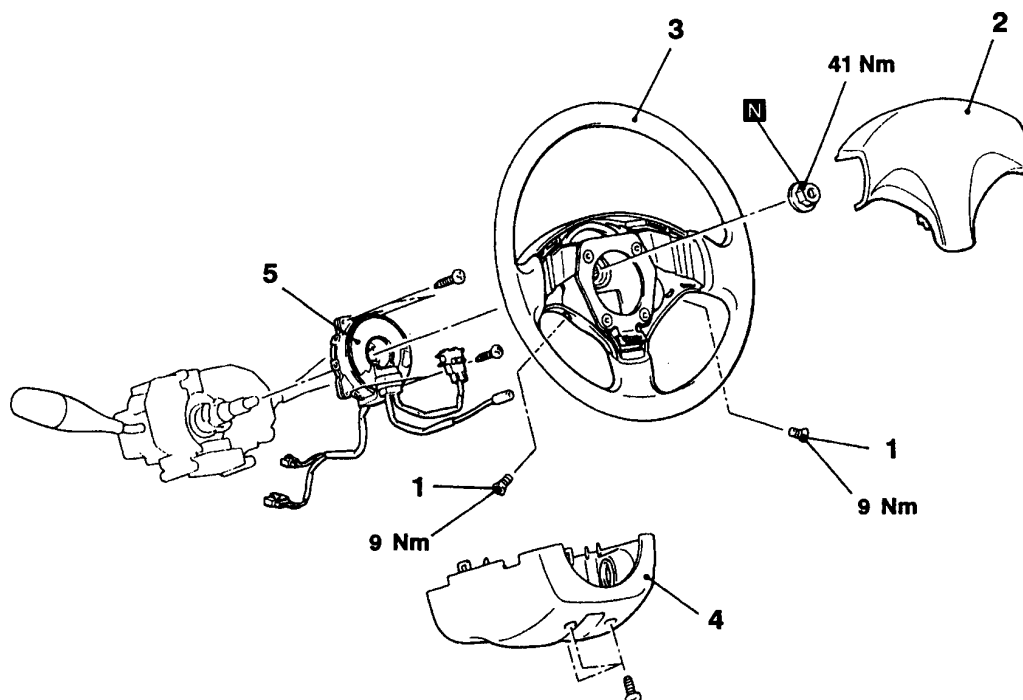
1. Disconnect the battery (–) terminal and wait for 60 seconds or more before starting work. Furthermore, the disconnected battery terminal should be covered with tape to insulate it. (Refer to P.52B-4.)
2. Never attempt to disassemble or repair the air bag modules or clock spring. If faulty, replace it.
3. Do not drop the air bag modules or clock spring or allow contact with water, grease or oil. Replace it if a dent, crack, deformation or rust is detected.
4. The air bag modules should be stored on a flat surface and placed so that the pad surface is facing upward. Do not place anything on top of it.
5. Do not expose the air bag modules to temperatures over 93°C.
6. After deployment of an air bag, replace the clock spring with a new one.
7. Wear gloves and safety glasses when handling air bags that have already deployed.
8. An undeployed air bag module should only be disposed of in accordance with the procedures (Refer to P.52B-34.)

REMOVAL AND INSTALLATION

<Air bag module (driver's side), clock spring>

Pre-removal Operation

- After setting the steering wheel and the front wheels to the straight ahead position, remove the ignition key.



A19M0101

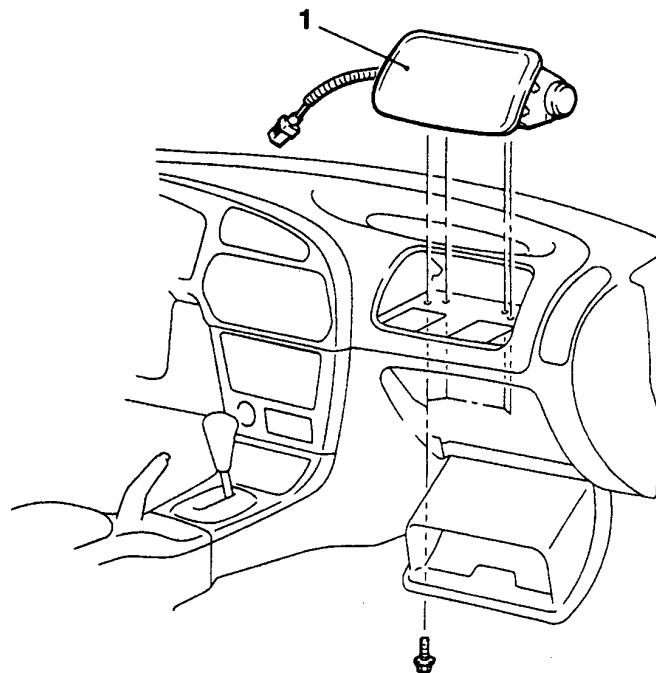
Air bag module removal steps

- ▶D◀ • Post-installation inspection
- Negative (–) battery cable connection
- 1. Air bag module mounting screw (Torx screw)
- 2. Air bag module
- ▶A◀ • Pre-installation inspection

Clock spring removal steps

- ▶D◀ • Post-installation inspection
- Negative (–) battery cable connection
- 1. Air bag module mounting screw (Torx screw)
- 2. Air bag module
- 3. Steering wheel
- 4. Column cover lower
- 5. Clock spring
- ▶A◀ • Pre-installation inspection

<Air bag module (front passenger's side)>

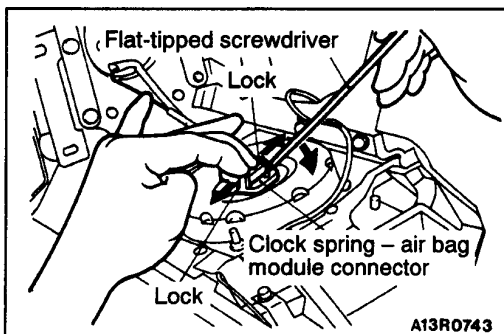


A19M0105

Air bag module removal steps

- D◄
- Post-installation inspection
 - Negative (–) battery cable connection

- ◄D►
- A◄
- 1. Air bag module
 - Pre-installation inspection



A13R0743

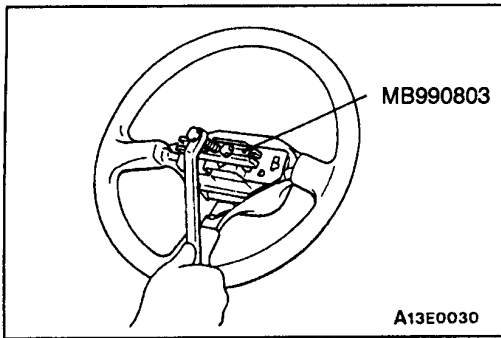
REMOVAL SERVICE POINTS

◄A► AIR BAG MODULE REMOVAL (DRIVER'S SIDE)

When disconnecting the connector of the clock spring from the air bag's lock towards the outer side to spread it open. Use a flat-tipped screwdriver, as shown in the figure at the left, to pry so as to remove the connector gently.

Caution

1. When disconnect the air bag module-clock spring connector, take care not to apply excessive force to it.
2. The removed air bag module should be stored in a clean, dry place with the pad cover face up.

**◀B▶ STEERING WHEEL REMOVAL****Caution**

Do not hammer on the steering wheel. Doing so may damage the collapsible column mechanism.

◀C▶ CLOCK SPRING REMOVAL**Caution**

The removed clock spring should be stored in a clean, dry place.

**◀D▶ AIR BAG MODULE REMOVAL
(FRONT PASSENGER'S SIDE)****Caution**

The removed air bag module should be stored in a clean, dry place with the pad cover face up.

INSTALLATION SERVICE POINTS**▶A◀ PRE-INSTALLATION INSPECTION**

1. When installing the new air bag modules and clock spring, refer to "INSPECTION".

Caution

Dispose of air bag modules only according to the specified procedure. (Refer to P.52B-34.)

2. Connect the battery (–) terminal.
3. Connect the MUT-II to the diagnosis connector.

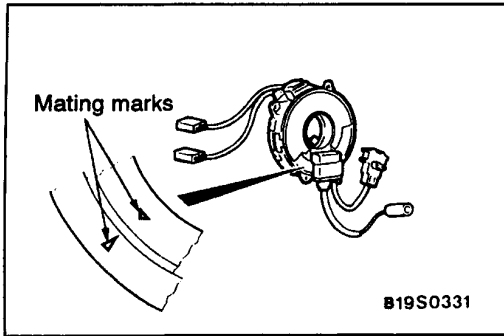
Caution

Make certain that the ignition switch is OFF when the MUT-II is connected or disconnected.

4. Turn the ignition key to the "ON" position.
5. Conduct self-diagnosis using the MUT-II to ensure entire SRS operates properly, except open circuit of air bag modules.
6. Turn the ignition key to the "LOCK" position, disconnect the negative battery cable and tape the terminal.

Caution

Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-4.)



►B◄ CLOCK SPRING INSTALLATION

Align the mating marks of the clock spring and, after turning the front wheels to the straight-ahead position, install the clock spring to the column switch.

Mating Mark Alignment

Turn the clock spring clockwise fully, and then turn back it approx. 3 4/5 turns counterclockwise to align the mating marks.

Caution

If the clock spring's mating marks are not properly aligned, the steering wheel may not be completely rotational during a turn, or the flat cable within the clock spring may be severed, obstructing normal operation of the SRS and possibly leading to serious injury to the vehicle's driver.

►C◄ STEERING WHEEL INSTALLATION

1. Before installation the steering wheel, be sure to first turn the vehicle's front wheels to the straight-ahead position and align the mating marks of the clock spring.

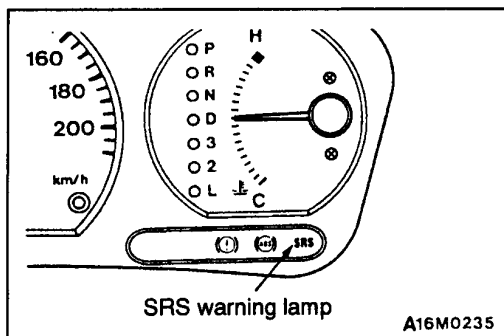
Caution

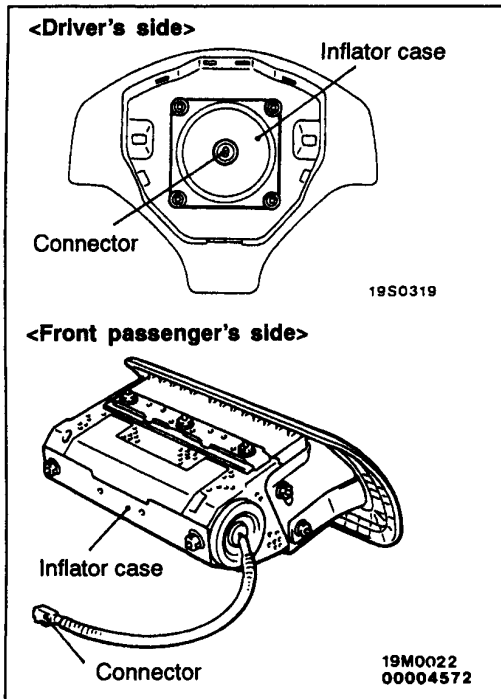
Be sure when installing the steering wheel, that the harness of the clock spring does not become caught or tangled.

2. After clamping, turn the steering wheel all the way in both directions to confirm that steering is normal.

►D◄ 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 OFF?
4. If yes, SRS system is functioning properly. If no, consult page 52B-6.



**INSPECTION****AIR BAG MODULE CHECK**

If any improper part is found during the following inspection, replace the air bag modules with a new one. Dispose the old one according to the specified procedure. (Refer to P.52B-34.)

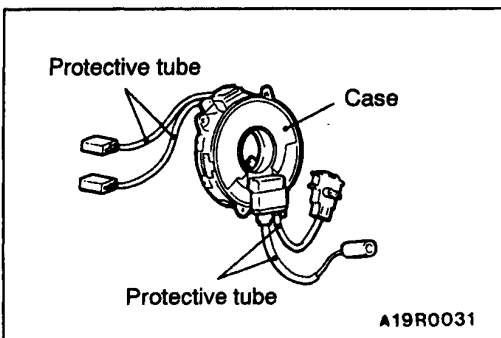
Caution

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

1. Check pad cover for dents, cracks or deformation.
2. Check connectors for damage, terminals for deformation, and harness for binds.
3. Check air bag inflator case for dents, cracks or deformation.
4. Install the air bag module to steering wheel to check fit or alignment with the wheel.

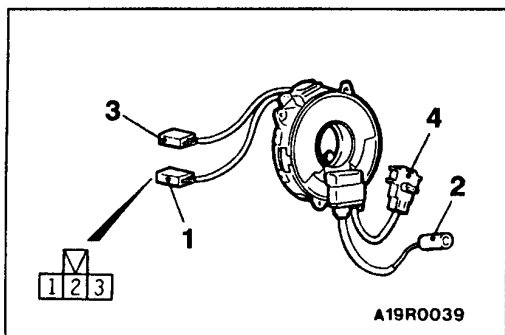
Caution

If dents, cracks, deformation, or rust are discovered in the air bag module, replace it with a new one. Dispose of the old one according to the specified procedure. (Refer to P.52B-34.)

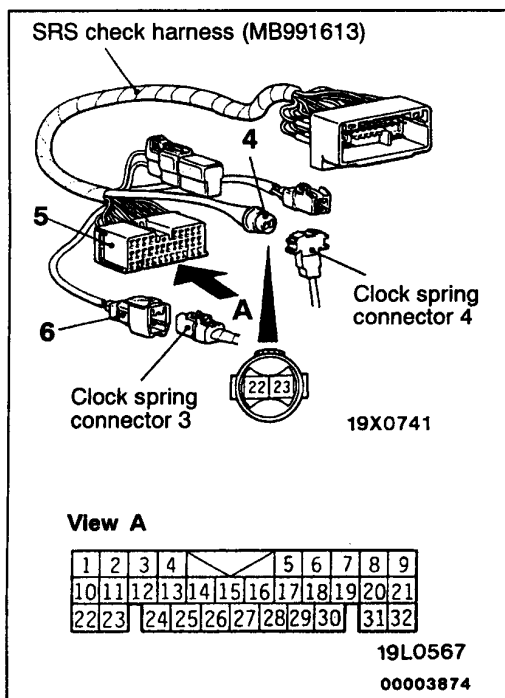
**CLOCK SPRING CHECK**

If, as result of following checks, even one abnormal point is discovered, replace the clock spring with a new one.

1. Check connectors and protective tube for damage, and terminals for deformation.
2. Visually check the case for damage.



3. Check that there is continuity between terminal (3) of the clock spring No.1 connector and the No. 2 connector.



4. Joint the No.3 connector and No.4 connector of the clock spring to connector No.6 and connector No.4 respectively, of the SRS check harness.

NOTE

When joining SRS check harness connector No.4 align its white paint with the hollow portion of the No.4 connector of the clock spring.

5. Check for continuity between terminal 22 and terminal 25, and terminal 23 and terminal 24, of SRS Check Harness connector No. 5 using a digital multi-meter.

SEAT BELT WITH PRE-TENSIONER

52400410025

Caution

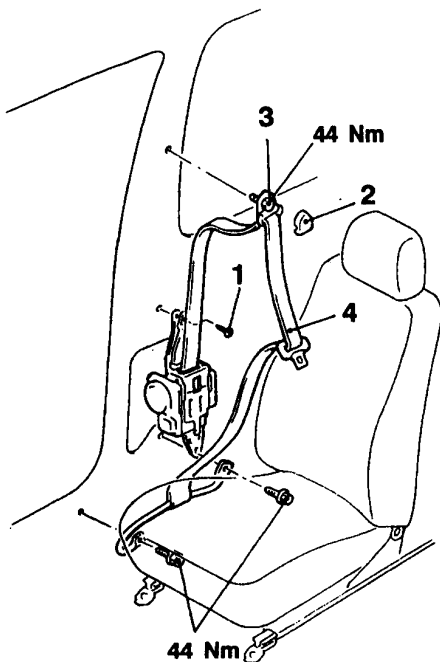
1. Never attempt to disassemble or repair the seat belt with pre-tensioner. If faulty, replace it.
2. Be extremely careful when handling the seat belt with pre-tensioner. Do not subject it to shocks, drop it, bring it close to strong magnets or allow contact with water, grease or oil. Always replace it with a new part if any dents, cracks or deformation is found.
3. Do not place anything on top of the seat belt pre-tensioner.
4. Do not expose the seat belt with pre-tensioner to temperatures over 90°C.
5. After operating the seat belt pre-tensioner, replace the seat belt pre-tensioner with a new part.
6. Gloves and protective goggles should be worn when handling a pre-tensioner once it has been used.
7. If disposing of a seat belt with pre-tensioner which has not yet been used, its pre-tensioner should be operated first before disposal. (Refer to P.52B-34.)

REMOVAL AND INSTALLATION

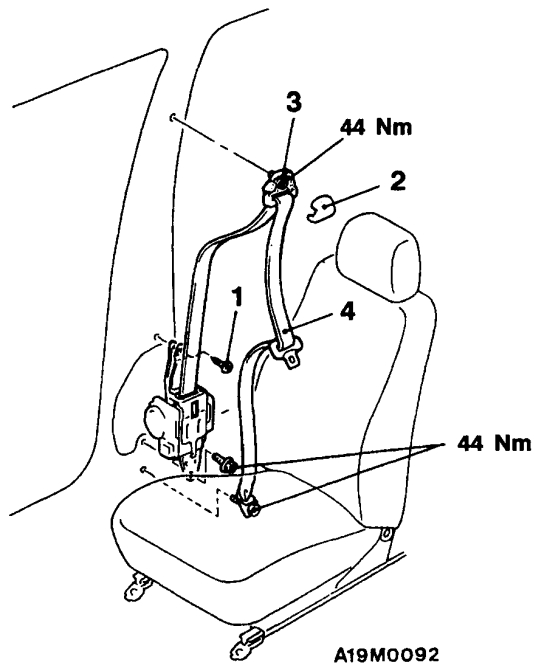
Pre-removal and Post-Installation Operation

- Center Pillar Lower Trim Removal and Installation (Refer to GROUP 52A.)

<Hatchback>



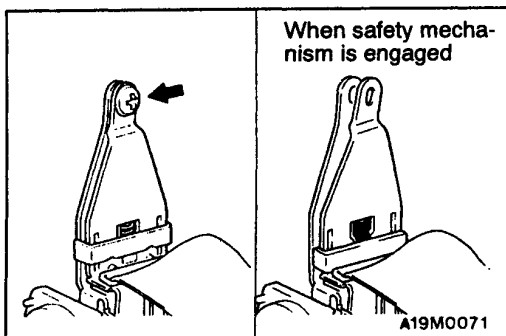
<Sedan>



A19M0092

Removal steps

- ◀A▶ ▶B▶
1. Retractor top mounting screw (for engaging and disengaging safety mechanism)
 2. Sash guide cover
 3. Sash guide
 4. Seat belt with pre-tensioner
- ▶A▶
- Pre-installation inspection



A19M0071

REMOVAL SERVICE POINT**◀A▶ RETRACTOR TOP MOUNTING SCREW REMOVAL (SAFETY MECHANISM ENGAGEMENT)**

The safety mechanism which is equipped in the seat belt pre-tensioner will engage automatically when the retractor top mounting screw is removed.

Caution

All of the following operations should be carried out while the safety mechanism is engaged to prevent mis-operation of the seat belt pre-tensioner.

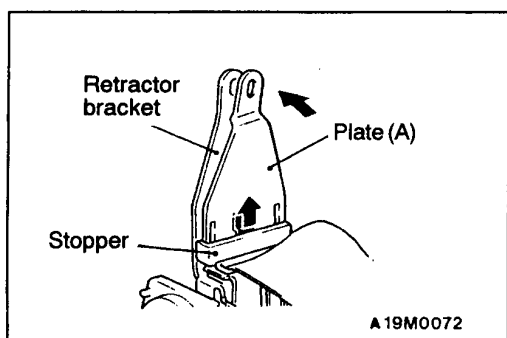
Furthermore, the safety mechanism should not be disengaged while the seat belt pre-tensioner is removed from the vehicle.

INSTALLATION SERVICE POINTS**►A◄ PRE-INSTALLATION INSPECTION**

When installing a new seat belt with pre-tensioner refer to "INSPECTION".

Caution

Disposal of the pre-tensioner must be carried out as stated in the procedure. (Refer to P.52B-34.)

**►B◄ RETRACTOR TOP MOUNTING SCREW INSTALLATION (SAFETY MECHANISM DISENGAGEMENT)**

1. Lift up the stopper and then bring the retractor bracket and plate (A) together so that the stopper tab goes into the hole in the retractor bracket.
2. Screw the retractor bracket and plate (A) together with the retractor top mounting screw.
3. Check that the seat belt can be pulled out smoothly. If it does not move smoothly, the safety mechanism may not have been properly disengaged, so remove the retractor top mounting screw and repeat the installation procedure.

INSPECTION

52400420028

SEAT BELT WITH PRE-TENSIONER CHECK

If any part is found to be faulty during the inspection. It must be replaced with a new one.

Dispose of the old one according to the specified procedure. (Refer to P.52B-34.)

- Check seat belt pre-tensioner for dents, cracks or deformation.

AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES

52400120119

Before disposing of a vehicle which is equipped with air bag or seat belts with pre-tensioner, or when disposing of the air bags or seat belt

pre-tensioner themselves, follow the procedures must be used to deploy the air bags or operate the seat belt pre-tensioners before disposal.

UNDEPLOYED AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL

Caution

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

AIR BAG MODULE DEPLOYMENT

Deployment Inside The Vehicle

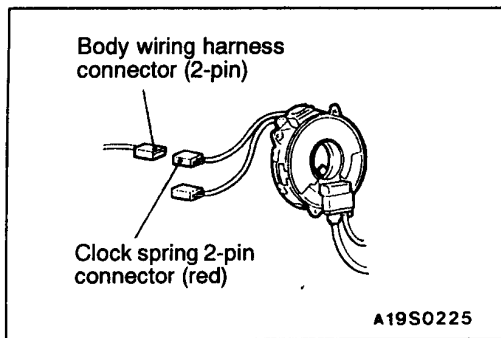
(when disposing of a vehicle)

1. Open all windows and doors of the vehicle. 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.

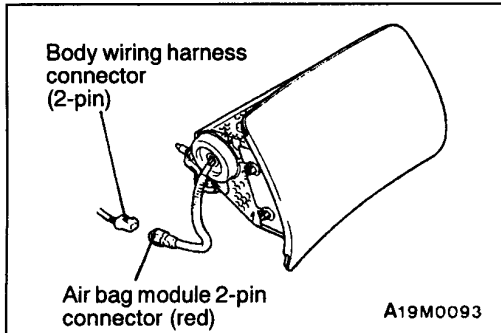
(Refer to P.52B-4.)



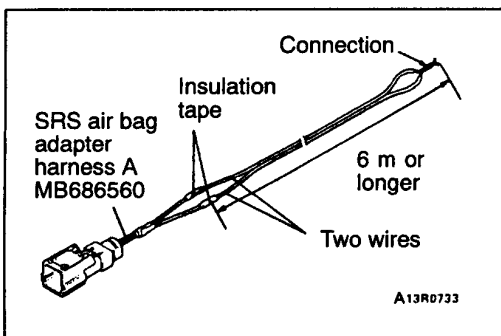
3. To deploy the air bag module (driver's side):
 - (1) Remove the steering column cover lower.
 - (2) Remove the connection between the clock spring 2-pin connector (red) and the body wiring harness connector.

NOTE

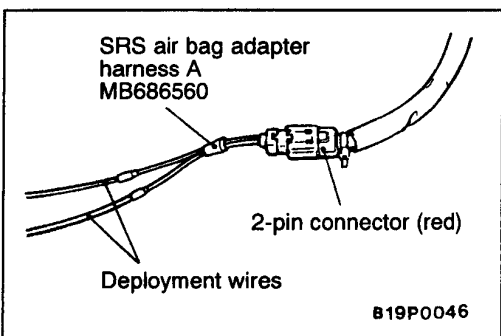
If the clock spring connector is disconnected from the body wiring harness, both electrodes of the clock spring connector will be automatically shorted to prevent unintended deployment of the air bag due to static electricity, etc.



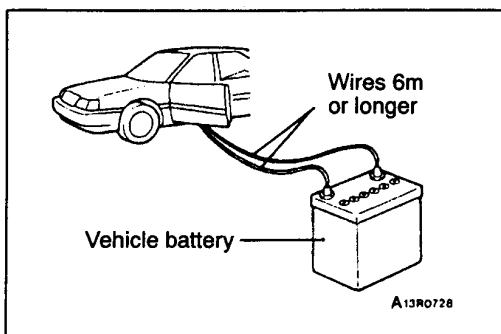
4. To deploy the air bag module (front passenger's side):
 - (1) Remove the glove box. (Refer to P.52B-27.)
 - (2) Remove the connection between the air bag module (front passenger's side) connector (red 2-pin) and the body wiring harness connector.



5. 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.



6. Connect the clock spring or air bag module (front passenger's side) 2-pin connector (red) to SRS air bag adapter harness A and pass the deployment wires out of the vehicle.



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 or Operated Seat Belt Pre-tensioner Disposal Procedures (P.52B-41.) for post-deployment handling instructions.
3. If the air bag module fails to deploy or the seat belt pre-tensioner fails to operate when the procedures above are followed, do not go near the module or the seat belt pre-tensioner. Contact your local distributor.
8. After deployment, dispose of air bag module according to the Deployed Air Bag Module or Operated Seat Belt Pre-tensioner Disposal Procedures. (Refer to P.52B-41.)

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.

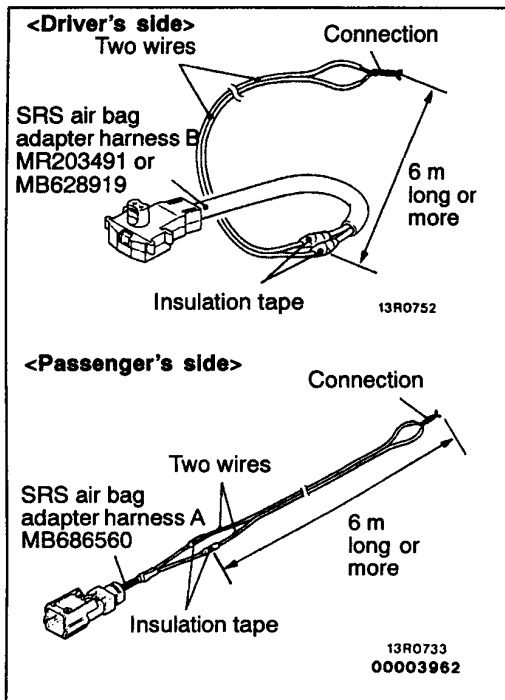
Caution

Wait at least 60 seconds after disconnecting the battery cables before doing any further work. (Refer to P.52B-4.).

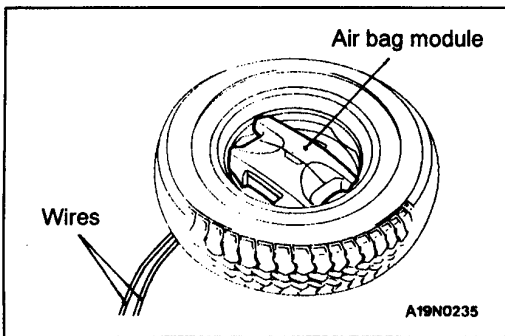
2. Remove the air bag module from the vehicle. (Refer to P.52B-25.)

Caution

The air bag module should be stored on a flat surface and placed so that the pad cover face up. Do not place anything on top of it.



3. Connect two wires, each six meters or longer, to the two leads of SRS air bag adapter harness B <driver's side> or SRS air bag adapter harness A <front passenger's side>, 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.



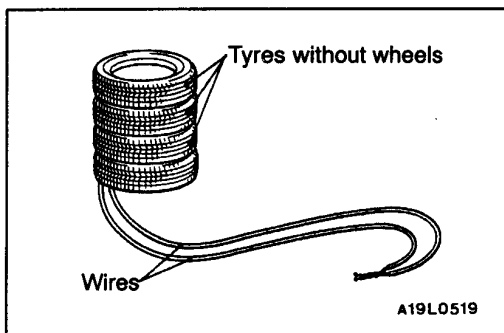
4. Set the air bag modules as follows:

<Air bag module (driver's side)>

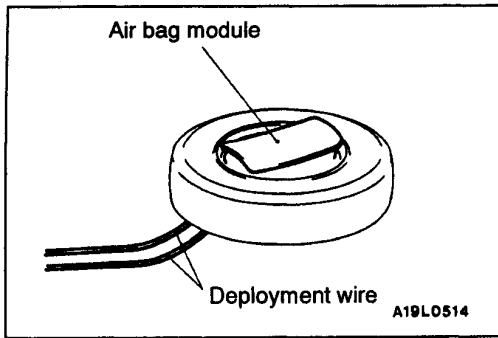
- (1) Take the SRS air bag adapter harness B that is connected to the wires, pass it beneath the old tyre wheel assembly, and connect it to the air bag module.
- (2) Pass the thick wire through the air bag module mounting hole, and then secure the air bag module to an old tyre with a wheel in it so that the pad on the module is facing upwards.

Caution

Leave some space below the wheel for the adaptor harness. If there is no space, the reaction when the air bag deploys could damage the adaptor harness.



- (3) Place three old tyres with no wheels on top of the tyre secured to the air bag module.

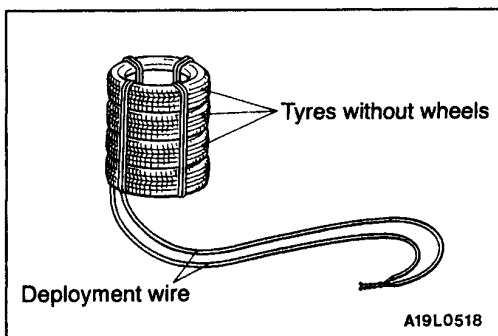


<Air bag module (front passenger's side)>

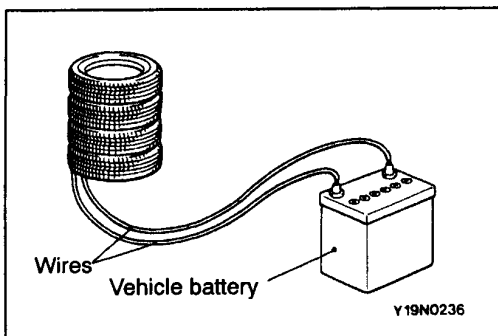
- (1) Connect the deployment wires to the SRS air bag adaptor harness A, pass it beneath the tyre, and wheel assembly, and connect it to the air bag module.
- (2) Pass the thick wires into the hole of the air bag module bracket, and secure it to the wheel of the old tyre with wheel (4 locations), with the air bag facing upwards.

Caution

1. Leave some space below the wheel for the deployment wires.
If there is no space, the reaction of the air bag deployment could result in damage of the adaptor harness.
2. While deployment takes place, do not have the connector of the SRS air bag adaptor harness A inserted between the tyres.



- (3) Place four old tyres, without wheels, on top of the tyre secured to the air bag module, and secure all tyres with ropes (4 locations).



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 or Operated Seat Belt Pre-tensioner Disposal Procedures (P.52B-41) for post-deployment handling instructions.

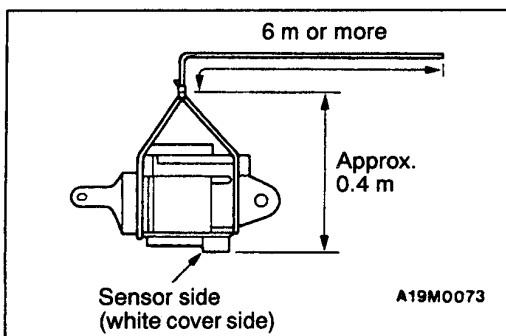
3. If the air bag fails to deploy or seat belt pre-tensioner fails to operate when the procedures above are followed, do not go near the module. Contact your local distributor.
6. After deployment, dispose of air bag module according to the Deployed Air Bag Module or Operated Seat Belt Pre-tensioner Disposal Procedures. (Refer to P.52B-41.)

SEAT BELT PRE-TENSIONER OPERATION

Operate the seat belt pre-tensioner by the following procedure after it has been removed from the vehicle.

Caution

Operation of the seat belt pre-tensioner should be carried out in a clear, open space at least 5 meters away from people and other objects.



1. Remove the seat belt with pre-tensioner. (Refer to P.52B-31.)

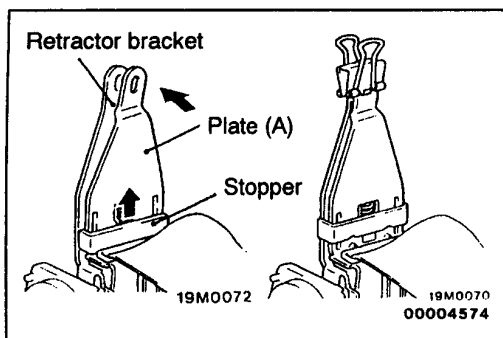
Caution

The pre-tensioner safety mechanism should be engaged to prevent accidental operation of the pre-tensioner.

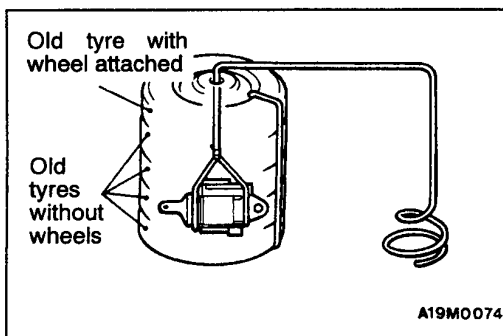
2. Tie a rope which is 6 meters or more in length to the seat belt pre-tensioner so that the pre-tensioner is level and the sensor side (the side with the white cover) is at the bottom when the pre-tensioner is suspended.
3. Disengage the pre-tensioner safety mechanism by the following procedure.

Caution

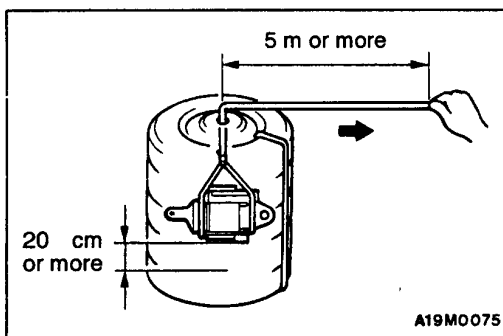
After disengaging the safety mechanism, the pre-tensioner can operate even if it is dropped by a distance of as little as 5 cm, so be extremely careful when handling the pre-tensioner in this condition.



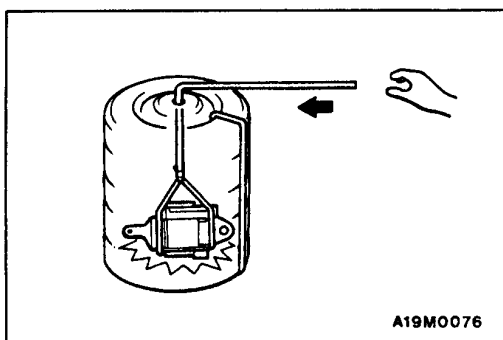
- (1) Lift up the stopper and then bring the retractor bracket and plate (A) together so that the stopper tab goes into the hole in the retractor bracket. This will disengage the safety mechanism.
- (2) Use a bulldog clip to secure the retractor bracket and plate (A) so that they do not become separated.



4. Place the pre-tensioner down gently onto a solid base such as a concrete floor, and stack four tyres without wheels around it. Then place one more tyre with the wheel still attached on top, and pass the rope through the hole in the middle of the wheel.
5. Tie the tyres together with rope so that they do not slip apart.



6. From a distance of 5 meters away, pull the rope to raise the seat belt pre-tensioner off the ground by 20 cm or more.



7. Release the rope so that the pre-tensioner drops down and operates from the force of the impact.

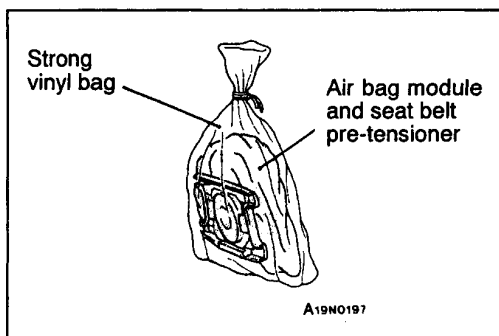
Caution

1. Check that nobody is near the tyres before operating the pre-tensioner.
2. The seat belt pre-tensioner will be hot after it has operated, so leave it for 30 minutes or more to wait for it to cool down before handling it further.
3. If the safety mechanism has not been properly disengaged or if the cylinder is not at the bottom when the pre-tensioner is dropped, the pre-tensioner may not operate. In such cases, repeat the procedure from the beginning, while being careful to avoid applying shocks to the pre-tensioner.
8. After the seat belt pre-tensioner has operated, dispose of it according to the proper disposal procedures. (Refer to P.52B-41)

DEPLOYED AIR BAG MODULE OR OPERATED SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES

After deployment or operation, the air bag module and the seat belt pre-tensioner 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 or on the seat belt pre-tensioner after operation.
3. There may be, adhered to the deployed air bag module or the operated seat belt pre-tensioner, material that could irritate the eye and/or skin, so wear gloves and safety glasses when handling a deployed air bag module or a operated seat belt pre-tensioner. 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 and seat belt pre-tensioner in a strong vinyl bag for disposal.
5. Be sure to always wash your hands after completing this operation.