

GENERAL

OUTLINE OF CHANGES

- Due to the changes on the circuit diagrams, the troubleshooting procedures have been changed.
- Due to the changes on the SRS-ECU, the troubleshooting procedures have been changed.
- Due to the addition of an auto-cruise control system, the service procedure has been changed. <Vehicles with auto-cruise control>
- Due to the addition of a steering shift switch, the service procedure has been changed. <VR-X>

TROUBLESHOOTING

The following items have been changed. The other items are the same as before.

INSPECTION CHART FOR DIAGNOSIS CODES

Code No.	Diagnosis item
26	Driver's side pre-tensioner (squib) system
27	Driver's side pre-tensioner (squib) system
39	Airbags deployed simultaneously
46*	Improperly installed SRS-ECU
66, 67	Driver's side pre-tensioner (squib) system

NOTE

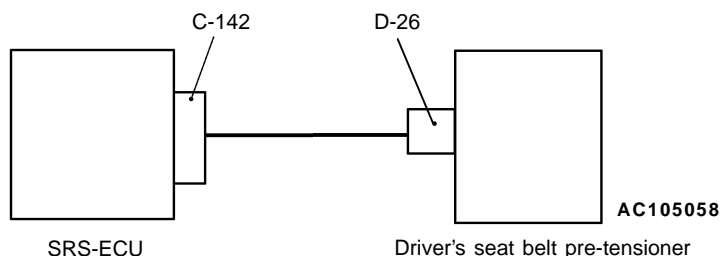
*: If the trouble(s) are removed, the SRS warning lamp will go out with diagnosis code history automatically erased.

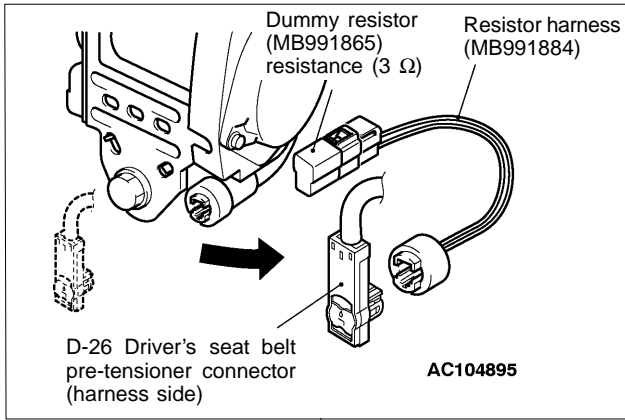
INSPECTION PROCEDURE CLASSIFIED BY DIAGNOSIS CODE

Code No.26 Driver's seat belt pre-tensioner (squib) system	Possible cause
This code is set 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 spring 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 spring (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 spring 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 set again after erasing the memory. If the diagnosis code is not set, the above-mentioned code is set 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 set again after erasing the memory.
- Is code No.26 set?

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.

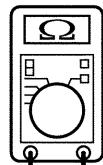
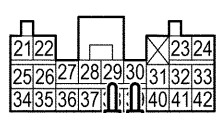
- Continuity between 29 and 30

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

C-142 connector



Y1724AU

OK

Replace SRS-ECU.

Replace driver's seat belt pre-tensioner.

NG

Check the following connectors: C-143, C-142, D-26

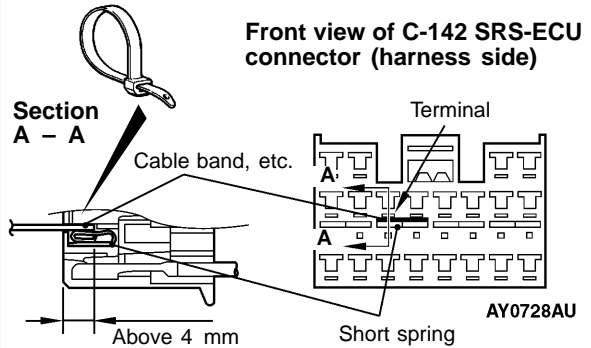
OK

Check trouble symptoms.

NG

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

Illustration A



Code No.27 Driver's seat belt pre-tensioner (squib) system	Possible cause
This code is set 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 contact Open in the driver's seat belt pre-tensioner (squib) circuit SRS-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 set again after erasing the memory.

Is code No.27 set?

<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.
- 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

YES

Replace SRS-ECU.

NO

Replace driver's seat belt pre-tensioner.

NG

Check the following connectors: C-143, 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

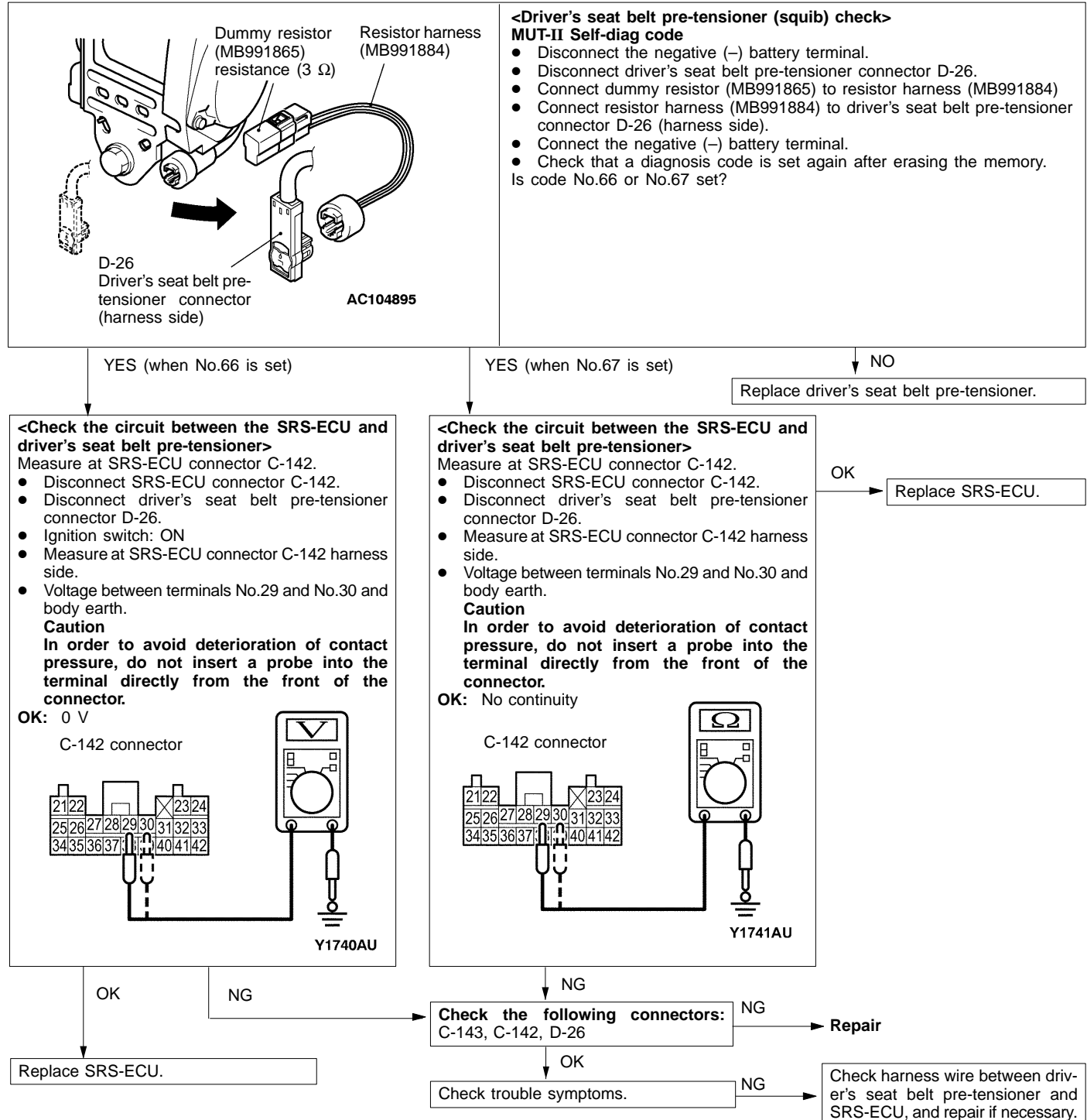
Code No.39 Airbags deployed simultaneously	Probable cause
This code is set when the airbags have already deployed. If this code is set before the airbags have deployed, an internal failure may have occurred in the SRS-ECU.	<ul style="list-style-type: none"> Malfunction of SRS-ECU

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

Code No.46 Improperly installed SRS-ECU	Possible cause
This diagnosis code is set when an SRS-ECU, designed only for the driver's air bag, is installed on the vehicle, which has both driver's and passenger's air bags.	<ul style="list-style-type: none"> Malfunction of SRS-ECU

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

Code No.66 Driver's seat belt pre-tensioner (squib) system (short-circuited to power supply)	Possible cause
Code No.67 Driver's seat belt pre-tensioner (squib) system (short-circuited to earth)	
This code is set 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).	<ul style="list-style-type: none"> • 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



AIR BAG MODULES AND CLOCK SPRING

Caution

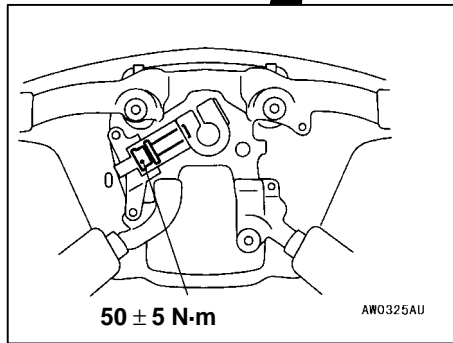
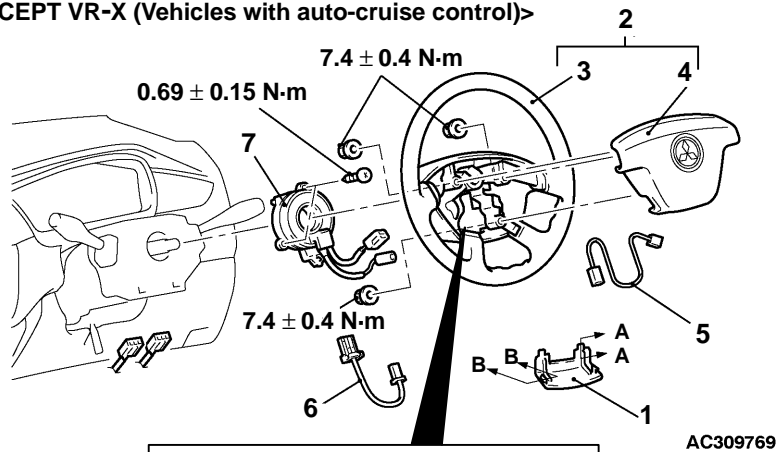
1. Disconnect the negative (–) battery terminal and wait for 60 seconds or more before starting work. Also, the disconnected battery terminal should be insulated with tape.
2. Never attempt to disassemble or repair the air bag modules and clock spring. If faulty, just replace with new one(s).
3. Do not 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

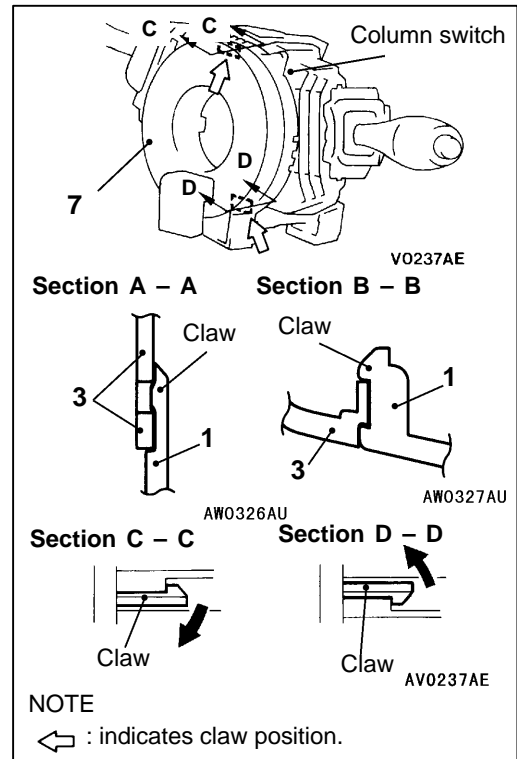
Pre-removal Operation

Disconnect the Negative (–) Battery Terminal.

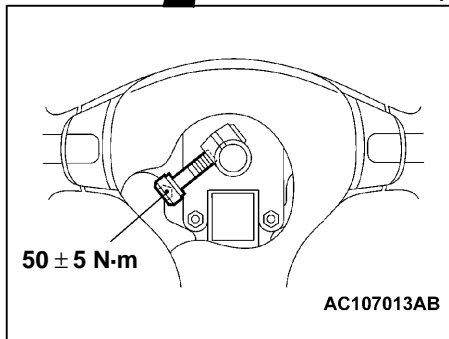
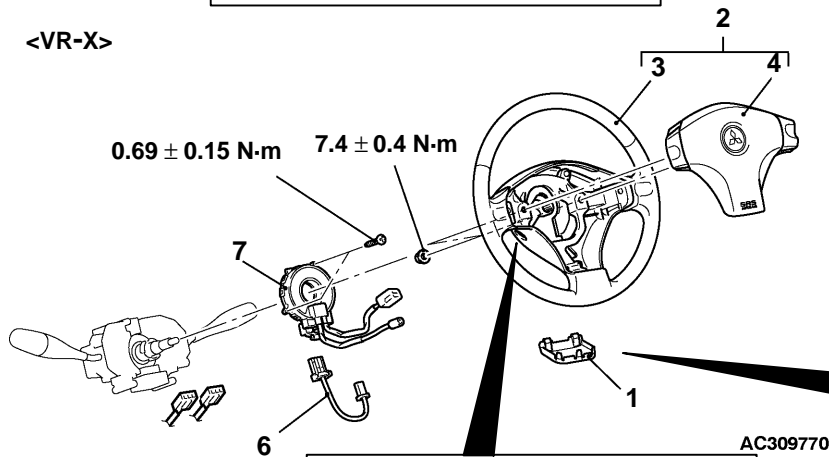
<EXCEPT VR-X (Vehicles with auto-cruise control)>



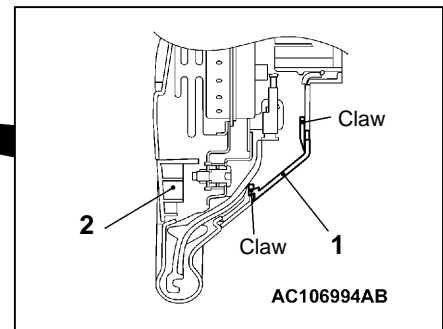
AC309769



<VR-X>



AC309770



AC107013AB

AC106994AB

Driver's air bag module removal steps

◀A▶
◀B▶

1. Cover
2. Steering wheel and air bag module assembly
3. Steering wheel
4. Driver's air bag module
5. Auto-cruse control switch sub harness

◀C▶

Clock spring removal steps

◀A▶
◀B▶

1. Cover
2. Steering wheel and air bag module assembly
6. Clock spring sub harness
 - Lower column cover
7. Clock spring

◀F▶

◀D▶

Driver's air bag module installation steps

▶A▶

- Pre-installation inspection
- 5. Auto-cruse control switch sub harness
- 4. Driver's air bag module
- 3. Steering wheel

▶C▶

2. Steering wheel and air bag module assembly
 1. Cover
 - Negative (–) battery terminal connection

▶D▶

- Post-installation check

Clock spring installation steps

▶A▶

▶B▶

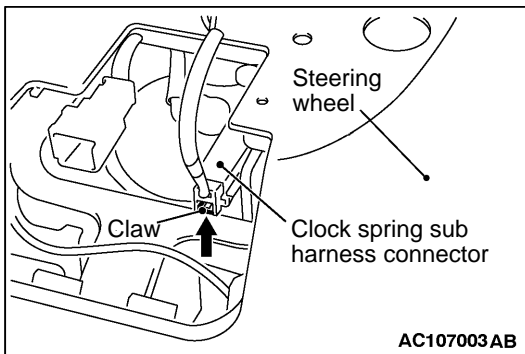
- Pre-installation check
- 7. Clock spring
- Lower column cover

▶C▶

6. Clock spring sub harness
2. Steering wheel and air bag module assembly
 1. Cover
 - Negative (–) battery terminal connection

▶D▶

- Post-installation inspection



REMOVAL SERVICE POINTS

The procedures other than below are the same as before.

◀F▶ CLOCK SPRING SUB HARNESS REMOVAL

Pressing the claw of the clock spring sub harness connector towards the arrowed direction, disconnect the connector.