INTERIOR AND SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

CONTENTS

52109000187

INTERIOR

CONTENTS

52109000453

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 (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: front impact sensors, 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 (*).

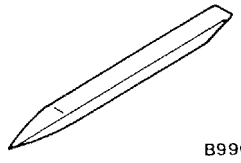
SERVICE SPECIFICATIONS

52100030062

Items		Standard value
Seatback heater resistance (between terminals) Ω		Approx. 10
Seat cushion heater resistance (between terminals) Ω	Between terminals 2 and 3	Approx. 11
	Between terminals 1 and 3	Approx. 9

SPECIAL TOOL

52100060146

Tool	Number	Name	Use
 B990784	MB990784	Ornament remover	Removal of switch, trim, etc.

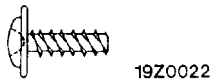
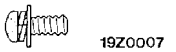
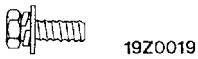
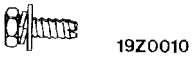
INSTRUMENT PANEL <L.H. DRIVE VEHICLES>

52100170351

Caution
For removal and installation of the passenger's side air bag module, always observe the service procedures described in GROUP 52B – Air Bag Module and Clock Spring.

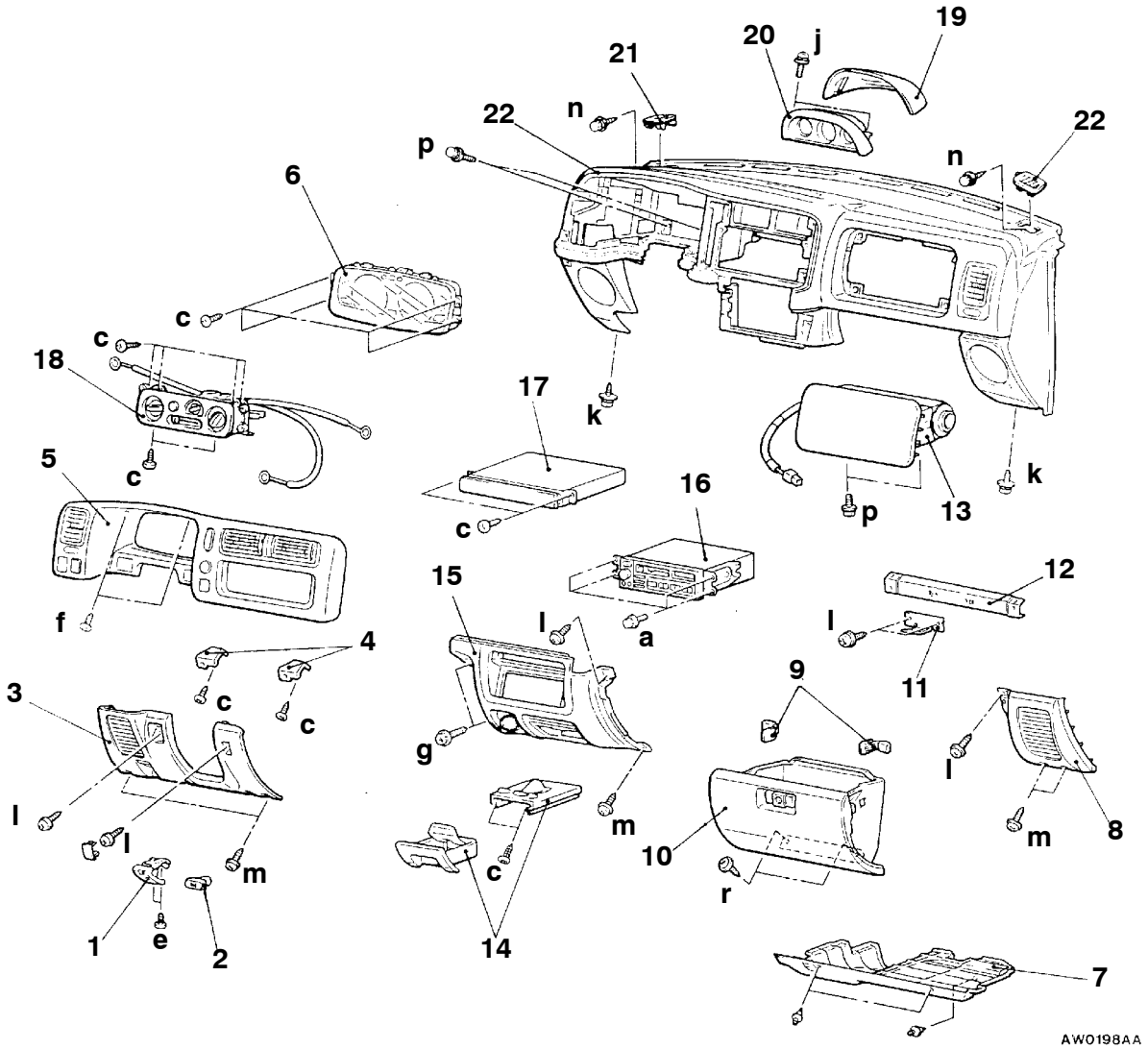
REMOVAL AND INSTALLATION

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

Name	Symbol	Size (D x L) mm	Colour	Shape
Tapping screw	a	5 × 12	–	 19Z0004
	b	5 × 14		
	c	5 × 16		
	d	5 × 20		
	e	5 × 12	Black	
	f	5 × 16		
	g	5 × 20		
	h	5 × 12	–	 19Z0022
	i	5 x 16		
Washer assembled screw	j	5 × 12	–	 19Z0007
	k	5 × 16	–	 19Z0006
	l	5 × 20	Black	
	m	5 × 20	Black	 19Z0030
Washer assembled bolt	n	6 × 16	–	 19Z0012
	o	8 × 20	–	 19Z0019
	p	6 × 16	–	 19Z0010
	q	8 × 20		
	r	5 × 16	Black	

D = Thread diameter
L = Effective thread length

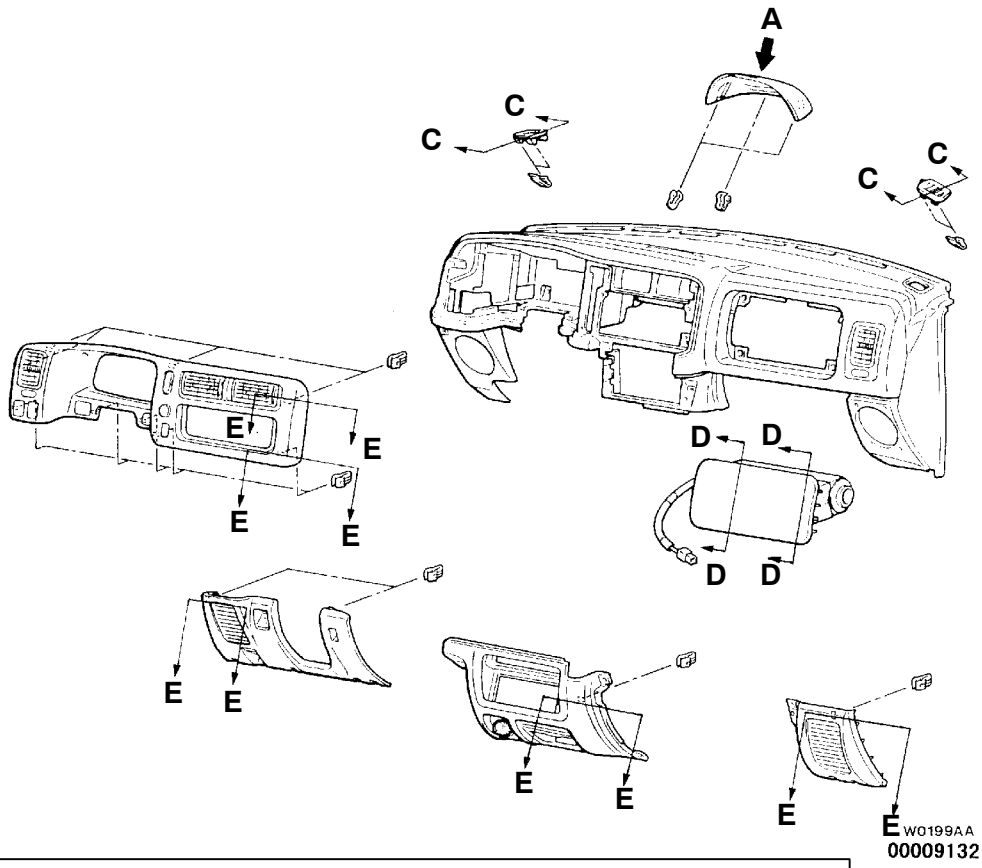
Pre-removal and Post-installation Operation
- Floor Console Assembly Removal and Installation (Refer to P.52A-12.)
- Steering Wheel and Column Cover Removal and Installation (Refer to GROUP 37A – Steering Column and Shaft.)



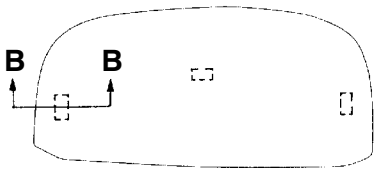
Removal steps

1. Hood lock release handle
2. Throttle knob
3. Knee protector assembly
4. Knee protector bracket
5. Meter bezel assembly
6. Combination meter
7. Under cover
8. Corner cover
9. Stopper
10. Glove box assembly
11. Glove box striker
12. Glove box upper frame
13. Front passenger's side air bag module (Refer to GROUP 52B – Air Bag Module and Clock Spring.)
14. Ashtray assembly
15. Center under cover assembly
16. Radio and tape player
17. Cup holder assembly
18. Heater control assembly (Refer to GROUP 55 – Heater Control Assembly and A/C Switch.)
19. Multi-meter panel
20. Multi-meter assembly
21. Side defroster grill
22. Instrument panel assembly

CLIP AND CLAW POSITION



View A



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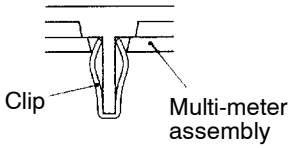

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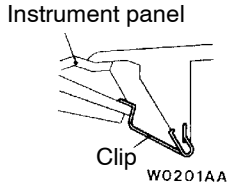

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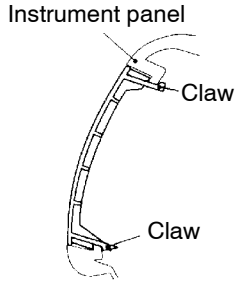

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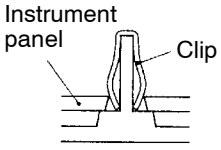

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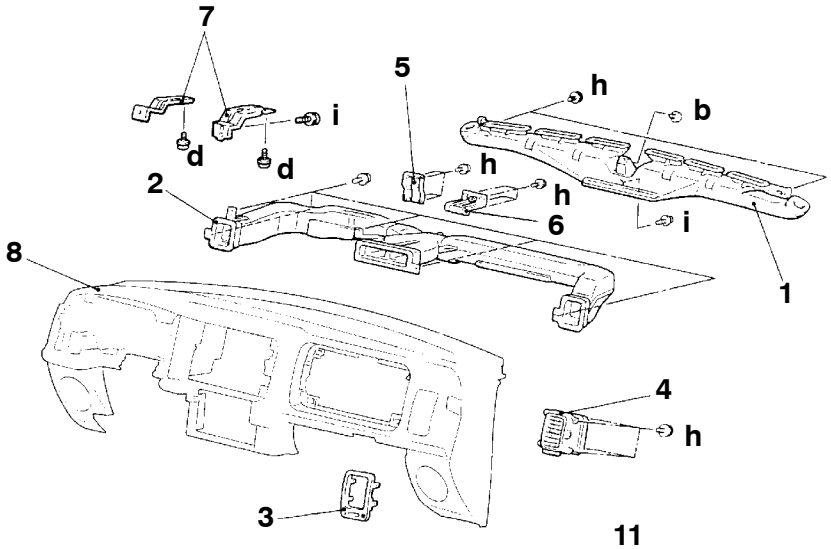
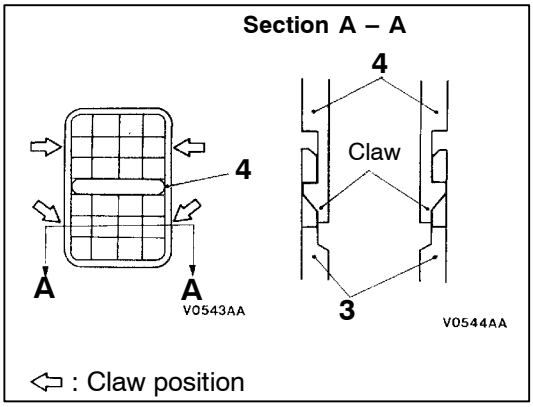
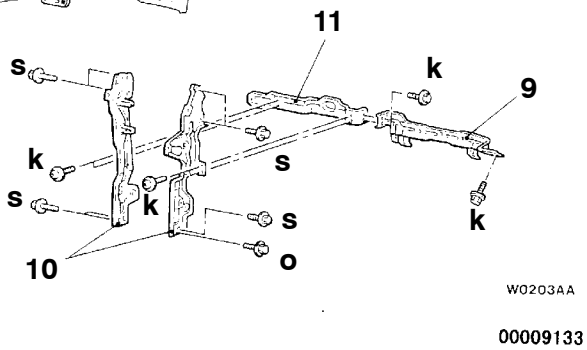
DISASSEMBLY AND REASSEMBLY

52100190265







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Disassembly steps

1. Defroster nozzle assembly
2. Distribution duct
3. Air outlet grille
4. Air outlet assembly
5. Combination meter reinforcement
6. Instrument panel reinforcement
7. Multi-meter bracket
8. Instrument panel
9. Glove box frame
10. Center reinforcement
11. Center frame A

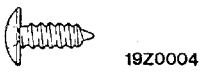
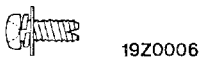
INSTRUMENT PANEL <R.H. DRIVE VEHICLES>

52100170368

Caution
For removal and installation of the passenger's side air bag module, always observe the service procedures described in GROUP 52B – Air Bag Module and Clock Spring.

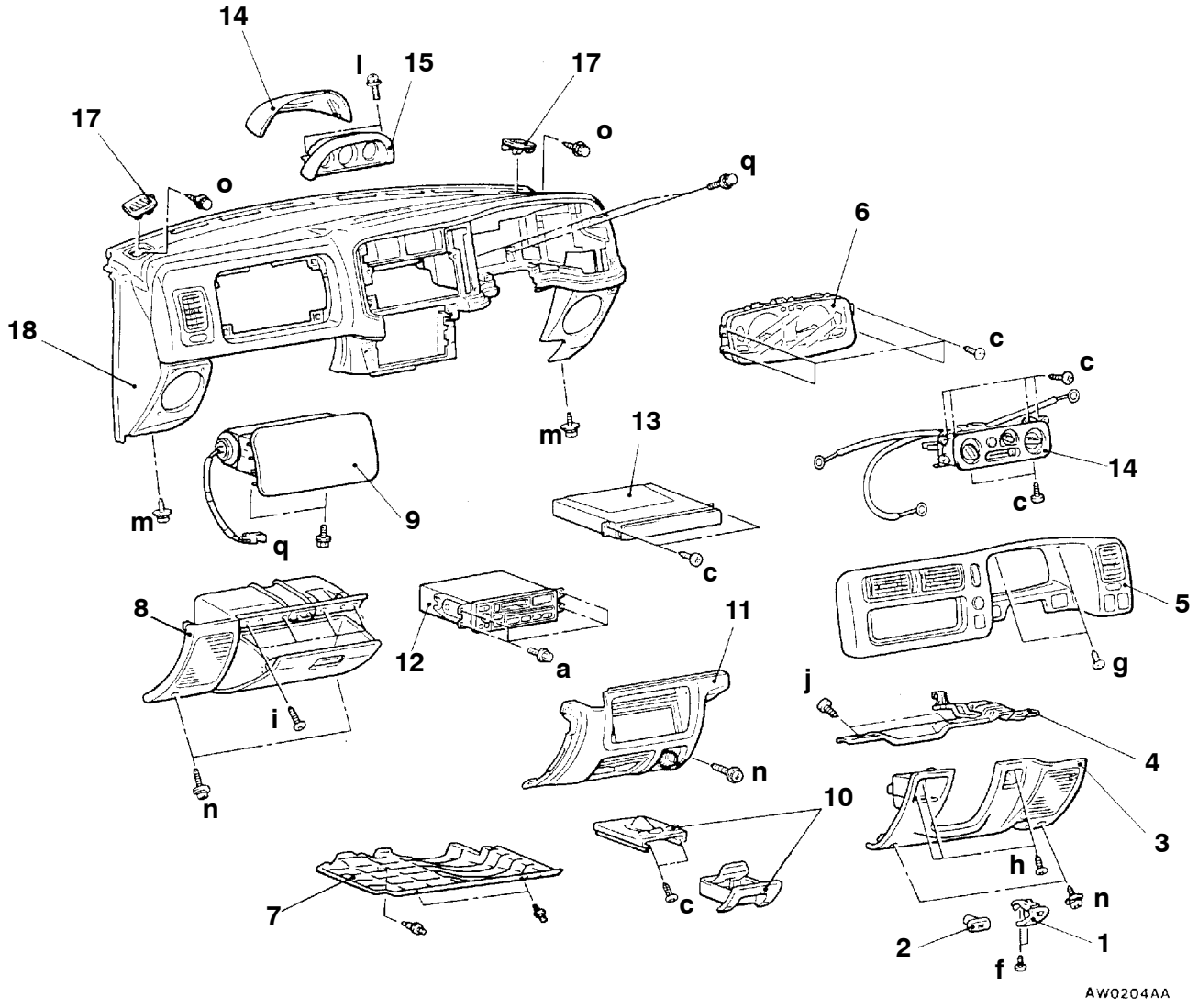
REMOVAL AND INSTALLATION

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

Name	Symbol	Size (D x L) mm	Colour	Shape
Tapping screw	a	5 × 12	–	 19Z0004
	b	5 × 14		
	c	5 × 16		
	d	5 × 20		
	e	5 × 25		
	f	5 × 12	Black	
	g	5 × 16		
	h	5 × 20		
	i	5 × 20	Black	 19Z0003
	j	5 × 12	–	 19Z0022
	k	5 x 16		
Washer assembled screw	l	5 × 12	–	 19Z0007
	m	5 × 16	–	 19Z0006
	n	5 × 20	Black	 19Z0030
Washer assembled bolt	o	6 × 16	–	 19Z0012
	p	8 × 20	–	 19Z0019
	q	6 × 16	–	 19Z0010
	r	8 × 20		

D = Thread diameter
L = Effective thread length

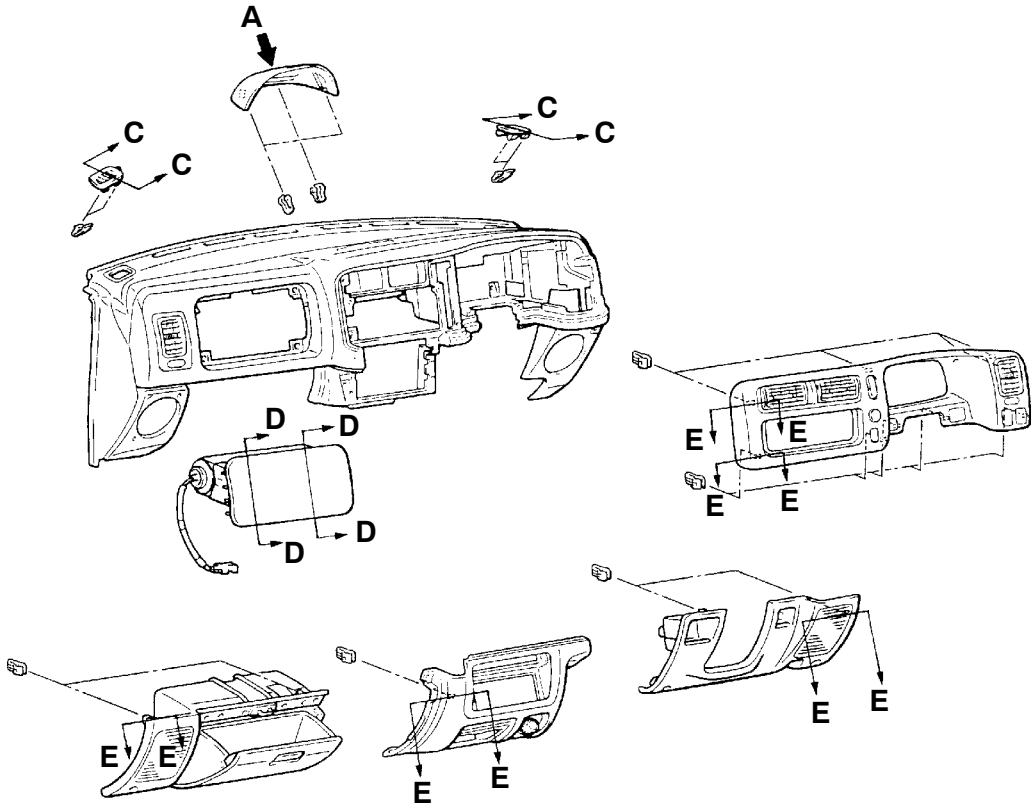
Pre-removal and Post-installation Operation
- Floor Console Assembly Removal and Installation (Refer to P.52A-12.)
- Steering Wheel and Column Cover Removal and Installation (Refer to GROUP 37A – Steering Column and Shaft.)



Removal steps

1. Hood lock release handle
2. Throttle knob
3. Driver side under cover assembly
4. Driver side frame
5. Meter bezel assembly
6. Combination meter
7. Under cover
8. Glove box assembly
9. Front passenger's side air bag module (Refer to GROUP 52B – Air Bag Module and Clock Spring.)
10. Ashtray assembly
11. Center under cover assembly
12. Radio and tape player
13. Cup holder assembly
14. Heater control assembly (Refer to GROUP 55 – Heater Control Assembly and A/C Switch.)
15. Multi-meter panel
16. Multi-meter assembly
17. Side defroster grill
18. Instrument panel assembly

CLIP AND CLAW POSITION



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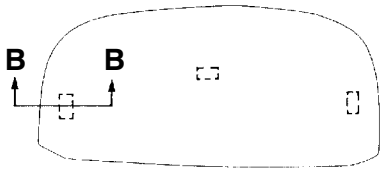
View A



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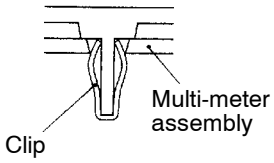
Section B – B



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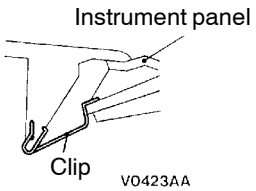

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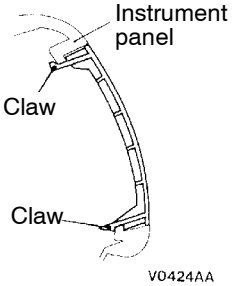

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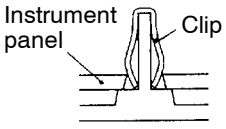

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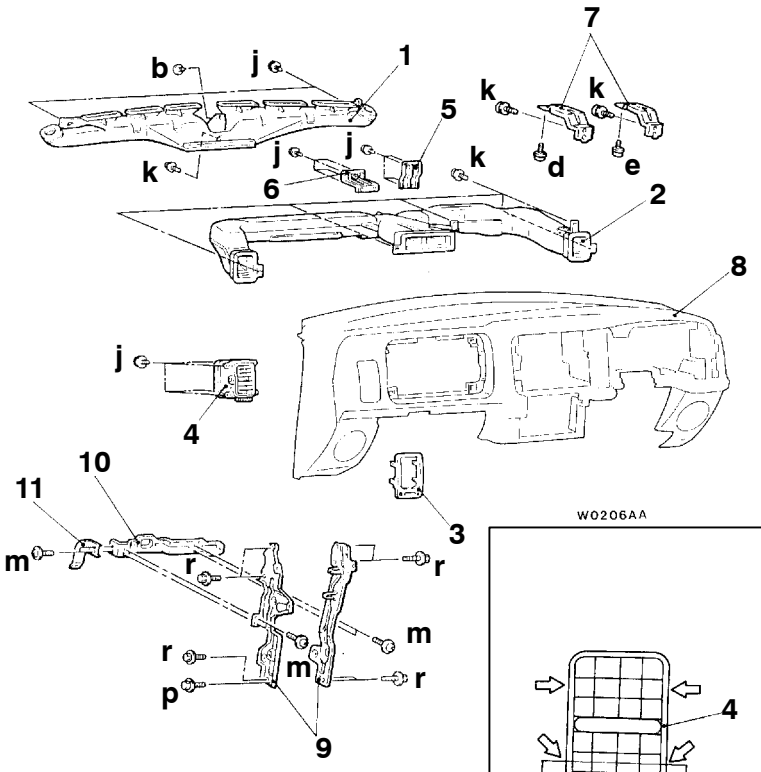
DISASSEMBLY AND REASSEMBLY

52100190272



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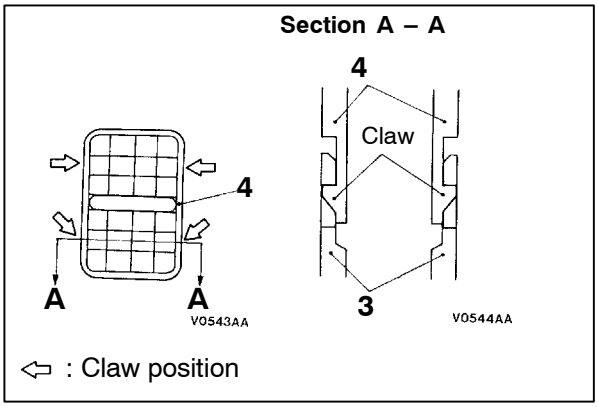


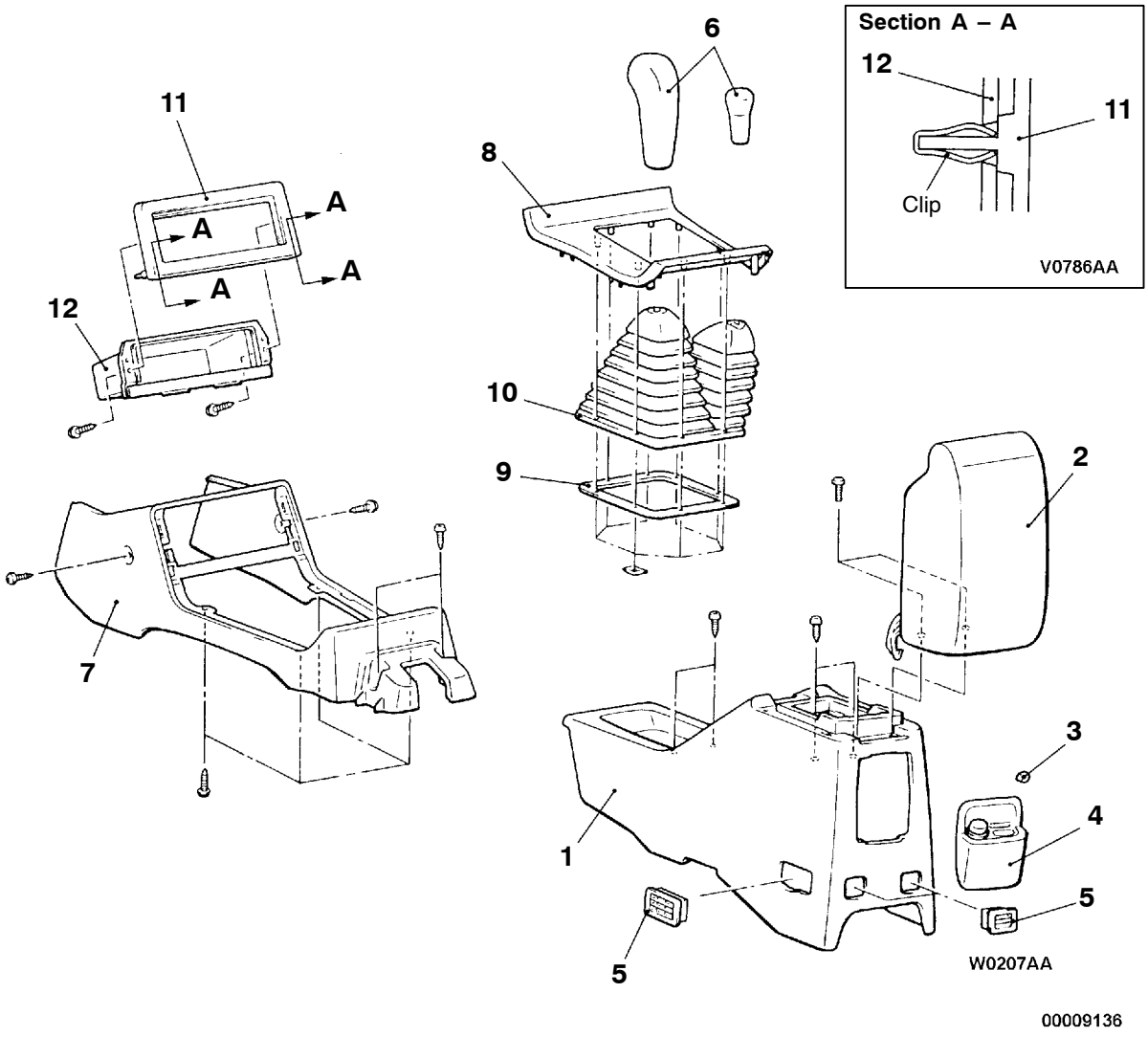
Disassembly steps

1. Defroster nozzle assembly
2. Distribution duct
3. Air outlet grille
4. Air outlet assembly
5. Combination meter reinforcement
6. Instrument panel reinforcement
7. Multi-meter bracket
8. Instrument panel
9. Center reinforcement
10. Center frame A
11. Center frame B

FLOOR CONSOLE

52100220254

REMOVAL AND INSTALLATION



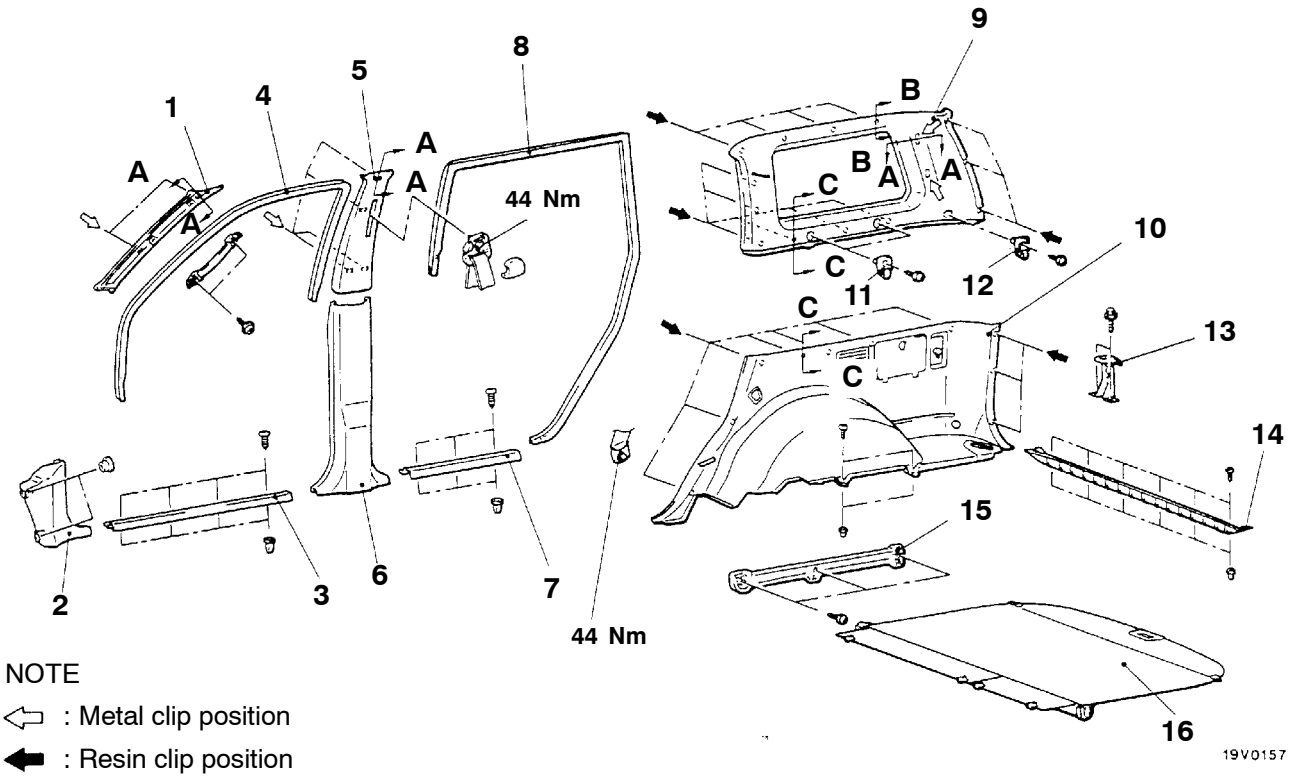
Removal steps

1. Rear floor console assembly
2. Console lid assembly
3. Knob
4. Rear heater control panel assembly
5. Foot grill
6. Shift lever knob
7. Front floor console assembly
8. Console panel
9. Shift lever boot reinforcement
10. Shift lever boot
11. Console panel
12. Box

TRIMS

52100110360

REMOVAL AND INSTALLATION



NOTE

⇦ : Metal clip position

⬅ : Resin clip position

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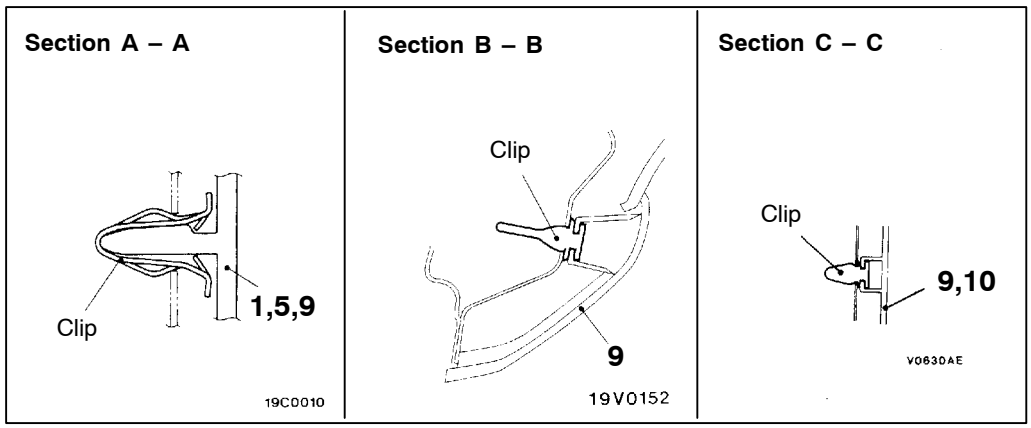
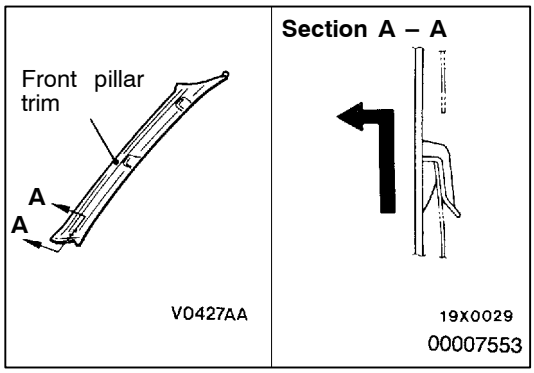
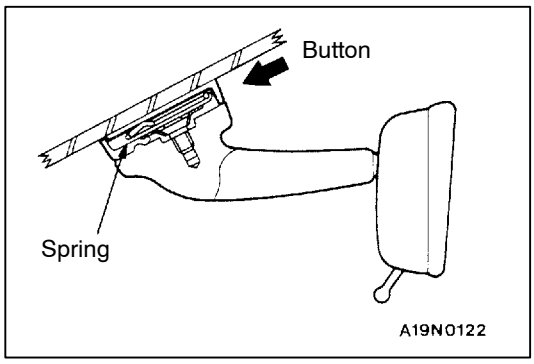


◀A▶

1. Front pillar trim
2. Cowl side trim
3. Front scuff plate
4. Front door opening weatherstrip, inner
5. Center pillar trim, upper
6. Center pillar trim, lower
7. Rear scuff plate
8. Rear door opening weatherstrip, inner
9. Quarter trim, upper
10. Quarter trim, lower
11. Side hook, center <vehicles without tonneau cover>
12. Side hook, rear <vehicles without tonneau cover>
13. Parcel hook
14. Rear end trim
15. Shelf holder <vehicles with tonneau cover>
16. Tonneau cover <vehicles with tonneau cover>





REMOVAL SERVICE POINT

◀A▶ FRONT PILLAR TRIM REMOVAL

After pulling upward, pull forward and remove as shown in the illustration.

INSIDE REAR VIEW MIRROR 52100270105

REMOVAL SERVICE POINT

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

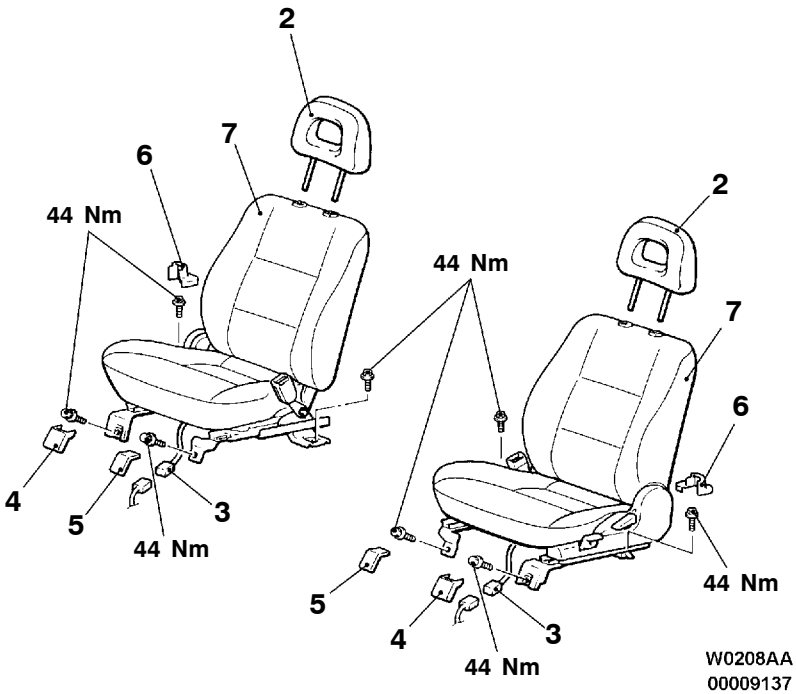
NOTE
1. The mirror spring fits firmly in the grove of the button that is attached to the glass.
2. The mirror breaking load is within 450 N.

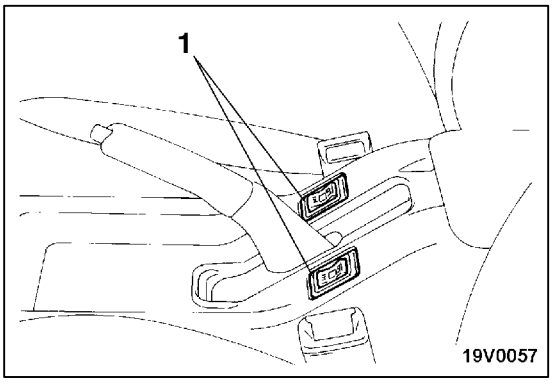
FRONT SEAT

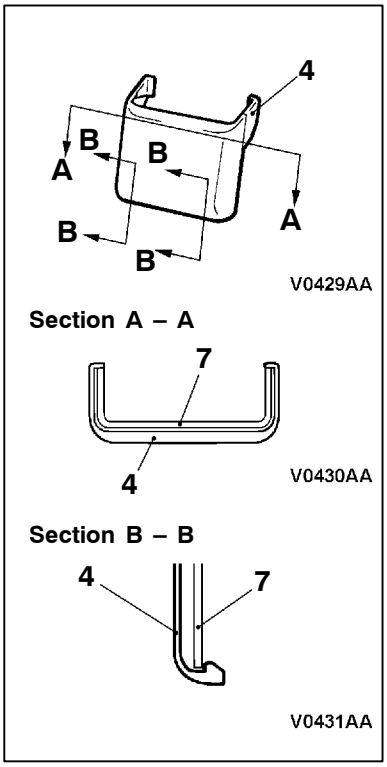
52200130277

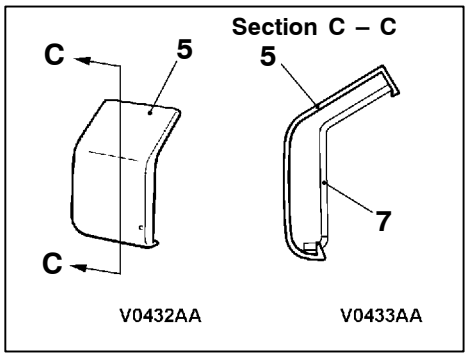
REMOVAL AND INSTALLATION

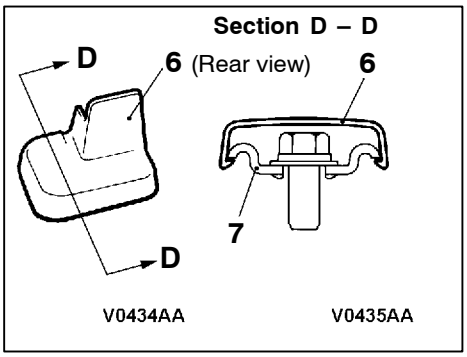
Pre-removal and Post-installation Operation
- Rear Floor Console Assembly Removal and Installation (Refer to P.52A-12.)









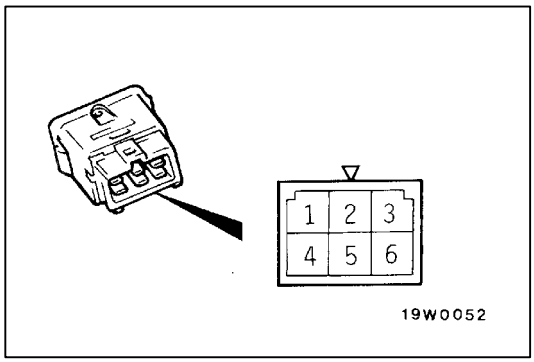


1. Head seat switch <Vehicles with heated seat>
2. Head restraint

Front seat assembly removal steps

3. Harness connector <Vehicles with heated seat>
4. Seat anchor cover, outer
5. Seat anchor cover, inner
6. Seat anchor cover, rear
7. Front seat assembly

NOTE
Install each seat assembly mounting bolt in every installation location, then tighten to the specified torque.



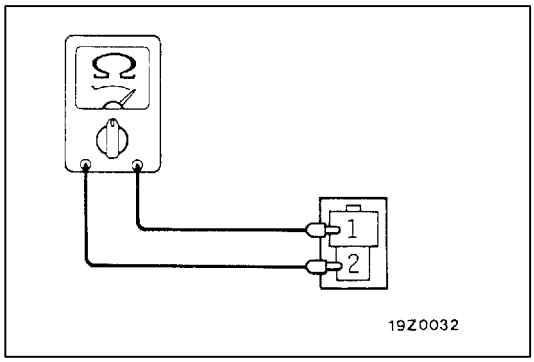
INSPECTION

52200390057

HEATED SEAT SWITCH CONTINUITY CHECK

Switch position	Terminal No.							
	1	2	IND	5	6	3	ILL	4
HI								
OFF								
LO								

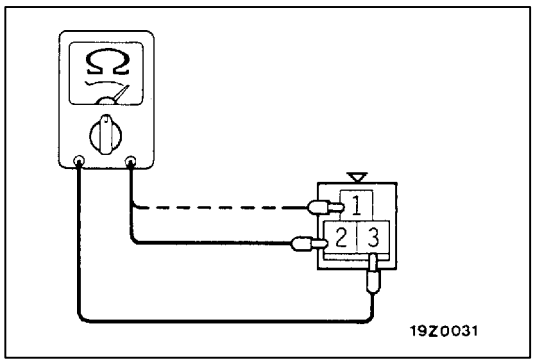
NOTE
To inspect the diode, match the polarity of the circuit tester with the (+) (–) polarities in the table.



SEATBACK HEATER CHECK

Measure the resistance between terminals.

Standard value: Approx. 10 Ω



SEAT CUSHION HEATER CHECK

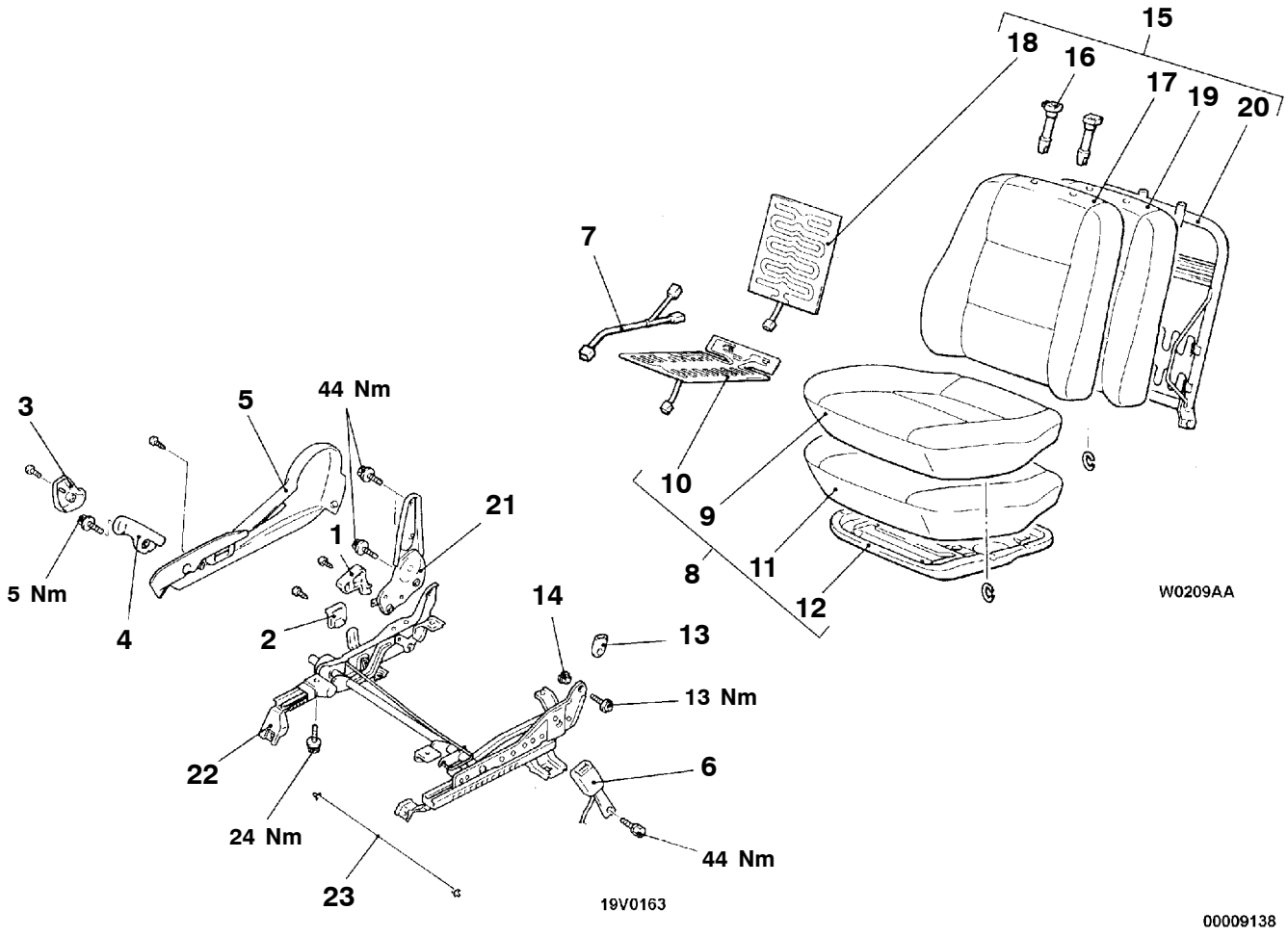
Measure the resistance between terminals.

Standard value:

Between terminals 2 and 3: Approx. 11 Ω
Between terminals 1 and 3: Approx. 9 Ω

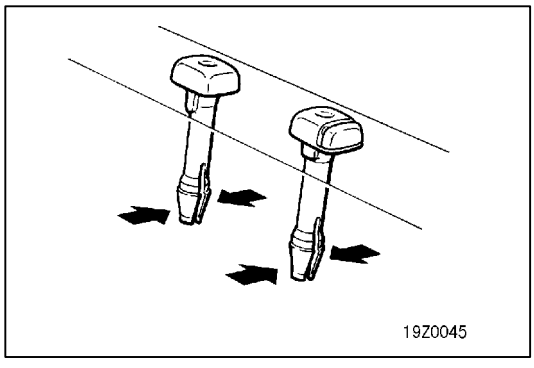
DISASSEMBLY AND REASSEMBLY

52200150365



Disassembly steps

1. Reclining adjusting knob
2. Slide adjusting knob
3. Front seat height adjuster inner lever
4. Front seat height adjuster lever
5. Front seat shield cover
6. Inner seat belt
7. Heated seat harness <Vehicles with heated seat>
8. Front seat cushion assembly
9. Front seat cushion cover
10. Front seat cushion heater <Vehicles with heated seat>
11. Front seat cushion pad
12. Front seat cushion frame
13. Protector
14. Bush
15. Front seatback assembly
16. Head restraint guide ◀A▶
17. Front seatback cover
18. Front seatback heater <Vehicles with heated seat>
19. Front seatback pad
20. Front seatback frame
21. Reclining adjuster
22. Seat adjuster assembly
23. Pull wire



DISASSEMBLY SERVICE POINT

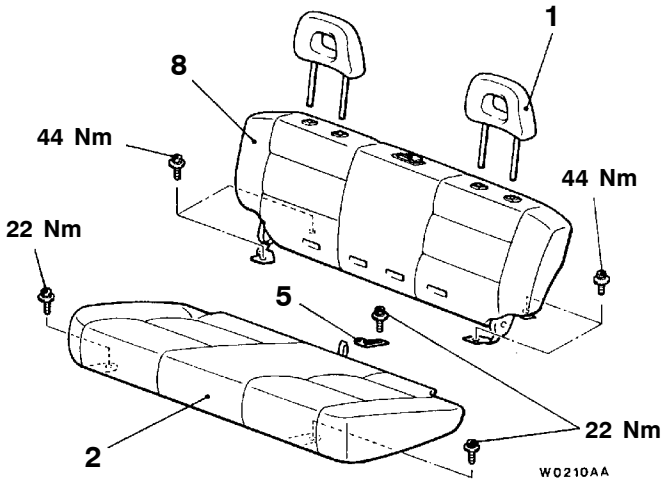
◀A▶ HEAD RESTRAINT GUIDE REMOVAL

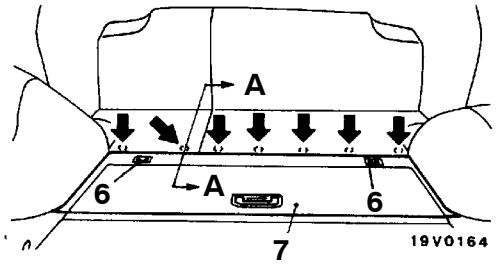
REAR SEAT

52200180302

REMOVAL AND INSTALLATION

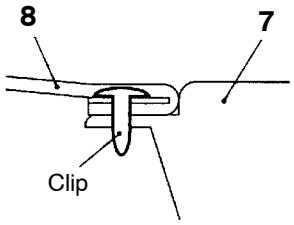
<Bench seat>





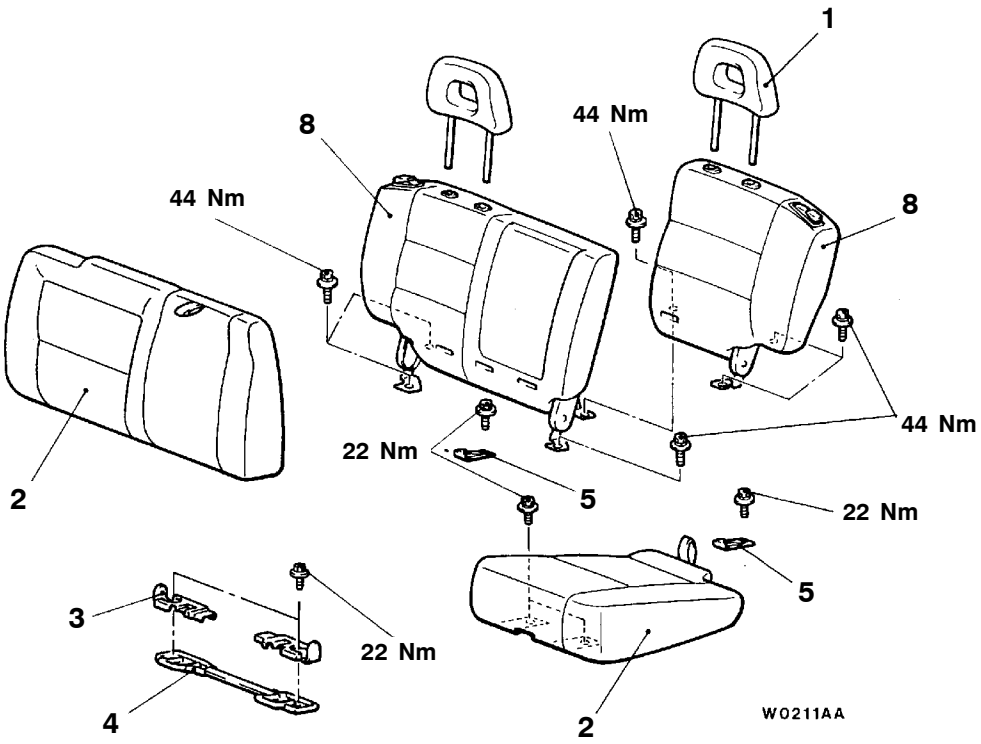
: Resion clip position
<Vehicles with split seat>

Section A – A



V0437AA

<Split seat>



00009139

1. Head restraint

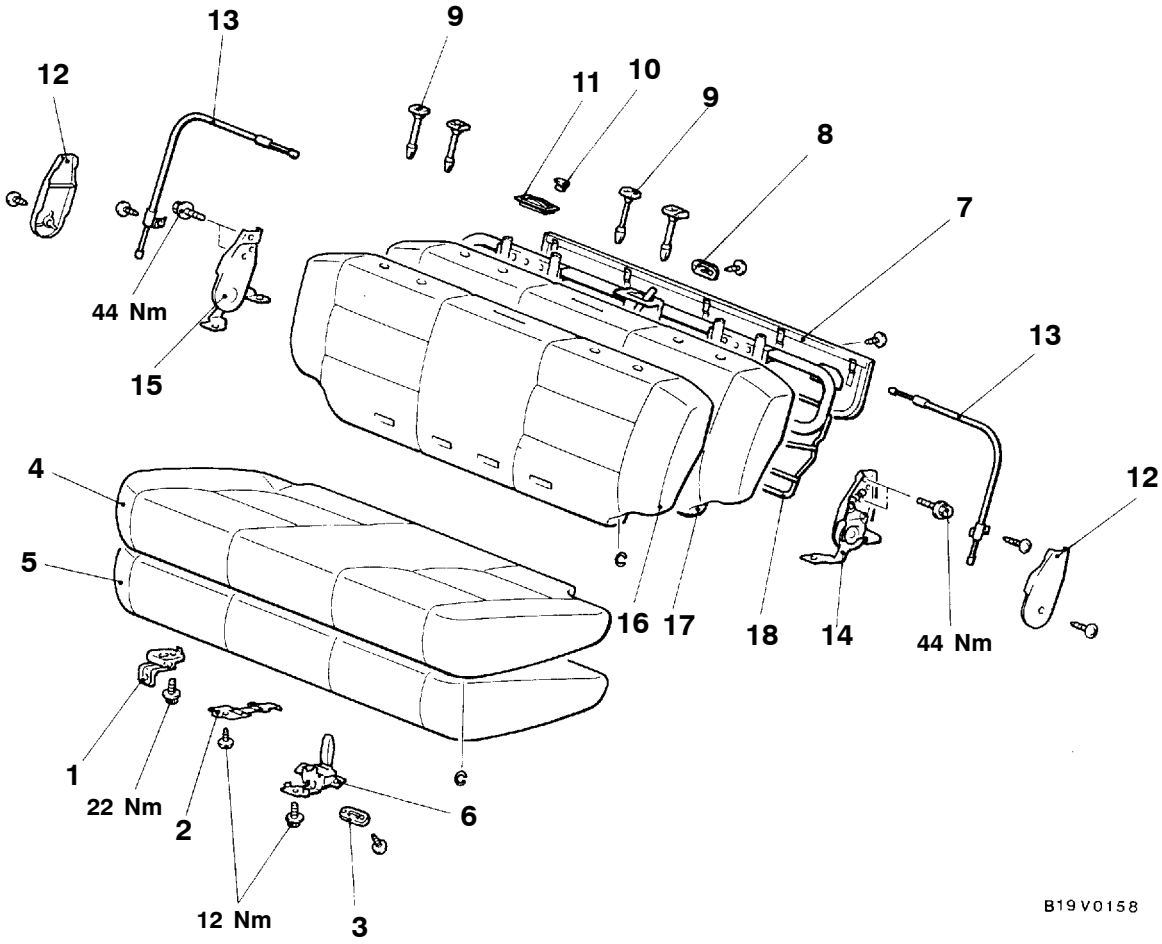
Rear seat removal steps

2. Rear seat cushion assembly
3. Striker cover
4. Striker assembly
5. Catch
6. Parcel hook
7. Luggage floor box, front
8. Rear seatback assembly

DISASSEMBLY AND REASSEMBLY

52200200121

<Bench seat>



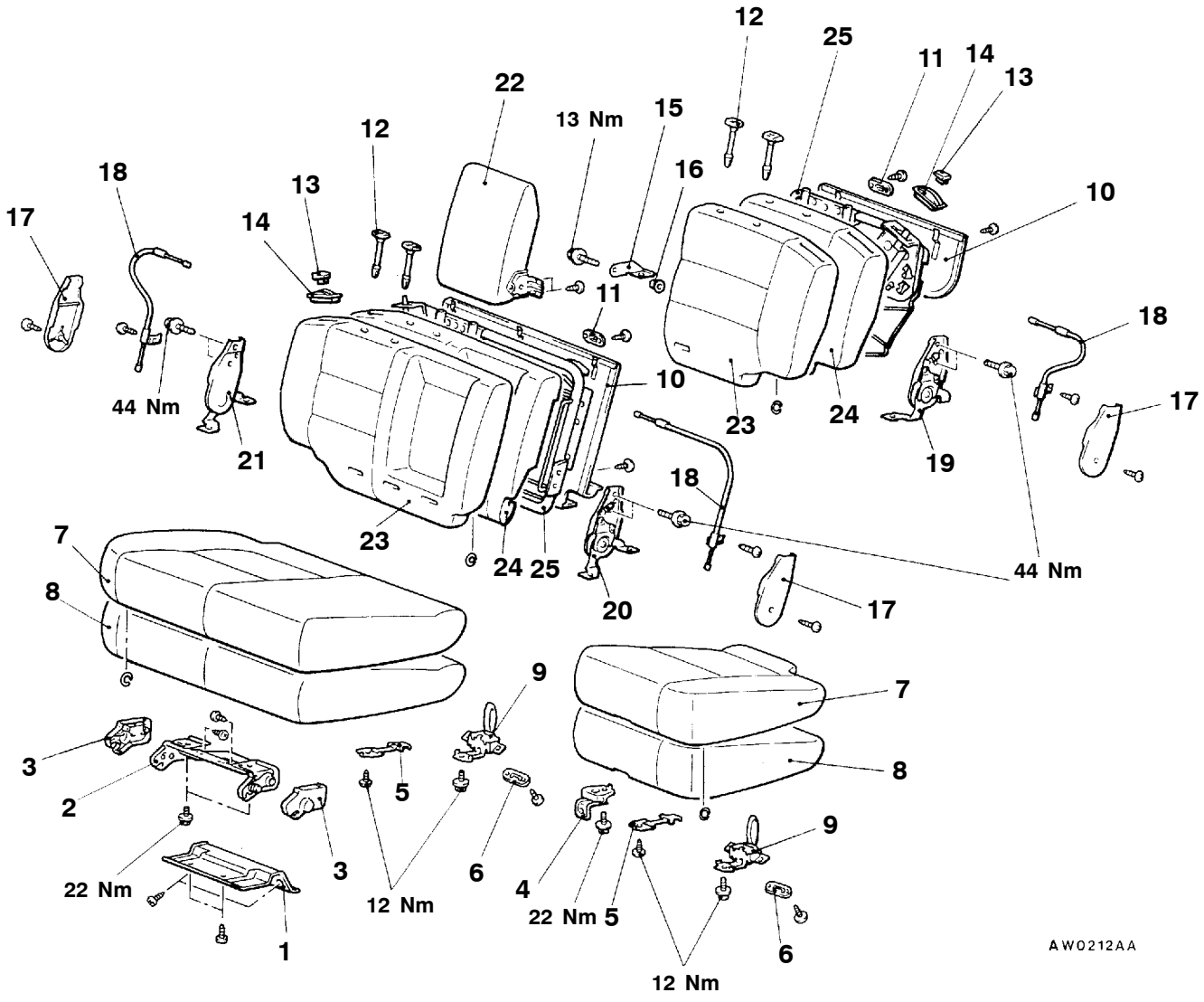
Rear seat cushion disassembly steps

1. Hinge
2. Band
3. Lock cover
4. Rear seat cushion cover
5. Rear seat cushion pad
6. Lock bracket

Rear seatback disassembly steps

7. Panel
8. Shelf clip
9. Head restraint guide
10. Knob
11. Garnish
12. Reclining cover
13. Control cable
14. Reclining adjuster <L.H.>
15. Reclining adjuster, outer <R.H.>
16. Rear seatback cover
17. Rear seatback pad
18. Rear seatback frame

<Split seat>

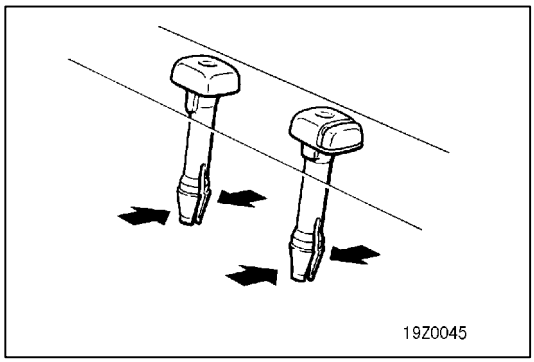


Rear seat cushion disassembly steps ◀A▶

1. Bottom cover
2. Lever assembly
3. Bracket cover
4. Hinge
5. Band
6. Lock cover
7. Rear seat cushion cover
8. Rear seat cushion pad
9. Lock bracket

Rear seatback disassembly steps

10. Panel
11. Shelf clip
12. Head restraint guide
13. Knob
14. Garnish
15. Hinge bracket
16. Bush
17. Reclining cover
18. Control cable
19. Reclining adjuster <L.H.>
20. Reclining adjuster, inner <L.H.>
21. Reclining adjuster, outer <R.H.>
22. Armrest
23. Rear seatback cover
24. Rear seatback pad
25. Rear seatback frame



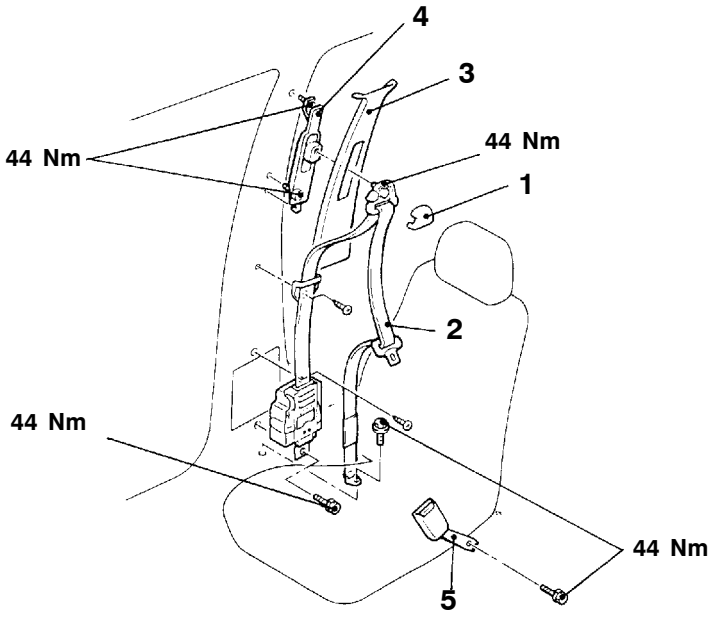
DISASSEMBLY SERVICE POINT

◀A▶ HEAD RESTRAINT GUIDE REMOVAL

FRONT SEAT BELT

52300130317

REMOVAL AND INSTALLATION



BT0141AA

Outer seat belt removal steps

- Center pillar trim, lower (refer to P.52A-13.)

1. Sash guide cover
2. Outer seat belt
3. Center pillar trim, upper (refer to P.52A-13.)
4. Adjustable seat belt anchor

Inner seat belt removal steps

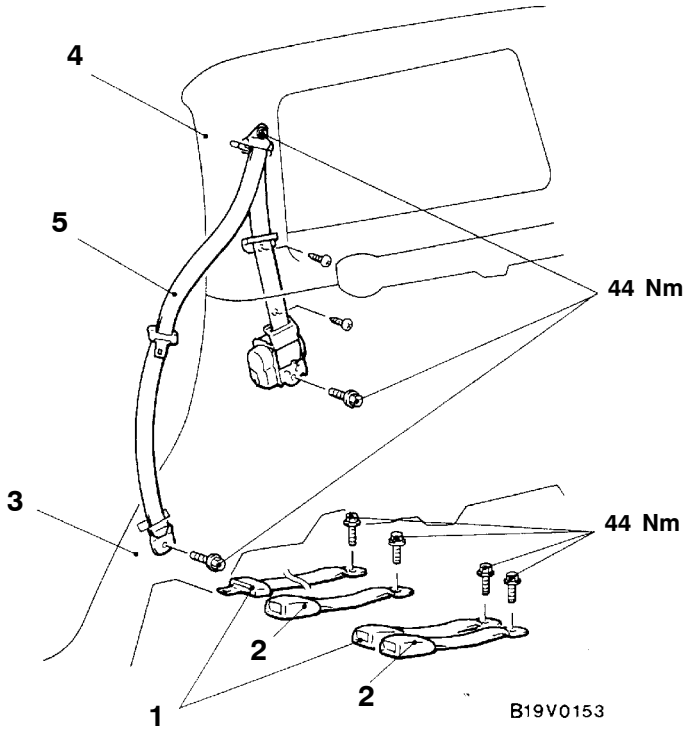
- Front seat (refer to P.52A-15.)

5. Inner seat belt

REAR SEAT BELT

52300160231

REMOVAL AND INSTALLATION



1. Center seat belt
2. Inner seat belt

Outer seat belt removal step

3. Quarter trim, lower (refer to P.52A-13.)
4. Quarter trim, upper (refer to P.52A-13.)
5. Outer seat belt

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

CONTENTS

52409000285

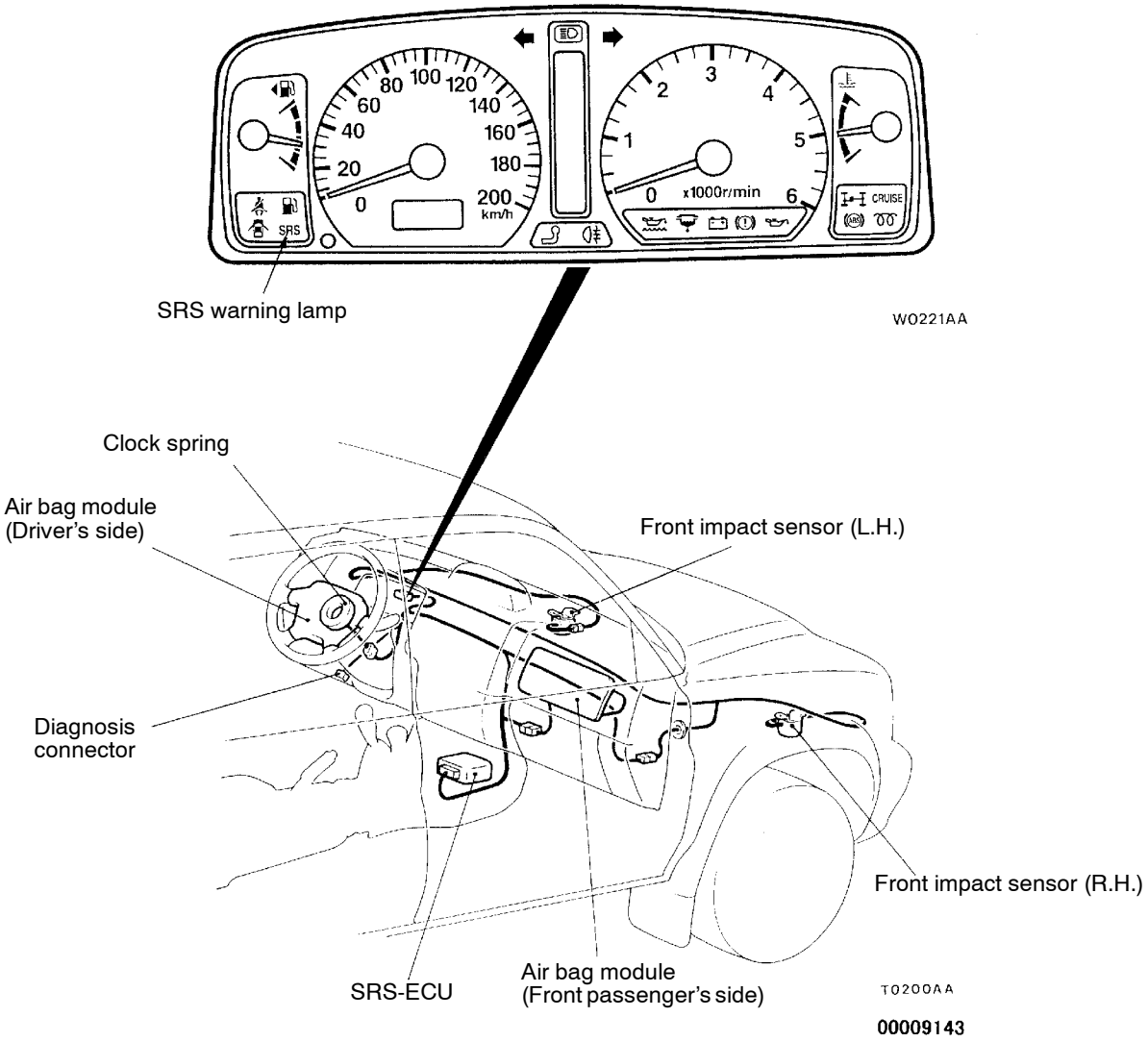
CAUTION

- **Carefully read and observe the information in the SRS SERVICE PRECAUTIONS (P.52B-3.) 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.52-20.) for the components involved.**
- **If you have any questions about the SRS, please contact your local distributor.**

GENERAL INFORMATION

52400010409

To improve safety, the SRS is available as optional part.
The SRS consists of two air bag modules, SRS air bag control unit (SRS-ECU), front impact sensors, 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 front impact sensors are installed in the fender shield panel. The warning lamp on the instrument panel indicates the operational status of the SRS. The clock spring is installed in the steering column. Only authorized service personnel should do work on or around the SRS components. 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 the driver (by rendering the SRS inoperative).

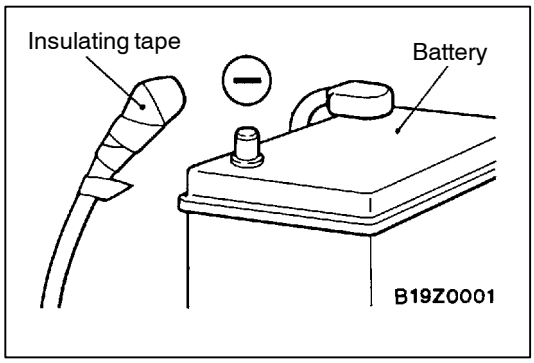


SRS SERVICE PRECAUTIONS

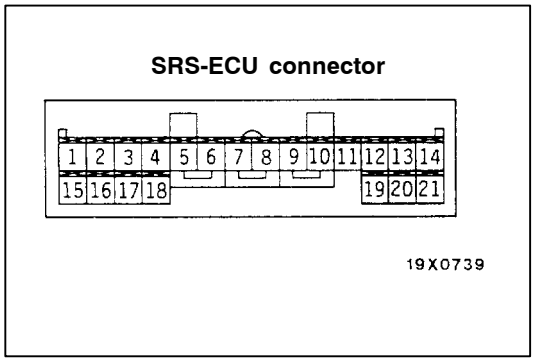
52400030375

1. In order to avoid injury to yourself or others from accidental deployment of the air bag 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)
   - Front impact sensor
   - Clock Spring
   - Air Bag Module

   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.**



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, 6		Body wiring harness → Clock spring → Air bag module (Driver's side)	Correct or replace each wiring harness. Replace clock spring.
7, 8		Body wiring harness → Air bag module (Front passenger's side)	Correct or replace each wiring harness.
9,10		–	–
11		Body wiring harness → Diagnosis connector	Correct or replace each wiring harness.
12, 17		Body wiring harness → Front wiring harness→Front impact sensor (L.H.)	Sensor cable* installation procedures (Refer to P.52B-39.)
13		Body wiring harness → Junction block (fuse No.11)	Correct or replace each wiring harness.
14		Body wiring harness → Junction block (fuse No.10)	
15		Body wiring harness → SRS warning lamp	
16		–	–
18, 19		Body wiring harness → Front wiring harness→Front impact sensor (R.H.)	Sensor cable* installation procedures (Refer to P.52B-39.)
20		Body wiring harness → Earth	Correct or replace body wiring harness.
21		–	–

NOTE
*: The sensor cable is available as service part.

6. SRS components should not be subjected to heat over 93°C, so remove the SRS-ECU, air bag module, clock spring and front impact sensors before drying or baking the vehicle after painting.
7. Whenever you finish servicing the SRS, check warning lamp operation to make sure that the system functions properly. (Refer to P.52B-13.)
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.

SERVICE SPECIFICATION

52400040132

Item	Standard value
Front impact sensor resistance Ω	2,000 ± 40

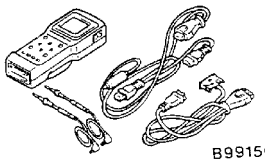
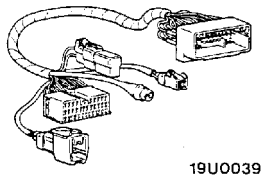
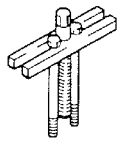
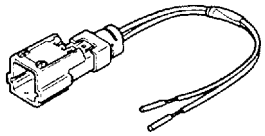
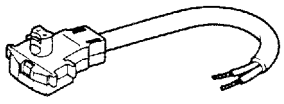
SEALANT

52400060015

Item	Specified sealant	Remark
Sensor cable	3M ATD Part No. 8625 or equivalent	Ribbon sealer

SPECIAL TOOLS

52400070261

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
 B990803	MB990803	Steering wheel puller	Steering wheel removal
 B686560	MB686560	SRS air bag adapter harness A	• Deployment of air bag modules inside the vehicle • Deployment of air bag module (front passenger's side) outside the vehicle
 B628919	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
 13R0745	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

52400310257

STANDARD FLOW OF DIAGNOSTIC TROUBLESHOOTING

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

DIAGNOSIS FUNCTION

52400320205

DIAGNOSIS CODES CHECK

Connect the MUT-II to the diagnosis connector (16-pin) under the instrument cover, then check diagnosis codes.
(Refer to GROUP 00 – How to Use Troubleshooting/Inspection Service Points.)

ERASING DIAGNOSIS CODES

WHEN USING THE MUT-II

Connect the MUT-II to the diagnosis connector and erase the diagnosis code.

Caution
Turn off the ignition switch before connecting or disconnecting the MUT-II.

INSPECTION CHART FOR DIAGNOSIS CODES

52400330369

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

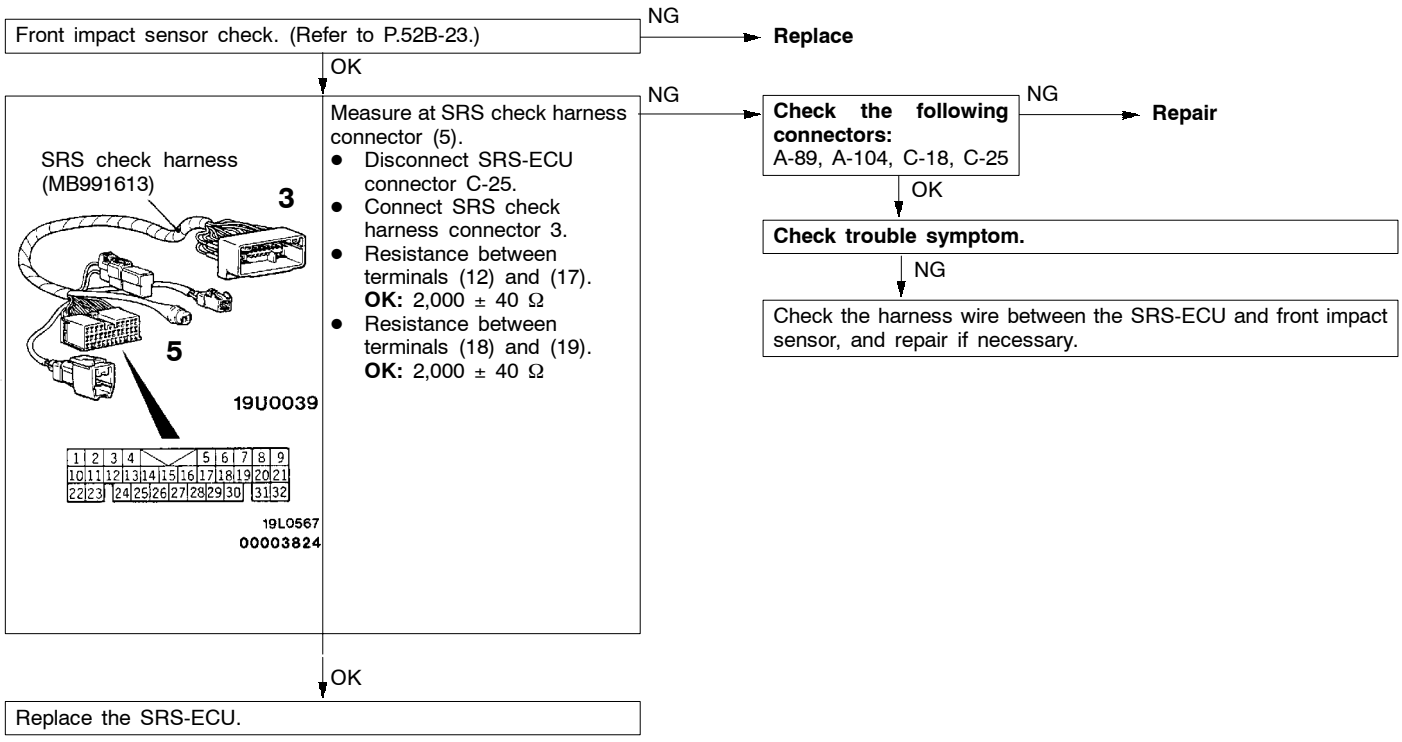
Code No.	Diagnosis item		Reference page
11, 12, 13	Front impact sensor system		52B-7
14	Analog G-sensor system in the SRS-ECU		52B-8
15,16	Safing G-sensor system in the SRS-ECU		52B-8
21, 22, 61, 62	Driver's side air bag module (squib) system		52B-9
24, 25, 64, 65	Front passenger's side air bag module (squib) system		52B-10
31, 32	SRS-ECU capacitor system		52B-8
34*	Connector lock system		52B-10
35	SRS-ECU (deployed air bag) system		52B-11
41*	Power circuit system (fuse No.10 circuit)		52B-11
42*	Power circuit system (fuse No.11 circuit)		52B-11
43	SRS warning lamp drive circuit system	Lamp does not illuminate.*	52B-12
		Lamp does not switch off.	52B-12
44	SRS warning lamp drive circuit system		52B-13
45	SRS-ECU non-volatile memory (EEPROM) and A/D converter system		52B-8
51, 52	Driver's side air bag module (squib ignition drive circuit) system		52B-8
54, 55	Front passenger's side air bag module (squib ignition drive circuit) system		52B-8

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.11, 12 or 13 Front impact sensor system	Probable cause
These diagnostic trouble codes are output if there is abnormal resistance between the input terminals of the front impact sensors. The trouble causes for each diagnosis code No. are as follows.	• Malfunction of front impact sensor • Malfunction of wiring harness of connectors • Malfunction of SRS-ECU

Code No.	Trouble Symptom
11	• Short circuit in front impact sensor or harness • Short circuit in front impact sensor harness leading to the vehicle body ground • Short circuit in front impact sensor harness leading to the power supply
12	• Open circuit in either left or right front impact sensor or harness • Short circuit in front impact sensor harness leading to the power supply
13	• Open circuit in both left and right front impact sensor or harness • Short circuit in front impact sensor harness leading to the power supply



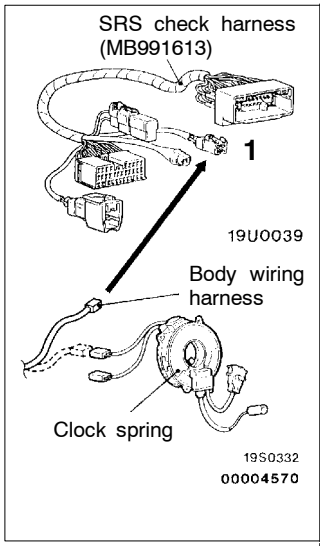
Code No.14, 15, 16, 31, 32, 45, 51, 52, 54, 55 System inside SRS-ECU	Probable cause
These diagnostic trouble codes are output when a fault is detected in the SRS-ECU. The trouble causes for each diagnosis code No. are as follows.	• Malfunction of SRS-ECU

Code No.	Defective part	Trouble Symptom
14	Analog G-sensor	• 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
15	Safing G-sensor	• Short circuit in the safing G-sensor
16		• Open circuit in the safing G-sensor
31	Capacitor	• Voltage at the capacitor terminal is higher than the specified value for five seconds or more
32		• Voltage at the capacitor terminal is lower than the specified value for five seconds or more (this is not detected if diagnostic trouble code No.41 or 42 indicating battery voltage drop has been output.)
45	Non-volatile memory (EEPROM) and A/D converter	• When the non-volatile memory (EEPROM) and A/D converter system are abnormal
51	Driver's side air bag module (squib ignition drive circuit)	• Short circuit in the squib ignition drive circuit
52		• Open circuit in the squib ignition drive circuit
54	Front passenger's side air bag module (squib ignition drive circuit)	• Short circuit in the squib ignition drive circuit
55		• Open circuit in the squib ignition drive circuit

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



MUT-II Self-diag code
- Disconnect clock spring connector C-25.
- Connect SRS check harness connector (1).
- Connect the battery (–) terminal.
- Erase diagnosis code memory.

Are code Nos.21, 22, 61 or 62 output?

Yes → **Check the following connectors:** C-25, D-09 → NG → **Repair**

OK → Check trouble symptoms.

NG → Check the harness wire between the SRS-ECU and clock spring. → NG → **Repair**

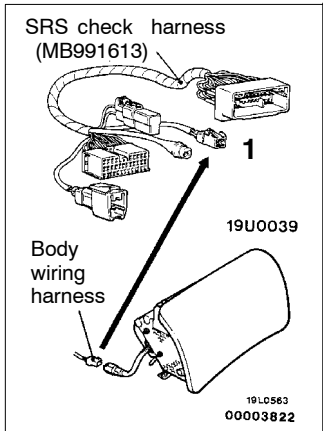
OK → Replace the SRS-ECU.

No → Check the clock spring. (Refer to P.52B-31.) → NG → **Replace**

OK → Replace the driver's side air bag module.

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



MUT-II Self-diag code
- Disconnect front passenger's side air bag module connector C-45.
- Connect SRS check harness connector (1).
- Connect the battery (–) terminal.
- Erase diagnosis code memory.

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

Yes → **Check the following connectors:** C-25, C-45 — NG → **Repair**

OK → Check trouble symptoms.

NG → Check the harness wire between the front passenger's side air bag module (squib) and SRS-ECU. — NG → **Repair**

OK → Replace the SRS-ECU.

No → Replace the front passenger's side air bag module.

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

Check the following connector: C-25 — NG → **Repair**

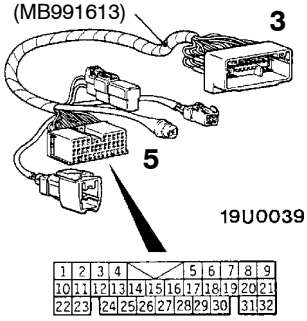
OK → Replace the SRS-ECU.

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 Power circuit system (fuse No.10 circuit) Code No.42 Power circuit system (fuse No.11 circuit)	Probable cause
Code No.41 is output if the voltage between the IG_1 terminal (SRS-ECU, terminal 14) and the earth is lower than the specifited value for a continuous period of five seconds or more. Code No.42 is output if the voltage between the IG_1 terminal (SRS-ECU, terminal 13) and the earth is lower than the specified value for a continuous period of five seconds or more. Automatically erased, and the SRS warning lamp will switch off. If the vehicle has a discharged battery it will store the fault codes 41 and 42. When these diagnosis codes are displayed, check the battery.	• Malfunction of wiring harness or connectors • Malfunction of SRS-ECU

SRS check harness (MB991613)



Measure at SRS check harness connector (5).
- Disconnect SRS-ECU connector C-25.
- Connect SRS check harness connector (3).
- Continuity between terminal (20)
  OK: Continuity

NG → **Check the following connectors:** C-25, D-26 → NG → **Repair**

OK → Check trouble symptoms.

NG → Check the harness wire between the SRS-ECU and earth, and repair if necessary.

OK

Measure at SRS check harness connector (5).
- Disconnect SRS-ECU connector C-25.
- Connect SRS check harness connector (3).
- Connect the battery (–) terminal.
- Ignition switch: ON
- Voltage between terminal (14) and body earth <code No.41>
  OK: 9V or more
- Voltage between terminal (13) and body earth <code No.42>
  OK: 9V or more

NG → **Check the following connectors:** C-25, D-26, D-27, D-28 → NG → **Repair**

OK → Check trouble symptoms.

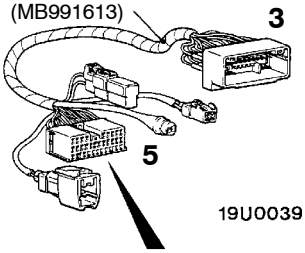
NG → Check the harness wire between the SRS-ECU and ignition switch IG_1, and repair if necessary.

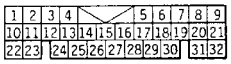
OK

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

SRS check harness (MB991613)





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Measure at SRS check harness connector (5).
- Disconnect SRS-ECU connector C-25.
- Connect SRS check harness connector (3).
- Continuity between terminal (20)

OK: Continuity

NG → **Check the following connectors:** C-25, D-26 — NG → **Repair**

OK → Check trouble symptoms.

NG → Check the harness wire between the SRS-ECU and earth, and repair if necessary.

OK → Measure at SRS check harness connector (5).
- Disconnect SRS-ECU connector C-25.
- Connect SRS check harness connector (3).
- Connect the battery (–) terminal.
- Ignition switch: ON
- Connect terminal (15) to the body earth.

OK: Lamp illuminates

NG → Blown bulb inspection — NG → **Repair**

OK → **Check the following connectors:** C-03, C-04, C-25, D-19, D-28 — NG → **Repair**

OK → Check trouble symptoms.

NG → Check the harness wire between the SRS-ECU and ignition switch (IG_1). — NG → **Repair**

OK → Replace the combination meter.

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 C-25 is disconnected?

No → **Check the following connectors:** C-03, C-25 — NG → **Repair**

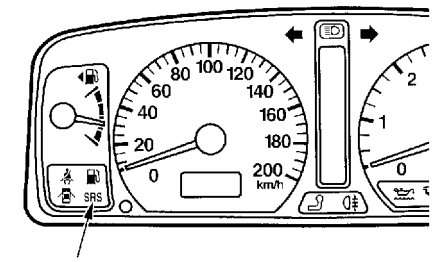
OK → Check trouble symptoms.

NG → Check the harness wire between the SRS-ECU and combination meter, and repair if necessary.

Yes → Replace the SRS-ECU.

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

Check the SRS warning lamp drive circuit system. (Refer to P.52B-12.) → OK → Replace the SRS-ECU.



SRS WARNING LAMP INSPECTION 52400430106

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 52400340379

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-13
	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-12

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

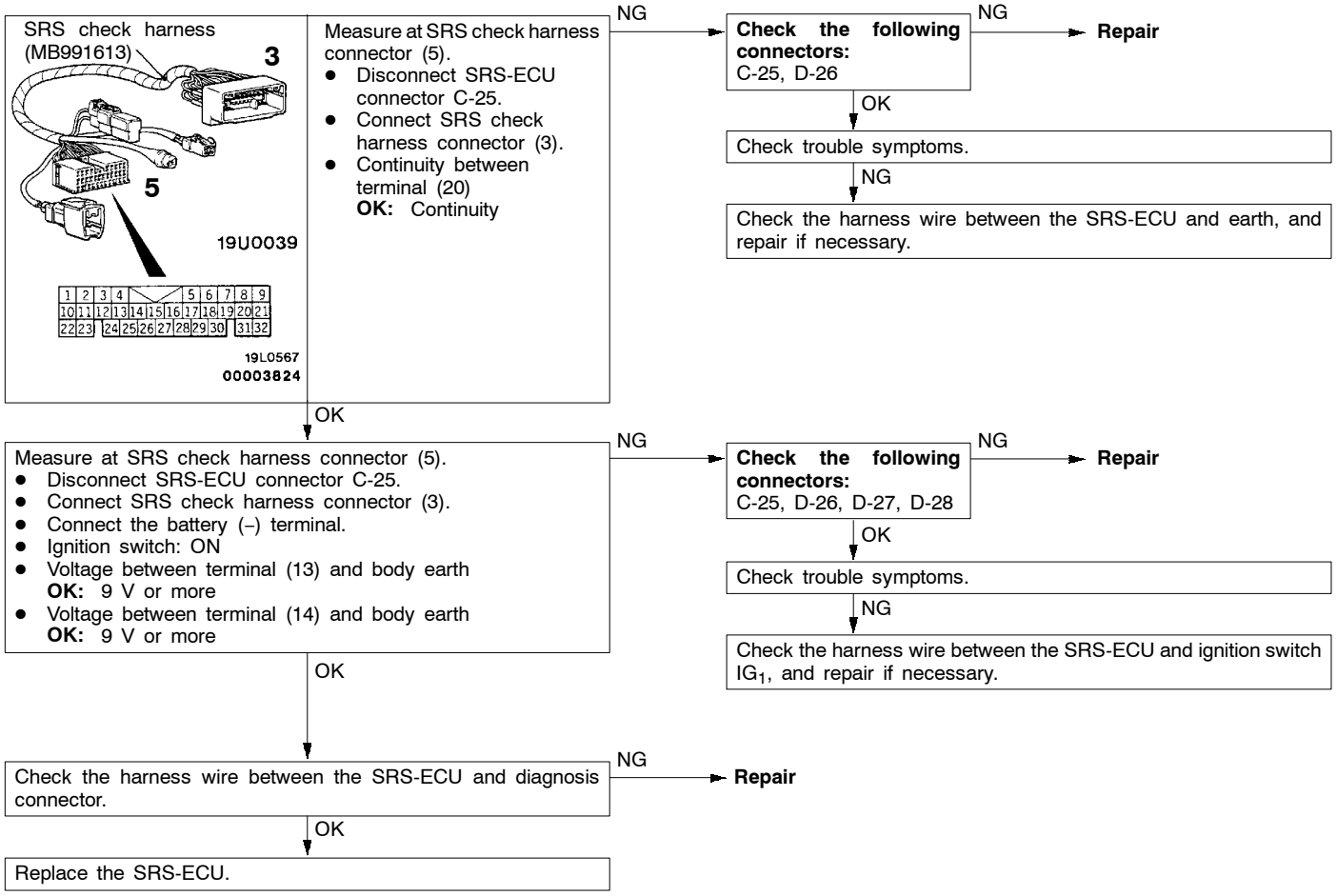
Inspection Procedure 1

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

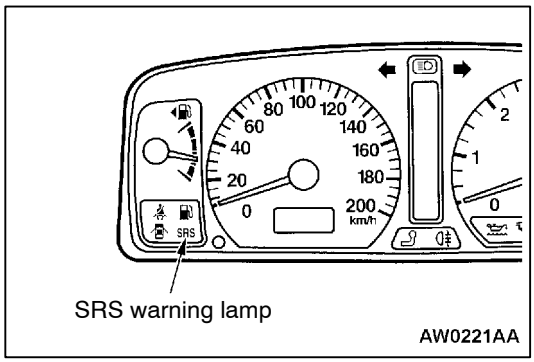
Communication with MUT-II is not possible. (Communication is not possible with SRS only.)	Probable cause
If communication is not possible with the SRS only, the cause is probably an open circuit in the diagnosis output circuit of the SRS or in the power circuit (including earth circuit).	• Malfunction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



SRS MAINTENANCE

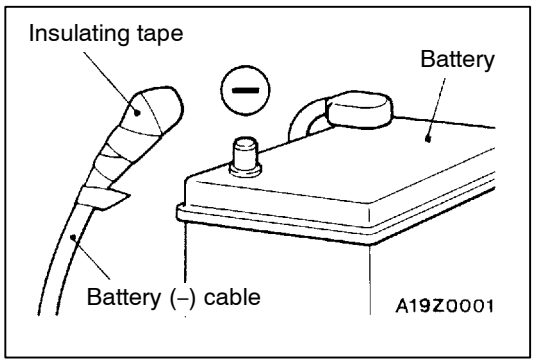
52400390299

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



SRS WARNING LAMP CHECK

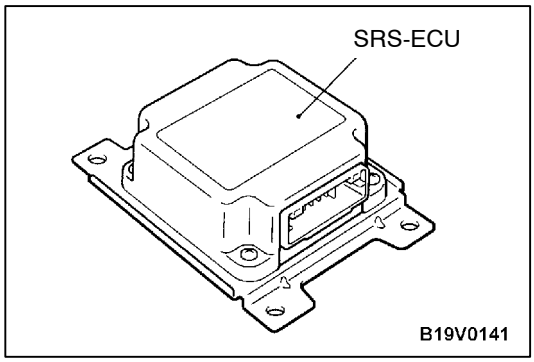
Turn the ignition key to the ON position. Does the SRS warning lamp illuminate for about 7 seconds, turn off and then remain extinguished for at least 5 seconds? If yes, SRS system is functioning properly. If no, consult page 52B-6.



SRS COMPONENT VISUAL CHECK

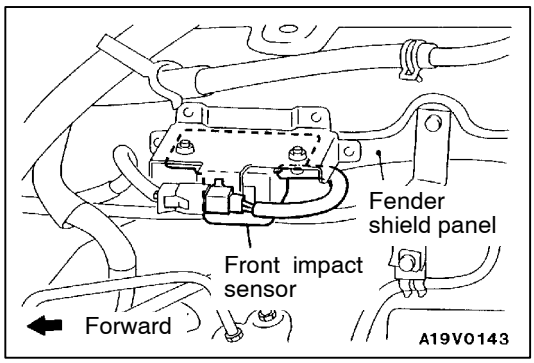
Turn the ignition key to the LOCK position, disconnect the negative battery cable and tape the terminal.

Caution
Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-3.)



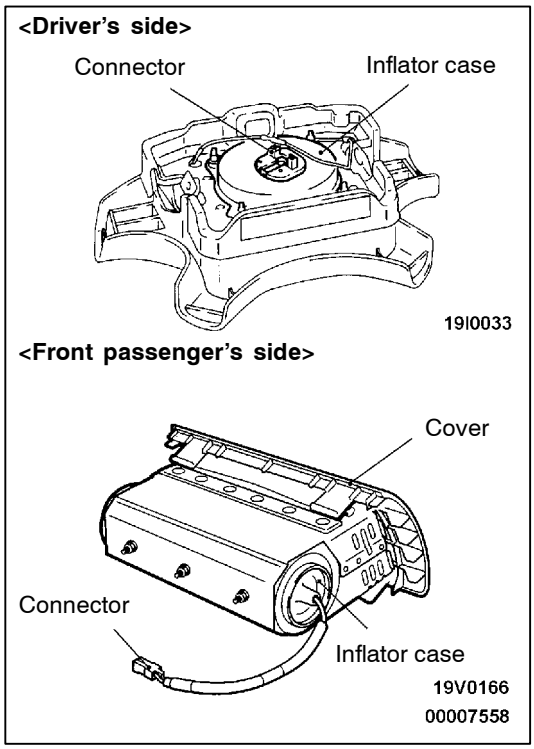
SRS CONTROL UNIT (SRS-ECU)

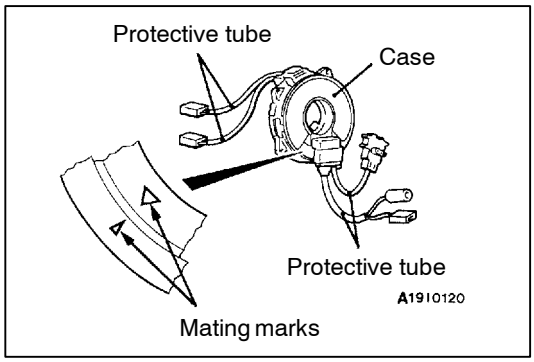
1. Check SRS-ECU case and brackets for dents, cracks, deformation or rust.
   Caution
   The SRS may not activate if the SRS-ECU is not installed properly, which could result in serious injury or death to the vehicle's driver or front passenger.
2. Check connector for damage, and terminals for deformation or rust.
   Replace SRS-ECU if it fails visual check.
   (Refer to P.52B-24.)



FRONT IMPACT SENSORS

1. Check the fender shield panel for deformation or rust.
2. Check the front impact sensor for dents, cracks, deformation or rust.
3. Check the sensor harnesses for binding, the connectors for damage, and the terminals for deformation.





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

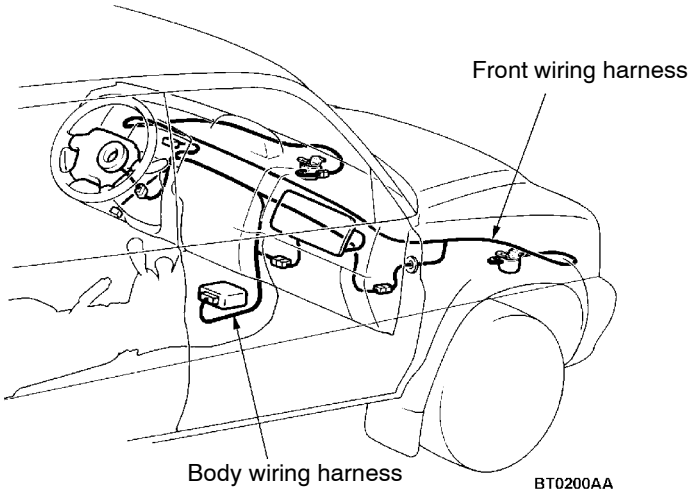
   Turn the clock spring clockwise fully, and then turn back it approx. 3 4/5 turns counterclockwise to align the mating marks.

   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 of 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.)

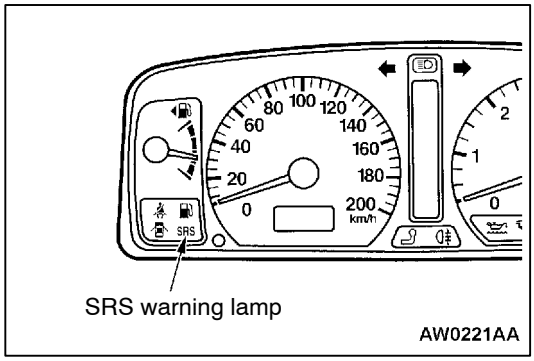
    Caution
    The SRS may not activate if any of the above components is not installed properly, which could result in serious injury or death to the vehicle's driver or front passenger.

BODY WIRING HARNESS/FRONT WIRING HARNESS



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-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-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 52400110390

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-6.)

   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
91	How long a problem has lasted (how long it takes from the occurrence of the problem till the first air bag squib igniting signal or from the first air bag squib ignition signal till now.)	Maximum time to be stored: 9,999 minutes (approximately seven days)
92	Number indicating how often the memory is cleared	Maximum time to be stored: 250

4. Erase the diagnosis codes and after waiting 5 seconds or more read (and write down) all displayed diagnosis codes. (Refer to P.52B-6.)

REPAIR PROCEDURE

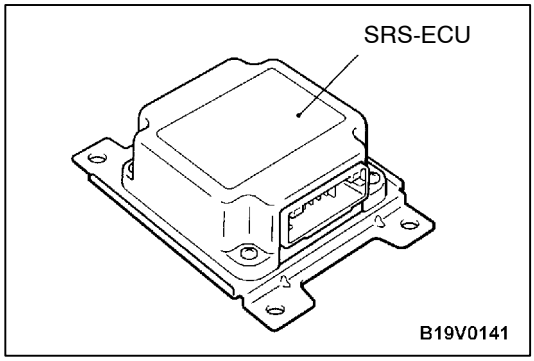
WHEN AIR BAG DEPLOYS IN A COLLISION.

1. Replace the following parts with new ones.
   - SRS-ECU (Refer to P.52B-24.)
   - Air bag module (Refer to P.52B-25.)
   - Front impact sensors (Refer to P.52B-22.)

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-17.)

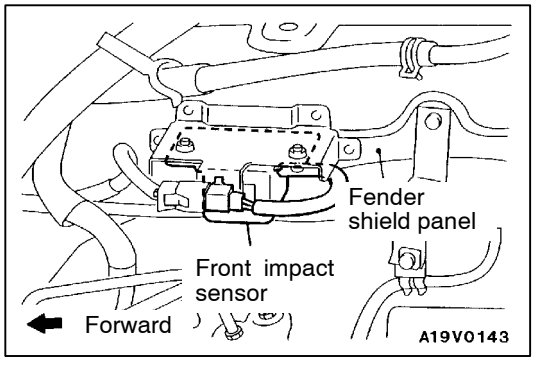
WHEN AIR BAG DOES NOT DEPLOY IN LOW-SPEED COLLISION.

Check the SRS components. If the SRS components 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-20.



SRS-ECU

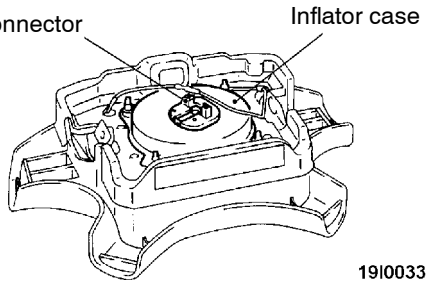
1. Check SRS-ECU case and brackets for dents, cracks or deformation.
2. Check connector for damage, and terminals for deformation.



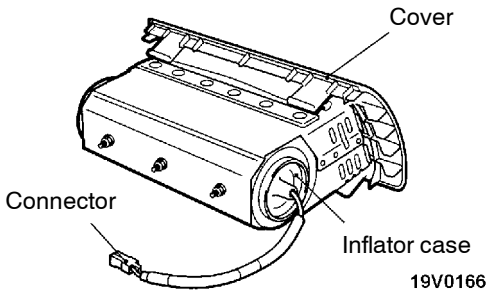
Front impact sensors

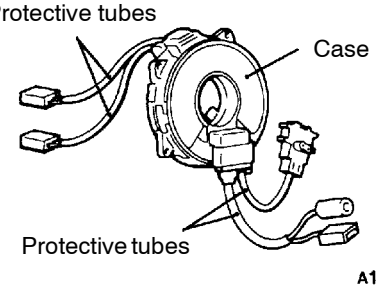
1. Check the fender shield panel for deformation or rust.
2. Check the front impact sensor for dents, cracks, deformation or rust.
3. Check the sensor harnesses for binding, the connectors for damage, and the terminals for deformation.

<Driver's side>



<Front passenger's side>





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 (driver's side) to steering wheel to check fit or alignment with the wheel.
5. Install the air bag module (front passenger's side) to the instrument panel and crossmember to check fit or alignment.
6. Install the air bag module cover (front passenger's side) to the instrument panel to check fit or alignment.

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 (front wiring harness, body wiring harness)

Check harnesses for binding, connectors for damage, poor connection, and terminals for deformation. (Refer to P.52B-17.)

INDIVIDUAL COMPONENT SERVICE

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If the SRS components are to be removed or replaced as a result of maintenance, troubleshooting, etc., follow each procedure (P.52B-22 – P.52B-32.)

Caution

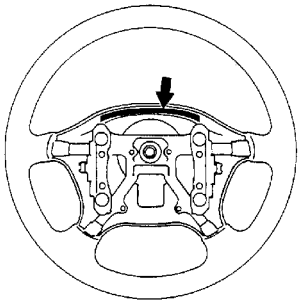
1. **SRS components should not be subjected to heat over 93°C, so remove the SRS-ECU, air bag module and clock spring before drying or baking the vehicle after painting. Recheck SRS system operability after re-installing them.**
2. **If the SRS components are removed for the purpose of check, sheet metal repair, painting, etc., they should be stored in a clean, dry place until they are reinstalled.**

WARNING/CAUTION LABELS

52400300117

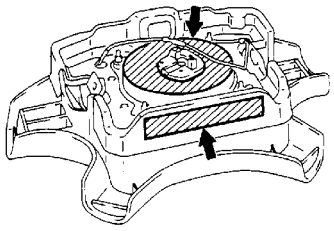
A number of caution labels related to the SRS are found in the vehicle, as shown in the following illustration. Follow label instructions when servicing SRS. If labels are dirty or damaged, replace them.

Steering wheel



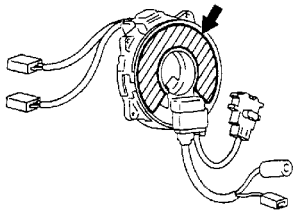
19I0042

Air bag module (Driver's side)



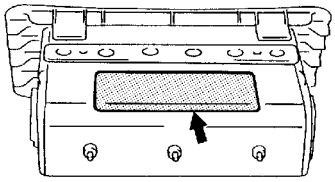
19I0034

Clock spring



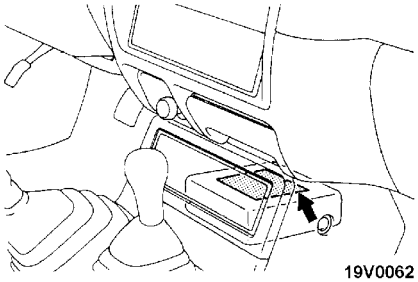
19I0122

Air bag module (Front passenger's side)



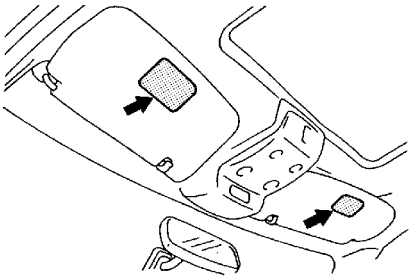
19V0127

SRS-ECU



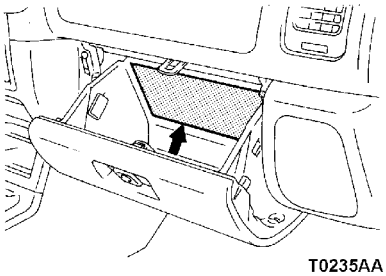
19V0062

Sun visor



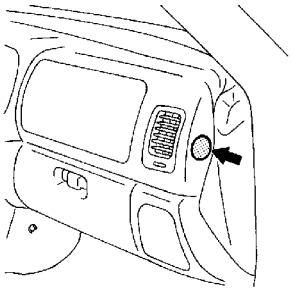
19V0128

Glove box



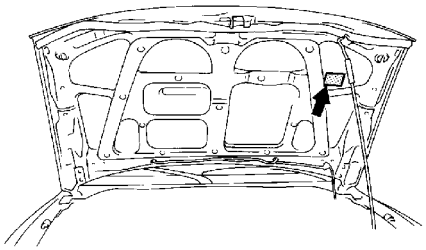
T0235AA

Instrument panel



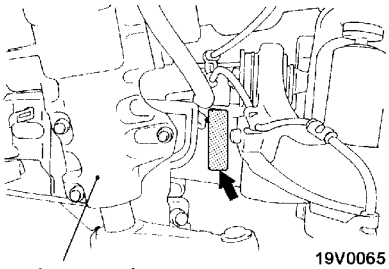
V0656AA

Hood



T0236AA

Frame*



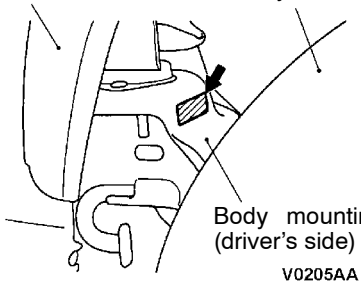
19V0065

Steering gear box

Frame*

Front bumper

Tyre



Body mounting bracket (driver's side)

V0205AA

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NOTE

*:The frame label is affixed to one of the positions.

FRONT IMPACT SENSORS

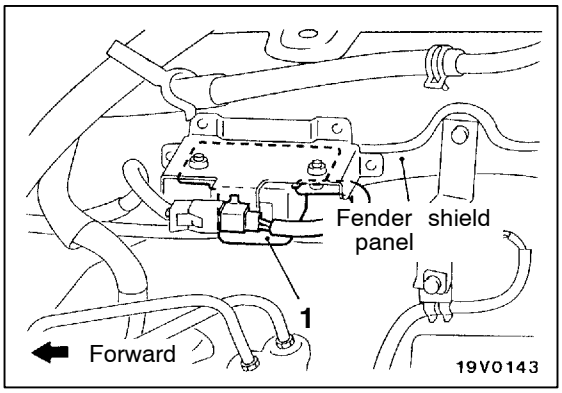
52400150163

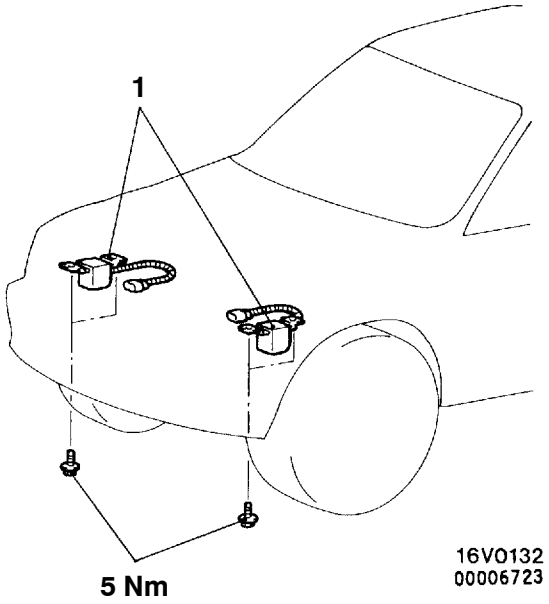
Caution

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-3.)**
2. **Never attempt to disassemble or repair the front impact sensor. If faulty, replace it.**
3. **Do not drop or subject the front impact sensor to impact or vibration. If denting, cracking, deformation, or rust are discovered in the front impact sensor, replace it with a new front impact sensor. Discard the old one.**
4. **After deployment of an air bag, replace the front impact sensor with a new one.**

REMOVAL AND INSTALLATION

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





Removal steps

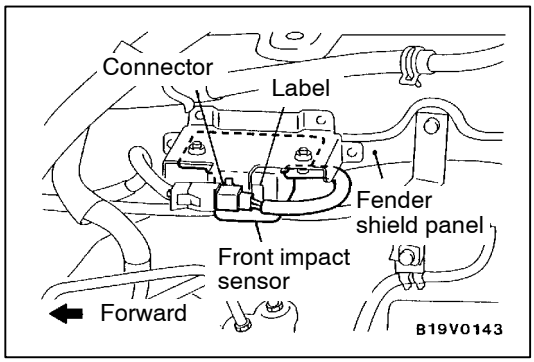
▶C◀ • Post-installation inspection
• Negative (–) battery cable connection

▶B◀ 1. Front impact sensor
▶A◀ • Pre-installation inspection

INSTALLATION SERVICE POINTS

▶A◀ PRE-INSTALLATION INSPECTION

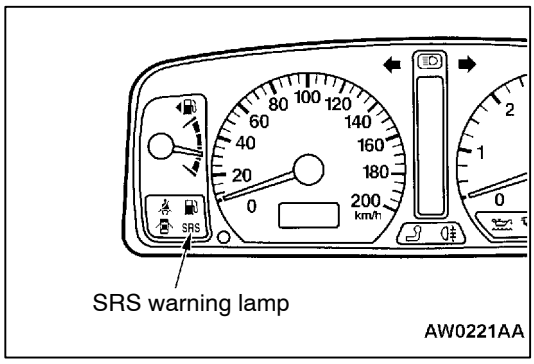
To mount the new front impact sensor, visually check it and measure the resistance between the terminals. (Refer to the previous item “INSPECTION”)



▶B◀ FRONT IMPACT SENSOR INSTALLATION

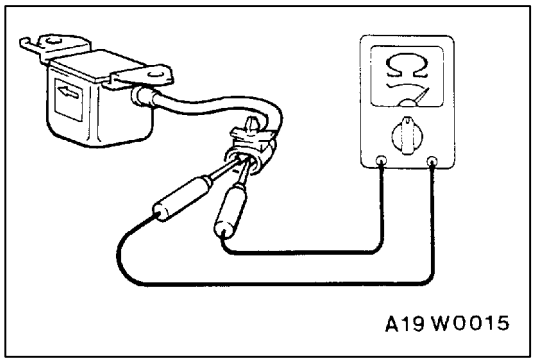
1. Securely connect the connector.
2. Position the front impact sensor facing toward the front of the vehicle as shown by the arrow on the label, and install it securely.

Caution
The SRS may not activate properly if a front impact sensor is not installed properly, which could result in serious injury or death to the vehicle's driver.



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



INSPECTION

52400160104

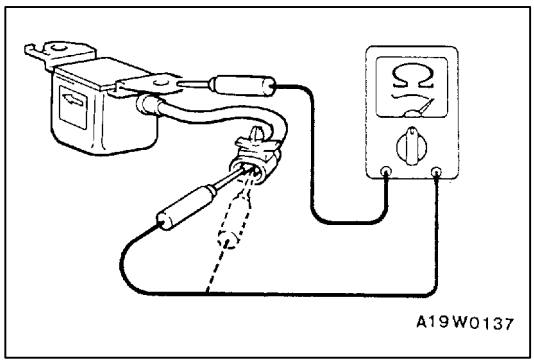
1. Check the front impact sensor for dents, cracks, deformation or rust.

   Caution
   If a dent, crack, deformation or rust is detected, replace with a new sensor.

2. Measure the resistance between terminals and check whether it is within the standard value.

   Standard value: 2,000 ± 40Ω

   Caution
   Always replace the sensor with a new one if the resistance is not within the standard value.



3. Check fender shield panel for deformation or rust.
4. Check the continuity between the terminal and bracket. If there is a continuity, the insulation is malfunctioned, and replace the sensor with a new one.

SRS AIR BAG CONTROL UNIT (SRS-ECU)

52400210281

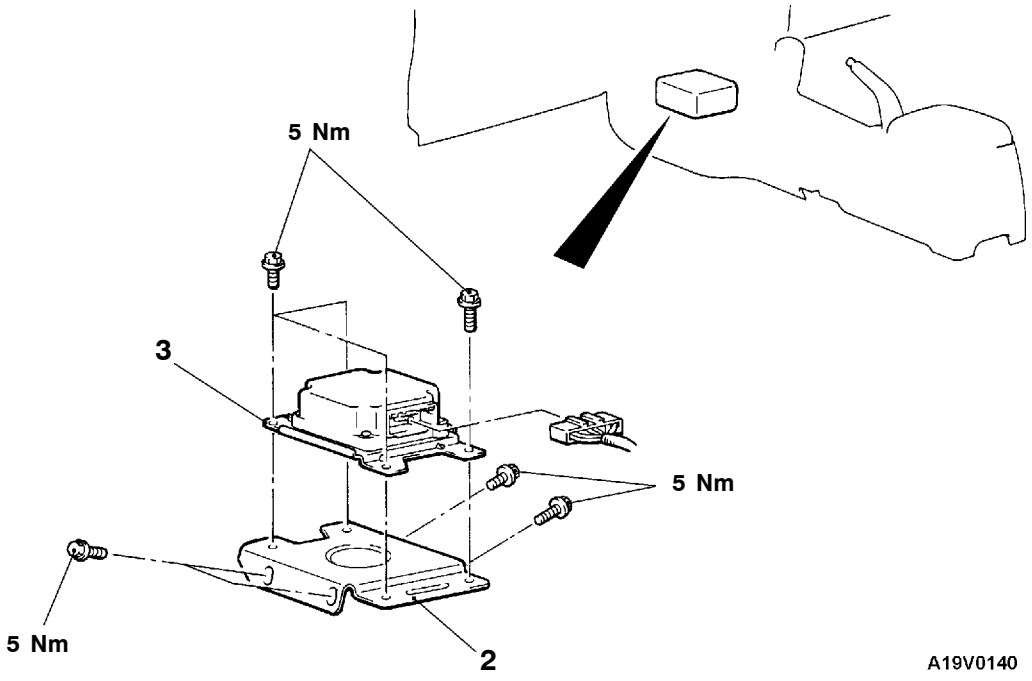
Caution

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-3.)**
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-5.**

REMOVAL AND INSTALLATION

Pre-removal Operation
- Turn the ignition key to the LOCK position.
- Floor Console Removal (Refer to GROUP 52A – Floor Console.)

Post-installation Operation
- Floor Console Installation (Refer to GROUP 52A – Floor Console.)



Removal steps

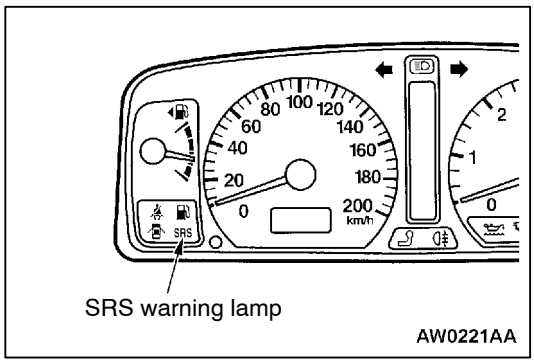
▶B◀ ● Post-installation inspection
● Negative (–) battery cable connection
1. SRS-ECU bracket

▶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 52400220246

- 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 52400240358

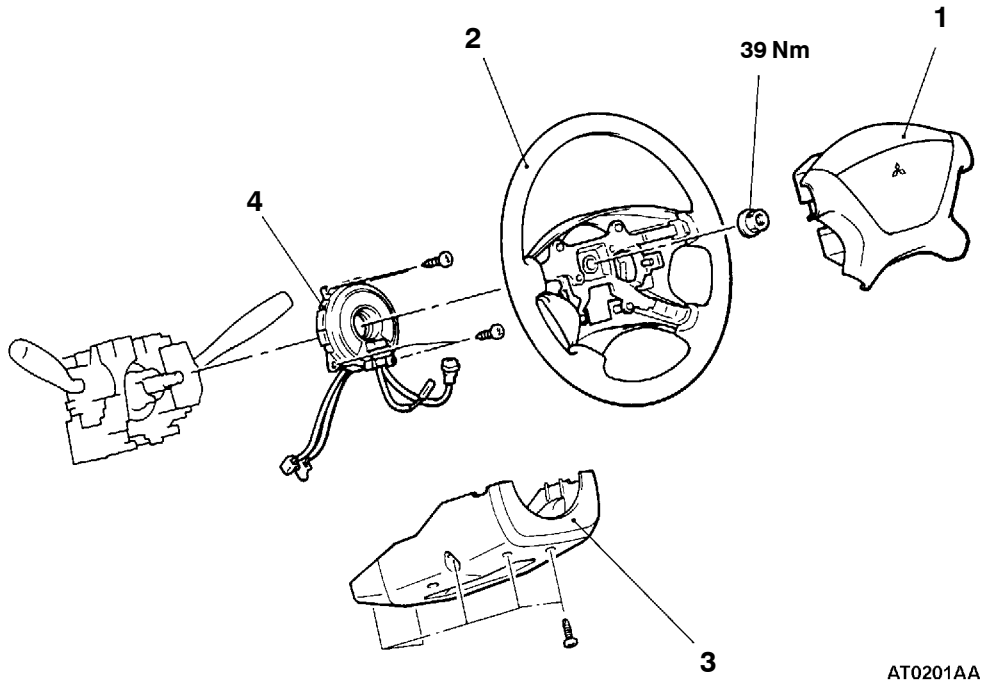
Caution
1. **Disconnect the battery (–) terminal and wait for 60 seconds or more before starting work. Furthermore, the disconnected battery terminal should be covered with tape to insulate it. (Refer to P.52B-3.)**
2. **Never attempt to disassemble or repair the air bag modules or clock spring.**
   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 air bag modules. Check the clock spring, and if faulty, replace it with a new part.**
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-33.)**

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.



Air bag module removal steps

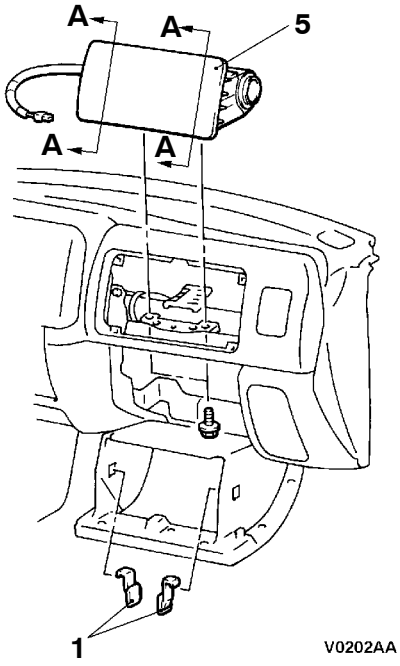
▶F◀ • Post-installation inspection
• Negative (–) battery cable connection
◀A▶ ▶E◀ 1. Air bag module
▶A◀ • Pre-installation inspection

Clock spring removal steps

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

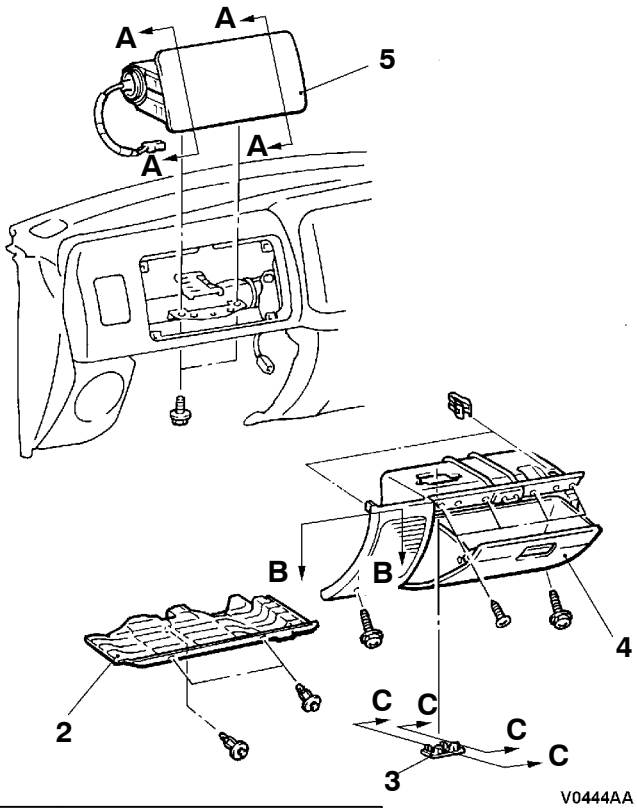
<Air bag module (front passenger's side)>

<L.H. drive vehicles>



V0202AA

<R.H. drive vehicles>



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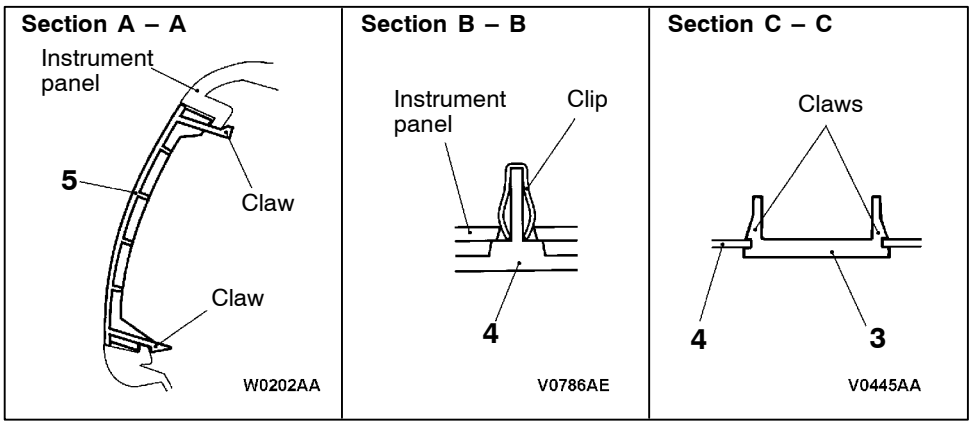
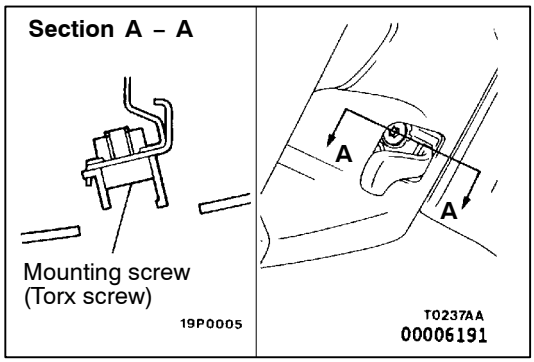
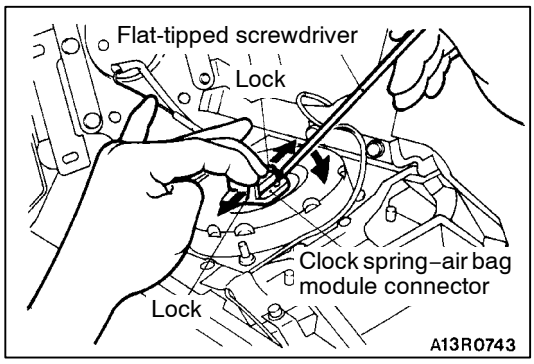


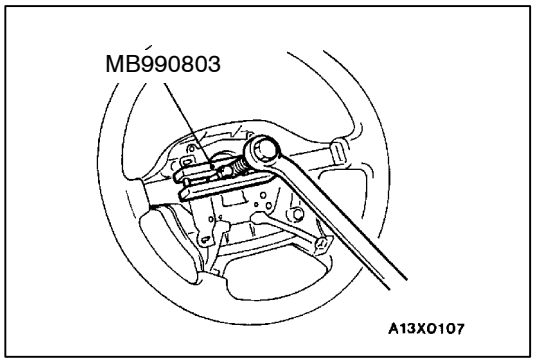
Air bag module removal steps

▶F◀ ● Post-installation inspection
● Negative (–) battery cable connection
1. Stopper
2. Under cover

▶B◀ 3. Connector plug
4. Glove box assembly
◀D▶ 5. Air bag module
▶A◀ ● Pre-installation inspection







REMOVAL SERVICE POINTS

◀A▶ AIR BAG MODULE REMOVAL (DRIVER'S SIDE)

1. Remove the air bag module mounting screws (Torx screws) at the sides of the steering wheel.

   NOTE
   Do not remove the screws from the holders.

2. When disconnecting the connector of the clock spring from the air bag module, press 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 disconnecting 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.

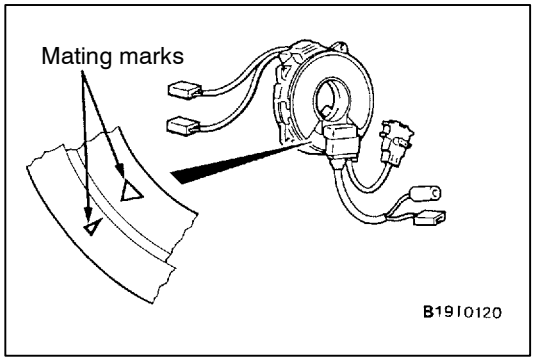
INSTALLATION SERVICE POINTS

▶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-33.)
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-3.)

▶B◀CONNECTOR PLUG INSTALLATION

Install the connector plug to the glove box assembly after installing the connection between the passenger’s side air bag module connector and the body harness connector at the back of the plug.



▶C◀ 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.

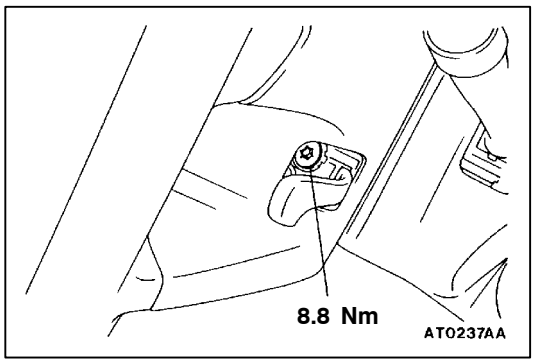
Caution
If the clock spring’s mating marks are not properly aligned, the steering wheel may not be completely rotational during a turn, or the flat cable within the clock spring may be severed, obstructing normal operation of the SRS and possibly leading to serious injury to the vehicle’s driver.

▶D◀ 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.

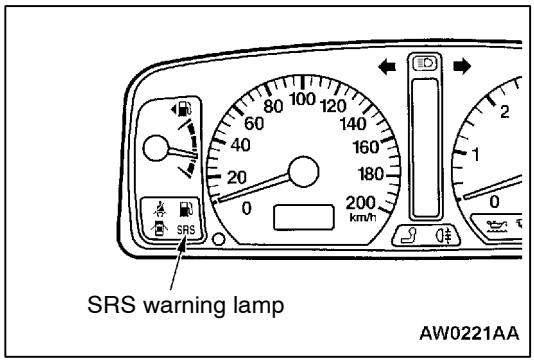
   Caution
   Be sure when installing the steering wheel, that the harness of the clock spring does not become caught or tangled.

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



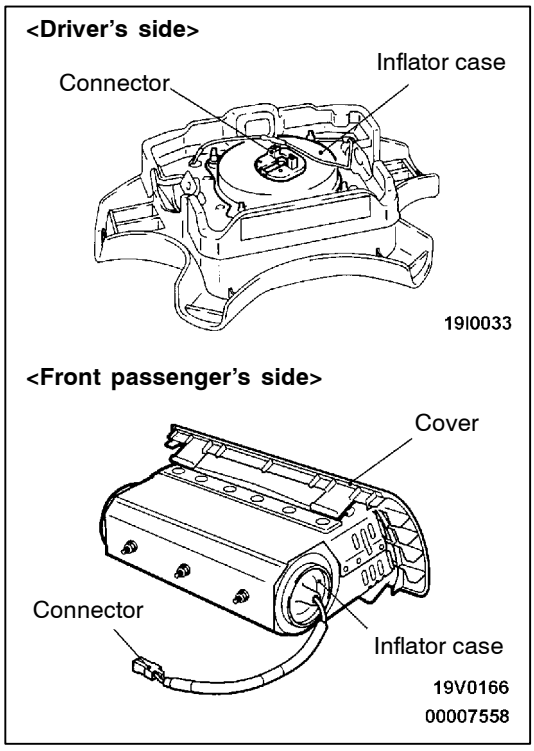
▶E◀ AIR BAG MODULE INSTALLATION (DRIVER'S SIDE)

1. Connect the air bag module connector securely.
2. Tighten the air bag module mounting screws.



▶F◀ 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

52400250351

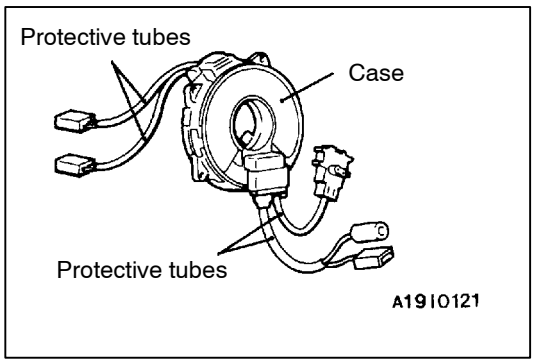
AIR BAG MODULE CHECK

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-33.)

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 (driver's side) to steering wheel to check fit or alignment with the wheel.
5. Install the air bag module (front passenger's side) to the instrument panel and crossmember and check fit and alignment.
6. Install the air bag module cover (front passenger's side) to the instrument panel to check fit and alignment.

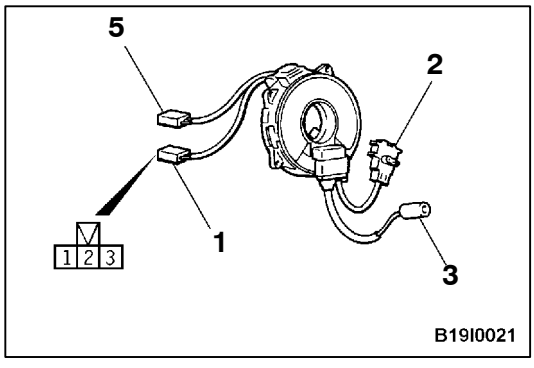
Caution
If dents, cracks, deformation, or rust are discovered in the air bag module, replace it with a new one.
Dispose of the old one according to the specified procedures. (Refer to P.52B-33.)



CLOCK SPRING CHECK

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

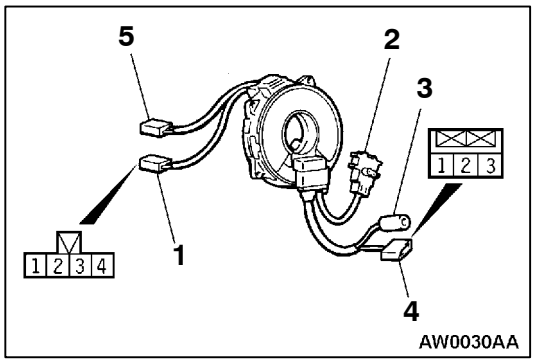
1. Check connectors and protective tube for damage, and terminals for deformation.
2. Visually check the case for damage.



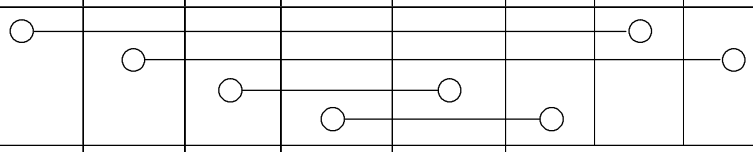
3. Check continuity.

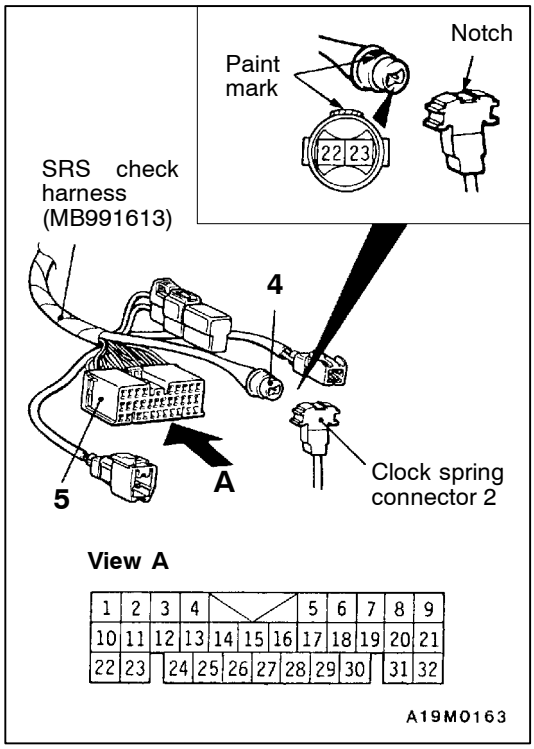
   <Vehicles without auto-cruise control>

   Check the continuity between the number 1 connector terminal 3 and number 3 connector.



<Vehicles with auto-cruise control>

No.1 connector terminal				No.3 connector	No.4 connector terminal		
1	2	3	4		1	2	3
							
To auto-cruise control unit	To ACC power	To horn relay	To ground	To horn switch	To auto-cruise control switch		



4. Align the paint mark of the SRS check harness connector No.4 with the notch in clock spring connector No.2 to connect the connectors Nos.2 and 4.
5. Check continuity between the terminals 22 and 23 of the SRS check harness connector No.5.

AIR BAG MODULE DISPOSAL PROCEDURES

52400120379

Before disposing of an air bag or a vehicle which is equipped with it, the procedures below are to be followed to deploy them.

UNDEPLOYED AIR BAG MODULE DISPOSAL

Caution

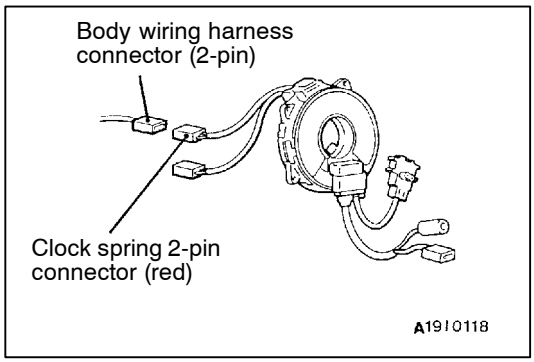
1. **If the vehicle is to be scrapped or otherwise disposed of, deploy the air bags inside the vehicle. If the vehicle will continue to be used and only the air bag modules are to be disposed of, deploy the air bags outside the vehicle.**
2. **Since a large amount of smoke is produced when the air bag is deployed, avoid residential areas whenever possible.**
3. **Since there is loud noise when the air bags are deployed, 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.**

DEPLOYMENT INSIDE THE VEHICLE

(when disposing of a vehicle)

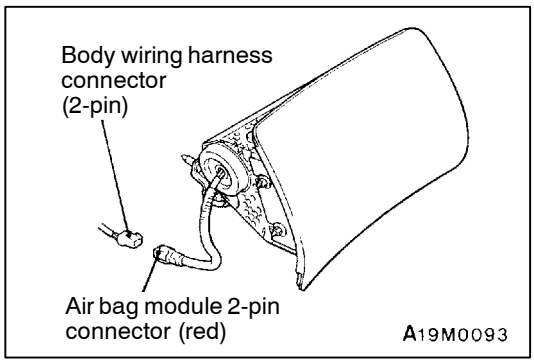
1. Open all windows and doors of the vehicle. Move the vehicle to an isolated spot.
2. Disconnect the negative (–) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.

   Caution
   Wait at least 60 seconds after disconnecting the battery cables before doing any further work.
   (Refer to P.52B-3.)



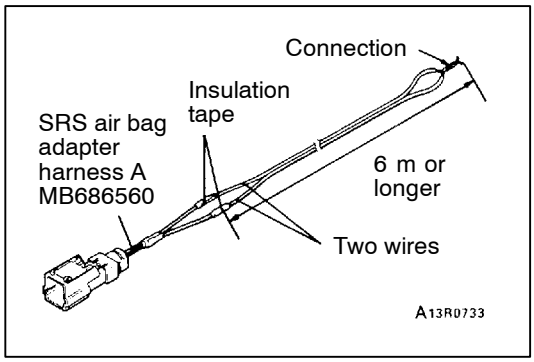
3. To deploy the air bag module (driver's side):
   (1) Remove the steering column cover lower.
   (2) Remove the connection between the clock spring 2-pin connector (red) and the body wiring harness connector.

   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.

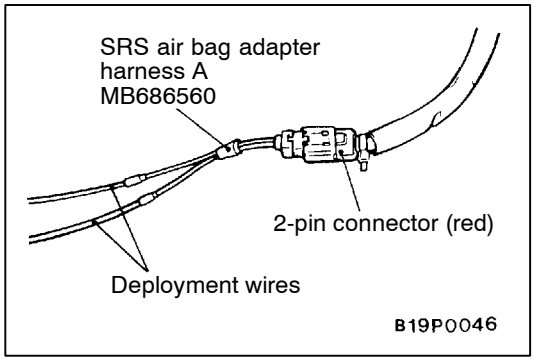


4. To deploy the air bag module (front passenger's side):
   (1) Remove the glove box. (Refer to P.52B-27.)
   (2) Remove the connection between the air bag module (front passenger's side) connector (red 2-pin) and the body wiring harness connector.

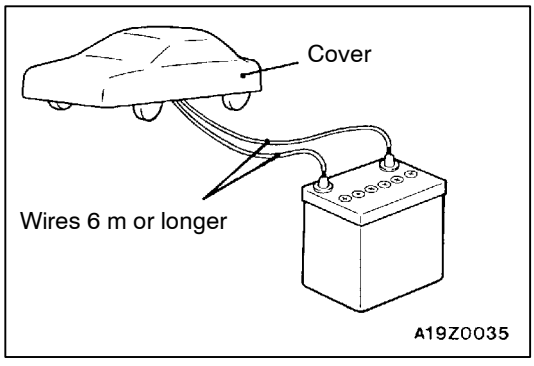
   NOTE
   If the air bag module connector is disconnected from the body wiring harness, both electrodes of the air bag module connector will be automatically shorted to prevent unintended deployment of the air bag due to static electricity, etc.



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. 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.

8. 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-38) 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.

9. After deployment, dispose of the air bag module according to the Deployed Air Bag Module Disposal Procedures. (Refer to P.52B-38.)

DEPLOYMENT OUTSIDE THE VEHICLE

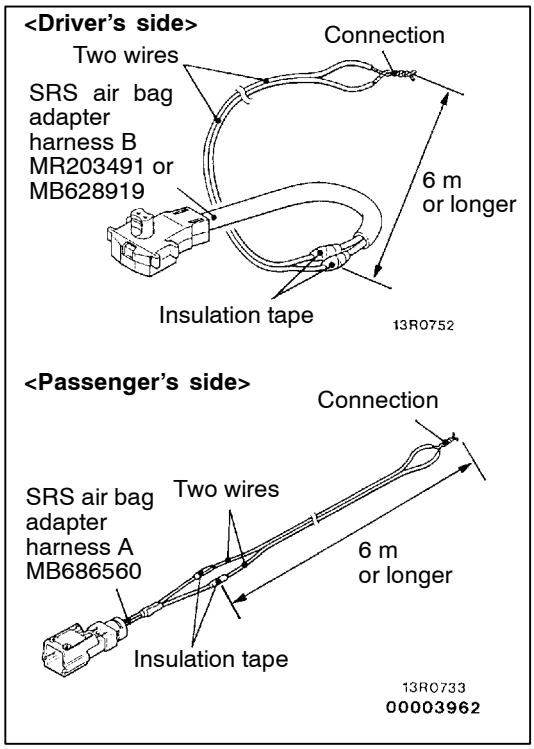
Caution
1. This should be carried out in a wide, flat area at least 6 m away from obstacles and other people.
2. Do not perform deployment outside, if a strong wind is blowing, and if there is even a slight breeze, the air bag module should be placed and deployed downwind from the battery.

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

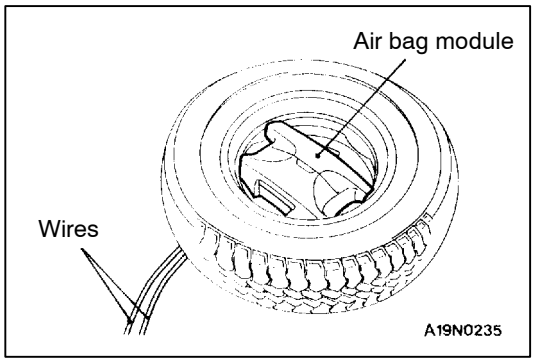
Caution
Wait at least 60 seconds after disconnecting the battery cables before doing any further work. (Refer to P.52B-3.).

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.



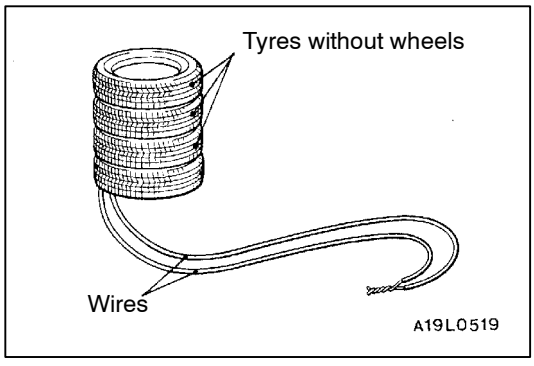
4. Set the air bag modules as follows:

<Air bag module (driver's side)>

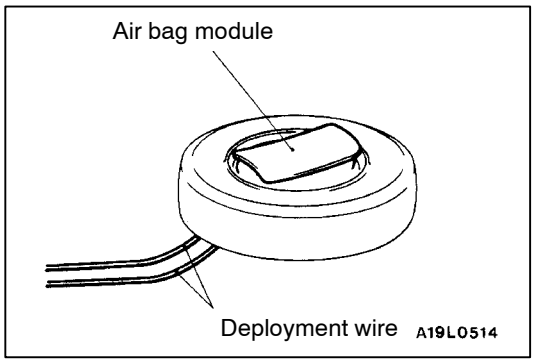
(1) Take the SRS air bag adapter harness B that is connected to the wires, pass it beneath the old tyre wheel assembly, and connect it to the air bag module.

(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.



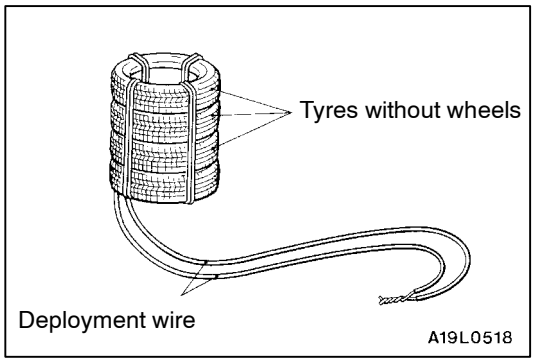
(3) Place three old tyres with no wheels on top of the tyre secured to the air bag module.



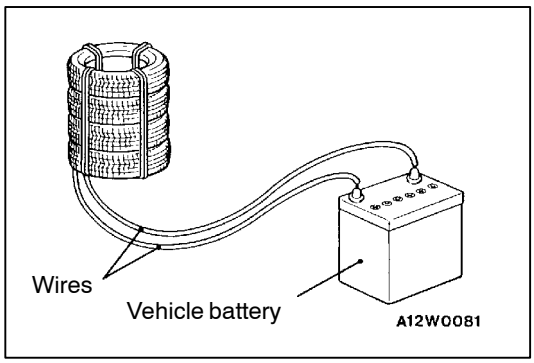
<Air bag module (front passenger's side)>

(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 three 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 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-38.) for post-deployment handling instructions.

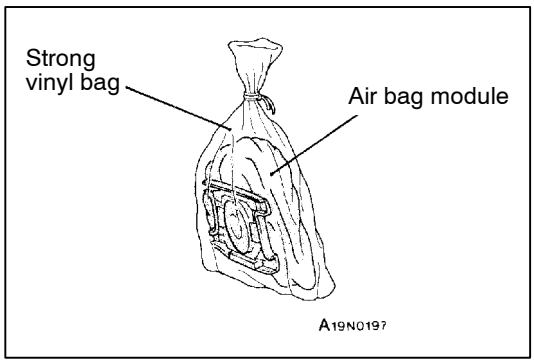
(3) If the air bag fails to deploy when the procedures above are followed, do not go near the module. Contact your local distributor.

6. After deployment, dispose of the air bag module according to the Deployed Air Bag Module Disposal Procedures.

DEPLOYED AIR BAG MODULE DISPOSAL PROCEDURES

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

SENSOR CABLE INSTALLATION PROCEDURES

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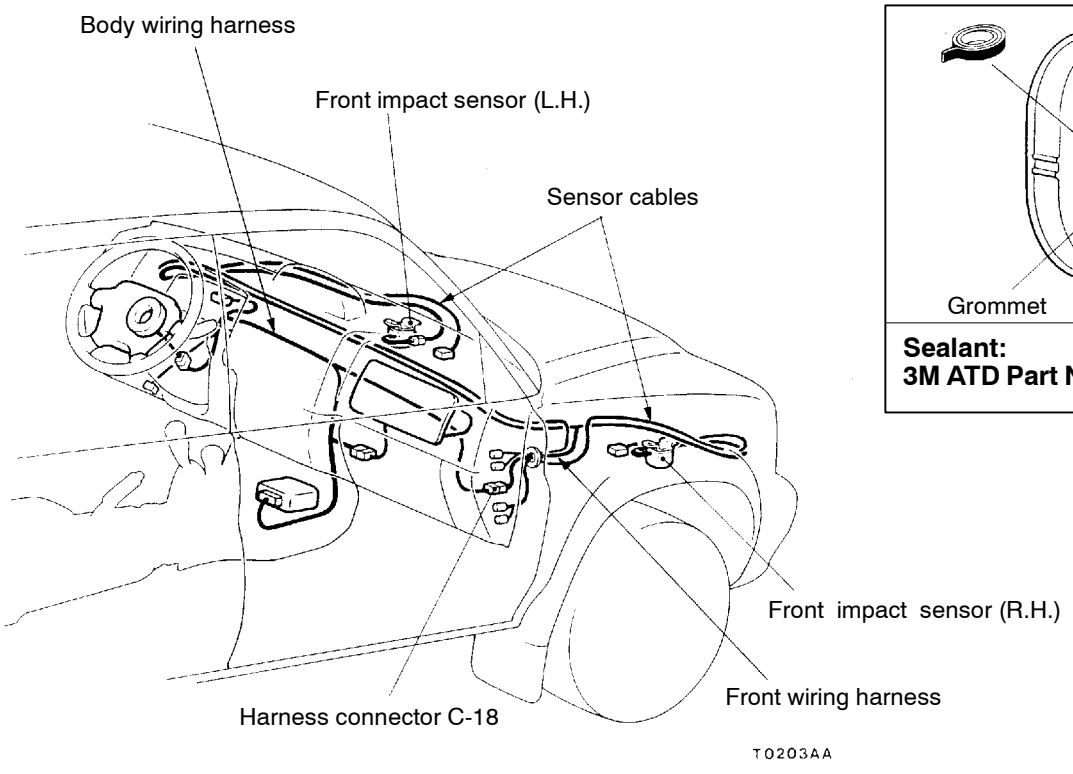
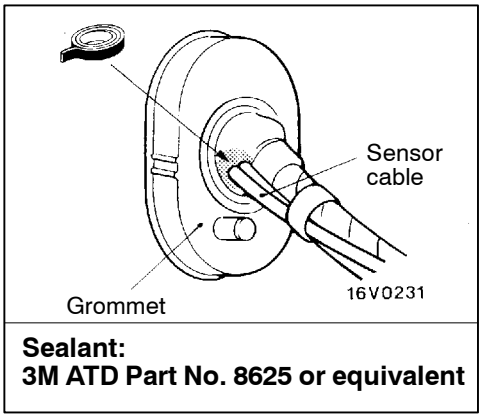
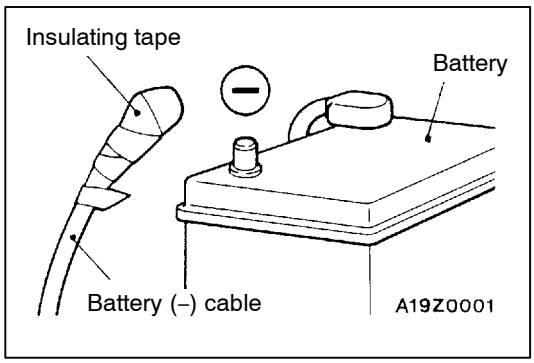
If there is a malfunction in the front wiring harness between the front impact sensor and body wiring harness, install and route a new sensor cable. (Refer to P.52B-4.)



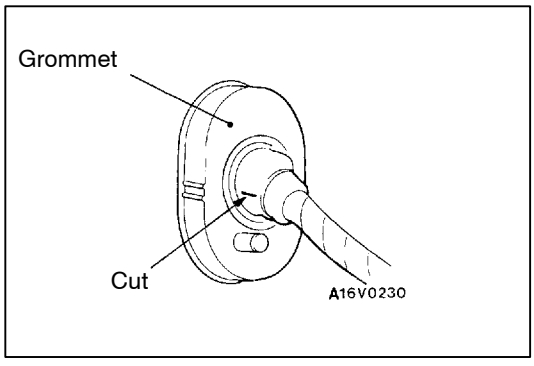


NOTE
Connector C-18 for R.H. drive vehicles is also installed at right side of vehicle. Carry out the installation by the same procedure as for L.H. drive vehicles.

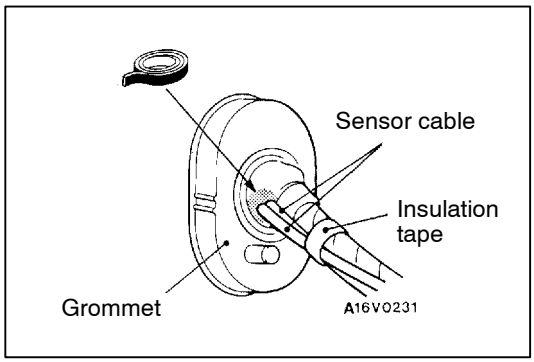


1. Turn the ignition key to the LOCK position, disconnect the negative battery cable and tape the terminal.

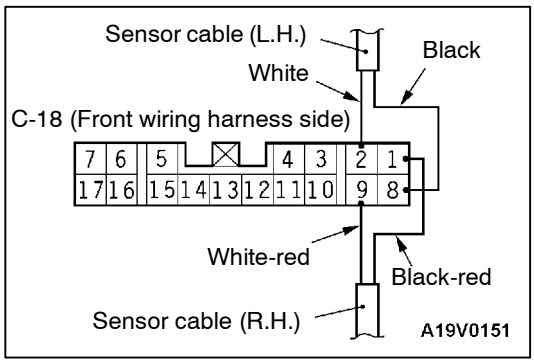
   Caution
   Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-3.)



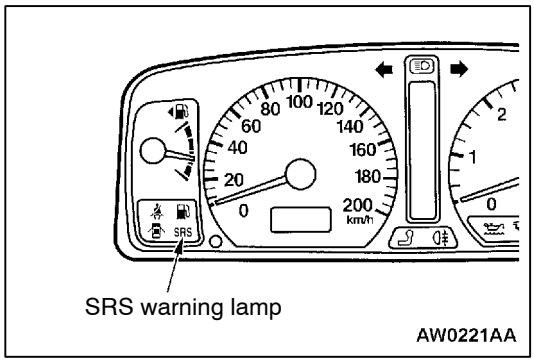
2. Make a cut in the grommet in the place shown in the illustration, and pass the sensor cable through the cut.



3. Run the sensor cable along the front wiring harness, and the secure the cable to the harness with insulation tape.
4. Apply the specified sealant to the grommet cut portion.



5. Exchange the terminal of the front wiring harness connector C-18 shown in the illustration with the terminal of the sensor cable shown in the illustration.



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.