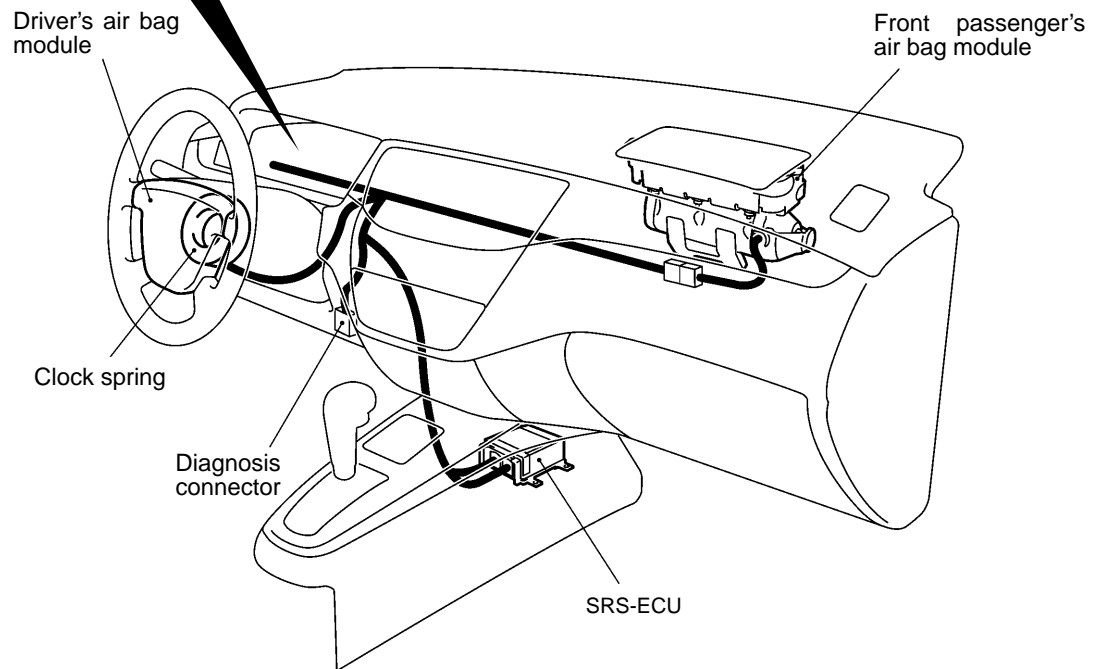
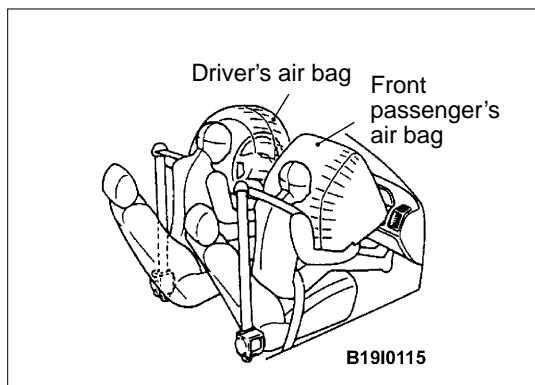
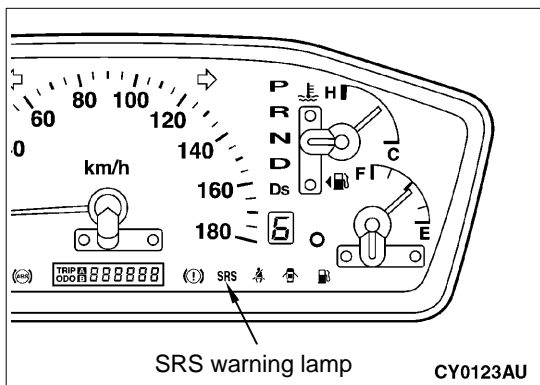


GENERAL INFORMATION

The SRS system enhances collision safety by restraining the front passengers in case of an accident.

The SRS consists of two air bag modules, SRS air bag control unit (SRS-ECU), SRS warning lamp and clock spring. The air bags are located in the center of the steering wheel, above the glove box. Each air bag has a folded air bag and an inflator unit. The SRS-ECU under the floor console monitors the system and has a safing G-sensor and an analog G-sensor. The warning lamp on the

instrument panel indicates the operational status of the SRS. The clock spring is installed in the steering column. 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).

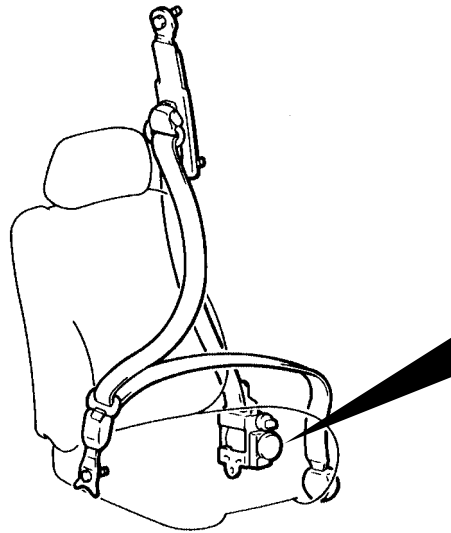


SEAT BELT WITH PRE-TENSIONER

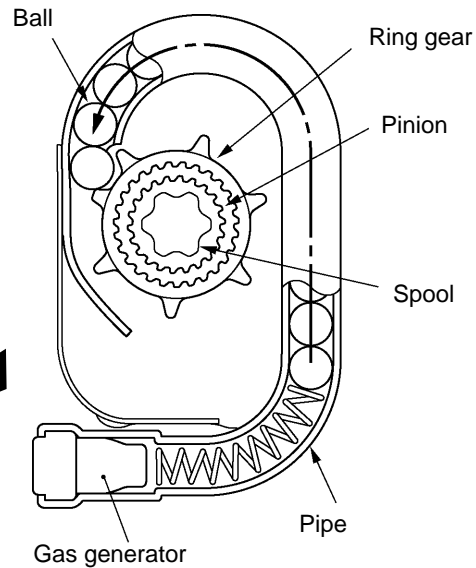
The seat belt with pre-tensioner allows the seat belt to be wound up automatically in frontal collision so that forward movement of the passenger can be restrained. Once the front impact sensor installed at the front of body detects impact exceeding the specified value in collision, the pre-tensioner helps the gas generator to fire for gas generation according to the signals from the SRS-ECU.

Gas pressure forces a ball to move inside the pipe until the protrusion of the ring gear gets hit causing the ring gear to be pushed in and get engaged in the pinion.

Rotation of the ring gear allows the pinion to rotate the spool towards the direction of belt retraction so that waving can be wound up.



W0403AU



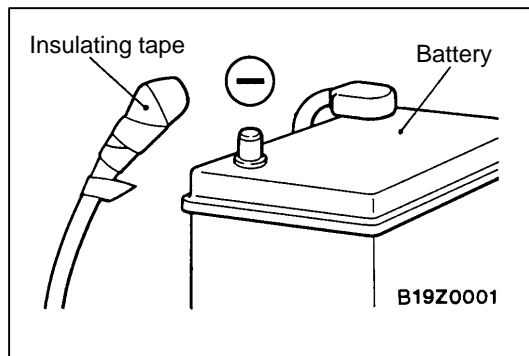
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SRS SERVICE PRECAUTIONS

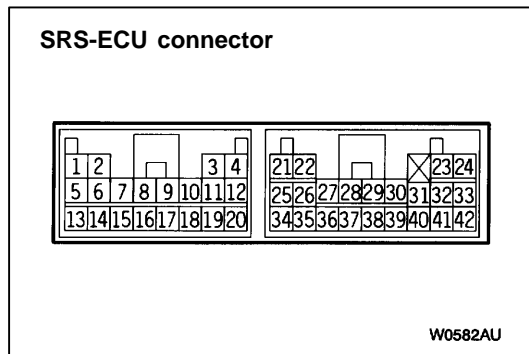
1. In order to avoid injury to yourself or others from accidental deployment of the air bag and accidental operation of the seat belt with pre-tensioner during servicing, read and carefully follow all the precautions and procedures described in this manual.
2. Do not use any electrical test equipment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

NOTE

If any of these components are diagnosed as faulty, they should only be replaced, in accordance with the [INDIVIDUAL COMPONENTS SERVICE](#) procedures in this manual.



4. After disconnecting the negative (–) battery cable, wait 60 seconds at least before any service and insulate the disconnected cable with tape. The SRS retain enough voltage to deploy the air bags for a short time even after the disconnection of the battery. So, serious injury may result by accidental air bag deployment if a work is done on the SRS just after the disconnection of the battery.



5. Do not attempt to repair the wiring harness connectors of the SRS. If a defective wiring harness is found, repair or replace it by referring to the table that follows.

52B SRS BASE – SRS Service Precautions

SRS-ECU Terminal No.	Destination of harness	Corrective action
7	Instrument panel wiring harness → Earth	Repair or replace each wiring harness
8	Instrument panel wiring harness → Combination meter (SRS warning lamp)	
9, 10	Instrument panel wiring harness → Front passenger's air bag module	
11, 12	Instrument panel wiring harness → Clock spring → Driver's air bag module)	Repair or replace the dash wiring harness. Replace clock spring.
13	Instrument panel wiring harness → Junction block (fuse No.3)	Repair or replace each wiring harness.
16	Instrument panel wiring harness → Junction block (fuse No.2)	
20	Instrument panel wiring harness → Diagnosis connector	
27, 28	Floor wiring harness → Seat belt with pre-tensioner (Front passenger's side)	Correct or replace each wiring harness.
29, 30	Floor wiring harness → Seat belt with pre-tensioner (Driver's side)	

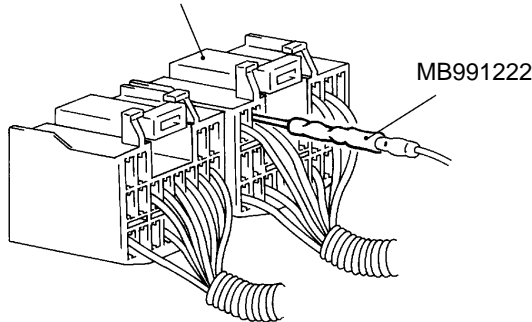
MAIN

Group
52

52B

6. Inspection of the SRS-ECU harness connector should be carried out by the following procedure. Insert the special tool (probe, MB991222, in the harness set) into the connector from harness side (rear side), and connect the tester to this probe. If any tool than specified is used, damage to the harness and other components will result. Furthermore, measurement should not be carried out by touching the probe directly against the terminals from the front of the connector. The terminals are plated to increase their conductivity, so that if they are touched directly by the probe, the plating may break, which will cause drops in reliability.

SRS-ECU harness connector



V0132AE

SRS-ECU harness connector (rear view)

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

NOTE

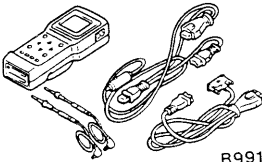
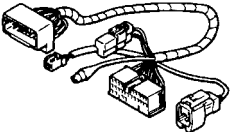
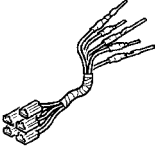
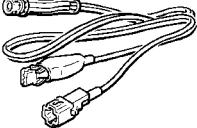
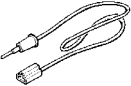

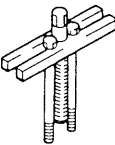
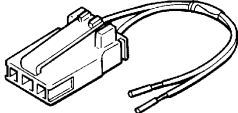
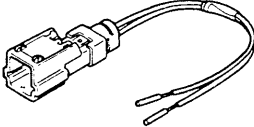
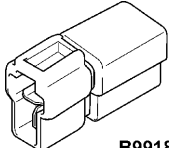
SERIOUS INJURY CAN RESULT FROM UNINTENDED AIR BAG DEPLOYMENT, SO USE ONLY THE PROCEDURES AND EQUIPMENT SPECIFIED IN THIS MANUAL.

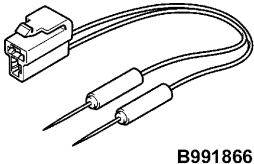
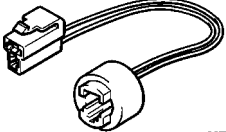
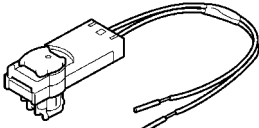
SPECIAL TOOLS

MAIN


Group
52

52B

Tool	Number	Name	Use
 B991502	MB991502	MUT-II sub assembly	<ul style="list-style-type: none"> • Reading and erasing diagnosis codes • Reading trouble period • Reading erase times
 B991613	MB991613	SRS check harness	Checking SRS electrical circuitry
A  B  C  D  C991223	MB991223 A: MB991219 B: MB991220 C: MB991221 D: MB991222	Harness set A: Check harness B: LED harness C: LED harness adapter D: Probe	Checking continuity and measuring voltage at SRS-ECU harness connector
 B990803	MB990803	Steering wheel puller	Removing steering wheel
 R372530	MR372530	SRS air bag adapter harness	Deploying driver's air bag module inside vehicle
 B686560	MB686560	SRS air bag adapter harness	Deploying front passenger's air bag module inside or outside vehicle
 B991865	MB991865	Dummy resistor	Checking SRS air bag and seat belt pre-tensioner electrical circuit

Tool	Number	Name	Use
 B991866	MB991866	Resistor harness (for SRS air bag)	Checking SRS air bag circuit
 MB991884	MB991884	Resistor harness (for pre-tensioner)	Checking seat belt pre-tensioner electrical circuit
 MB991885	MB991885	Seat belt pre-tensioner adapter harness	Deploying seat belt pre-tensioner inside or outside vehicle

TEST EQUIPMENT

Tool	Name	Use
 13R0746	Digital multi-meter	Checking SRS electrical circuitry Use multi-meter for which the maximum test current is 2 mA or less at minimum range of resistance measurement

TROUBLESHOOTING

STANDARD FLOW OF DIAGNOSTIC TROUBLESHOOTING

Refer to [How to Use Troubleshooting/Inspection Service Points](#).

DIAGNOSIS FUNCTION

DIAGNOSIS CODES CHECK

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

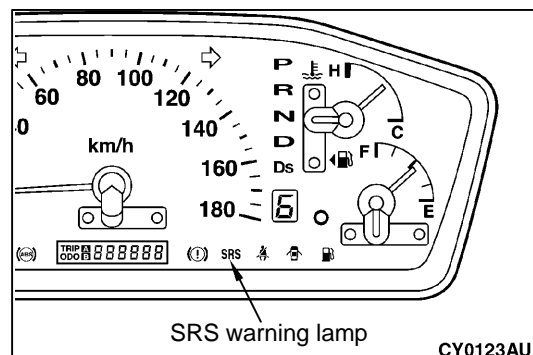
(Refer to [How to Use Troubleshooting/Inspection Service Points](#).)

ERASING DIAGNOSIS CODE

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.



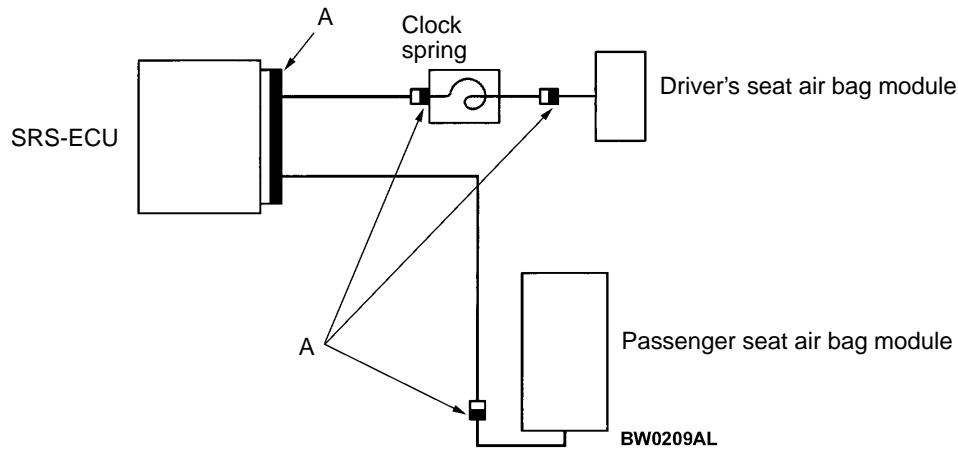
SRS WARNING LAMP CHECK

1. Check that the SRS warning lamp comes on when the ignition switch is turned ON.
2. Check that the SRS warning lamp illuminates for about 7 seconds and then goes out.
3. If this is not the cause, check the diagnosis codes.

CONNECTOR FOR SRS AIR BAG

The SRS air bag system connector is yellow or red.

To enhance system reliability, a connector short-circuit mechanism is adopted for the SRS-ECU connector, and each air bag module and clock spring connector<the connector A in the following illustration(black)>.



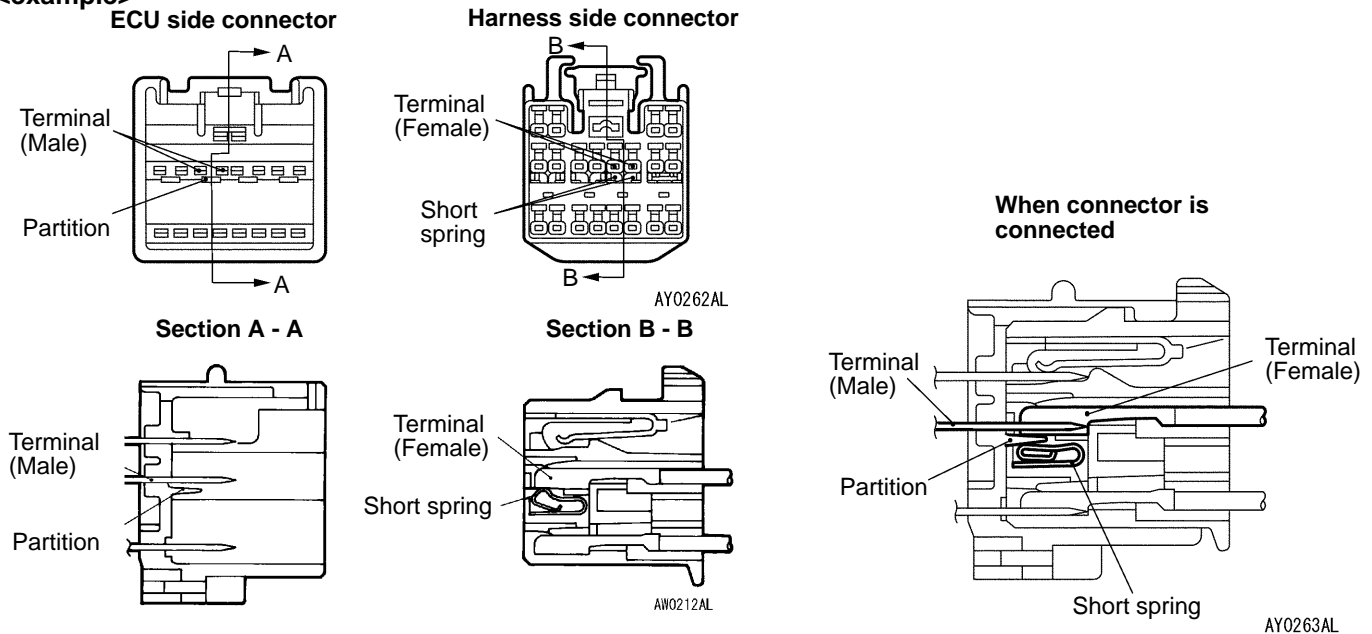
Connector Short-Circuit Mechanism

This mechanism automatically short-circuits the power supply side terminal and earth side terminal of the air bag when the connector is disconnected. A short spring is incorporated in the connector to short-circuit the power supply side terminal and earth side terminal of the air bag (no potential difference between the two terminals) and prevent flow of current by static electricity to the squib.

Caution

When the connector is disconnected, it is normal for short-circuiting to occur between the connector terminals.

<example>



INSPECTION CHART FOR DIAGNOSIS CODES

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

Code No.	Diagnosis item
14	Front impact analog G-sensor system inside SRS-ECU
15, 16	Front impact safing G-sensor system inside SRS-ECU
21*1	Driver's air bag module (squib) system
22*1	Driver's air bag module (squib) system
24*1	Front passenger's air bag module (squib) system
25*1	Front passenger's air bag module (squib) system
26*3	Driver's side pre-tensioner (squib) system
27*3	Driver's side pre-tensioner (squib) system
28*1	Front passenger's side pre-tensioner (squib) system
29*1	Front passenger's side pre-tensioner (squib) system
31, 32	DC-DC converter inside SRS-ECU
34*2	Connector lock system
35	SRS-ECU (deployed air bag) system
41*2	Power circuit system (fuse No.2 circuit)
42*2	Power circuit system (fuse No.3 circuit)
43*2	SRS warning lamp drive circuit system
	Lamp does not illuminate.
	Lamp does not go out off.
44*2	SRS warning lamp drive circuit system
45	Internal circuit system of non-volatile memory (EEPROM) inside SRS-ECU
51, 52	Driver's air bag module (squib ignition drive circuit) system
54, 55	Front passenger's air bag module (squib ignition drive circuit) system
56, 57	Driver's side pre-tensioner (squib ignition drive circuit) system
58, 59	Front passenger's side pre-tensioner (squib ignition drive circuit) system
61, 62	Driver's air bag module (squib) system
64, 65	Front passenger's air bag module (squib) system
66, 67	Driver's side pre-tensioner (squib) system
68, 69	Front passenger's side pre-tensioner (squib) system

NOTE

- (1) *1: If the trouble(s) are removed, the SRS warning lamp go out with diagnosis code history stored.
- (2) *2: If the trouble(s) are removed, the SRS warning lamp will go out with diagnosis code history automatically erased.
- (3) *3: If the system returns to normal, the SRS warning lamp will go out, but the relevant diagnosis code will be retained in memory.
- (4) When the battery has been discharged, diagnosis code Nos.41 or 42 is stored. Check the battery when either of these is displayed.

INSPECTION PROCEDURE CLASSIFIED BY DIAGNOSIS CODE

Code No.14, 15, 16, 31, 32, 45, 51, 52, 54, 55 System inside SRS-ECU	Probable cause
Malfunction is present inside SRS-ECU. See table below for what each code tells.	<ul style="list-style-type: none"> Malfunction of SRS-ECU

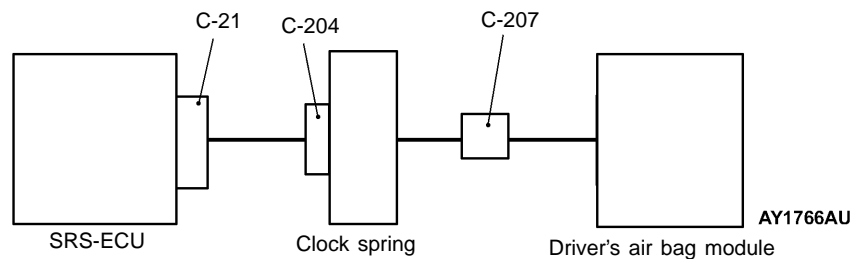
Code No.	Defective parts	Trouble
14	Front impact analog G-sensor	<ul style="list-style-type: none"> Not operating Abnormal characteristics Abnormal output
15	Front impact safing G-sensor	<ul style="list-style-type: none"> Short in the circuit
16		<ul style="list-style-type: none"> Open in the circuit
31	DC-DC converter	<ul style="list-style-type: none"> Terminal voltage of the converter higher than specified for five seconds or more
32		<ul style="list-style-type: none"> Terminal voltage of the converter lower than specified for 5 seconds or more (this code is not detected when code No.41 or 42, which indicates discharged battery, has been detected)
45	Non-volatile memory (EEPROM)	<ul style="list-style-type: none"> Defective parts inside
51	Driver's air bag module (squib) ignition drive circuit	<ul style="list-style-type: none"> Short in the circuit
52		<ul style="list-style-type: none"> Open in the circuit
54	Front passenger's air bag module (squib) ignition drive circuit	<ul style="list-style-type: none"> Short in the circuit
55		<ul style="list-style-type: none"> Open in the circuit

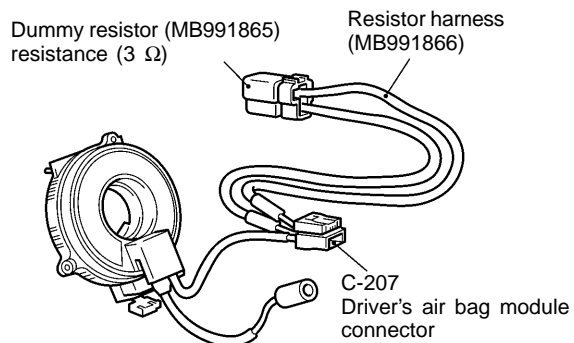
Replace SRS-ECU.

Code No.21 Driver's air bag module (squib) system	Possible cause
<p>This code is output when short circuit occurs between terminals of the SRS-ECU driver's air bag module (squib) circuit. However, SRS warning lamp goes out when a normal operation is resumed (diagnosis code is not cleared.)</p>	<ul style="list-style-type: none"> • Connector engagement faulty or short bar faulty* • Short circuit in the clock spring • Short circuit between terminals of the driver's air bag module (squib) circuit • Faulty connector • SRS-ECU inoperable

NOTE:

*: The connector of the squib circuit contains a short bar (short-circuiting the positive (+) cable and the negative (–) cable to avoid an erroneous deployment caused by static electricity when a connector is not connected). Thus, when a connector is connected, the short bar may not be released due to improper engagement of the connector or faulty connector as shown in the illustration below. Disconnect the connector as shown in the illustration below, then reconnect it. Check that a diagnosis code is output again after erasing the memory. If the diagnosis code is not output, the above-mentioned code is output due to improper engagement of the connector.





AY1728AU

<Driver's air bag module (squib) check>

MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect driver's air bag module connector C-207.
- Connect dummy resistor (MB991865) to resistor harness (MB991866).
- Insert resistor harness (MB991866) from the rear of driver's air bag module connector C-207 of the clock spring.

Caution

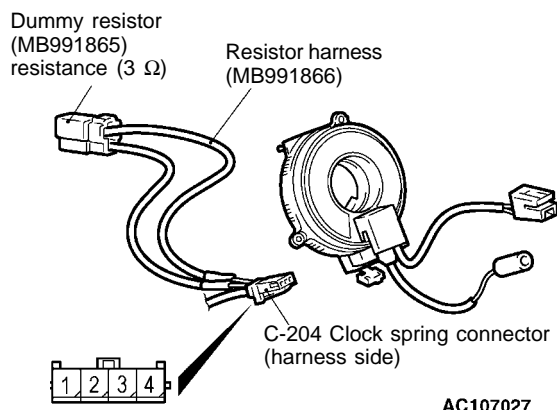
In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.21 output?

YES

NO

Replace driver's air bag module (squib).



AC107027

<Clock spring check>

MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect clock spring connector C-204 (4 pin).
- Connect dummy resistor (MB991865) to resistor harness (MB991866).
- Insert resistor harness (MB991866) to terminal No.3 and No.4 from the rear of clock spring connector C-204 (harness side).

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.21 output?

YES

NO

To next page

Replace the clock spring.

From previous page

YES

<Check the circuit between the SRS-ECU and the clock spring>
Measure at SRS-ECU connector C-21.

- Disconnect SRS-ECU connector C-21.
- Disconnect clock spring connector C-204.

Caution

In order to release the short spring of SRS-ECU connector in the operation shown below, disconnect this connector to keep the squib circuit short-circuited.

- Insert a cable band, etc. (width: 3 mm, thickness: 0.5 mm), between SRS-ECU connector C-21 (harness side) terminals 11 and 12 and the short spring, and release the short spring. (See illustration A.)

Caution

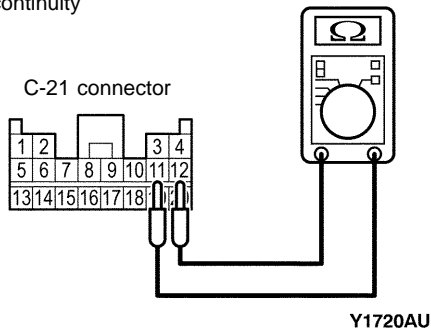
To avoid the occasion of inability of releasing the short spring due to insufficient insertion, insert the insulator for 4 mm or more.

- Continuity between 11 and 12

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: No continuity



OK

Replace SRS-ECU.

NG

Check the following connectors: C-21, C-204

OK

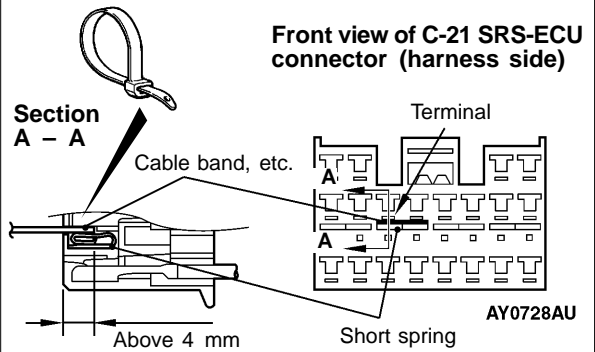
Check trouble symptoms.

NG

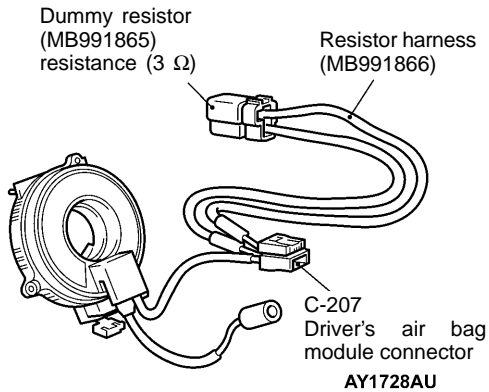
Check the harness wire between clock spring and SRS-ECU, and repair if necessary.

Repair

Illustration A



Code No.22 Driver's air bag module (squib) system	Possible cause
This code is output when open circuit occurs in the SRS-ECU driver's air bag module (squib) circuit. However, SRS warning lamp goes out when a normal operation is resumed (diagnosis code is not cleared.)	<ul style="list-style-type: none">• Open in the clock spring• Half open in the circuit due to improper neutral positioning of the clock spring• Open in the driver's air bag module (squib) circuit• Driver's air bag module (squib) connector falling out• Connector improper contact• SRS-ECU inoperable



<Driver's air bag module (squib) check>

MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect driver's air bag module connector C-207.
- Connect dummy resistor (MB991865) to resistor harness (MB991866)
- Insert resistor harness (MB991866) from the rear of driver's air bag module connector C-207 of the clock spring.

Caution

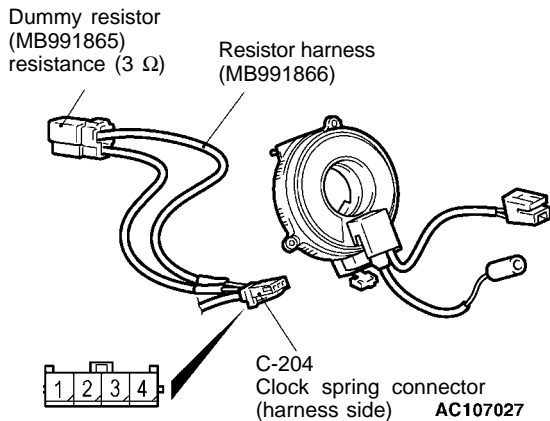
In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.22 output?

YES

NO

Replace driver's air bag module (squib).



<Clock spring check>

MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect clock spring connector C-204 (4 pin).
- Connect dummy resistor (MB991865) to resistor harness (MB991866)
- Insert resistor harness (MB991866) from the rear of clock spring connector C-204 (harness side) to terminals No.3 and No.4.

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.22 output?

YES

NO

To next page

Replace clock spring.

From previous page

YES

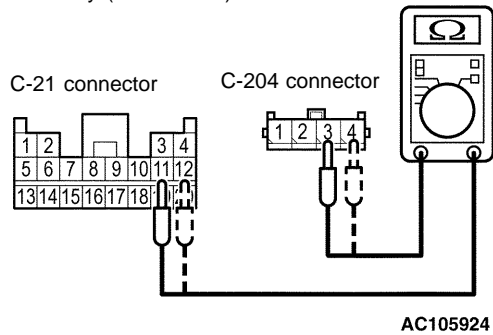
<Check the circuit between the SRS-ECU and the clock spring>
Measure at SRS-ECU connector C-21 and clock spring connector C-204

- Disconnect SRS-ECU connector C-21 and clock spring connector C-204 and measure at the harness side.
- Continuity between following terminals
C-21 connector C-204 connector
11 – 3
12 – 4

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: Continuity ($2\ \Omega$ or less)



OK

Replace SRS-ECU.

NG

Check the following connectors: C-21, C-204

OK

Check trouble symptoms.

NG

Check the harness wire between clock spring and SRS-ECU, repair if necessary.

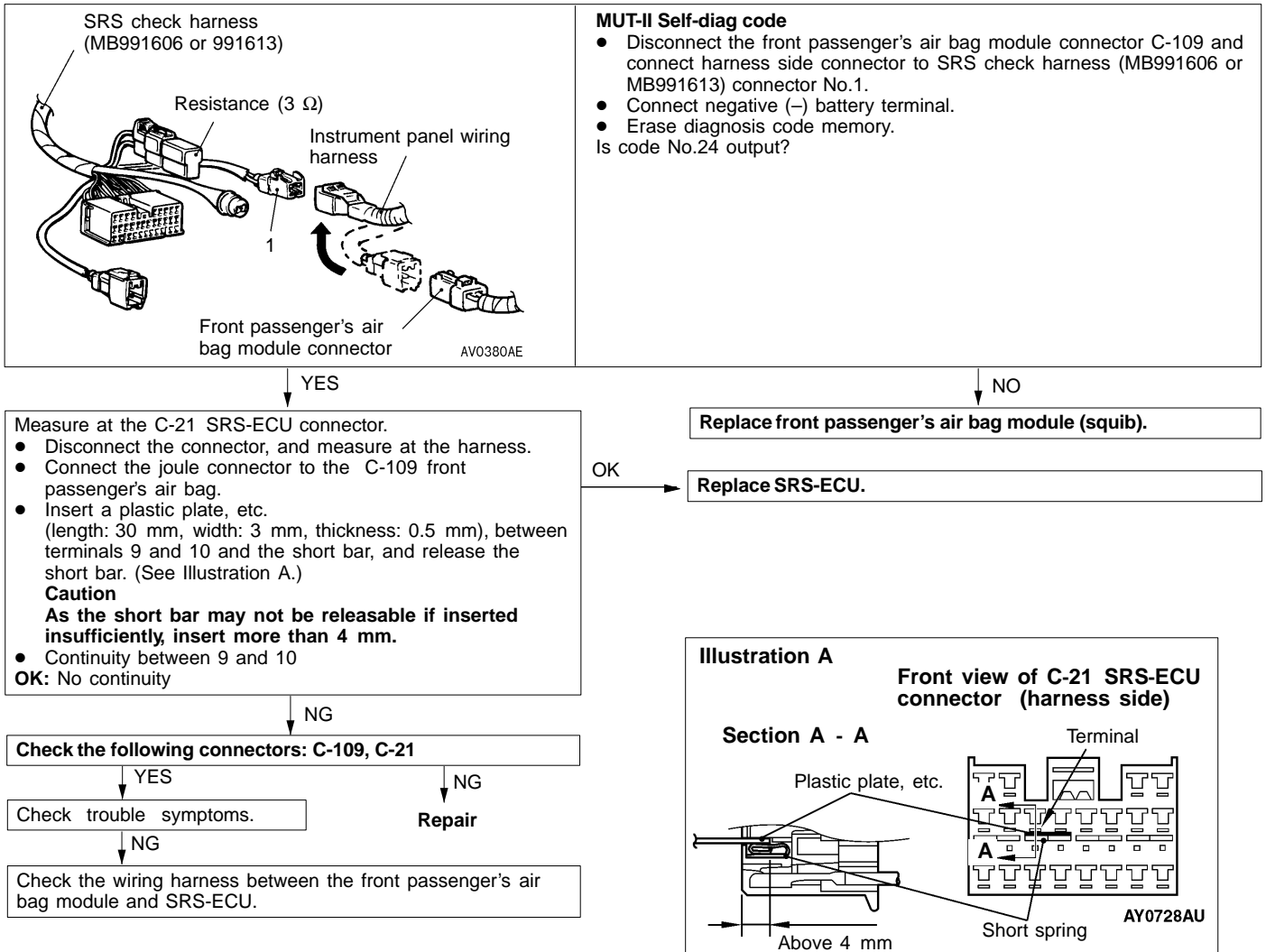
NG

Repair

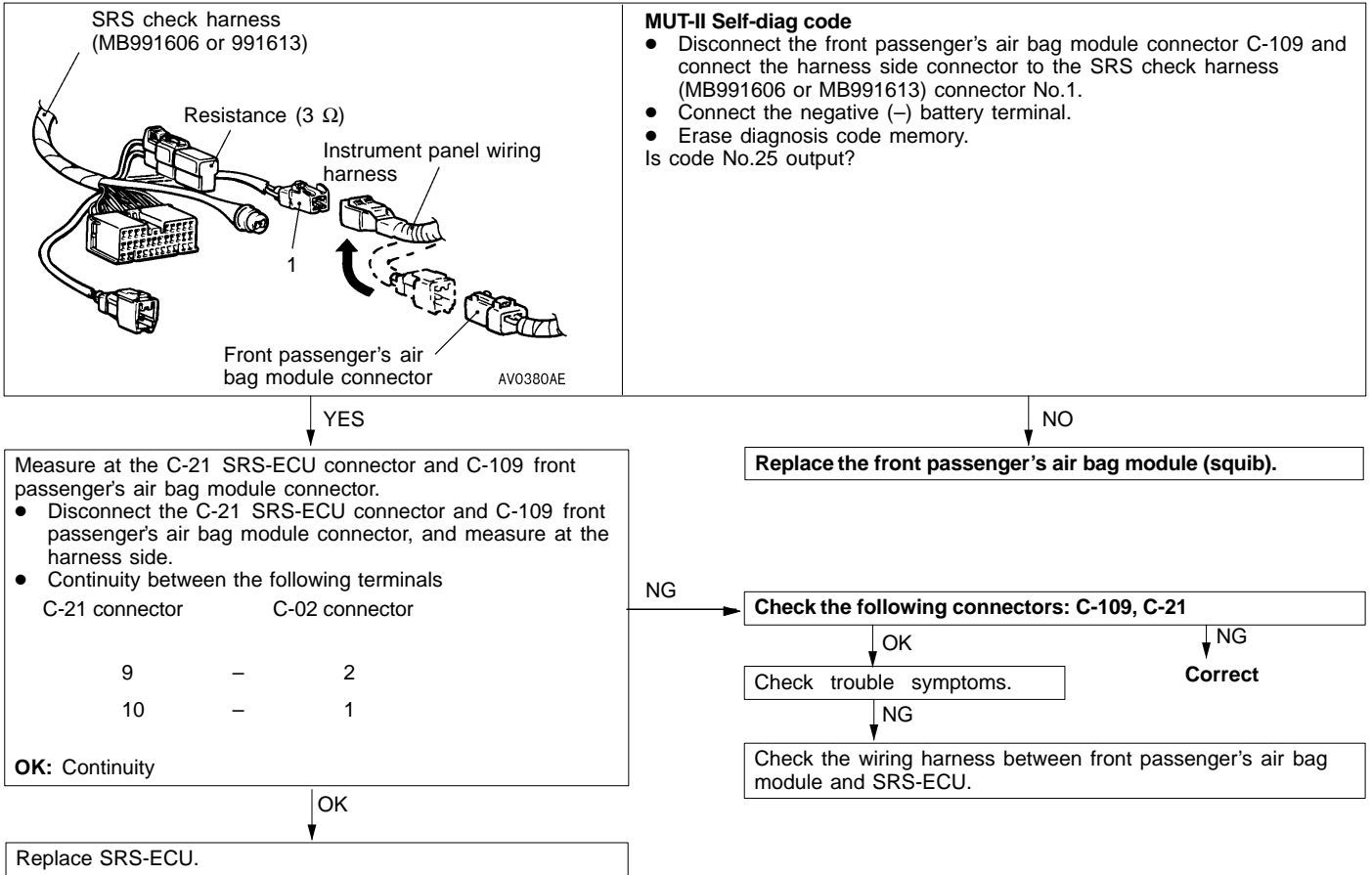
Code No.24 Front passenger's air bag module (squib) system	Probable cause
Abnormal resistance is present between input terminals of front passenger's air bag module (squib). However, once trouble is extinguished, SRS warning lamp will go out. (Diagnosis code will remain stored)	<ul style="list-style-type: none"> Front passenger's air bag module (squib) short-circuit or harness short-circuit Connector malfunction* SRS-ECU malfunction

NOTE

*: The shorting bars, which short positive (+) and negative (–) wires to prevent the air bags from accidental deployment during the disconnection of the connector, are set in the squib circuit connectors. In a defective connector, the short-bar may be still working even after the connection of the connector.



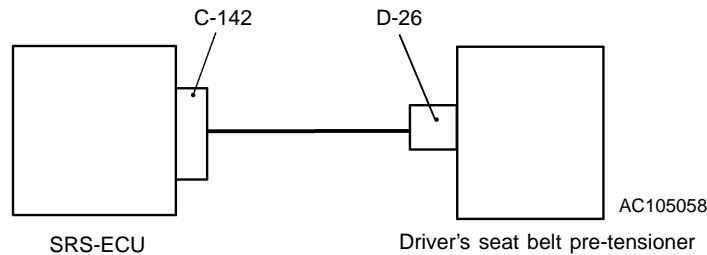
Code No.25 Front passenger's air bag module (squib) system	Probable cause
Abnormal resistance is present between input terminals of front passenger's air bag module (squib). However, once trouble is extinguished, SRS warning lamp will go out. (Diagnosis code will remain stored)	<ul style="list-style-type: none">• Front passenger's air bag module (squib) disconnection or harness disconnection• Connector contact defect• SRS-ECU malfunction

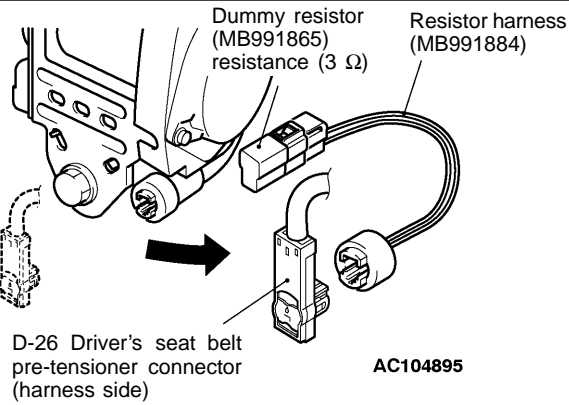


Code No.26 Driver's seat belt pre-tensioner (squib) system	Possible cause
This code is output when short circuit occurs between terminals of the SRS-ECU driver's seat belt pre-tensioner (squib) circuit. However, SRS warning lamp goes out when a normal operation is resumed (diagnosis code is not cleared.)	<ul style="list-style-type: none"> • Connector engagement faulty or short bar faulty* • Short circuit between terminals of the driver's seat belt pre-tensioner (squib) circuit • Faulty connector • SRS-ECU inoperable

NOTE:

*: The connector of the squib circuit contains a short bar (short-circuiting the positive (+) cable and the negative (–) cable to avoid an erroneous deployment caused by static electricity when a connector is not connected). Thus, when a connector is connected, the short bar may not be released due to improper engagement of the connector or faulty connector as shown in the illustration below. Disconnect the connector as shown in the illustration below, then reconnect it. Check that a diagnosis code is output again after erasing the memory. If the diagnosis code is not output, the above-mentioned code is output due to improper engagement of the connector.





<Driver's seat belt pre-tensioner (squib) check>

MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect driver's seat belt pre-tensioner connector D-26.
- Connect dummy resistor (MB991865) to resistor harness (MB991884)
- Connect resistor harness (MB991884) to driver's seat belt pre-tensioner connector D-26 harness side
- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.26 output?

YES

NO

<Check the circuit between the SRS-ECU and driver's seat belt pre-tensioner>

Measure at SRS-ECU connector C-142.

- Disconnect SRS-ECU connector C-142.
- Disconnect driver's seat belt pre-tensioner connector D-26.

Caution

In order to release the short spring of SRS-ECU connector in the operation shown below, disconnect this connector to keep the squib circuit short-circuited.

- Insert a cable band, etc. (width: 3 mm, thickness: 0.5 mm), between SRS-ECU connector C-142 terminals 29 and 30 and the short spring, and release the short spring. (See illustration A.)

Caution

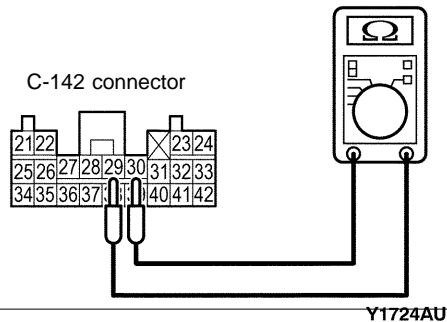
To avoid the occasion of inability of releasing the short spring due to insufficient insertion, insert the insulator for 4 mm or more.

- Continuity between 29 and 30

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: No continuity



OK

Replace SRS-ECU.

Replace driver's seat belt pre-tensioner.

NG

Check the following connectors: C-112, C-142, D-26

YES

Check trouble symptoms.

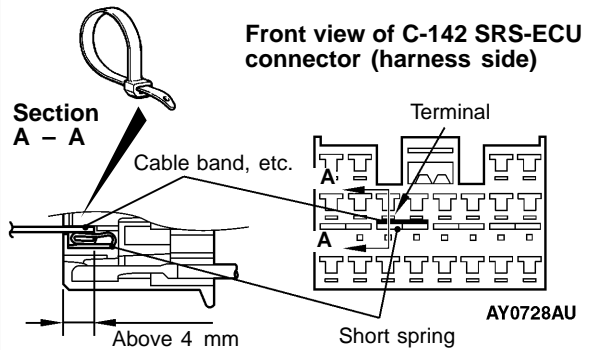
NG

Check harness wire between driver's seat belt pre-tensioner and SRS-ECU, and repair if necessary.

NG

Repair

Illustration A



Code No.27 Driver's seat belt pre-tensioner (squib) system	Possible cause
This code is output when open circuit occurs in the SRS-ECU driver's seat belt pre-tensioner (squib) circuit. However, SRS warning lamp goes out when a normal operation is resumed (diagnosis code is not cleared.)	<ul style="list-style-type: none">Connector improper contactOpen in the driver's seat belt pre-tensioner (squib) circuitSRS-ECU inoperable

Dummy resistor (MB991865) resistance (3 Ω)

Resistor harness (MB991884)

D-26 Driver's seat belt pre-tensioner connector (harness side)

AC104895

<Driver's seat belt pre-tensioner (squib) check>
MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect driver's seat belt pre-tensioner connector D-26.
- Connect dummy resistor (MB991865) to resistor harness (MB991884)
- Connect resistor harness (MB991884) to driver's seat belt pre-tensioner connector D-26 (harness side).
- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory.

Is code No.27 output?

YES

<Check the circuit between the SRS-ECU and driver's seat belt pre-tensioner>
Measure at SRS-ECU connector C-142 and resistor harness connector

- Disconnect SRS-ECU connector C-142 and measure at the harness side
- Disconnect driver's seat belt pre-tensioner connector D-26 and connect resistor harness (MB991884) to the harness side (Refer to P.52B-25.) **X**
- Continuity between following terminals

C-142 connector		Resistor harness connector
29	–	1
30	–	2

Caution
In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: Continuity (2 Ω or less)

C-142 connector

Resistor harness connector

AC106051

NO

Replace driver's seat belt pre-tensioner.

NG

Check the following connectors: C-112, C-142, D-26

OK

Check trouble symptoms.

NG

Check harness wire between driver's seat belt pre-tensioner and SRS-ECU, and repair if necessary.

Repair

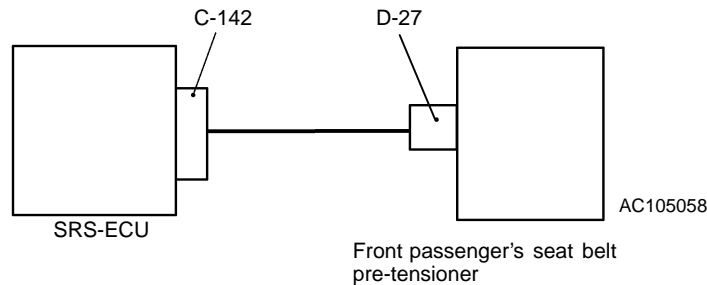
OK

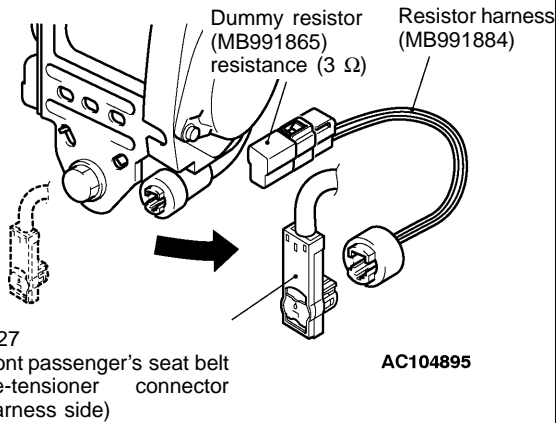
Replace SRS-ECU.

Code No.28 Front passenger's seat belt pre-tensioner (squib) system	Possible cause
This code is output when short circuit occurs between terminals of the SRS-ECU front passenger's seat belt pre-tensioner (squib) circuit. However, SRS warning lamp goes out when a normal operation is resumed (diagnosis code is not cleared.)	<ul style="list-style-type: none"> Connector engagement faulty or short bar faulty* Short circuit between terminals of the front passenger's seat belt pre-tensioner (squib) circuit Faulty connector SRS-ECU inoperable

NOTE

*: The connector of the squib circuit contains a short bar (short-circuiting the positive (+) cable and the negative (–) cable to avoid an erroneous deployment caused by static electricity when a connector is not connected). Thus, when a connector is connected, the short bar may not be released due to improper engagement of the connector or faulty connector as shown in the illustration below. Disconnect the connector as shown in the illustration below, then reconnect it. Check that a diagnosis code is output again after erasing the memory. If the diagnosis code is not output, the above-mentioned code is output due to improper engagement of the connector.





<Front passenger's seat belt pre-tensioner (squib) check> MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect front passenger's seat belt pre-tensioner connector D-27.
- Connect dummy resistor (MB991865) to resistor harness (MB991884).
- Connect resistor harness (MB991884) to front passenger's seat belt pre-tensioner connector D-27 (harness side).
- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.28 output?

YES

<Check the circuit between the SRS-ECU and front passenger's seat belt pre-tensioner>

Measure at SRS-ECU connector C-142.

- Disconnect SRS-ECU connector C-142.
- Disconnect front passenger's seat belt pre-tensioner connector D-27.

Caution

In order to release the short spring of SRS-ECU connector in the operation shown below, disconnect this connector to keep the squib circuit short-circuited.

- Insert a cable band, etc. (width: 3 mm, thickness: 0.5 mm), between SRS-ECU connector C-142 terminals 27 and 28 and the short spring, and release the short spring. (See illustration A.)

Caution

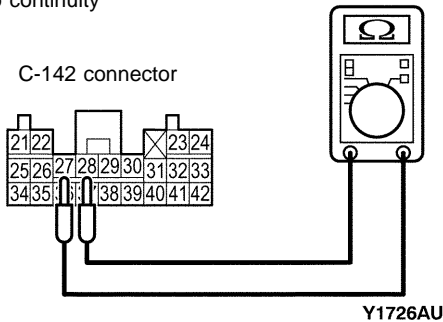
To avoid the occasion of inability of releasing the short spring due to insufficient insertion, insert the insulator for 4 mm or more.

- Continuity between 27 and 28

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: No continuity



OK

Replace SRS-ECU.

NO

Replace front passenger's seat belt pre-tensioner.

NG

Check the following connectors: C-134, C-142, D-27

YES

Check trouble symptoms.

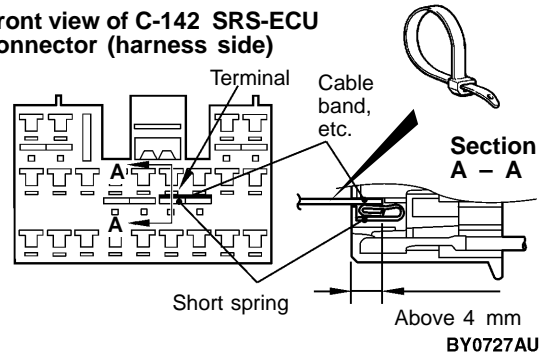
NG

Check harness wire between front passenger's seat belt pre-tensioner and SRS-ECU, and repair if necessary.

NG

Repair

Illustration A Front view of C-142 SRS-ECU connector (harness side)



Code No.29 Front passenger's seat belt pre-tensioner (squib) system	Possible cause
This code is output when short circuit occurs between terminals of the SRS-ECU front passenger's seat belt pre-tensioner (squib) circuit. However, SRS warning lamp goes out when a normal operation is resumed (diagnosis code is not cleared.)	<ul style="list-style-type: none">• Short circuit between terminals of the front passenger's seat belt pre-tensioner (squib) circuit• Connector engagement faulty• SRS-ECU inoperable

D-27
Front passenger's seat belt pre-tensioner connector harness side

Dummy resistor (MB991865) resistance (3 Ω)

Resistor harness (MB991884)

AC104895

<Front passenger's seat belt pre-tensioner (squib) check>
MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect front passenger's seat belt pre-tensioner connector D-27.
- Connect dummy resistor (MB991865) to resistor harness (MB991884)
- Connect resistor harness (MB991884) to front passenger's seat belt pre-tensioner connector D-27 (harness side).
- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory.

Is code No.29 output?

YES

<Check the circuit between the SRS-ECU and front passenger's seat belt pre-tensioner>
Measure at SRS-ECU connector C-142 and resistor harness connector

- Disconnect SRS-ECU connector C-142 and measure at the harness side
- Disconnect front passenger's seat belt pre-tensioner connector D-27 and connect resistor harness (MB991884).
- Continuity between following terminals

C-142 connector		Resistor harness connector
27	–	2
28	–	1

Caution
In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: Continuity (2 Ω or less)

C-142 connector

Resistor harness connector

AC106052

NO

Replace front passenger's seat belt pre-tensioner.

NG

Check the following connectors: C-134, C-142, D-27

OK

Check trouble symptoms.

NG

Check harness wire between front passenger's seat belt pre-tensioner and SRS-ECU, and repair if necessary.

Repair

OK

Replace SRS-ECU.

CodeNo.34 Connector Lock System**Probable Cause**

The SRS-ECU connector is mounted with a connector lock switch terminal for detecting the connected state of the connector.
SRS-ECU connector is poorly connected.
However, when the vehicle condition returns to normal, this code will be automatically erased, and the SRS warning lamp will go out.

- Connector malfunction
- SRS-ECU malfunction

Is the SRS-ECU connector C-21 connected properly?

NO

Correct the connector connection.

YES

Check the C-21 SRS-ECU connector.

- Disconnect the connector.
- Check the connector lock switch terminal in the harness side connector for contact pressure and deformation, etc.(See Illustration A.)

Is the connector lockswitch terminal normal?

NG

Check trouble symptoms.

NG

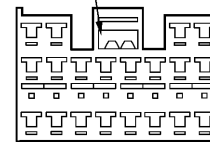
Correct

OK

Replace the SRS-ECU.

Illustration A**Front view of the SRS-ECU connector (harness side)**

Connector lockswitch terminal



BY0726AU

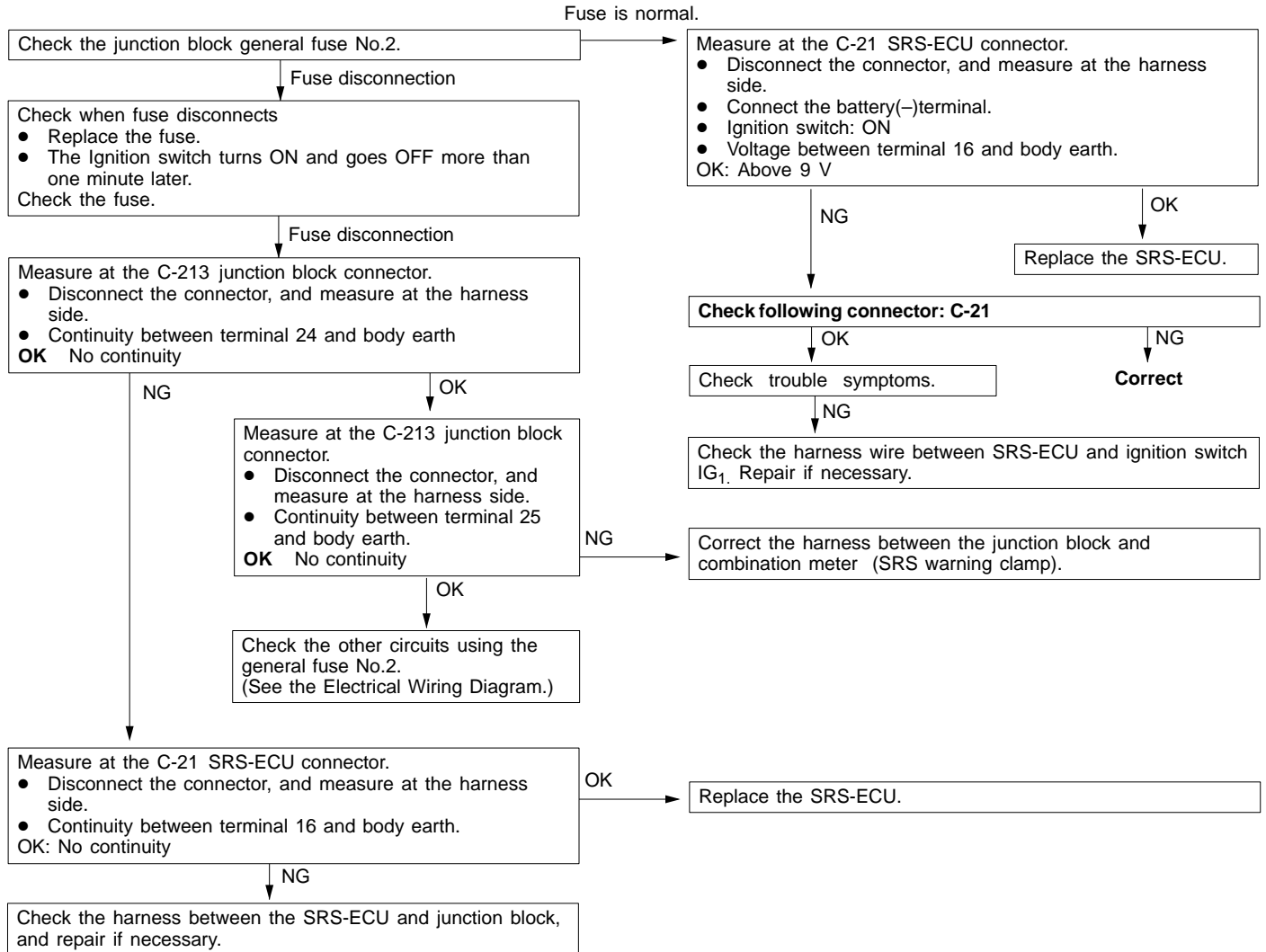
Code No.35 SRS-ECU (deployed air bag) system**Probable cause**

This code is displayed after deployment of air bags. If displayed before deployment, the code indicates malfunction probably present in SRS-ECU.

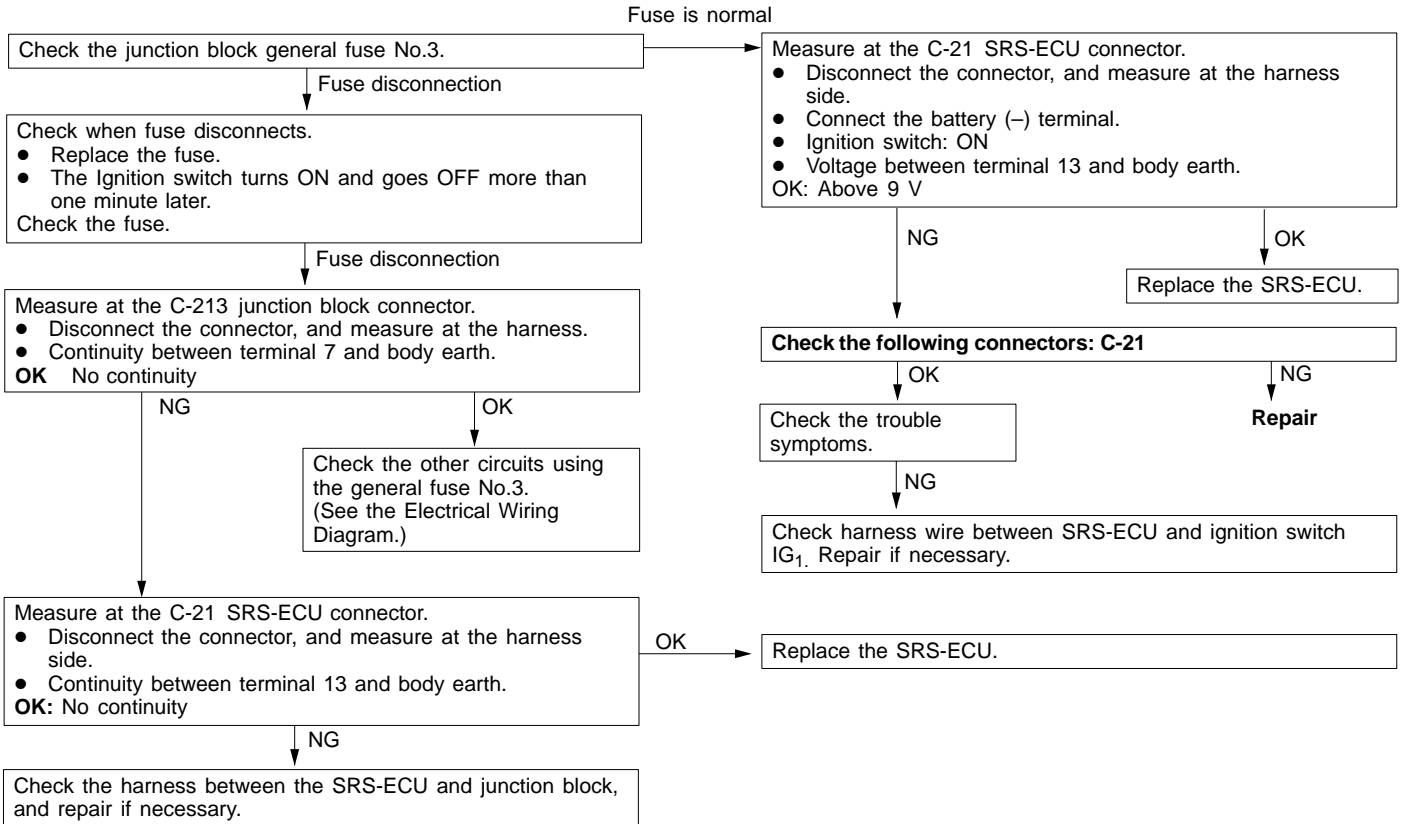
- Malfunction of SRS-ECU

Replace the SRS-ECU.

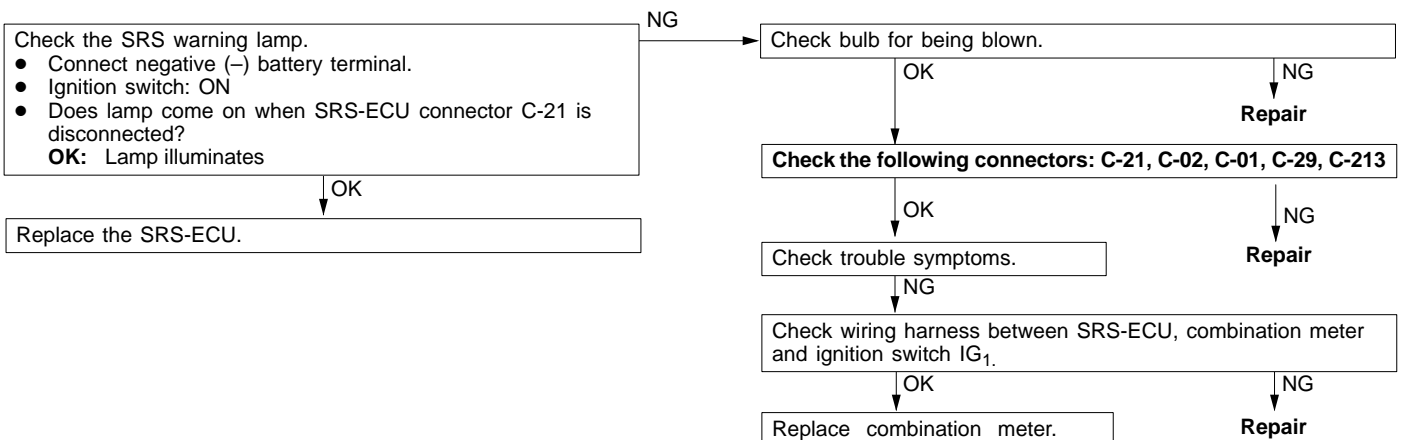
Code No.41 Power circuit system (fuse No.2 circuit)	Probable cause
Code No.41 is displayed if voltage between IG ₁ terminal (SRS-ECU, terminal 16) and earth is lower than specified for 5 successive seconds or more. However, once the trouble has been removed, these codes will be automatically erased, and SRS warning lamp will go out. If code Nos.41 and 42 are displayed together, check battery first as vehicle may have discharged battery.	<ul style="list-style-type: none"> Defective wiring harnesses or connectors Malfunction of SRS-ECU



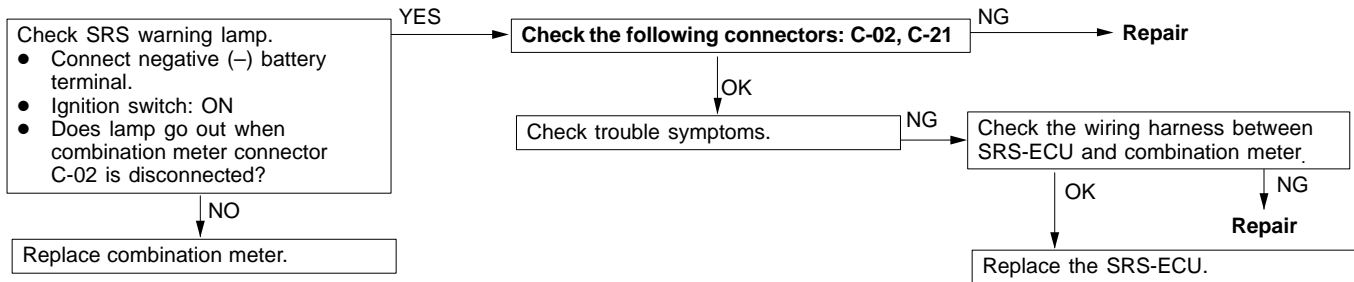
Code No.42 Power Supply Circuit System (Fuse No.3 circuit)	Probable Cause
<p>Code No.42 is displayed if voltage between IG₁ terminal (SRS-ECU, terminal 13) and earth is lower than specified for five successive seconds or more. However, once trouble is extinguished, these codes will be automatically erased, and SRS warning lamp will go out. If code Nos.41 and 42 are displayed together, check battery first as vehicle may have discharged battery.</p>	<ul style="list-style-type: none"> Defective wiring harnesses or connectors Malfunction of SRS-ECU



Code No.43 SRS warning lamp drive circuit system (Lamp does not illuminate)	Probable Cause
<p>Open circuit is present for 5 successive seconds or more in SRS warning lamp drive circuit. However, once trouble is extinguished, this code, if displayed due to open circuit, will be automatically erased.</p>	<ul style="list-style-type: none"> Defective wiring harnesses or connectors Blown bulb Malfunction of SRS-ECU Malfunction of combination meter



Code No.43 SRS warning lamp drive circuit system (Lamp does not go out off)	Probable cause
Harness between SRS warning lamp and SRS-ECU is being shorted to earth However, once trouble is extinguished, this code will be automatically erased, and SRS warning lamp will go out.	<ul style="list-style-type: none"> Defective wiring harnesses or connectors Malfunction of SRS-ECU Malfunction of combination meter



Code No.44 SRS warning lamp drive circuit system	Probable cause
Short is present in SRS warning lamp drive circuit, or output transistor in SRS-ECU is defective. However, once trouble is extinguished, this code will be automatically erased, and SRS warning lamp will go out.	<ul style="list-style-type: none"> Defective wiring harnesses or connectors Malfunction of SRS-ECU

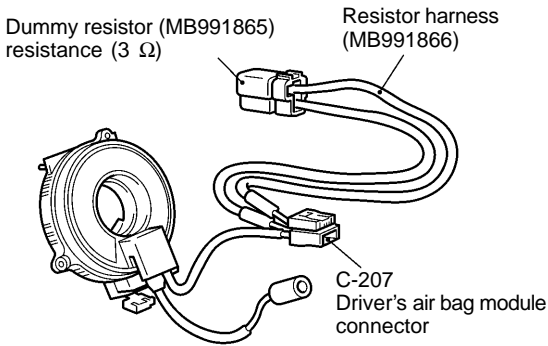


Code No.56, 57, 58, 59 System inside SRS-ECU	Probable cause
These diagnostic trouble codes are output when a fault is detected in the SRS-ECU. The defective parts and trouble causes for each diagnosis code No. are as follows.	<ul style="list-style-type: none"> Malfunction of SRS-ECU

Code No.	Defective parts	Trouble causes
56	Driver's side pre-tensioner (squib ignition drive circuit)	<ul style="list-style-type: none"> Short circuit in the squib ignition drive circuit
57		<ul style="list-style-type: none"> Open circuit in the squib ignition drive circuit
58	Front passenger's side pre-tensioner (squib ignition drive circuit)	<ul style="list-style-type: none"> Short circuit in the squib ignition drive circuit
59		<ul style="list-style-type: none"> Open circuit in the squib ignition drive circuit

If the diagnosis code(s) above is set, replace the SRS-ECU.

Code No.61 Driver's air bag module (squib) system (short-circuited to power supply)	Possible cause
Code No.62 Driver's air bag module (squib) system (short-circuited to earth)	
This code is output when the input terminal of the SRS-ECU driver's air bag module (squib) is short-circuited to power supply (code No.61) or short-circuited to earth (code No.62).	<ul style="list-style-type: none">● Clock spring fault● Harness or connector fault● The harness of the driver's air bag module (squib) is short-circuited to power supply (code No.61) or short-circuited to earth (code No.62)● SRS-ECU inoperable



Dummy resistor (MB991865)
resistance (3 Ω)

Resistor harness (MB991866)

C-207
Driver's air bag module
connector

AY1728AU

<Driver's air bag module (squib) check>
MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect driver's air bag module connector C-207.
- Connect dummy resistor (MB991865) to resistor harness (MB991866)
- Insert resistor harness (MB991866) from the rear of driver's air bag module connector C-207 of the clock spring.

Caution
In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

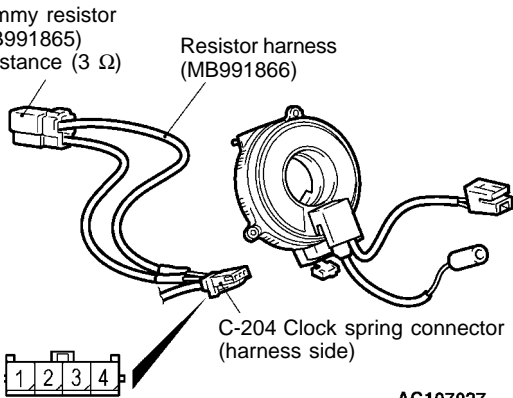
- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory.

Is code No.61 or No.62 output?

YES

NO

Replace driver's air bag module (squib).



Dummy resistor (MB991865)
resistance (3 Ω)

Resistor harness (MB991866)

C-204 Clock spring connector
(harness side)

AC107027

<Clock spring check>
MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect clock spring connector C-204 (4 pin).
- Connect dummy resistor (MB991865) to resistor harness (MB991866).
- Insert resistor harness (MB991866) to terminal No.3 and No.4 from the rear of clock spring connector C-204 (harness side).

Caution
In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory.

Is code No.61 or No.62 output?

YES (When No.61 is output)

YES (When No.62 is output)

NO

To next page

Replace clock spring.

From previous page

YES (When No.61 is output)

<Check the circuit between the SRS-ECU and clock spring>

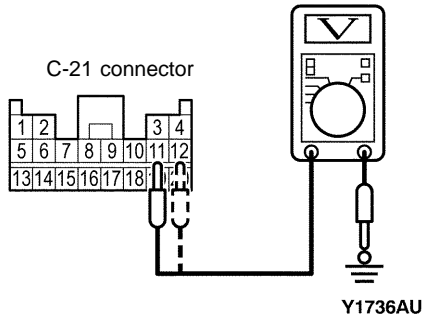
Measure at SRS-ECU connector C-21

- Disconnect SRS-ECU connector C-21.
- Disconnect clock spring connector C-204.
- Ignition switch: ON
- Measure at SRS-ECU connector C-21 harness side.
- Voltage between terminals No.11 and No.12 and body earth.

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: 0 V



OK

NG

Replace SRS-ECU.

YES (When No.62 is output)

<Check the circuit between the SRS-ECU and clock spring>

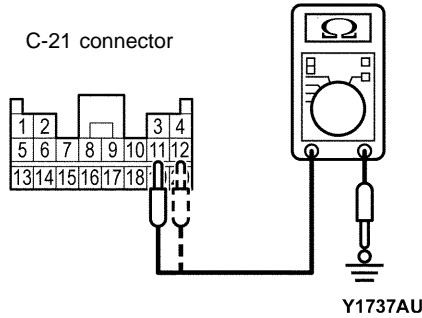
Measure at SRS-ECU connector C-21

- Disconnect SRS-ECU connector C-21.
- Disconnect clock spring connector C-204.
- Measure at SRS-ECU connector C-21 harness side.
- Voltage between terminals No.11 and No.12 and body earth.

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: No continuity



NG

OK

Replace SRS-ECU.

Check the following connectors: C-21, C-204

NG

Repair

OK

Check trouble symptoms.

NG

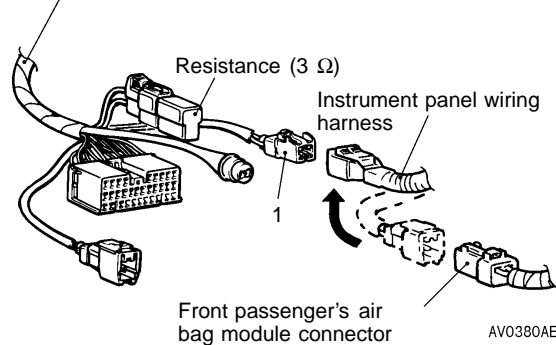
Check harness wire between clock spring and SRS-ECU, and repair if necessary.

Code No.64, 65 Front passenger's air bag module (squib) system**Probable cause**

Abnormal resistance is present between input terminals of front passenger's air bag module (squib).

- Harness, connector malfunction
- The front passenger's air bag module (squib) harness has short-circuited to the power supply (code No. 64) or short-circuited to the earth (code No.65).
- SRS-ECU malfunction

SRS check harness
(MB991606 or 991613)

**MUT-II Self-diag code**

- Disconnect front passenger's air bag module connector C-109 and connect harness side connector to SRS check harness (MB991606 or MB991613) connector No.1.
 - Connect negative (-) battery terminal.
 - Erase diagnosis code memory.
- Is code No. 64 or 65 output?

YES(When No.64 is output)

YES(When No.65 is output)

NO

Replace front passenger's air bag module (squib).

Measure at the C-21 SRS-ECU connector.

- Disconnect the connector, and measure at the harness side.
- Disconnect the C-109 front passenger's air bag module connector.
- Ignition switch:ON
- Voltage between terminals 9 and 10 and body earth.

OK: 0 V

OK

NG

Replace the SRS-ECU.

Measure at the C-21 SRS-ECU connector.

- Disconnect the connectors, and measure at the harness.
- Disconnect the C-109 front passenger's air bag module connector.
- Continuity between terminals 9 and 10 and body earth.

OK: No continuity

NG

OK

Replace SRS-ECU.

Check the following connectors: C-109, C-21

NG

Repair

OK

Check the trouble symptoms.

NG

Check the wiring harness between front passenger's air bag module and SRS-ECU.

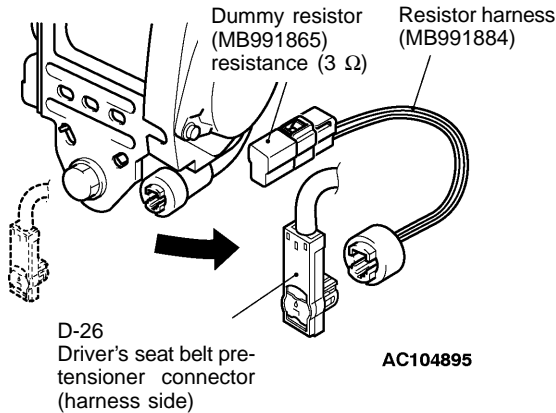
Code No.66 Driver's seat belt pre-tensioner (squib) system (short-circuited to power supply)

Code No.67 Driver's seat belt pre-tensioner (squib) system (short-circuited to earth)

This code is output when the input terminal of the SRS-ECU driver's seat belt pre-tensioner (squib) is short-circuited to power supply (code No.66) or short-circuited to earth (code No.67).

Possible cause

- Harness or connector fault
- The harness of the driver's seat belt pre-tensioner (squib) is short-circuited to power supply (code No.66) or short-circuited to earth (code No.67).
- SRS-ECU inoperable



<Driver's seat belt pre-tensioner (squib) check>

MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect driver's seat belt pre-tensioner connector D-26.
- Connect dummy resistor (MB991865) to resistor harness (MB991884)
- Connect resistor harness (MB991884) to driver's seat belt pre-tensioner connector D-26 (harness side).
- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.66 or No.67 output?

YES (when No.66 is output)

YES (when No.67 is output)

NO

Replace driver's seat belt pre-tensioner.

<Check the circuit between the SRS-ECU and driver's seat belt pre-tensioner>

Measure at SRS-ECU connector C-142.

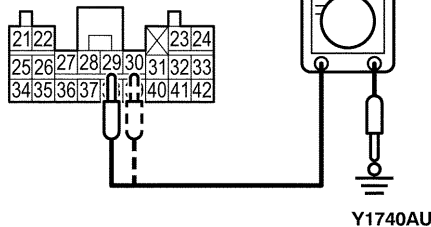
- Disconnect SRS-ECU connector C-142.
- Disconnect driver's seat belt pre-tensioner connector D-26.
- Ignition switch: ON
- Measure at SRS-ECU connector C-142 harness side.
- Voltage between terminals No.29 and No.30 and body earth.

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: 0 V

C-142 connector



OK

NG

Replace SRS-ECU.

<Check the circuit between the SRS-ECU and driver's seat belt pre-tensioner>

Measure at SRS-ECU connector C-142.

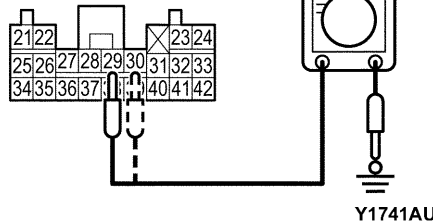
- Disconnect SRS-ECU connector C-142.
- Disconnect driver's seat belt pre-tensioner connector D-26.
- Measure at SRS-ECU connector C-142 harness side.
- Voltage between terminals No.29 and No.30 and body earth.

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: No continuity

C-142 connector



NG

NG

OK

Replace SRS-ECU.

Check the following connectors: C-112, C-142, D-26

Repair

OK

Check trouble symptoms.

NG

Check harness wire between driver's seat belt pre-tensioner and SRS-ECU, and repair if necessary.

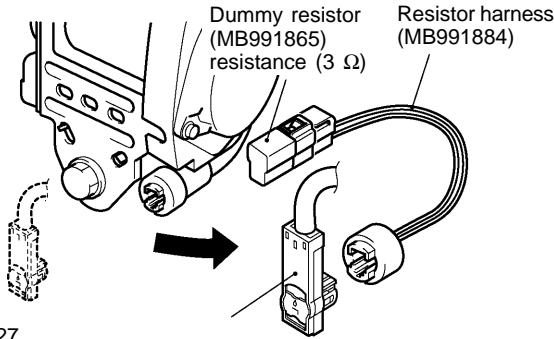
Code No.68 Front passenger's seat belt pre-tensioner (squib) system (short-circuited to power supply)

Code No.69 Front passenger's seat belt pre-tensioner (squib) system (short-circuited to earth)

This code is output when the input terminal of the SRS-ECU front passenger's seat belt pre-tensioner (squib) is short-circuited to power supply (code No.68) or short-circuited to earth (code No.69).

Possible cause

- Harness or connector fault
- The harness of the front passenger's seat belt pre-tensioner (squib) is short-circuited to power supply (code No.68) or short-circuited to earth (code No.69).
- SRS-ECU inoperable



D-27
Front passenger's seat belt pre-tensioner connector (harness side)

AC104895

<Front passenger's seat belt pre-tensioner (squib) check> MUT-II Self-diag code

- Disconnect the negative (–) battery terminal.
- Disconnect front passenger's seat belt pre-tensioner connector D-27.
- Connect dummy resistor (MB991865) to resistor harness (MB991884)
- Connect resistor harness (MB991884) to front passenger's seat belt pre-tensioner connector D-27 (harness side).
- Connect the negative (–) battery terminal.
- Check that a diagnosis code is output again after erasing the memory. Is code No.68 or No.69 output?

YES (when No.68 is output)

YES (when No.69 is output)

NO

Replace front passenger's seat belt pre-tensioner.

<Check the circuit between the SRS-ECU and driver's seat belt pre-tensioner>

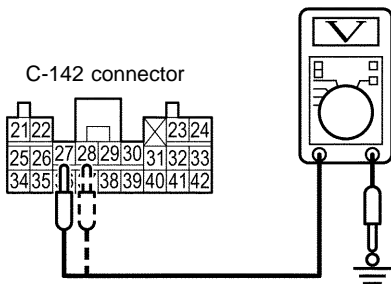
Measure at SRS-ECU connector C-142.

- Disconnect SRS-ECU connector C-142.
- Disconnect front passenger's seat belt pre-tensioner connector D-27.
- Ignition switch: ON
- Measure at SRS-ECU connector C-142 harness side.
- Voltage between terminals No.27 and No.28 and body earth.

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: 0 V



Y1742AU

OK

NG

Replace SRS-ECU.

<Check the circuit between the SRS-ECU and driver's seat belt pre-tensioner>

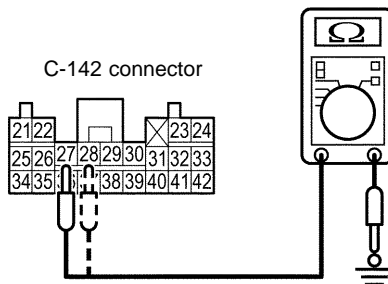
Measure at SRS-ECU connector C-142.

- Disconnect SRS-ECU connector C-142.
- Disconnect front passenger's seat belt pre-tensioner connector D-27.
- Measure at SRS-ECU connector C-142 (harness side).
- Voltage between terminals No.27 and No.28 and body earth.

Caution

In order to avoid deterioration of contact pressure, do not insert a probe into the terminal directly from the front of the connector.

OK: No continuity



Y1743AU

NG

NG

Check the following connectors:
C-134, C-142, D-27

Repair

OK

Check trouble symptoms.

NG

Check harness wire between front passenger's seat belt pre-tensioner and SRS-ECU, and repair if necessary.

OK

Replace SRS-ECU.

INSPECTION CHART FOR TROUBLE SYMPTOMS

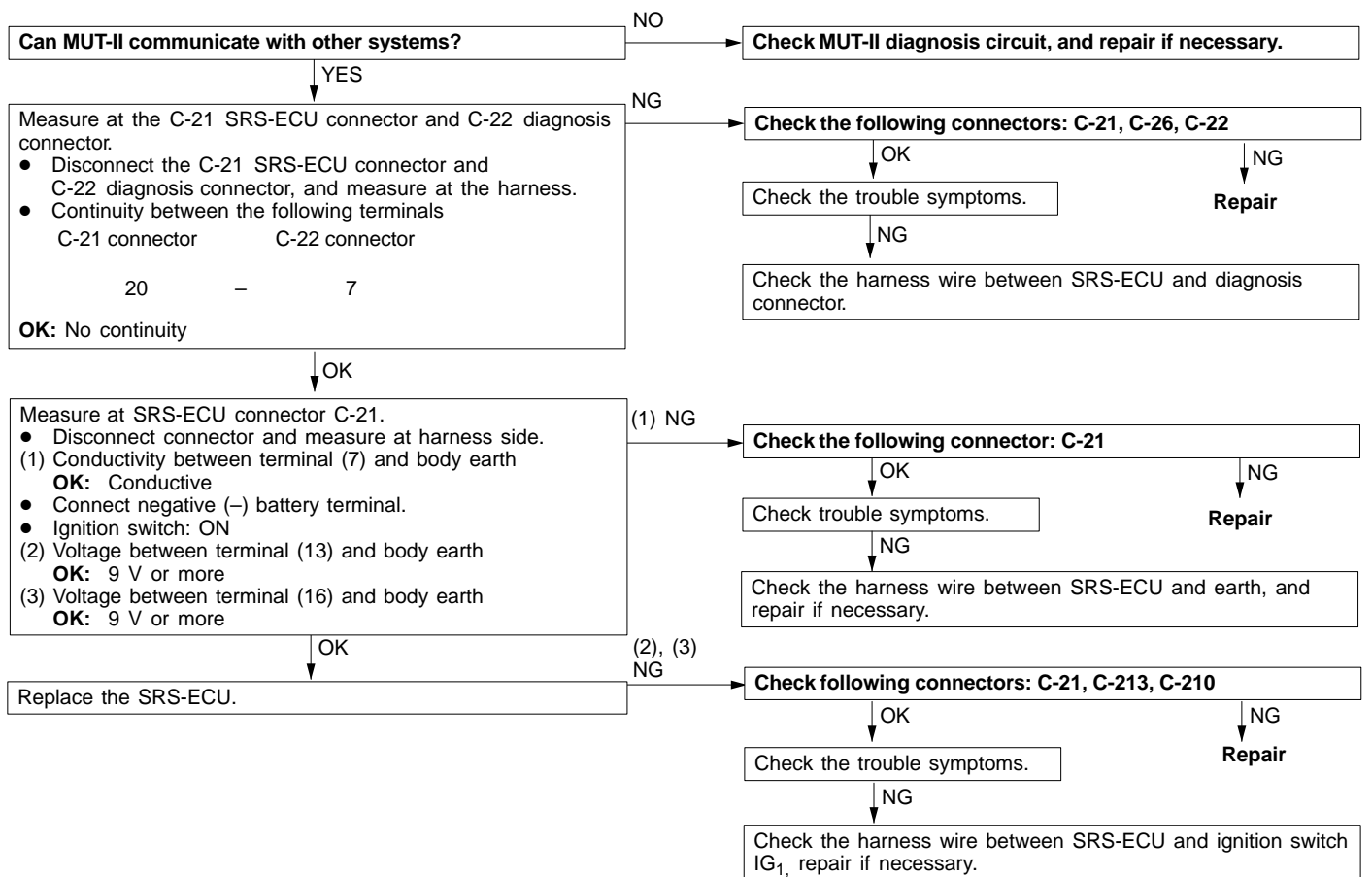
Study the trouble symptoms and check according to the inspection procedure chart.

Trouble	Inspection procedure No(s).
Communication with MUT-II is impossible.	1
SRS warning lamp does not illuminate.	See diagnosis code No.43.
SRS warning lamp does not go out off.	See diagnosis code Nos.43, 44.

INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

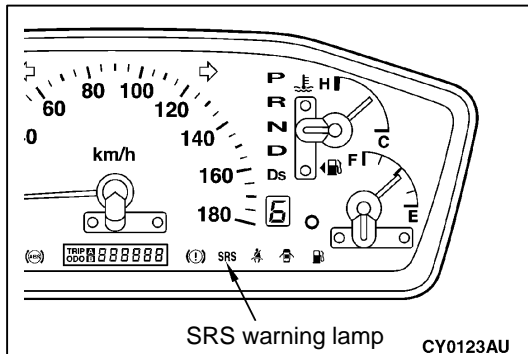
Inspection Procedure 1

Communication with MUT-II is impossible.	Probable cause
When communication with all systems is impossible, diagnosis circuit is suspected as faulty. When only communication with SRS air bags is impossible, open in diagnosis output circuit or power supply circuit including earth circuit may be present.	<ul style="list-style-type: none"> • Harness, connector malfunction • SRS-ECU malfunction • MUT ROM pack unmatching



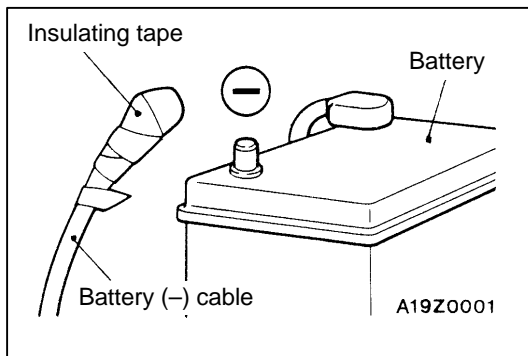
SRS MAINTENANCE

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



SRS WARNING LAMP CHECK

Turn the ignition switch 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, refer [troubleshooting](#).

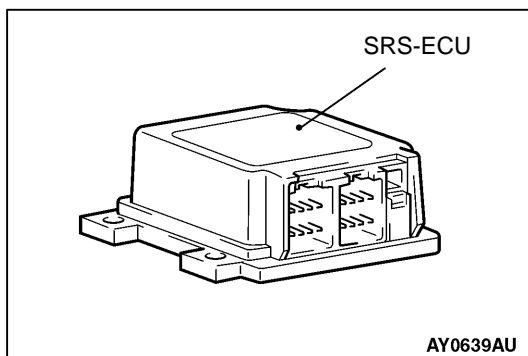


SRS COMPONENT VISUAL CHECK

Turn the ignition key to LOCK (OFF) 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.



SRS CONTROL UNIT (SRS-ECU)

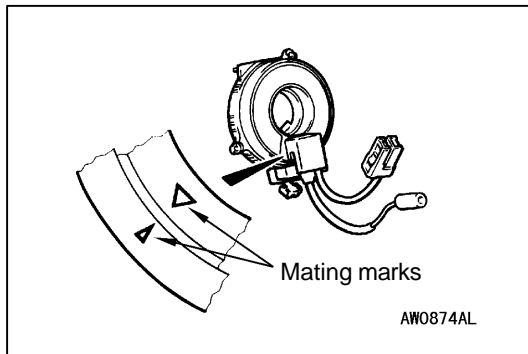
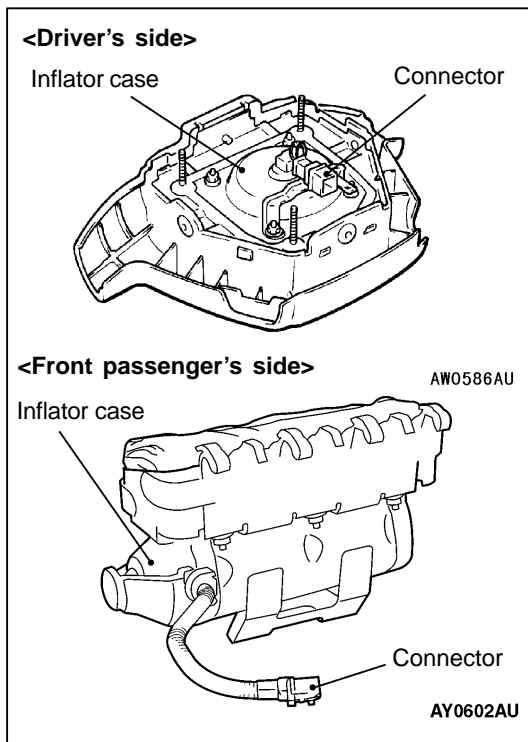
1. Check SRS-ECU case and brackets for dents, cracks, deformation or rust.

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.



AIR BAG MODULES, STEERING WHEEL AND CLOCK SPRING

1. Remove the **air bag modules, steering wheel and clock spring**.

Caution

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

2. Check 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 times 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.

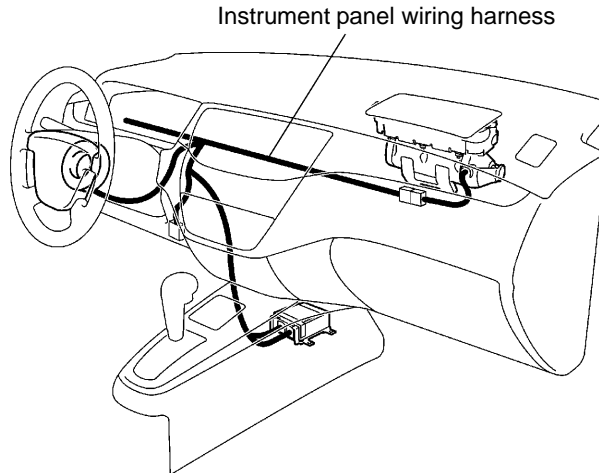
9. Install the steering column covers, steering wheel and the air bag module.
10. Check steering wheel for noise, binds of difficult operation.

11. Check steering wheel for excessive free play.
REPLACE ANY VISUALLY INSPECTED PART IF IT FAILS THAT INSPECTION.

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.

INSTRUMENT PANEL WIRING HARNESS

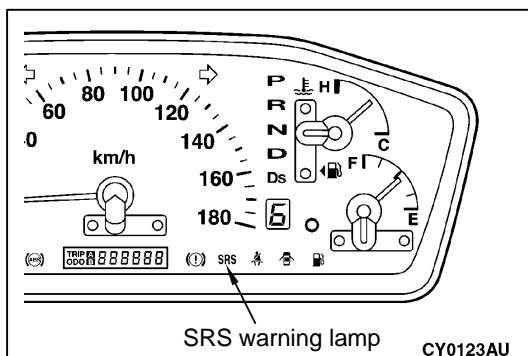


BY1057AU

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](#).

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 switch 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 [SRS Warning Lamp Check](#).

POST-COLLISION DIAGNOSIS

Whether or not the air bags have deployed, check and service the vehicle after collision as follows:

SRS-ECU MEMORY CHECK

1. Connect the MUT-II to the diagnosis connector. (Refer to [How to Use Troubleshooting/Inspection Service Points.](#))

Caution

Refer to that the ignition switch is LOCK(OFF) when connecting or disconnecting MUT-II.

2. Read (and write down) all displayed [diagnosis codes](#).

NOTE

If battery power supply has been shut down by the collision, the MUT-II cannot communicate with the SRS-ECU. Check and, repair if necessary, the instrument panel wiring harness before the next job.

3. Use the the MUT-II to read the data list (how long trouble(s) have continued and how often memory have been erased).

Data list

No	Service Data Item	Applicability
92	Number indication how often the memory is cleared.	Maximum time to be stored: 250
93	How long problem have lasted (How long it takes from the occurrence of the problem till the first air bag squib igniting signal)	Maximum time to be stored: 9999 minutes (approximately 7 days)
94	How long problem(s) have lasted (How long it takes from the first air bag squib igniting signal till now.)	

4. Erase the diagnosis codes and after waiting 5 seconds or more read (and write down) all displayed [diagnosis codes](#).

REPAIR PROCEDURE**DEPLOYED DRIVER'S AND FRONT PASSENGER'S AIR BAGS**

1. Replace the following parts with new ones.
 - SRS-ECU
 - Driver's air bag module
 - Front passenger's air bag module
2. Check the following parts and replace if malfunction is found:
 - Clock spring
 - Steering wheel, steering column and intermediate joint
 - (1) Check the wiring harness (built into steering wheel) and connectors for damage, and terminals for deformation.
 - (2) Check the driver's air bag module for proper installation to the steering wheel.
 - (3) Check the steering wheel for noise, binds or difficult operation and excessive free play.
3. Check the harness for binding, connectors for damage, poor connections, and terminals for deformation.

WHEN PRE-TENSIONER OPERATES IN A COLLISION.

1. Replace the following parts with new ones.
 - SRS-ECU
 - Seat belt with pre-tensioner
2. Check harnesses for binding, connectors for damage, poor connections, and terminals for deformation.

UNDEPLOYED AIR BAGS IN LOW-SPEED COLLISION

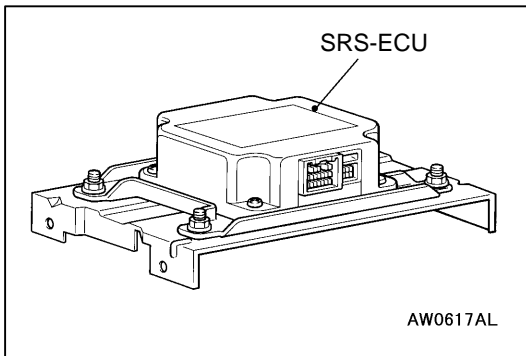
Check the SRS-ECU and Seat belt with pre-tensioner. If visible damage such as dents, cracks, or deformation are found on the the SRS-ECU and Seat belt with pre-tensioner, replace them with new ones. Concerning parts removed for inspection, replacement with new parts and cautions in working, refer to [INDIVIDUAL COMPONENT SERVICE](#).

SRS-ECU

The check procedure is the same as before.

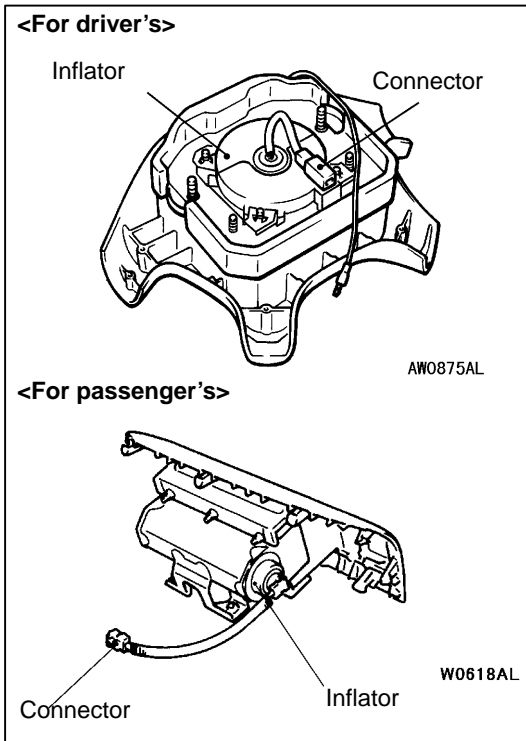
Seat belt with pre-tensioner

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



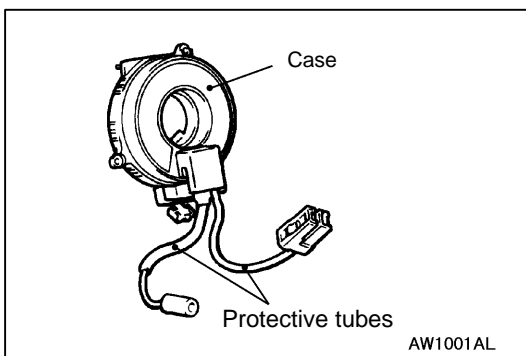
SRS-ECU

1. Check the SRS-ECU case and bracket for dents, cracks or deformation.
2. Check the connector for damage, and terminals for deformation.
3. Check the SRS-ECU and bracket for proper installation.



Driver's and passenger's air bag modules

1. Check the covers for dents, cracks or deformation.
2. Check the connectors for damage, the terminals deformities, and the harness for binds.
3. Check the air bag inflator cases for dents, cracks or deformities.
4. Check the air bag modules for proper installation.



Clock spring

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

Steering wheel, steering column and intermediate joint

1. Check the driver's air bag module for proper installation to the steering wheel.
2. Check the steering wheel for noise, binds or difficult operation and excessive free play.

Harness connector (Instrument panel wiring harness)

Check the harness for binds, the connector for damage and the terminals for deformation. (Refer to P.52B-25.) **X**

INDIVIDUAL COMPONENT SERVICE

If the SRS components and seat belt with pre-tensioner are to be removed or replaced as a result of maintenance, troubleshooting etc., follow the service procedures that follow.

Caution

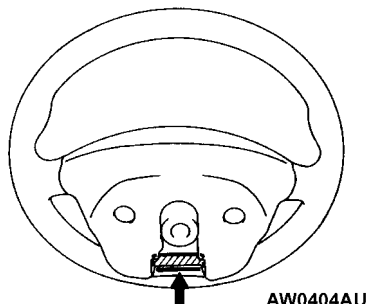
1. **SRS components and seat belt with pre-tensioner should not be subjected to heat, so remove the SRS-ECU, driver's air bag module, front passenger's air bag module, clock spring, and seat belt with pre-tensioner before drying or baking the vehicle after painting.**
 - SRS-ECU, Air bag module, clock spring: 93°C or more
 - Seat belt with pre-tensioner: 90°C or more**Recheck SRS system operability after re-installing them.**
2. **If the SRS components and seat belt with pre-tensioner are removed for the purpose of check, sheet metal repair, painting, etc., they should be stored in a clean, dry place until they are reinstalled.**

WARNING/CAUTION LABELS

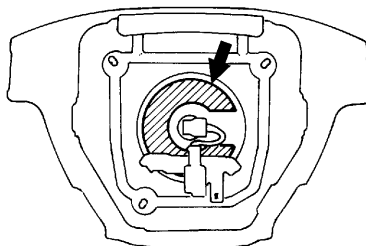
Caution labels on the SRS are attached in the vehicle as shown. Follow label instructions when

servicing the SRS. If the label(s) are dirty or damaged, replace with new one(s).

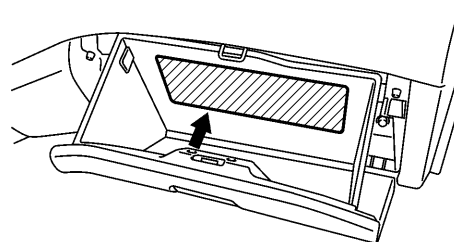
Steering wheel



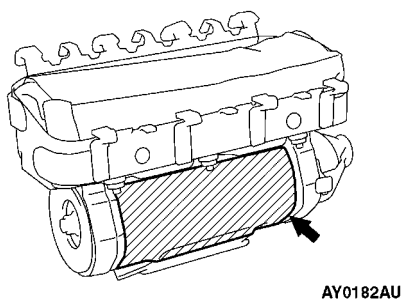
Driver's air bag module



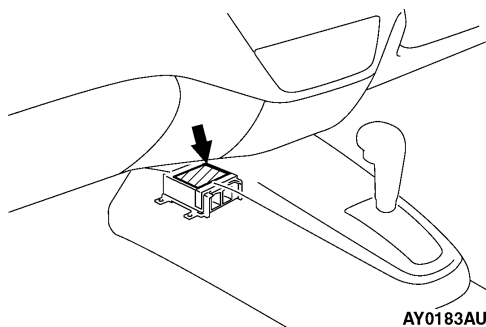
Glove box



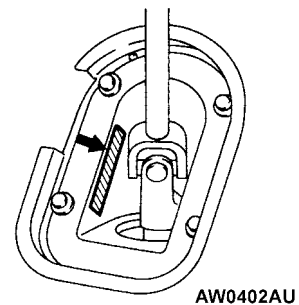
Front passenger's
air bag module

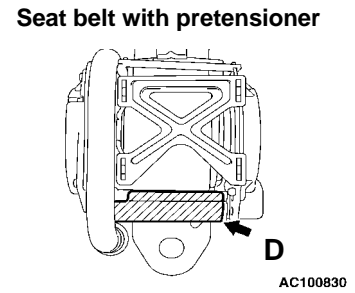
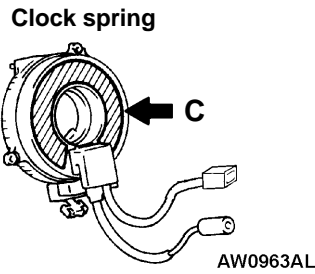
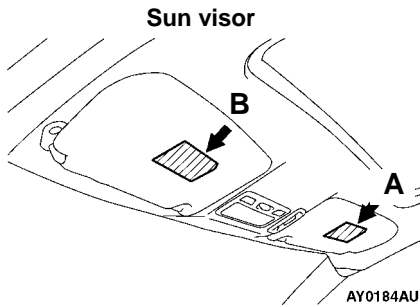


SRS-ECU




Steering joint cover





A. WARNING TO AVOID SERIOUS INJURY:

- FOR MAXIMUM SAFETY PROTECTION IN ALL TYPES OF CRASHES, YOU MUST ALWAYS WEAR YOUR SAFETY BELT.
- DO NOT SIT OR LEAN UNNECESSARILY CLOSE TO THE AIR BAG.
- DO NOT PLACE ANY OBJECTS OVER THE AIR BAG OR BETWEEN THE AIR BAG AND YOURSELF.
- SEE THE OWNER'S MANUAL FOR FURTHER INFORMATION AND EXPLANATIONS.

C. CAUTION: SRS CLOCK SPRING
THIS IS NOT A REPAIRABLE PART. IF DEFECTIVE REPLACE ENTIRE UNIT ACCORDING TO THE SERVICE MANUAL INSTRUCTIONS. TO RE-CENTER: ROTATE CLOCKWISE UNTIL TIGHT. THEN ROTATE IN OPPOSITE DIRECTION ROUGHLY 3 3/4 TURNS AND ALIGN ARROWS .

D. DANGER: SEAT BELT PRETENSIONER

- DO NOT IMPACT, DISMANTLE OR INSTALL IT INTO ANOTHER VEHICLE.
- SERVICE OR DISPOSE OF IT AS DIRECTED IN THE REPAIR MANUAL.

B. WARNING TO AVOID SERIOUS INJURY:

- FOR MAXIMUM SAFETY PROTECTION IN ALL TYPES OF CRASHES, YOU MUST ALWAYS WEAR YOUR SAFETY BELT.
- DO NOT INSTALL REARWARD-FACING CHILD SEATS IN ANY FRONT PASSENGER SEAT POSITION.
- DO NOT SIT OR LEAN UNNECESSARILY CLOSE TO THE AIR BAG.
- DO NOT PLACE ANY OBJECTS OVER THE AIR BAG OR BETWEEN THE AIR BAG AND YOURSELF.
- SEE THE OWNER'S MANUAL FOR FURTHER INFORMATION AND EXPLANATIONS.

SRS AIR BAG CONTROL UNIT (SRS-ECU)

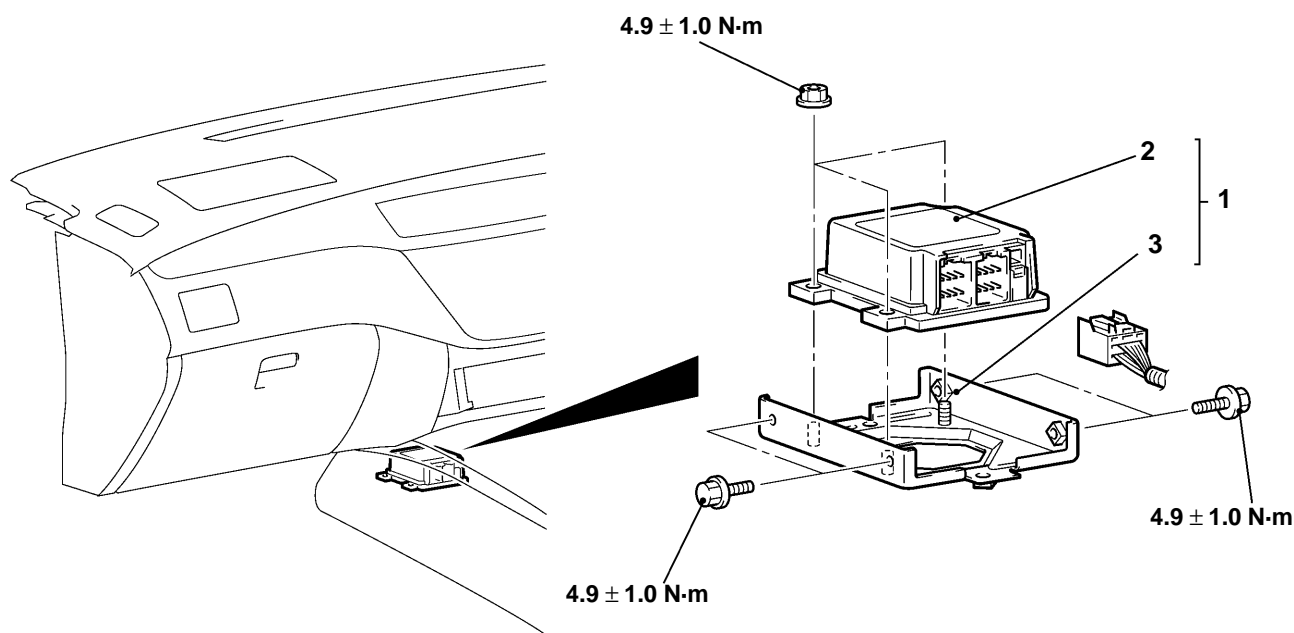
Caution

1. Disconnect the negative (–) battery terminal and wait for 60 seconds or more before starting work. Also, the disconnected battery terminal should be insulated with tape.
2. Never attempt to disassemble or repair the SRS-ECU. If faulty, just replace with a new one.
3. Do not drop or subject the SRS-ECU to impact or vibration. If denting, cracking, deformation, or rust are found in the SRS-ECU, replace it with a new one. Discard the old one.
4. After deployment of the air bags, 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.

REMOVAL AND INSTALLATION

Pre-removal Operation

- Turn Ignition Key to LOCK (OFF) Position.
- Disconnect the Negative (–) Battery Terminal.



BY0603AU

Removal steps

- Front floor console (Refer to [Front floor console](#).)
 - Rear heater duct B <Vehicles with rear heater duct>
1. SRS-ECU/SRS-ECU bracket assembly
 2. SRS-ECU
 3. SRS-ECU bracket

Installation steps

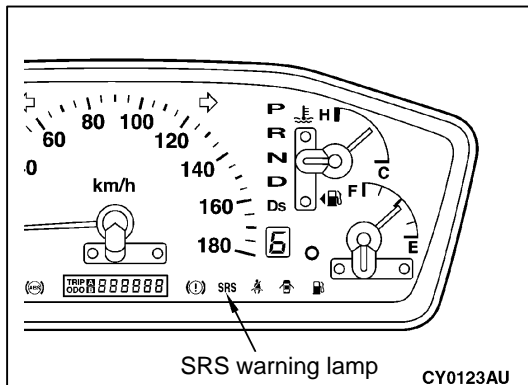
3. SRS-ECU bracket
 2. SRS-ECU
 1. SRS-ECU/SRS-ECU bracket assembly
- Rear heater duct B <Vehicles with rear heater duct>
 - Front floor console (Refer to [Front floor console](#).)
 - Negative (–) battery terminal connection
- **A** ◀
- **B** ◀
- Post-installation inspection

INSTALLATION SERVICE POINTS

►A◄ SRS-ECU INSTALLATION

Caution

Be sure to install the SRS-ECU properly. Otherwise, the SRS air bags do not activate, which results in serious injury or death of vehicle's occupants.



►B◄ POST-INSTALLATION CHECK

1. Turn the ignition switch to ON.
2. Does the SRS warning lamp illuminate for about 7 seconds and then go out for more than 5 seconds?
3. Yes: The SRS warning lamp is working properly
No: Go to [Troubleshooting](#).

INSPECTION

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

Caution

If a dent, crack, deformation or rust are present, replace the SRS-ECU with a new one.

NOTE

To check the SRS-ECU in other items than described above, go to [Troubleshooting](#).

AIR BAG MODULES AND CLOCK SPRING

Caution

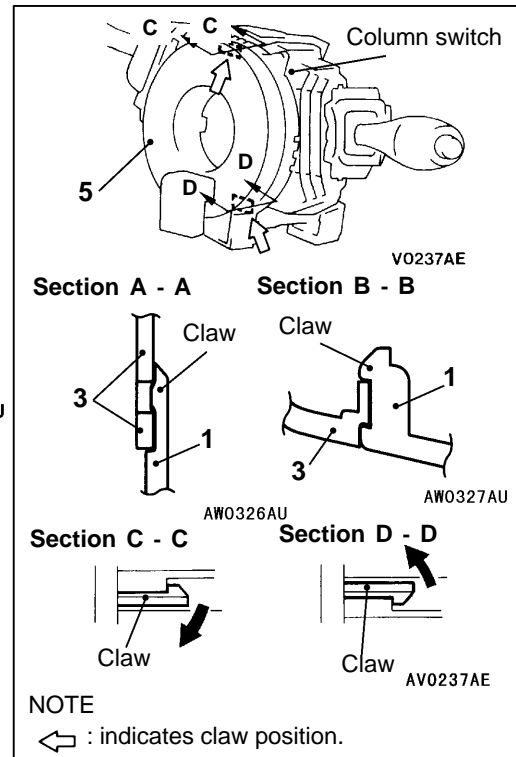
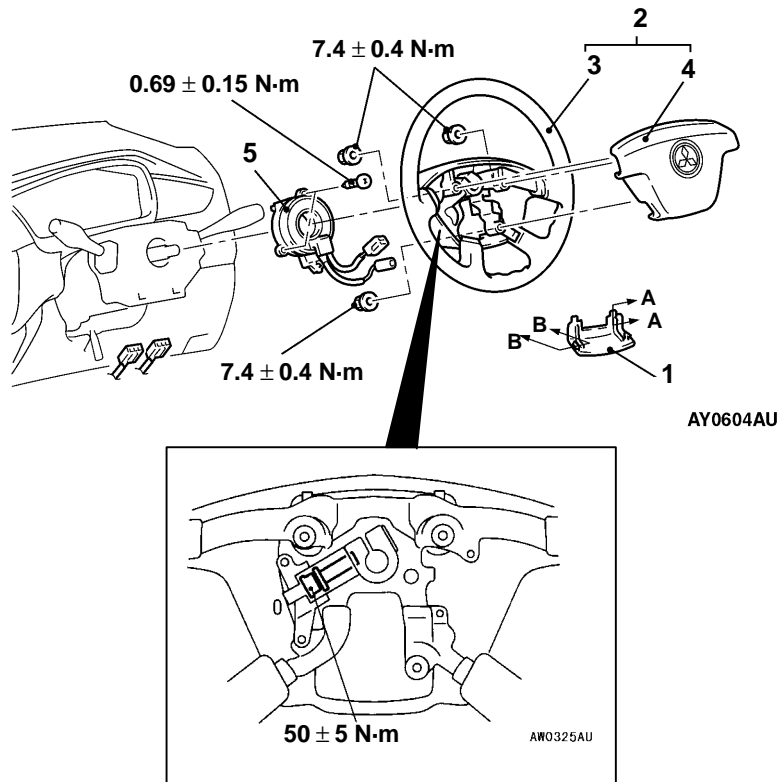
1. Disconnect the negative (–) battery terminal and wait for 60 seconds or more before starting work. Also, the disconnected battery terminal should be insulated with tape.
2. Never attempt to disassemble or repair the air bag modules and clock spring. If faulty, just replace with new one(s).
3. Do not drop the air bag modules or clock spring or allow contact with water, grease or oil.
Replace if a dent, crack, deformation or rust are present.
4. Store the air bag modules on a flat surface with the deployment surface facing up. Do not place anything on top of them.
5. Do not store the air bag modules in a place more than 93°C.
6. When the driver's and front passenger's air bags have been deployed, replace the driver's and passenger's air bag modules with new ones.
7. Put on gloves and safety glasses when handling deployed air bags.
8. When discarding the undeployed air bag module(s), be sure to deploy the air bag(s) in advance as [specified in the service procedure](#).

REMOVAL AND INSTALLATION

<Driver's air bag module, clock spring>

Pre-removal Operation

Disconnect the Negative (–) Battery Terminal.



Driver's air bag module removal steps



1. Cover
2. Steering wheel and air bag module assembly
3. Steering wheel
4. Driver's air bag module



Clock spring removal steps



1. Cover
2. Steering wheel and air bag module assembly
- Lower column cover
5. Clock spring



Driver's air bag module installation steps



- Pre-installation inspection
- 4. Driver's air bag module
- 3. Steering wheel
- 2. Steering wheel and air bag module assembly
- 1. Cover
- Negative (–) battery terminal connection
- Post-installation check



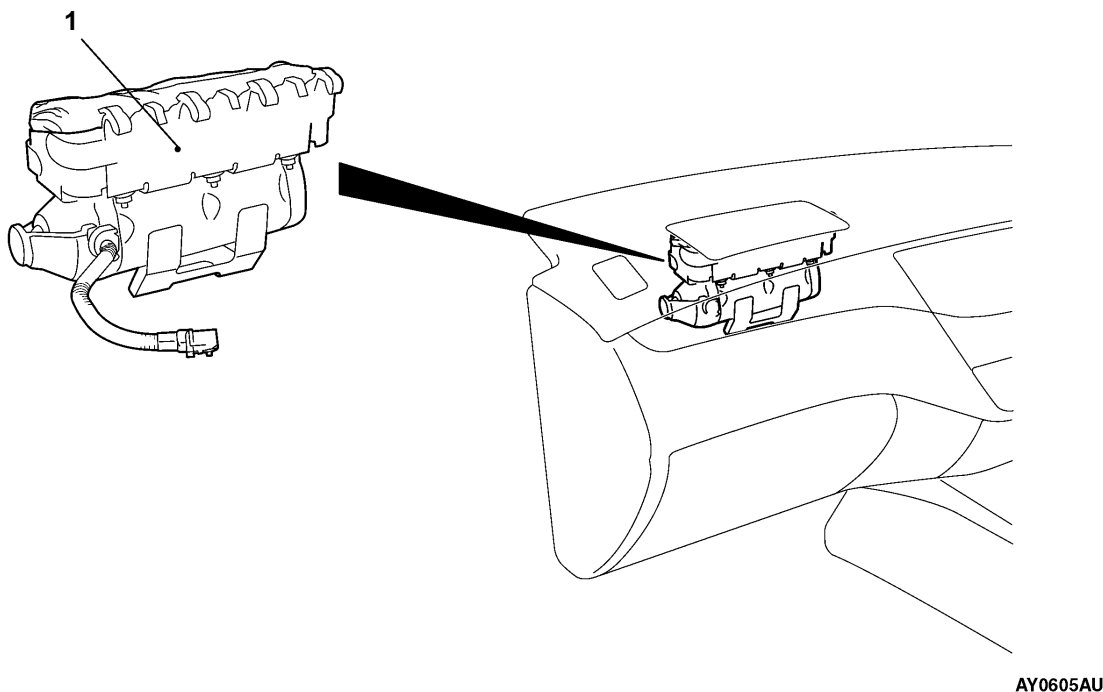
Clock spring installation steps



- Pre-installation check
- 5. Clock spring
- Lower column cover
- 2. Steering wheel and air bag module assembly
- 1. Cover
- Negative (–) battery terminal connection
- Post-installation inspection



<Front passenger's air bag module>

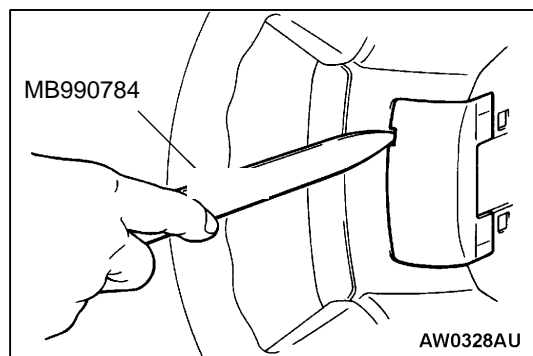


Removal steps

- Instrument panel assembly (Refer to [Instrument panel](#).)
- 1. Passenger's air bag module

Installation steps

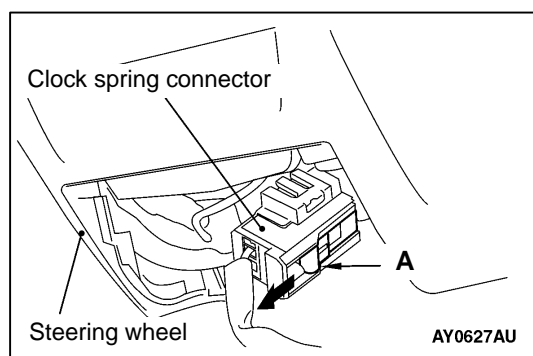
- ▶ **A** ▶ • Pre-installation inspection
- 1. Passenger's air bag module
- Instrument panel assembly (Refer to [Instrument panel](#).)
- Negative (–) battery cable connection
- ▶ **D** ▶ • Post-installation inspection



REMOVAL SERVICE POINTS

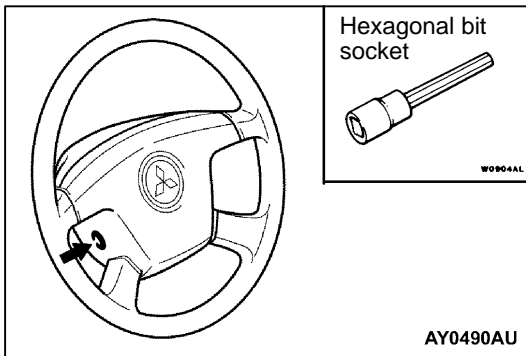
◀ **A** ▶ COVER REMOVAL

Insert the special tool as shown in the illustration to remove the cover.



◀ **B** ▶ STEERING WHEEL AND AIR BAG MODULE ASSEMBLY REMOVAL

1. By sliding the A section (in the figure) of the clock spring connector in the arrow direction, disconnect the connector.



2. Insert the hexagonal bit socket into the arrow section in the figure. Completely loosen the bolt, and then remove the steering wheel airbag module assembly.

NOTE

Use a hexagonal bit socket or a hexagonal wrench having an effective length of 75 mm or more in the hexagonal section and the diameter of 8 mm or more.

◀C▶ DRIVER'S AIR BAG MODULE REMOVAL POINT

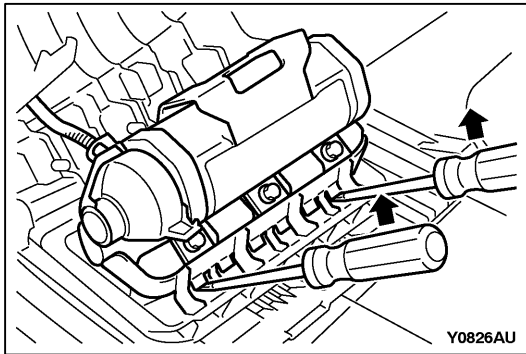
Caution

1. The air bag module must not be measured with such equipment as an ohmmeter, nor disassembled.
2. The removed air bag module should be stored in a clean, dry place with the deployment surface facing up.

◀D▶ CLOCK SPRING REMOVAL

Caution

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



◀E▶ PASSENGER'S AIR BAG MODULE REMOVAL

Insert the screwdriver (–) into the position specified in the figure and lift the screwdriver upward to release the pawls engaged, and then remove the passenger's airbag module.

Caution

2. When the passenger's airbag module is removed, do not damage the engagement of the pawls.
3. The removed passenger's air bag module should be stored in a clean, dry place with facing the deployment surface facing up.

INSTALLATION SERVICE POINTS

►A◄ PRE-INSTALLATION INSPECTION

1. Even new air bag modules and a clock spring require [inspection](#) before installation.

Caution

When discarding the air bag module, deploy the air bag as specified in the [service procedure](#).

2. Connect the negative (–) battery terminal.
3. Connect the MUT-II to the diagnosis connector (16-pin).

Caution

Turn the ignition switch to LOOK (OFF) position when connecting and disconnecting the MUT-II.

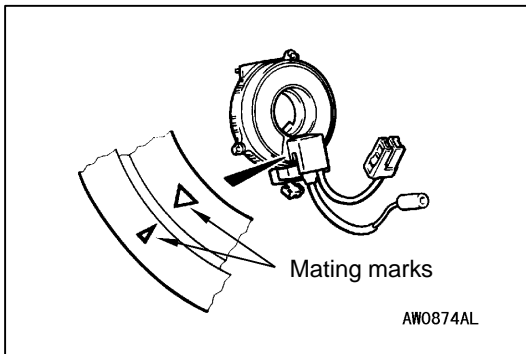
4. Turn the ignition switch to ON.
5. Read a diagnostic code to Refer to that the SRS is operating properly except an open in the air bag module circuit.
6. Turn the ignition switch to LOCK (OFF) position. Disconnect the negative (–) battery cable and insulate with tape.

Caution

Wait at least [60 seconds](#) after the disconnection of the battery cable before any further job.

►B◄ CLOCK SPRING INSTALLATION

Align the mating marks on the clock spring as mentioned in the next step. Then, after putting the front wheels in straight-ahead position, install the clock spring to the column switch.

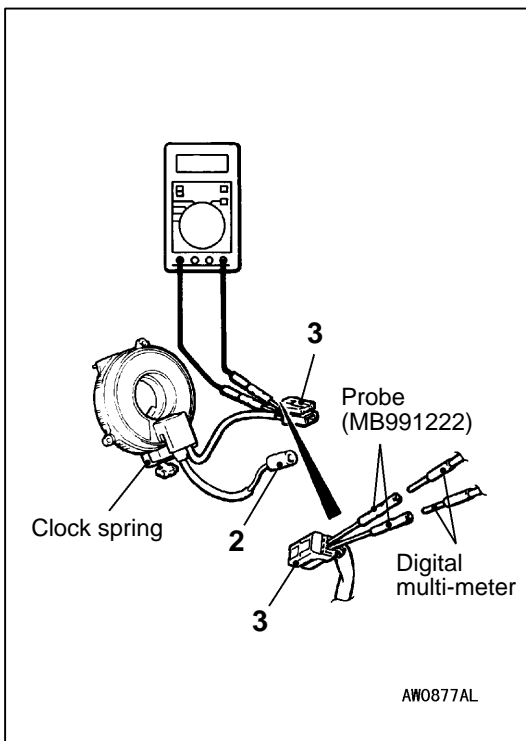


Centering of the clock spring

After turning the clock spring clockwise fully, turning approximately 3 3/4 rounds in the opposite direction, and align mating marks.

Caution

If centering of the clock spring is not properly done, the SRS air bag system does not function normally due to possible malfunctions that the steering wheel may not turn in the way or cables in the clock spring may be torn.



4. Insert the probe (MB991222) from the rear of connector No.3 of the clock spring.

Caution

The probe must not be inserted directly to the terminals from the front of the connector.

5. Connect a digital multi-meter to the probe (MB991222), as shown, to check that conductivity is present between the terminals.

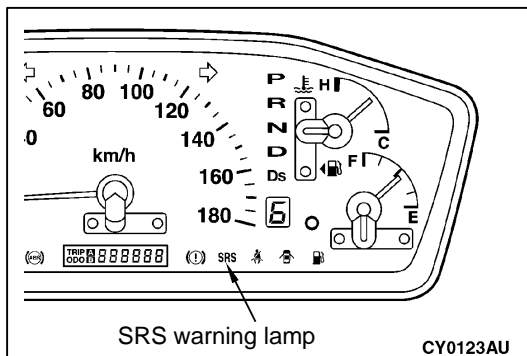
►C◄ STEERING WHEEL AND AIR BAG MODULE ASSEMBLY INSTALLATION

1. Refer to first that the clock spring has been centred properly. Then, install the steering wheel and air bag module assembly.

Caution

Be sure, when installing the steering wheel and air bag module, not to have the clock spring harness caught or tangled.

2. After the installation, check the steering wheel for proper operation by turning it fully right and left.



►D◄ POST-INSTALLATION CHECK

1. Lightly turn the steering wheel right and left to Refer to that noise and malfunction are not present.
2. Turn the ignition switch to "ON".
3. Does the SRS warning lamp illuminate for about 7 seconds and then go out for 5 seconds or more?
4. Yes: The SRS is working properly.
No: Go to [Troubleshooting](#).

INSPECTION

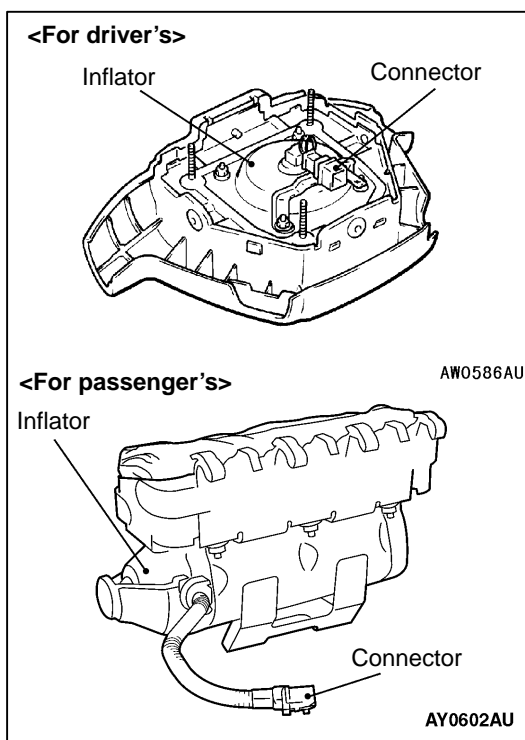
DRIVER'S AND PASSENGER'S AIR BAG MODULE INSPECTION

If any malfunction is found in the following inspection, replace the air bag module(s) with new one(s). Discard the old one(s) after deployment as specified in the [service procedure](#).

Caution

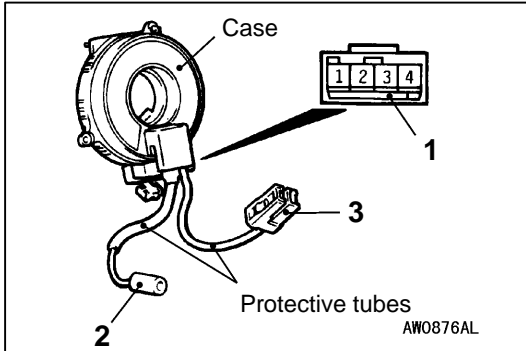
Never measure circuit resistance in the air bag modules (squib) even with the specified tester. Measuring the circuit resistance with a tester causes accidental air bag deployment due to current that flows or static, resulting in serious personal injury.

1. Check the cover for dents, cracks or deformation.
2. Check the connectors for damage, terminals for deformation, and harness for binds.
3. Check the air bag inflator cases for dents, cracks or deformation.
4. With air bag module installed



Caution

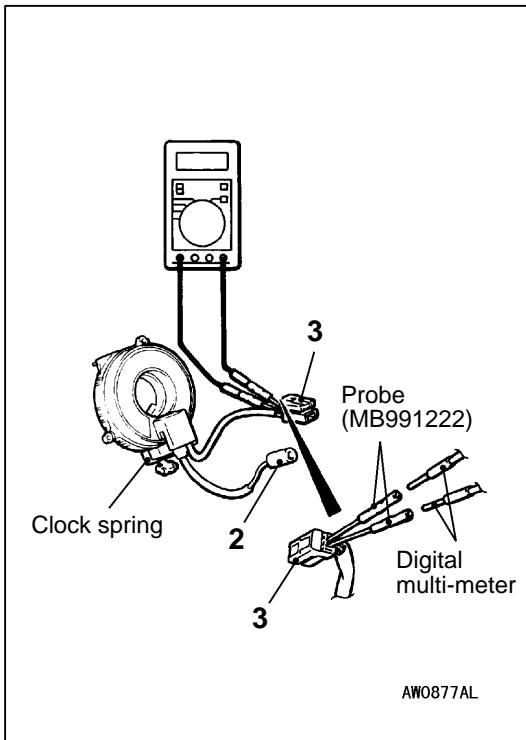
If dents, cracks, deformation, or rust are present in the air bag module(s), replace with new one(s). Discard the old one(s) as specified in the [service procedure](#).



CLOCK SPRING CHECK

If any malfunction is found in the following inspections, replace the clock spring with a new one.

1. Check the connectors and protective tubes for damage, and terminals for deformation.
2. Visually check the case for damage.
3. Refer to that the clock spring has continuity between connector No.2 and terminal No.4 of connector No.1.



4. Insert the probe (MB991222) from the rear of connector No.3 of the clock spring.

Caution

The probe must not be inserted directly to the terminals from the front of the connector.

5. Connect a digital multi-meter to the probe (MB991222), as shown, to check that conductivity is present between the terminals.

SEAT BELT WITH PRE-TENSIONER

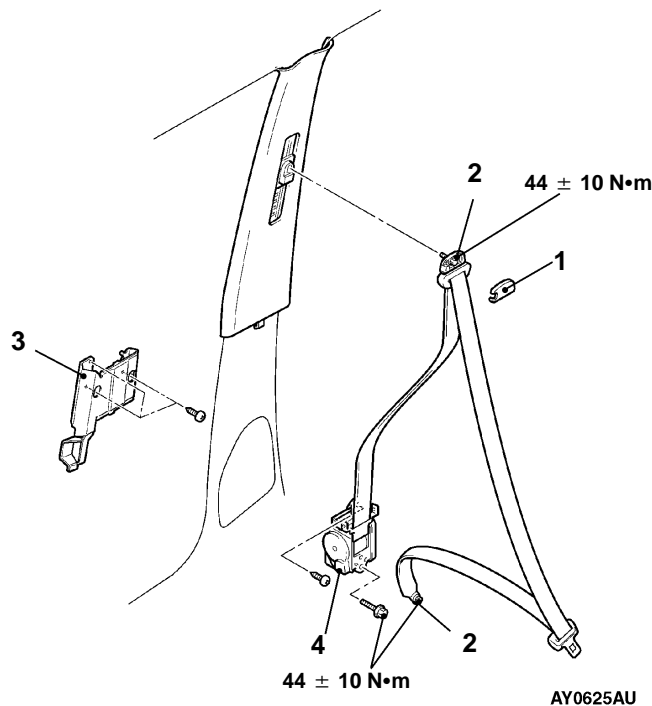
Caution:

1. Wait for at least 60 seconds after disconnecting the negative (–) terminal of the battery before starting any operation. The removed negative (–) terminal must be protected by wrapping the tape.
2. Never disassemble or repair the seat belt with pre-tensioner. Replace the part with a new one when it malfunctions.
3. Take an extra care to deal with the seat belt with pre-tensioner by avoiding dropping or wetting it with water or oil. If any dent, crack, or deformation is found, be sure to replace the seat belt with pre-tensioner with a new part.
4. Do not place a heavy object on top of the seat belt pre-tensioner.
5. Never keep the seat belt with pre-tensioner in a place where the temperature can exceed over 90°C.
6. Replace the seat belt with pre-tensioner with a new one after operating the seat belt pre-tensioner.
7. Wear gloves or protective glasses when handling the seat belt with pre-tensioner after operation.
8. If the seat belt with pre-tensioner before operation needs to be discarded, be sure to do so after operating the **seat belt pre-tensioner**.

REMOVAL AND INSTALLATION

Pre-removal Operation

- Turn the ignition key to the LOCK (OFF) position.
- Disconnect the negative (–) terminal of the battery.



Removal steps

1. Sash cover guide
2. Outer seat belt connection
 - Lower center pillar trim
3. Bracket
4. Seat belt with pre-tensioner

Installation steps

- ▶ **A** ▶
 - Pre-installation inspection
 - 4. Seat belt with pre-tensioner
 - 3. Bracket
 - Lower center pillar trim
 - 2. Outer seat belt connection
 - 1. Sash cover guide
 - Negative (–) terminal of the battery connection
- ▶ **B** ◀
 - Post-installation inspection

REMOVAL SERVICE POINTS

◀A▶ SEAT BELT WITH PRE-TENSIONER REMOVAL

While the harness side connector locking button is pulled forward using flat-tipped screw driver, release the lock and disconnect the connector.

INSTALLATION SERVICE POINTS

▶A◀ PRE-INSTALLATION INSPECTION

1. Pre-installation inspection must be carried out even when installing a new seat belt with pre-tensioner. (Refer to Inspections.)

Caution

If the seat belt with pre-tensioner is discarded, discard it after operating the seat belt pre-tensioner according to the specified procedure. (Refer to P.52B-28.)

2. Connect the negative (–) terminal of the battery.
3. Connect the MUT-II to the diagnosis connector (16 pin).

Caution

Connection and disconnection of the MUT-II must be carried out after turning the ignition switch to the LOCK (OFF) position.

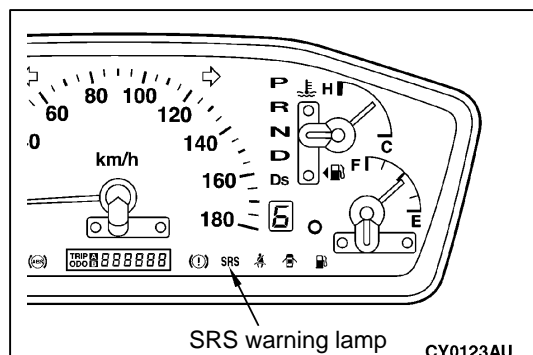
4. Turn the ignition switch to ON position.
5. Check that there is no abnormality except for open circuit in the seat belt pre-tensioner after reading diagnostic codes.
6. Turn the ignition key to the LOCK (OFF) position.
7. Release the negative (–) terminal cable of the battery and wrap a tape around it for insulation.

Caution

Wait for at least 60 seconds after disconnecting the negative (–) battery cable before starting any operation.

▶B◀ POST-INSTALLATION INSPECTION

1. Turn the ignition switch to the ON position.
2. Check that the SRS warning lamp illuminates for 6 to 8 seconds and goes out.
3. Carry out troubleshooting if the lamp does not go out.



INSPECTION

SEAT BELT PRE-TENSIONER

If any faulty is discovered by the following inspections, replace the seat belt with pre-tensioner with a new one.

Discard the old parts according to the [specified procedure](#) after operating the seat belt pre-tensioner.

Caution

Do not measure the circuit resistance of the seat belt pre-tensioner even if it is done with a specified tester.

If a tester is used to measure the circuit resistance, squib charged with current or erroneous activation by static may cause critical damage.

1. Seat belt pre-tensioner for dent, crack, or deformation
2. Harness or connector for damage and terminal for deformation

AIR BAG MODULE DISPOSAL PROCEDURES

Carry out the following procedure of air bag deployment and seat belt pre-tensioner operation before disposing the air bag module and seat belt

with pre-tensioner or the vehicle with SRS air bag and seat belt with pre-tensioner.

UNDEPLOYED OF AIR BAG MODULE AND SEAT BELT WITH PRE-TENSIONER

Caution

1. Carry out deployment of all the air bag modules and operation of all seat belt pre-tensioners before disposing the vehicle with SRS air bag and seat belt with pre-tensioner inside the vehicle.
2. Carry out deployment of the used air bag or operation of the used seat belt pre-tensioner outside the vehicle when replacing the air bag module or the seat belt with pre-tensioner.
3. Carry out deployment of air bag or operation of seat belt pre-tensioner in a well ventilated place since a lot of smoke is generated. Do not carry out operation near a smoke detector.
4. Avoid carrying out operation in a residential area as much as possible and give a warning when any person is near by since air bag deployment or seat belt pre-tensioner operation causes loud operation sound.
5. Prepare ear plugs for those are engaged in air bag deployment or seat belt pre-tensioner operation or for those who are near by.

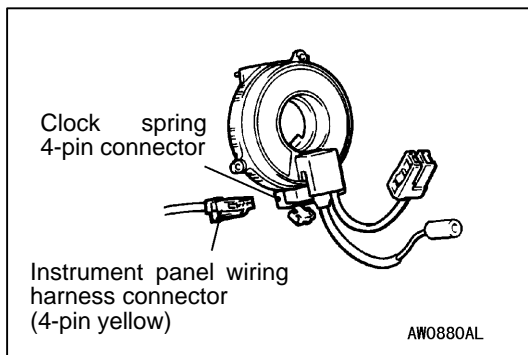
DEPLOYMENT INSIDE THE VEHICLE

1. Move the vehicle to flat and 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 the disconnection of the battery cables before any further job.

3. Carry out deployment of the air bag module and operation of the seat belt pre-tensioner according to the following procedure.

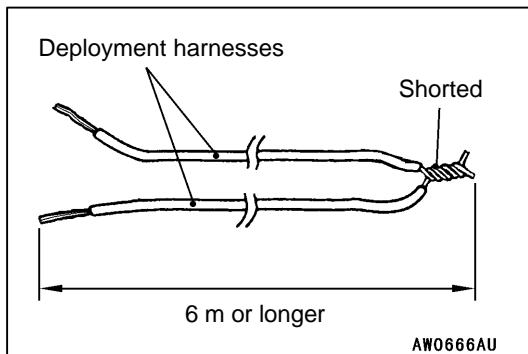


Driver's air bag module

- (1) Remove the steering column cover, lower.
- (2) Disconnect the clock spring 4-pin connector and instrument panel wiring harness connector (4-pin, yellow).

NOTE

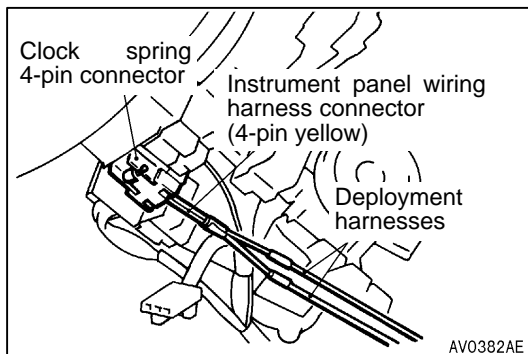
Once disconnected from the instrument panel wiring harness, both electrodes of the clock spring connector short automatically. This prevents the driver's air bag from accidental deployment caused by static, etc.



- (2) Prepare two deployment harnesses longer than 6 m for deployment and connect the terminals in one end to short-circuit. This is to prevent accidental deployment caused by static etc.
- (3) Touch the vehicle's body with bare hands to discharge static in you.

Caution

Never fail to do Step (3) in order to prevent accidental deployment caused by static.



- (4) Use a nipper or other tools to cut off the harness of the disconnected instrument panel wiring harness connector (4-pin, yellow).

NOTE

Carefully determine the cut off position in relation to the connection position of deployment harness so that enough space from the clock spring connector can be provided.

- (5) Connect deployment harnesses to each of two cut-off harnesses and insulate the connections with tape, then connect the deployment harness to the clock spring 4-pin connector in order to pull the deployment harness out of the vehicle.
- (6) Close all the doors with the windows fully closed and put a cover over the vehicle to minimize report.

Caution

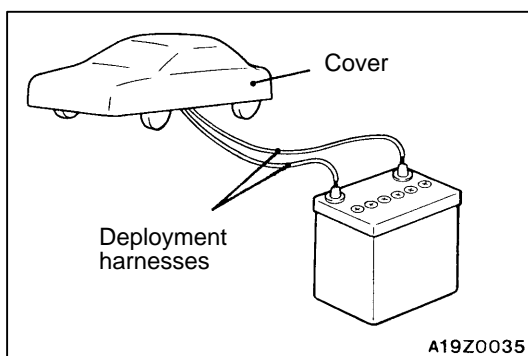
The cover is required as the glass, if already damaged, may break.

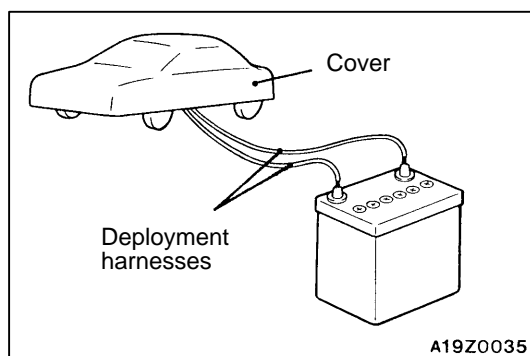
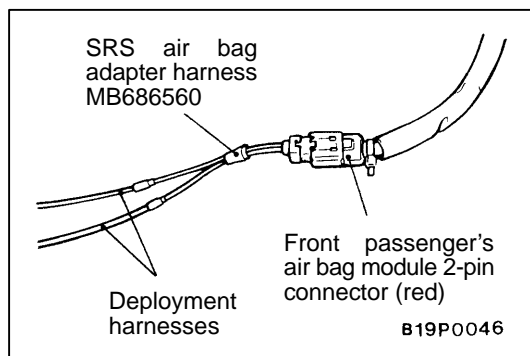
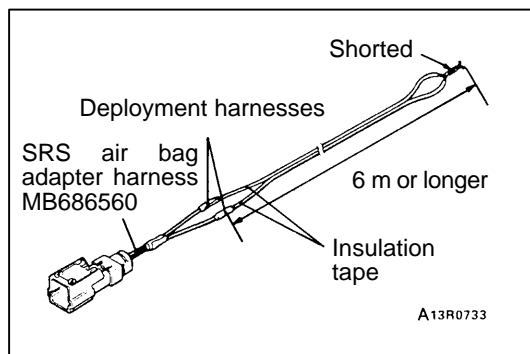
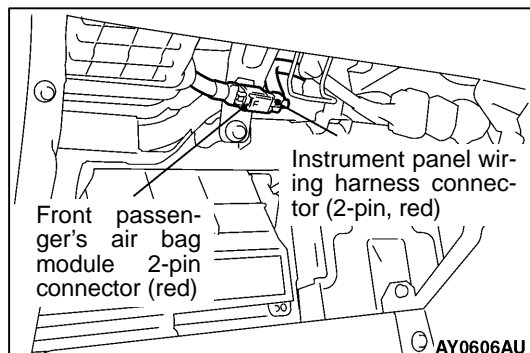
- (7) Separate the deployment harnesses as far from the vehicle as possible and connect to the terminals of the battery removed from the vehicle. Then deploy.

Caution

- 1) **Before deploying the air bag, see that no one is in and near the vehicle. Also, put on safety glasses.**
- 2) **The deployment makes the inflator of the driver's air bag very hot. Before handling the inflator, wait more than 30 minutes for cooling.**
- 3) **If the driver's air bag module fails to deploy although the procedure is respected, do not go near the module. Contact your local distributor.**

- (8) Discard the deployed air bag module according to [Deployed Air Bag Module Disposal Procedures](#).





Front passenger's air bag module

- (1) Remove the glove box.
(Refer to [Instrument Panel](#).)
- (2) Disconnect the front passenger's air bag module 2-pin connector (red) and instrument panel wiring harness connector (2-pin, red).

NOTE

Once disconnected from the instrument panel wiring harness, both electrodes of the front passenger's air bag module short automatically. This prevents the front passenger air bag from accidental deployment caused by static, etc.

- (3) Connect deployment harnesses longer than 6 m to each SRS air bag adapter harness and insulate the connections with plastic tape.
Also, connect the deployment harnesses in the other ends to short, thereby preventing the front passenger's air bag from accidental deployment caused by static etc.

- (4) Connect the SRS air bag adapter harness to the front passenger's air bag module 2-pin connector (red) and route the deployment harnesses out of the vehicle.

- (5) Close all the doors with the windows fully closed and put a cover over the vehicle to minimize report.

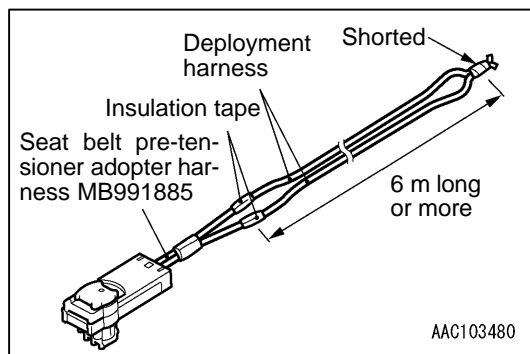
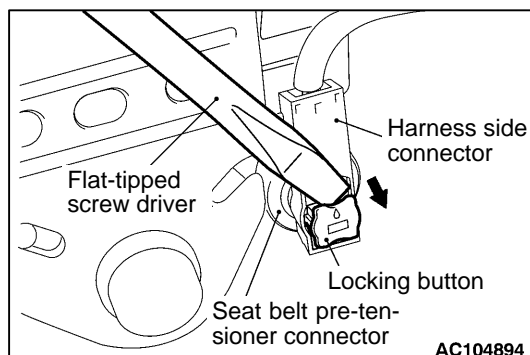
Caution

The cover is required as the glass, if already damaged, may break.

- (6) Separate the deployment harnesses as far from the vehicle as possible and connect to the terminals of the battery removed from the vehicle. Then deploy.

Caution

- 1) **Before deploying the air bag, see that no one is in and near the vehicle. Also, put on safety glasses.**
- 2) **The deployment makes the inflator of the front passenger's air bag very hot. Before handling the inflator, wait more than 30 minutes for cooling.**
- 3) **If the air bag module fails to deploy although the procedure is respected, do not go near the module. Contact your local distributor.**
- (7) Discard the deployed air bag module according to [Deployed Air Bag Module Disposal Procedures](#).



Seat belt pre-tensioner

- (1) Remove the lower center pillar trim.
- (2) Use a flat-tipped screw driver to pull out the locking button on the harness side of the connector forward so that the connector can be unlocked for disconnection.

NOTE

Once disconnected from the floor wiring harness, both electrodes of the seat belt pre-tensioner connector short-circuit automatically. This prevents the seat belt pre-tensioner from accidental deployment caused by static, and etc.

- (3) Prepare two operation harnesses longer than 6 m to get connected with pretensioner adapter harnesses (MB991885) and insulate the connections with tape. Furthermore, connect one end of the operation harnesses with the other to short-circuit.

NOTE

Short-circuiting both ends of the operation harness prevents the pretensioner from accidental deployment caused by static, etc.

- (4) Connect the pretensioner adapter harness (MB991885) to the pretensioner 2-pin connector in order to pull the operation harness out of the vehicle.
- (5) Close all the doors with the windows fully closed and put a cover over the vehicle to minimize report.
- (6) Separate the deployment harnesses as far from the vehicle as possible and connect to the terminals of the battery removed from the vehicle. Then deploy.

Caution

- 1) **Before operating the seat belt pre-tensioner, see that no one is in or near the vehicle.**
- 2) **The operation makes the insulator of the seat belt pre-tensioner very hot. Before handling the inflator, wait more than 30 minutes for cooling.**
- 3) **If the seat belt pre-tensioner fails to operate although the procedure is respected, do not go near the seat belt pre-tensioner. Contact your local distributor.**
- (7) Discard the operated seat belt pre-tensioner according to Disposal Procedure.

DEPLOYMENT OUTSIDE THE VEHICLE**Caution**

1. Carry out air bag deployment or seat belt pre-tensioner operation on large flat place at least 6 m away from any object or person.
 2. Avoid a strong wind weather when carrying out deployment or operation outside the vehicle. Ignite the air bag at a place upwind from the air bag module and the seat belt pre-tensioner even in a breeze weather.
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** before any further job after the disconnection of the battery cables.

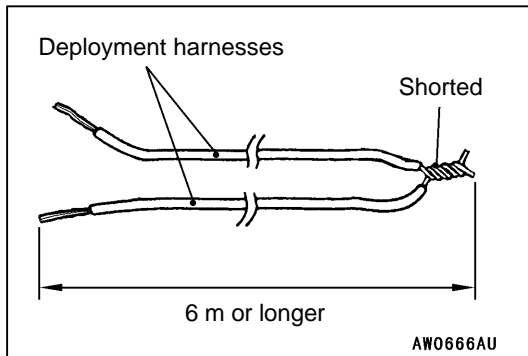
2. Deploy each air bag module as specified in the procedure that follows.

Driver's side air bag module

- (1) **Remove the driver's air bag module** from the vehicle.

Caution

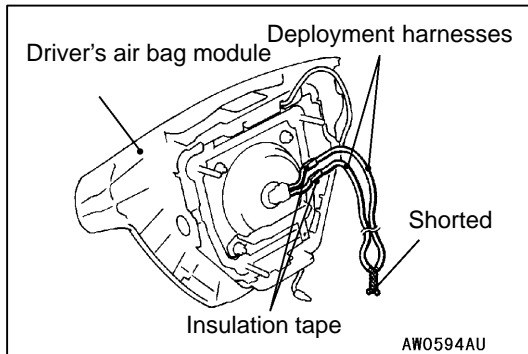
Once disconnected, both electrodes of the driver's air bag module connector short automatically to prevent accidental deployment caused by static etc. Still, in consideration of the accidental deployment, store the air bag module on flat place with deployment surface facing up. Also, do not put anything on it.



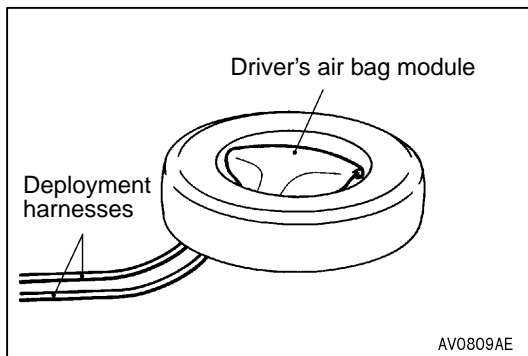
- (2) Prepare two wires longer than 6 m for deployment and connect the terminals in one end to short-circuit. This is to prevent accidental deployment caused by static etc.
- (3) Touch the vehicle's body with bare hands to discharge static in you.

Caution

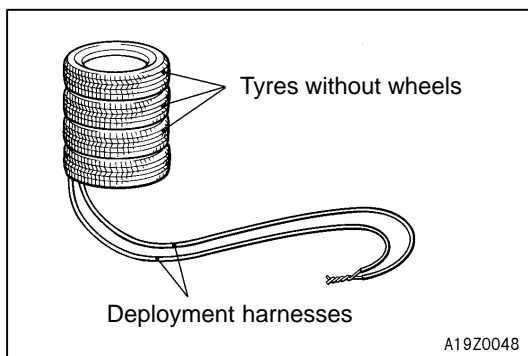
Never fail to do Step (3) in order to prevent accidental deployment caused by static.



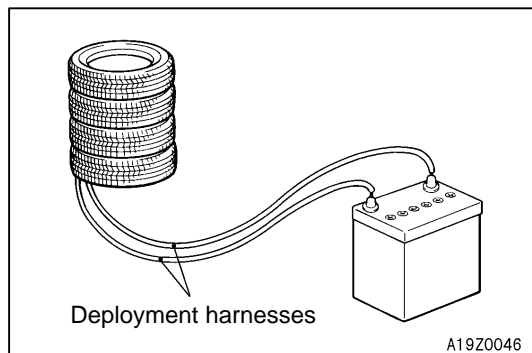
- (4) Using pliers, cut the driver's air bag module connector from the harnesses. Connect the deployment harnesses to each harness that has been cut and insulate the connections with plastic tape.



- (5) Install a nut to the bolt behind the driver's air bag module and tie thick wire there for securing.
- (6) Route the deployment harnesses connected to the driver's air bag module beneath an old tyre and wheel assembly. Then, using the wire tied to the bolt, secure the driver's air bag module to the tyre and wheel assembly with the deployment surface facing up.



- (7) Place three old tyres without wheels on the tyre secured with the driver's air bag module.



- (8) Separate the deployment harnesses as far from the driver's side air bag module as possible and connect to the terminals of the battery removed from the vehicle. Then deploy.

Caution

- 1) Before the deployment, see that no one is near around the driver's air bag module.
- 2) The deployment makes the inflator of the driver's air bag very hot. Before handling the inflator, wait more than 30 minutes for cooling.
- 3) If the driver's air bag module fails to deploy although the procedure is respected, do not go near the module. Contact your local distributor.

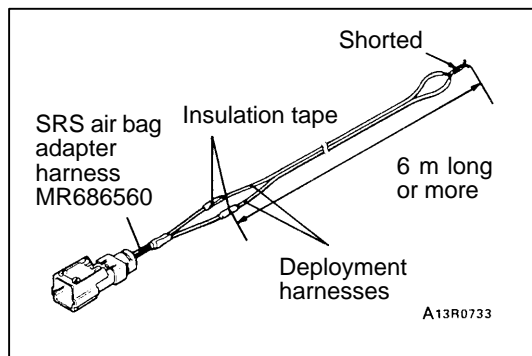
- (9) Discard the deployed air bag module as specified in [Deployed Air Bag Module Disposal Procedures](#).

Front passenger's air bag module

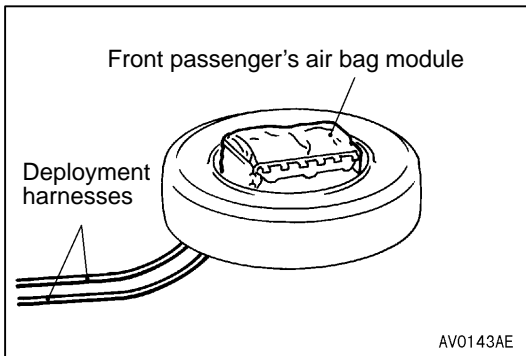
- (1) [Remove the front passenger's air bag module](#) from the vehicle.

Caution

Once disconnected, both electrodes of the front passenger's air bag module connector short automatically to prevent accidental deployment caused by static etc. Still, in consideration of the accidental deployment, store the air bag module on flat place with deployment surface facing up. Also, do not put anything on it.



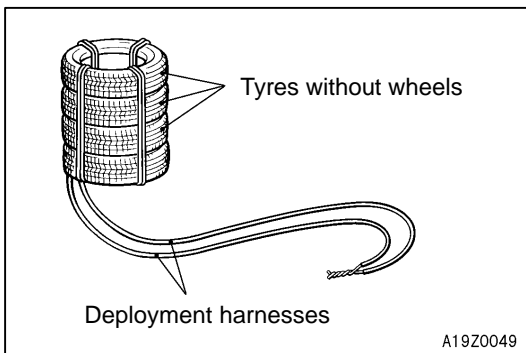
- (2) Connect deployment wires 6 m or longer with the SRS air bag adapter harness respectively. Insulate the connection with tape. Also, connect the other ends of the deployment harness each other to short, thereby preventing the front passenger's air bag from accidental deployment caused by static etc.



- (3) Route the SRS air bag adapter harness with the deployment harnesses beneath an old tyre and wheel assembly. Then, connect the harnesses to the front passenger's air bag module.
- (4) Route a thick wire through the holes in the front passenger's air bag module bracket. With the deployment surface facing up, secure the front passenger's air bag module to the old tyre and wheel assembly.

Caution

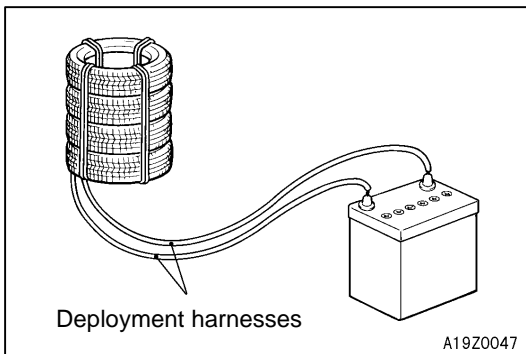
- 1) **The adapter harness below the wheel should be loose. If it is too tight, the reaction when the air bag deploys could damage the adapter harness.**
- 2) **Place the connector of the SRS air bag adapter harness so that it is not clamped by the tyre at deployment.**



- (5) Put three old tyres without wheels on the tyre secured to the front passenger's air bag module. Secure all the tyres with ropes (4 locations).

NOTE

The tyres must be bound because the passenger's air bag inflates more than the driver's air bag.



- (6) Disconnect the deployment harnesses as far from the front passenger's air bag module as possible and connect the harnesses to the battery removed from the vehicle.

Caution

- 1) Before the deployment, see that no one is near the front passenger's air bag module.
- 2) The deployment makes the inflator of the front passenger's air bag very hot. Before handling the inflator, wait more than 30 minutes for cooling.
- 3) If the front passenger's air bag module fails to deploy although the procedure is respected, do not go near the module. Contact your local distributor.

- (7) Discard the deployed air bag module as specified in [Deployed Air Bag Module Disposal Procedures](#).

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** before any further job after the disconnection of the battery cables.

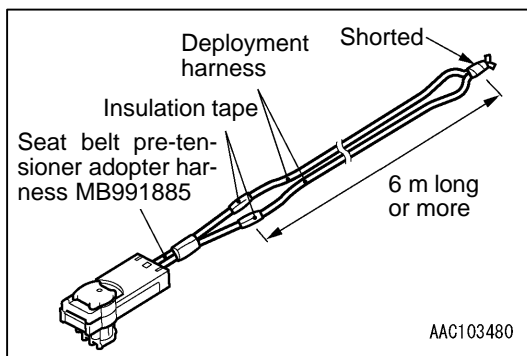
2. Carry out deployment of operation of the seat belt pre-tensioner according to the following procedure.

Seat belt pre-tensioner

- (1) [Remove the seat belt with pre-tensioner](#) from the vehicle.

Caution

Once disconnected, both electrodes of the seat belt pre-tensioner are short-circuited automatically to prevent accidental deployment caused by static etc. Still, in consideration of the accidental deployment, store the air bag module on flat place with deployment surface facing up. Also, do not put anything on it.



- (2) Prepare two operation harnesses longer than 6 m to get connected with pretensioner adapter harnesses (MB991885) and insulate the connections with tape. Furthermore, connect one end of the operation harnesses with the other to short-circuit.

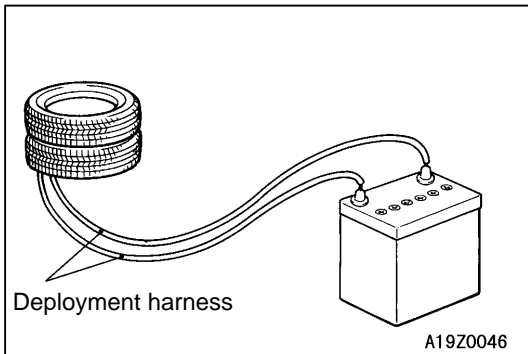
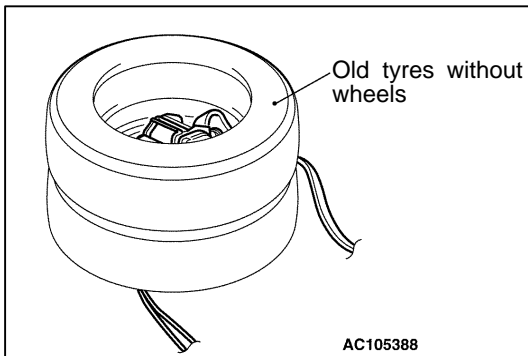
NOTE

Short-circuiting both ends of the operation harness prevents the pretensioner from accidental deployment caused by static, etc.

- (3) Route a thick wire through the holes in the seat belt retractor bracket to secure at the top of the wheel (convex part). (two locations)
- (4) Connect the seat belt pre-tensioner connector to the the SRS air bag adapter harness with the operation harness attached.
- (5) Pull out the seat belt outside the tyre.

Caution

Place the connector of the SRS air bag adapter harness so that it is not clamped by the tyres at deployment.



- (6) Place an old tyre (without a wheel) on the tyre, which the seat belt with pre-tensioner is secured on.

- (7) Disconnect the deployment harness as far from the seat belt pre-tensioner as possible and connect the both terminals of the battery removed from the vehicle. Then deploy.

Caution

- 1) Before the deployment, see that no one is near the seat belt pre-tensioner.
 - 2) Before handling the insulator, wait for a while for cooling.
 - 3) If the seat belt pre-tensioner fails to operate although the procedure is respected, do not go near the seat belt pre-tensioner. Contact your local distributor.
- (8) Discard the operated seat belt pre-tensioner according to Disposal Procedure.

DEPLOYED AIR BAG MODULE DISPOSAL PROCEDURES

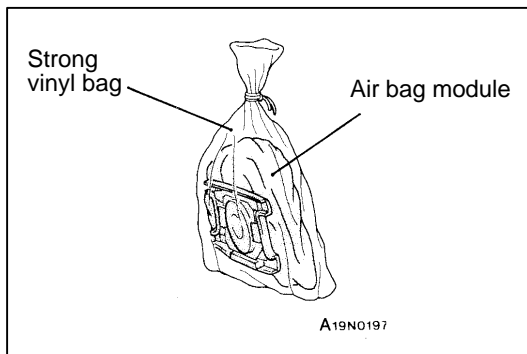
After the deployment, discard the air bag modules the same way as any other scrap parts, respecting local laws and/or legislation that may be in force.

However, note the following points at the disposal:

1. The inflators will be quite hot just after deployment. So, wait at least 30 minutes to cool it before handling.
2. Do not put water or oil on the air bags after deployment.
3. There may be, adhered to the deployed air bag modules, material that could irritate the eye and/or skin, so put on gloves and safety glasses when handling the deployed air bag module.

Caution

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. Discard the air bag module in a vinyl bag tightly sealed.
5. Be sure to always wash your hands after completing this operation.