GROUP 52B

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

CONTENTS

GENERAL DESCRIPTION **52B-3**

SERVICE PRECAUTIONS **52B-16**

SRS AIR BAG DIAGNOSIS **52B-18**
- INTRODUCTION TO DIAGNOSIS 52B-18
- TROUBLESHOOTING STRATEGY 52B-19
- DIAGNOSTIC FUNCTION 52B-19
- SRS WARNING LIGHT CHECK 52B-20
- DIAGNOSTIC TROUBLE CODE CHART . . 52B-21
- TROUBLE SYMPTOM CHART 52B-23
- DIAGNOSTIC TROUBLE CODE PROCEDURES 52B-24
- SYMPTOM PROCEDURES 52B-150

SPECIAL TOOLS **52B-157**

TEST EQUIPMENT **52B-158**

POST-COLLISION DIAGNOSIS **52B-159**

INDIVIDUAL COMPONENT SERVICE **52B-162**

FRONT IMPACT SENSORS **52B-163**
- REMOVAL AND INSTALLATION 52B-163
- INSPECTION 52B-165

Continued on next page

⚠ WARNING
Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

⚠ WARNING
- ***Carefully read and observe the information in the SRS SERVICE PRECAUTIONS prior to any service.***
- ***For information concerning diagnosis or maintenance, always observe the procedures in the SRS Diagnosis or the SRS Maintenance sections, respectively.***
- ***If any SRS components are removed or replaced in connection with any service procedures, be sure to follow the procedures in the INDIVIDUAL COMPONENT SERVICE section for the comportments involved.***

SRS CONTROL UNIT (SRS-ECU). . . 52B-166
REMOVAL AND INSTALLATION 52B-166
INSPECTION 52B-168

AIR BAG MODULE(S) AND CLOCK SPRING 52B-168
REMOVAL AND INSTALLATION 52B-168
INSPECTION 52B-175

SEAT BELTS WITH PRE-TENSIONER 52B-176
REMOVAL AND INSTALLATION 52B-176
INSPECTION. 52B-180

AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES 52B-180

SPECIFICATIONS 52B-193
FASTENER TIGHTENING SPECIFICATIONS. 52B-193

GENERAL DESCRIPTION

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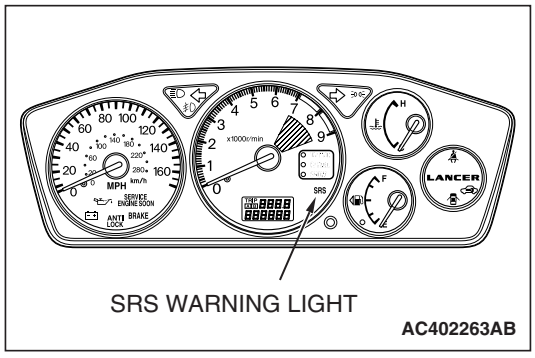
⚠ ***WARNING***

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).

The Supplemental Restraint System (SRS) and seat belt with pre-tensioner is designed to supplement the driver's and passenger's (front) seat belts to help reduce the risk or severity of injury to the driver and front passenger by activating and deploying both front air bags in certain frontal collisions.

The SRS consist of driver's and passenger's (front) air bag modules, SRS air bag control unit (SRS-ECU), front impact sensors, SRS warning light, and clock spring. Air bags are located in the center of the steering wheel and above the glove box. Each air bag is made up of 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 light on the instrument panel indicates the operational status of the SRS. The clock spring is installed in the steering column. The seat belt pre-tensioner is built into the driver's and passenger's (front) seat belt retractor. The front impact sensor is assembled on the headlight support panel to monitor collision upon frontal impact.

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.



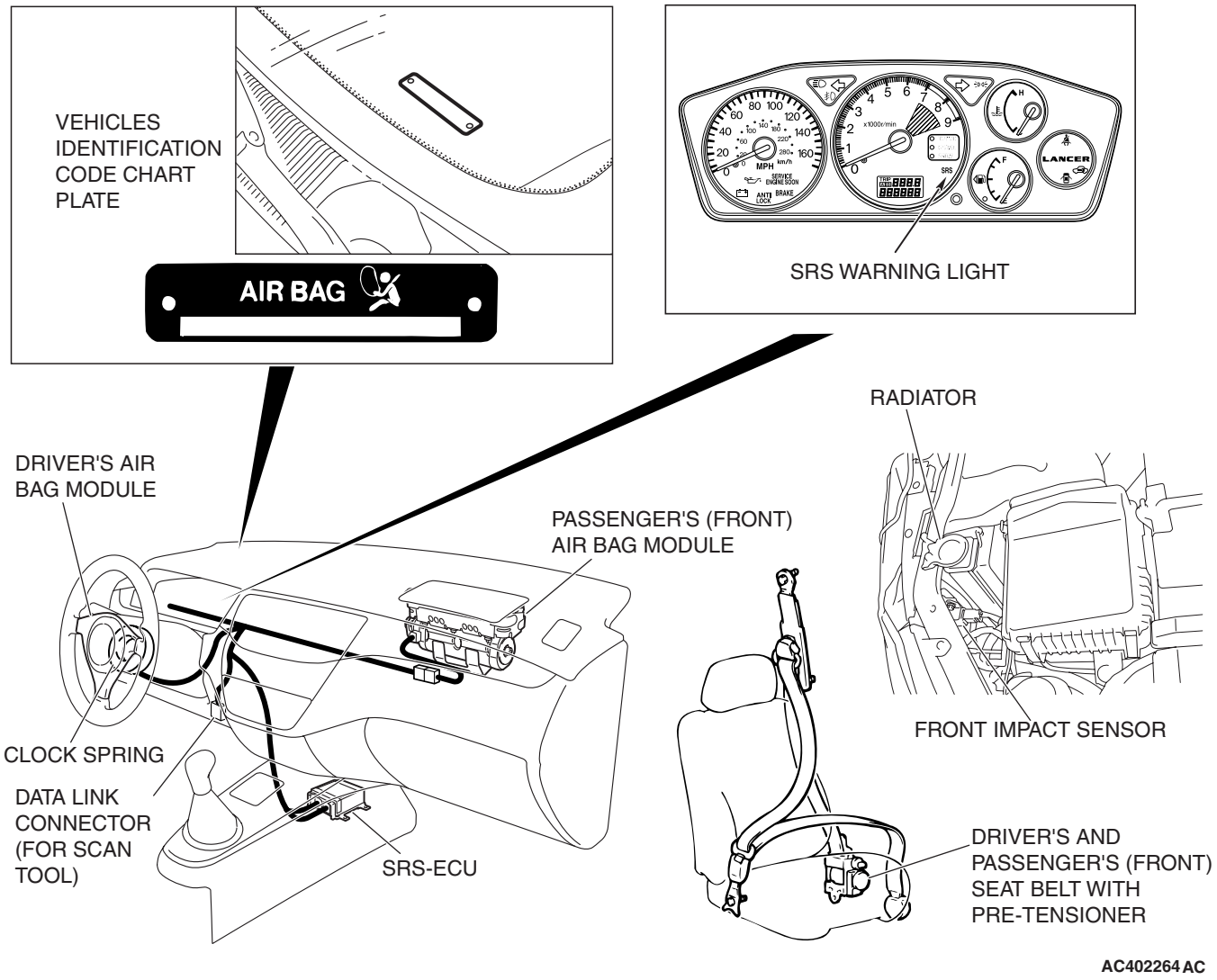
ON-BOARD DIAGNOSTIC/SRS WARNING LIGHT FUNCTION

The diagnosis unit monitors the SRS system and stores data concerning any detected faults in the system. When the ignition switch is in "ON" or "START" position, the SRS warning light should illuminate for about seven seconds and then turn "OFF". That indicates that the SRS system is in operational order. If the SRS warning light does any of the following, immediate inspection by an authorized dealer is needed.

1. The SRS warning light does not illuminate as described above.
2. The SRS warning light stays on for more than seven seconds.
3. The SRS warning light illuminates while driving.

If a vehicle's SRS warning light is in any of these three conditions when brought in for inspection, the SRS system must be inspected, diagnosed and serviced in accordance with this manual.

CONSTRUCTION DIAGRAM

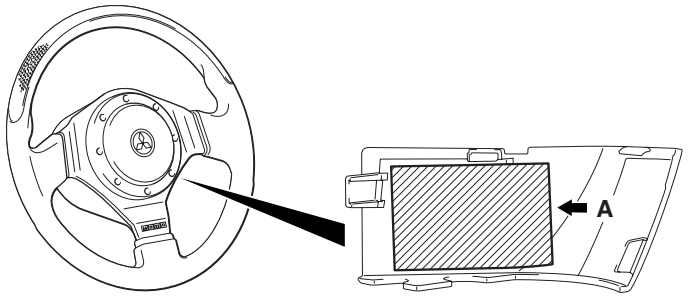


NOTE: This construction diagram shows the general view of the SRS components. For details, refer to "Schematic", (P.52B-7)"Configuration Diagrams" (P.52B-10)and "Circuit Diagram" (P.52B-11).

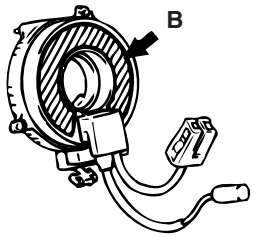
WARNING/CAUTION LABELS

A number of caution labels related to the SRS are found in the vehicle, as shown in the following illustration. Follow label instructions when servicing SRS. The label F is not to be removed except by owner. If the other labels are dirty or damaged, replace them.

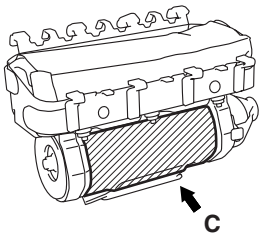
CLOCK SPRING



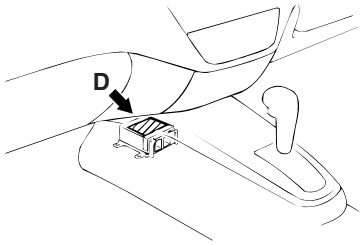
COVER



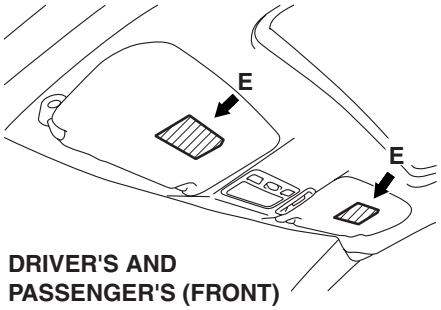
PASSENGER'S (FRONT) AIR BAG MODULE



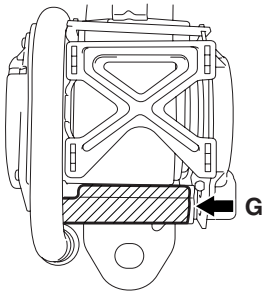
SRS-ECU



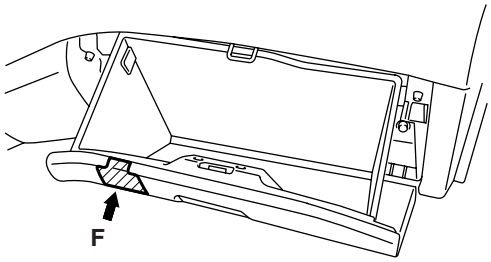
SUN VISOR



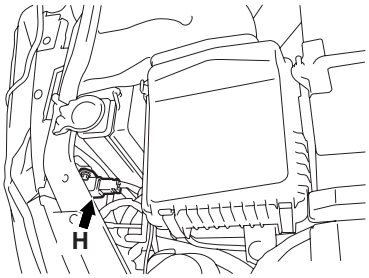
DRIVER'S AND PASSENGER'S (FRONT) SEAT BELT WITH PRE-TENSIONER



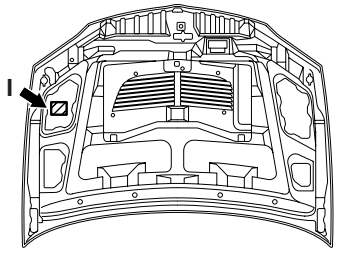
GLOVE BOX



FRONT IMPACT SENSOR



HOOD



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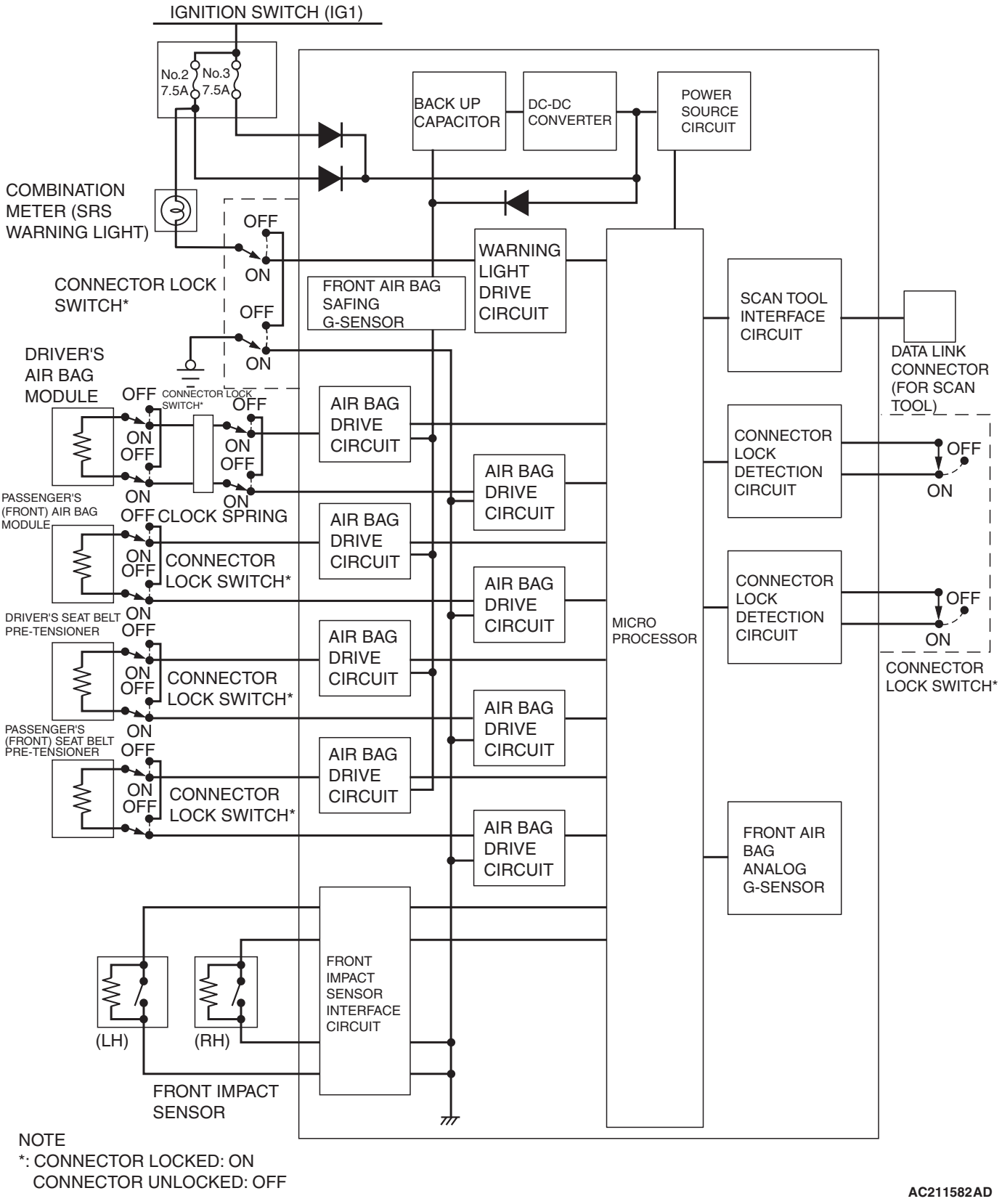
LABEL CONTENTS	
A	WARNING: SRS BEFORE REPLACING STEERING WHEEL, READ SERVICE MANUAL. THIS AIR BAG MODULE CANNOT BE REPAIRED. DO NOT DISASSEMBLE OR TAMPER.
B	CAUTION: SRS CLOCK SPRING THIS IS NOT A REPAIRABLE PART. IF DEFECTIVE REPLACE ENTIRE UNIT ACCORDING TO THE SERVICE MANUAL INSTRUCTIONS. TO RE-CENTER: ROTATE CLOCKWISE UNTIL TIGHT. THEN ROTATE IN OPPOSITE DIRECTION ROUGHLY 3/4 TURNS AND ALIGN ARROWS >><<.
C	WARNING FLAMMABLE/EXPLOSIVE SRS AIR BAG MODULE TO AVOID SERIOUS INJURY: • DO NOT REPAIR, DISASSEMBLE OR TAMPER. • AVOID CONTACT WITH FLAME OR ELECTRICITY. • DO NOT DIAGNOSIS/USE NO TEST EQUIPMENT OR PROBES. • STORE BELOW 200° F (93° C). • BEFORE DOING ANY WORK INVOLVING MODULE, READ SERVICE MANUAL FOR IMPORTANT FURTHER DATA.
D	CAUTION: DO NOT DISASSEMBLE OR DROP IF DEFECT REFER TO SERVICE MANUAL.
E V0037AA	WARNING DEATH or SERIOUS INJURY can occur • Children 12 and under can be killed by the air bag. • The BACK SEAT is the SAFEST place for children. • NEVER put a rear-facing child seat in the front. • Sit as far back as possible from the air bag. • ALWAYS use SEAT BELTS and CHILD RESTRAINTS.
F	WARNING Children can be KILLED or INJURED by Passenger air bag. The back seat is the safest place for children 12 and under. Make sure all children use seat belts or child seat. Not to be removed except by owner.
G	DANGER: SEAT BELT PRETENSIONER CAUTION: THIS ASSEMBLY CONTAINS AN EXPLOSIVE INITIATOR FLAMMABLE MATERIAL TO PREVENT PERSONAL INJURY • DO NOT IMPACT, DISMANTLE OR INSTALL IT INTO ANOTHER VEHICLE. • SERVICE OR DISPOSE OF IT AS DIRECTED IN THE REPAIR MANUAL.
H	CAUTION: DO NOT DISASSEMBLE OR DROP.
I	WARNING THIS VEHICLE HAS AN AIR BAG SYSTEM. REFER TO SERVICE MANUAL BEFORE SERVICING OR DISASSEMBLING UNDERHOOD COMPONENTS. READ THE "SRS" SECTION OF MANUAL FOR IMPORTANT INSTRUCTIONS. IMPROPER SERVICE PROCEDURES CAN RESULT IN THE AIR BAG FIRING OR BECOMING INOPERATIVE, POSSIBLY LEADING TO INJURY.

SCHEMATIC



NOTE
*: CONNECTOR LOCKED: ON
CONNECTOR UNLOCKED: OFF

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SRS AIR BAG SPECIAL CONNECTOR

To enhance the system reliability, a connector lock switch is integrated in the SRS-ECU connector, the air bag module connectors, the clock spring connector, the seat belt pretensioner connectors (black connector "A" shown in the illustration below).

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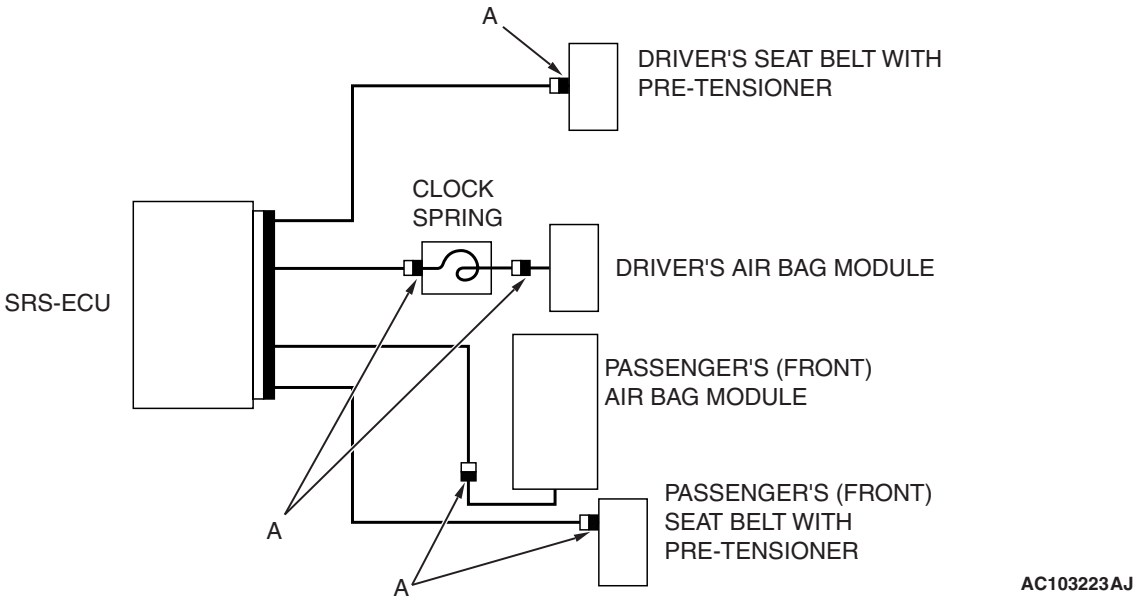
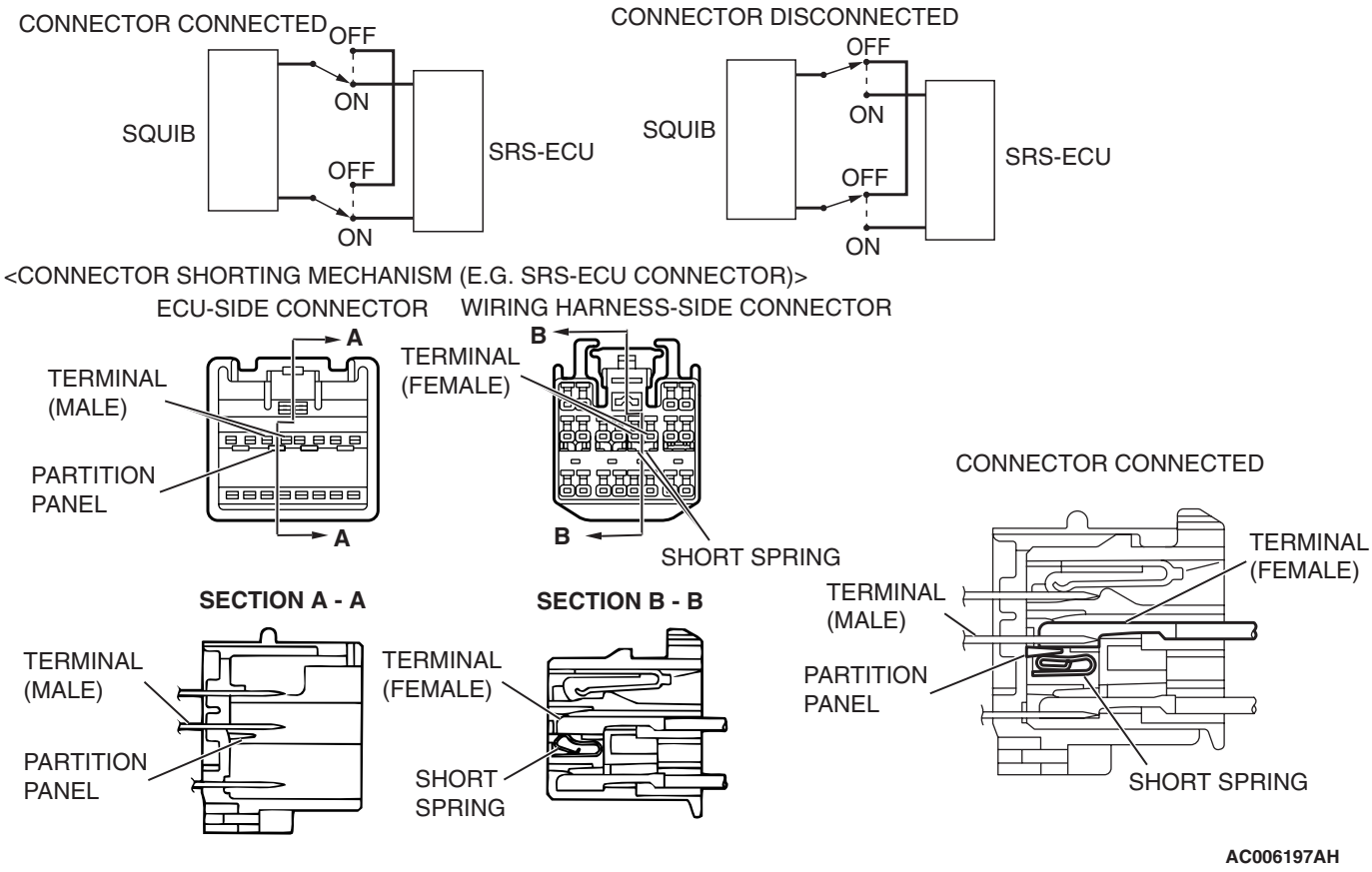


SQUIB CIRCUIT CONNECTOR LOCK SWITCH

The switch is a mechanism that shorts the power supply terminal to the ground terminal automatically in the air bag squib circuit when the connector is disconnected. A "short" spring is integrated inside the connector. This spring prevents static electricity from flowing to the squib by shorting the power supply terminal to the ground terminal (i.e. there is no potential difference between the two terminals).

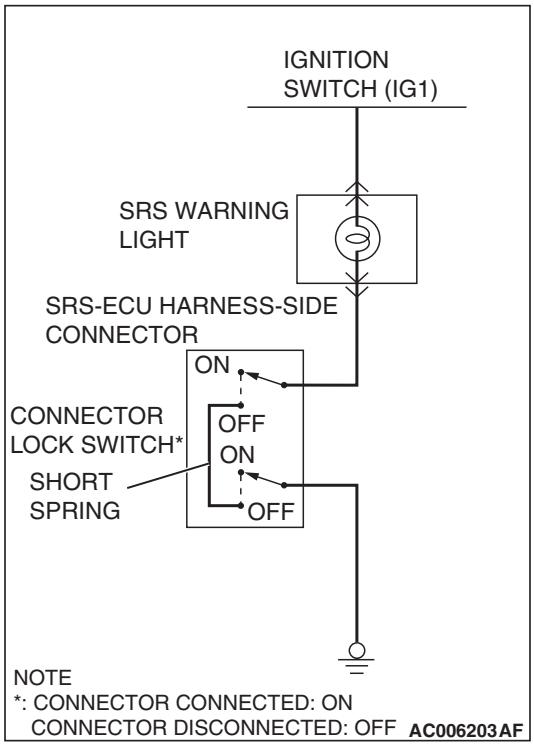
⚠ CAUTION

When the connector is disconnected, there will be short circuit between the terminals. This is not a fault.



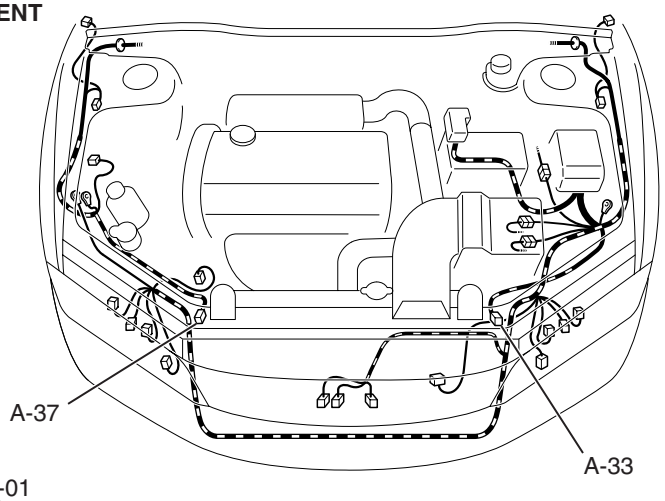
WARNING LIGHT CIRCUIT CONNECTOR LOCK SWITCH

The switch is a mechanism that shorts the power supply terminal to the ground terminal automatically in the warning light circuit when the connector is disconnected. Its structure is similar to the squib circuit connector shorting mechanism.

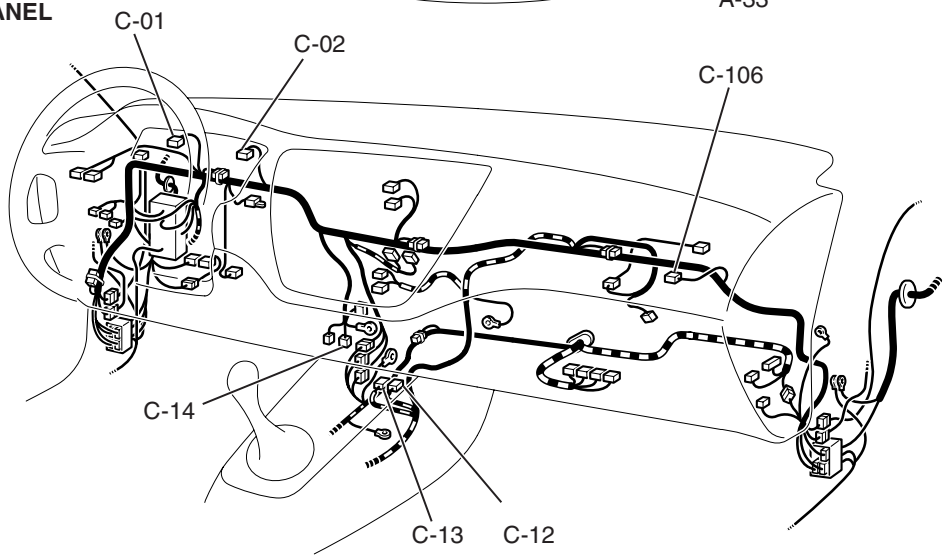


CONFIGURATION DIAGRAMS

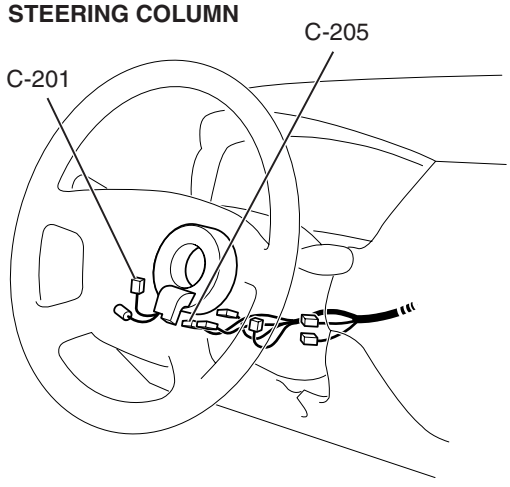
ENGINE COMPARTMENT



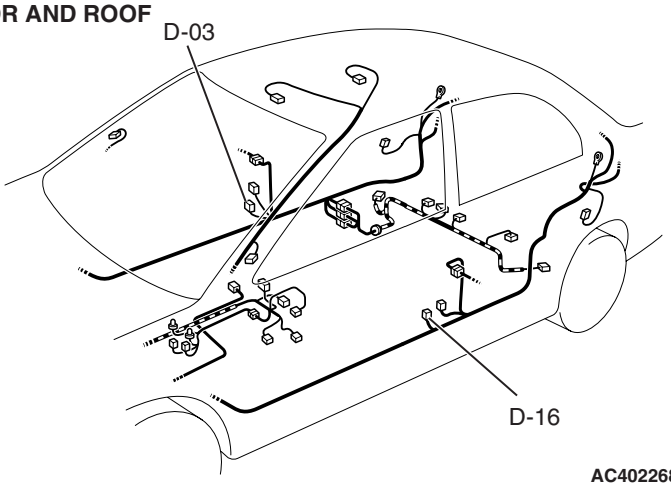
DASH PANEL



STEERING COLUMN



FLOOR AND ROOF



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A-33	FRONT IMPACT SENSOR (LH)	C-106	AIR BAG MODULE (SQUIB) <PASSENGER'S SIDE>
A-37	FRONT IMPACT SENSOR (RH)	C-201	AIR BAG MODULE (SQUIB) <DRIVER'S SIDE>
C-01	COMBINATION METER	C-205	CLOCK SPRING
C-02	COMBINATION METER	D-03	SEAT BELT PRETENSIONER (RH)
C-12	SRS-ECU	D-16	SEAT BELT PRETENSIONER (LH)
C-13	SRS-ECU		
C-14	DATA LINK CONNECTOR		

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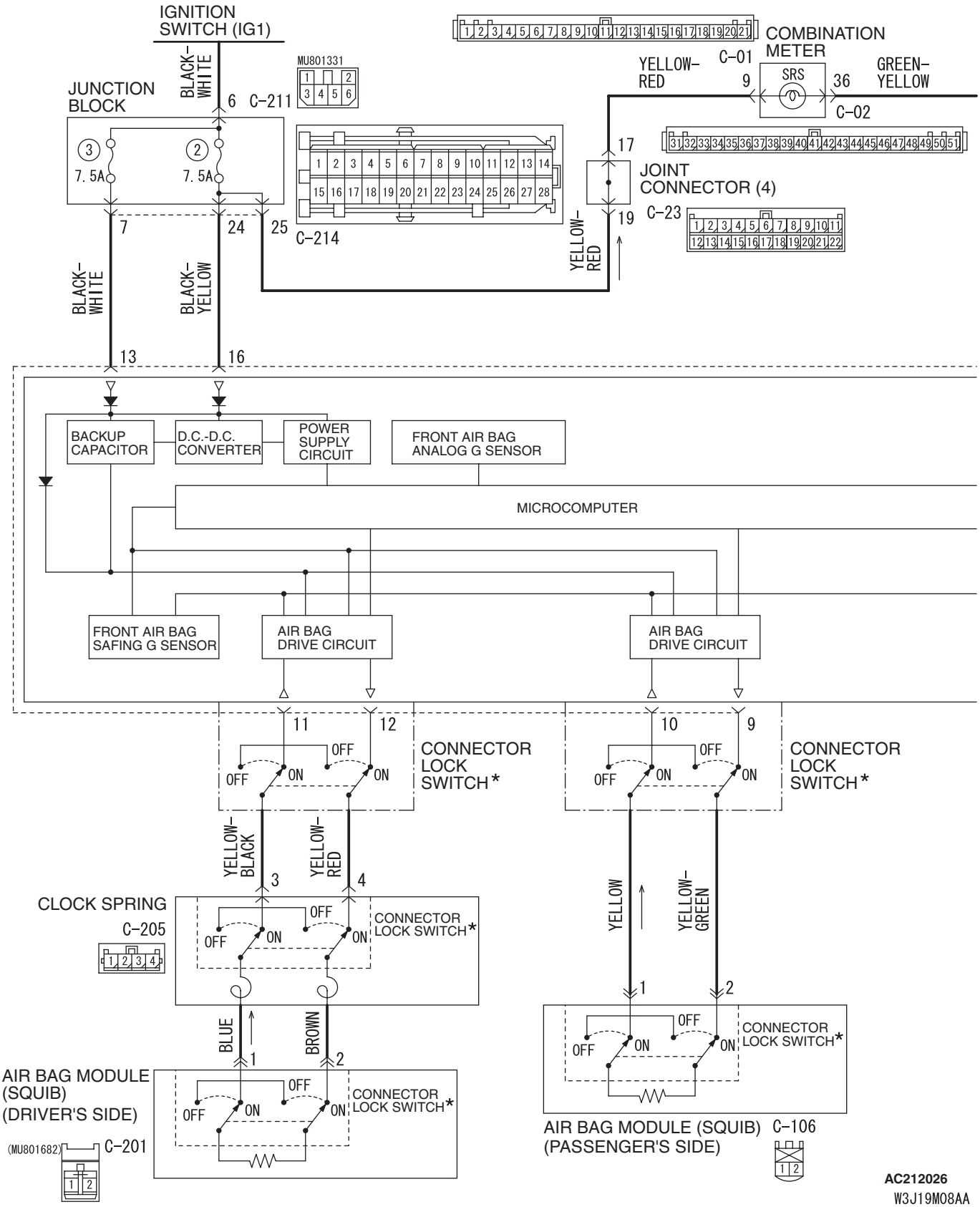
CIRCUIT DIAGRAM

⚠ WARNING

- ***Do not repair, splice, or modify the SRS wiring (except for specific repairs to the instrument panel wiring harness and the floor wiring harness shown on P.52B-16): replace the wiring if necessary, after reading and following all precautions and procedures in this manual.***
- ***Do not use an analog ohmmeter to check the SRS wiring or components; use only the special tools (refer to P.52B-157) and a digital multi-meter (refer to P.52B-158).***



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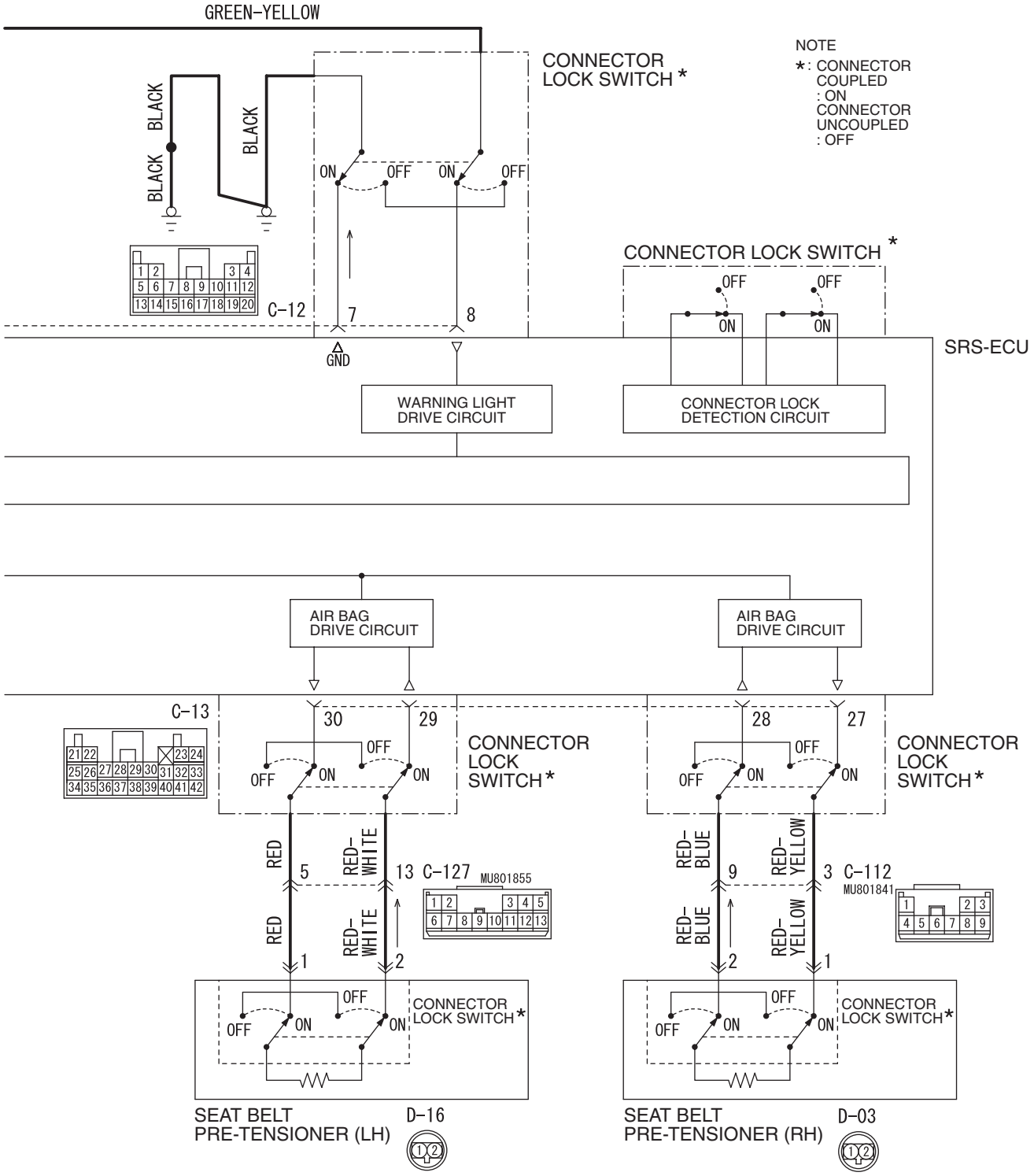

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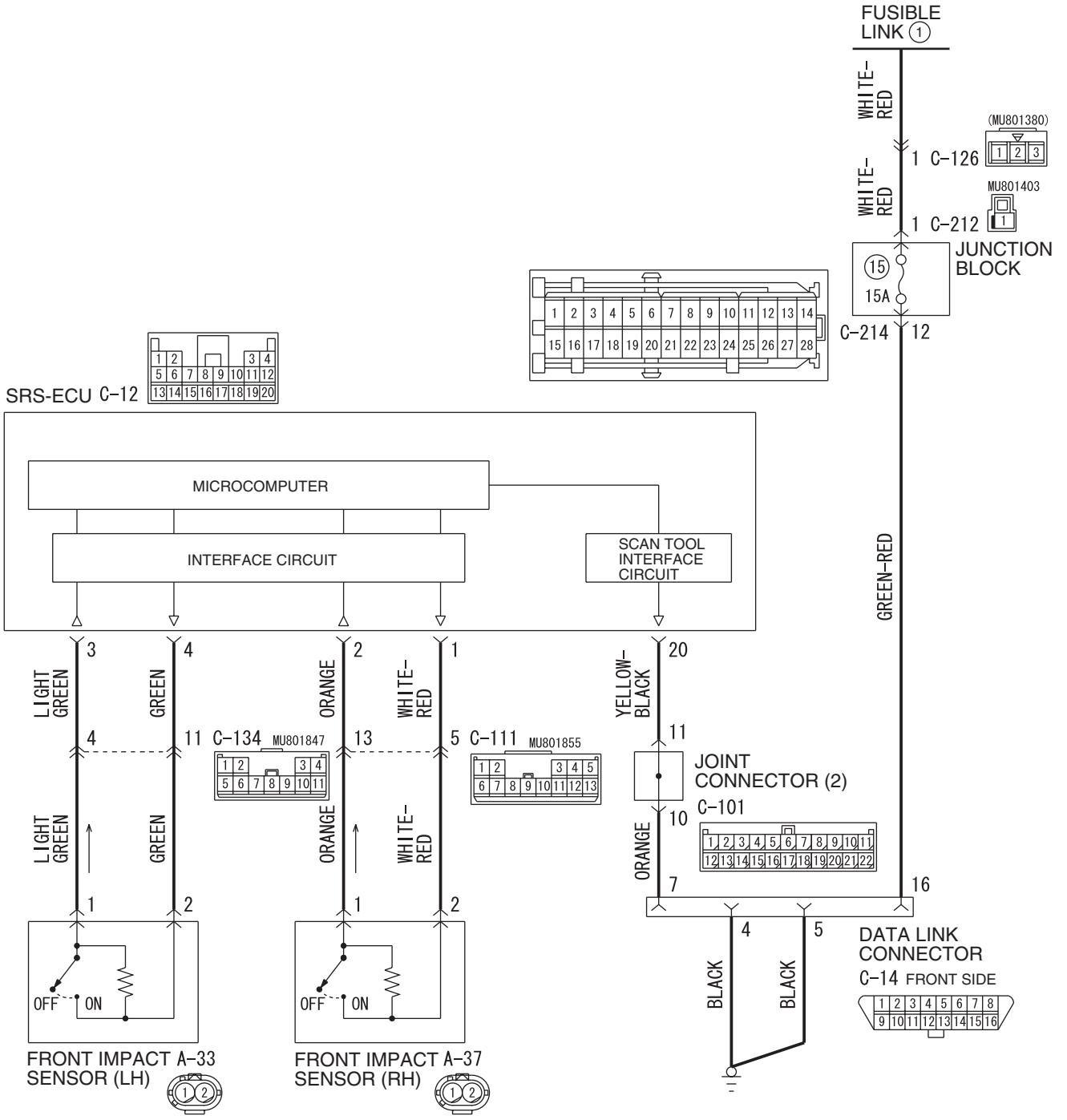

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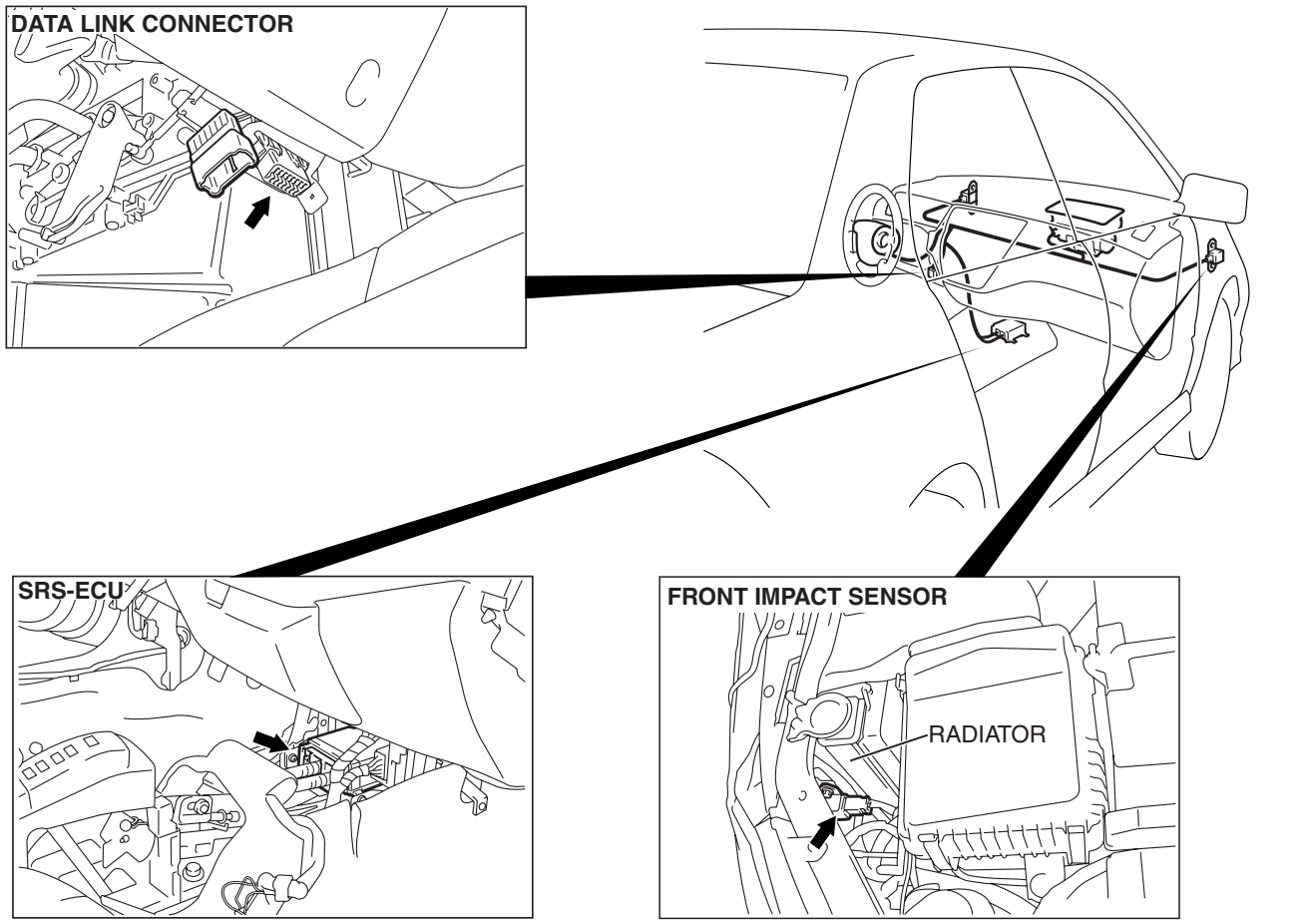
COMPONENT LOCATION



NOTE: The illustration above shows the front impact sensor (LH). The position of the side impact sensor (RH) is symmetrical to this.

SERVICE PRECAUTIONS

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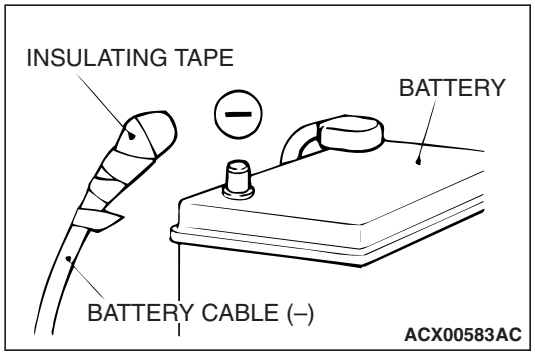
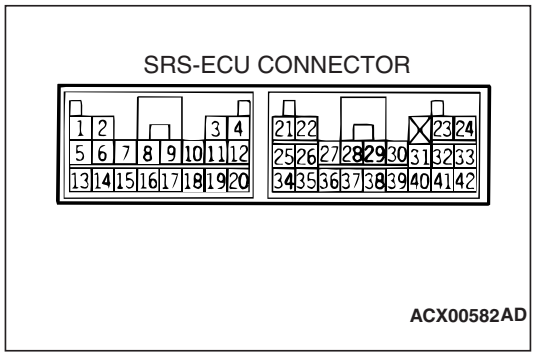


⚠ DANGER

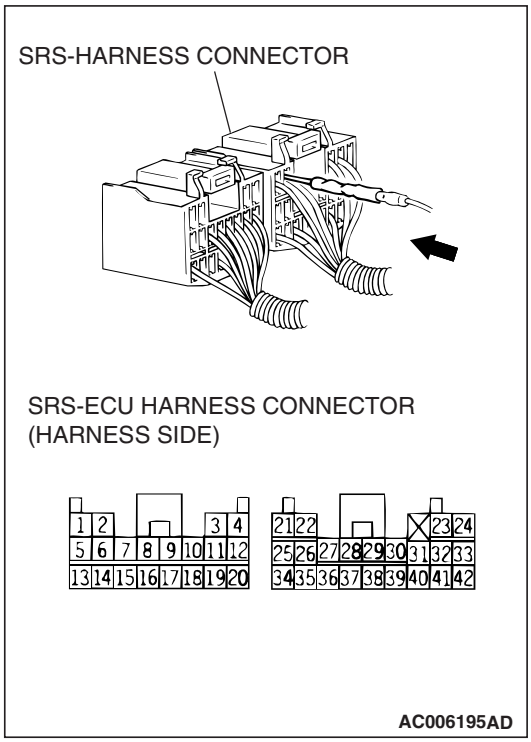
- ***In order to avoid injury to yourself or others from accidental deployment of the air bag during servicing, read and carefully follow all the precautions and procedures described in this manual.***
- ***After disconnecting the battery cable, wait 60 seconds or more before proceeding with the following work. The SRS system is designed to retain enough voltage to deploy the air bag for a short time even after the battery has been disconnected, so serious injury may result from unintended air bag deployment if work is done on the SRS system immediately after the battery cables are disconnected.***

⚠ WARNING

- ***Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.***
- ***Do not use any electrical test equipment on or near the SRS components, except those specified on P.52B-158.***
- ***Never Attempt to Repair the Following Components: SRS-ECU, Clock Spring, Air Bag Module, Side Impact Sensor, Seat Belt with Pre-tensioner. If any of these components are diagnosed as faulty, they should only be replaced, in accordance with the INDIVIDUAL COMPONENT SERVICE procedures in this manual, starting on P.52B-162.***
- ***Do not attempt to repair the wiring harness connectors of the SRS. If any of the connectors are diagnosed as faulty, replace the wiring harness. If the wires are diagnosed as faulty, replace or repair the wiring harness according to the following table.***



SRS-ECU TERMINAL NO.	DESTINATION OF HARNESS	CORRECTIVE ACTION
1, 2	Instrument panel wiring harness → Front wiring harness → Front impact sensor (RH)	Correct or replace each wiring harness.
3, 4	Instrument panel wiring harness → Front wiring harness → Front impact sensor (LH)	Correct or replace each wiring harness.
7	Instrument panel wiring harness → Ground	Correct or replace the body wiring harness.
8	Instrument panel wiring harness →SRS warning light	Correct or replace each wiring harness.
9, 10	Instrument panel wiring harness →Air bag module (Front passenger's side)	Correct or replace the body wiring harness.
11, 12	Instrument panel wiring harness → Clock spring →Air bag module (Driver's side)	Correct or replace each wiring harness. Replace the clock spring.
13	Instrument panel wiring harness → Junction block (fuse No.3)	Correct or replace the body wiring harness.
16	Instrument panel wiring harness → Junction block (fuse No.2)	Correct or replace the body wiring harness.
20	Instrument panel wiring harness → Data link connector	Correct or replace the body wiring harness.
27, 28	Floor wiring harness (RH) → Seat belt pre-tensioner (RH)	Connector or replace each wiring harness.
29, 30	Floor wiring harness (LH) → Seat belt pre-tensioner (LH)	Connector or replace each wiring harness.



⚠ WARNING

- ***Inspection of the SRS-ECU connector harness should be carried out by the following procedure. Insert the backprobing tool into connector from harness side (rear side), and connect the tester to backprobing tool. If any tool other than backprobing tool is used, it may cause damage to the harness and other components. Furthermore, measurement should not be carried out by touching the backprobing tool directly against the terminals from the front of the connector. The terminals are plated to increase their conductivity, so if they are touched directly by the backprobing tool, the plating may break, which will decrease reliability.***
- ***The SRS components and seat belt with pre-tensioner should not be subjected to heat, so removed the front impact sensor, SRS-ECU, air bag modules, clock spring, and seat belt pre-tensioner before drying or baking the vehicle after painting.***
  - ***Front impact sensor, SRS-ECU, air bag module, clock spring: 93°C (200°F) or more***
  - ***Seat belt with pre-tensioner 90°C (194°F) or more***
- ***After servicing the SRS system, check the warning light operation to make sure that the system functions properly (Refer to P.52B-3).***
- ***Make certain that the ignition switch is "LOCK" (OFF) position when the scan tool is connected or disconnected.***

SRS AIR BAG DIAGNOSIS

INTRODUCTION TO DIAGNOSIS

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The SRS system is controlled by the SRS-ECU. The SRS-ECU judges how severe a collision is by detecting signals from the left and right front impact sensors, front air bag analog G-sensor and front air bag safing G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the safing G-sensor is on, the SRS air bag will inflate. The SRS warning light in the combination meter alerts a malfunction of the SRS system. If the following symptoms occur even when the vehicle has not been in a collision, there may be a malfunction in the SRS system.

- The SRS warning light does not go off within approximately seven seconds after the ignition switch has been turned "ON".
- The SRS warning light does not illuminate when the ignition switch is turned "ON".

Refer to the Post-collision Diagnosis when inspecting and servicing the vehicle that has been in a collision (Refer to P.52B-159).

TROUBLESHOOTING STRATEGY

M1524003100665

Use these steps to plan your diagnostic strategy. If you follow them carefully, you will be sure that you have exhausted all of the possible ways to find a SRS fault.

1. Gather information about the problem from the customer.
2. Verify that the condition described by the customer exists.
3. Check the vehicle for any SRS diagnostic trouble codes (SRS DTC).
4. If you cannot verify the condition but there are no SRS DTCs, the malfunction is intermittent. Refer to INTRODUCTION, How to use Troubleshooting –Inspection Service Points – How to Cope With Intermittent Malfunctions P.00-13.
5. If there is a SRS DTC, record the code number, then erase the code from vehicle memory using scan tool MB991958.
6. Recreate the SRS DTC set conditions to see if the same SRS DTC will be set again.
   - If the same SRS DTC is set again, follow the Inspection Chart for DTC and find the fault.
   - If you cannot get the same SRS DTC to be set again, the malfunction is intermittent. Refer to GROUP 00, How to use Troubleshooting – Inspection Service Points – How to Cope With Intermittent Malfunctions P.00-13.

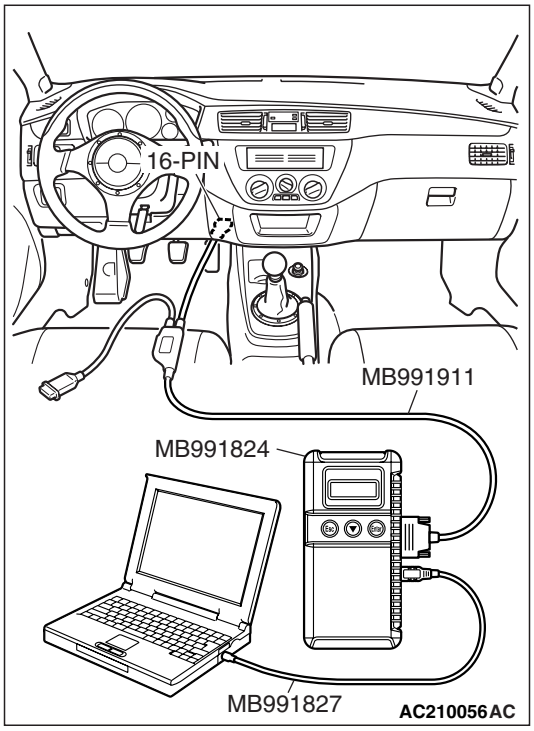
DIAGNOSTIC FUNCTION

M1524013800137

HOW TO CONNECT THE SCAN TOOL

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B



⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

1. Ensure that the ignition switch is at the "LOCK" (OFF) position.
2. Start up the personal computer.
3. Connect special tool MB991827 to special tool MB991824 and the personal computer.
4. Connect special tool MB991911 to special tool MB991824.
5. Connect special tool MB991911 to the data link connector.
6. Turn the power switch of special tool MB991824 to the "ON" position.

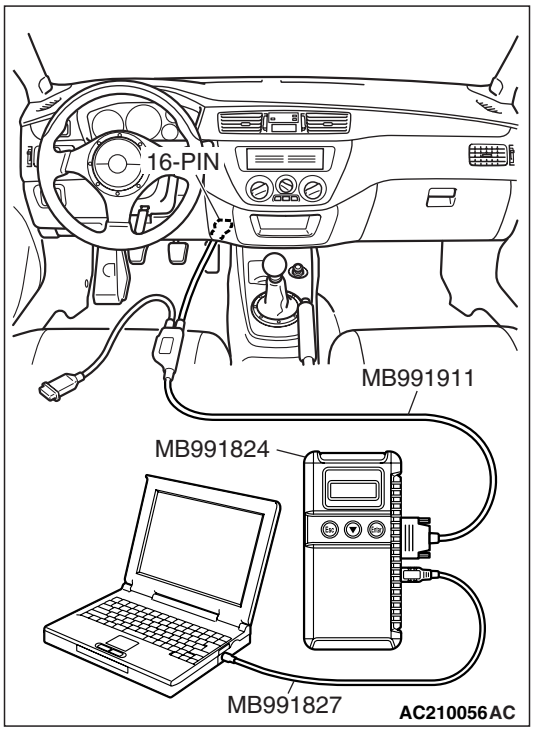
   NOTE: When special tool MB991824 is energized, special tool MB991824 indicator light will be illuminated in a green color.
7. Start the M.U.T.-III system on the personal computer.

NOTE: Disconnecting scan tool MB991958 is the reverse of the connecting sequence, making sure that the ignition switch is at the "LOCK" (OFF) position.

HOW TO READ AND ERASE DIAGNOSTIC TROUBLE CODES

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B



⚠ CAUTION

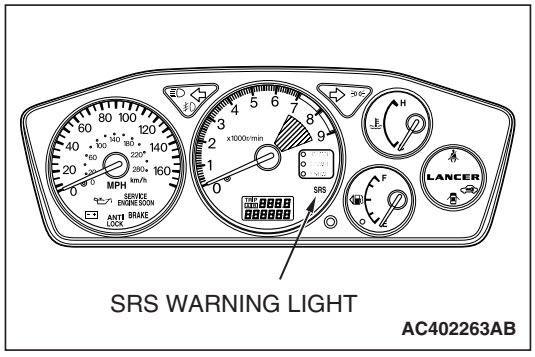
To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

NOTE: If the battery voltage is low, diagnostic trouble codes will not be set. Check the battery if scan tool MB991958 does not display.

1. Connect scan tool MB991958 to the data link connector.
2. Turn the ignition switch to the "ON" position.
3. Select "Interactive Diagnosis" from the start-up screen.
4. Select "System select."
5. Choose "SRS-AIR BAG" from the "BODY" tab.
6. Select "MITSUBISHI."
7. Select "Diagnostic Trouble Code."
8. If a DTC is set, it is shown.
9. Choose "Erase DTCs" to erase the DTC.

SRS WARNING LIGHT CHECK

M1524004300543



1. Check that the SRS warning light illuminates when the ignition switch is in the "ON" position.
2. Check that it illuminates for approximately seven seconds and then goes out.
3. If not, check for DTC.

DIAGNOSTIC TROUBLE CODE CHART

M1524003300614

Inspect according to the inspection chart that is appropriate for the DTC.

DIAGNOSTIC TROUBLE CODE NO.	INSPECTION ITEM		REFERENCE PAGE
1A	Front impact sensor (LH) circuit short		P.52B-24
1B	Front impact sensor (LH) circuit open		P.52B-24
1C	Front impact sensor (LH) short-circuited to power supply		P.52B-24
1D	Front impact sensor (LH) short-circuited to ground		P.52B-24
2A	Front impact sensor (RH) circuit short		P.52B-24
2B	Front impact sensor (RH) circuit open		P.52B-24
2C	Front impact sensor (RH) short-circuited to power supply		P.52B-24
2D	Front impact sensor (RH) short-circuited to ground		P.52B-24
14	Analog G-sensor system in the SRS-ECU		P.52B-30
15	Safing G-sensor short circuit		P.52B-30
16	Safing G-sensor open circuit		P.52B-30
21*2	Driver's air bag module (squib) system fault 1 (Short circuit between terminals of the squib circuit)		P.52B-31
22*2	Driver's air bag module (squib) system fault 2 (Open in the squib circuit)		P.52B-38
24*2	Passenger's (front) air bag module (squib) system fault 1 (Short circuit between terminals of the squib circuit)		P.52B-43
25*2	Passenger's (front) air bag module (squib) system fault 2 (Open in the squib circuit)		P.52B-49
26*2	Driver's seat belt pre-tensioner (squib) system fault 1 (Short circuit between terminals of the squib circuit)		P.52B-53
27*2	Driver's seat belt pre-tensioner (squib) system fault 2 (Open in the squib circuit)		P.52B-61
28*2	Passenger's (front) seat belt pre-tensioner (squib) system fault 1 (Short circuit between terminals of the squib circuit)		P.52B-66
29*2	Passenger's (front) seat belt pre-tensioner (squib) system fault 2 (Open in the squib circuit)		P.52B-74
31	SRS-ECU capacitor circuit voltage too high		P.52B-30
32	SRS-ECU capacitor circuit voltage too low		P.52B-30
34*1	Connector lock system detects connector unlocked		P.52B-79
35	SRS-ECU air bag condition monitor detects deployed air bag		P.52B-81
39	Air bag deployed simultaneously		P.52B-81
41*1	IG1 power supply circuit system (fuse No.2 circuit)		P.52B-82
42*1	IG1 power supply circuit system (fuse No.3 circuit)		P.52B-90
43*1	SRS warning light drive circuit system fault 1	Light does not illuminate*1	P.52B-96
		Light does not switch off	P.52B-102

TSB Revision

DIAGNOSTIC TROUBLE CODE NO.	INSPECTION ITEM	REFERENCE PAGE
44*[1]	SRS warning light drive circuit system fault 2	P.52B-106
45	SRS-ECU non-volatile memory (EEPROM) and A/D converter system	P.52B-30
46*[1]	Improper installed of SRS-ECU	P.52B-108
51	Driver's air bag module (squib ignition drive circuit) system detected short circuit	P.52B-30
52	Driver's air bag module (squib ignition drive circuit) system detected open circuit	P.52B-30
54	Passenger's (front) air bag module (squib ignition drive circuit) system detected short circuit	P.52B-30
55	Passenger's (front) air bag module (squib ignition drive circuit) system detected open circuit	P.52B-30
56	Driver's seat belt pre-tensioner (squib ignition drive circuit) system detected short circuit	P.52B-30
57	Driver's seat belt pre-tensioner (squib ignition drive circuit) system detected open circuit	P.52B-30
58	Passenger's (front) seat belt pre-tensioner (squib ignition drive circuit) system detected short circuit	P.52B-30
59	Passenger's (front) seat belt pre-tensioner (squib ignition drive circuit) system detected open circuit	P.52B-30
61	Driver's air bag module (squib) system fault for power supply circuit (Short-circuited to power supply)	P.52B-108
62	Driver's air bag module (squib) system fault for ground circuit (Short-circuited to ground)	P.52B-113
64	Passenger's (front) air bag module (squib) system fault for power supply circuit (Short-circuited to power supply)	P.52B-118
65	Passenger's (front) air bag module (squib) system fault for ground circuit (Short-circuited to ground)	P.52B-122
66	Driver's seat belt pre-tensioner (squib) system fault for power supply circuit (Short-circuited to power supply)	P.52B-126
67	Driver's seat belt pre-tensioner (squib) system fault for ground circuit (Short-circuited to ground)	P.52B-132
68	Passenger's (front) seat belt pre-tensioner (squib) system fault for power supply circuit (Short-circuited to power supply)	P.52B-138
69	Passenger's (front) seat belt pre-tensioner (squib) system fault for ground circuit (Short-circuited to ground)	P.52B-144

NOTE:

1. **1: If the vehicle condition returns to normal, the DTC will be automatically erased, and the SRS warning light will return to normal.*
2. **2: However, if no DTC resets, the SRS warning light will be switched off (The DTC will be retained).*
3. *If the vehicle has a discharged battery, it will store the DTC 41 or 42. When these DTCs are read, check the battery.*

TSB Revision

TROUBLE SYMPTOM CHART

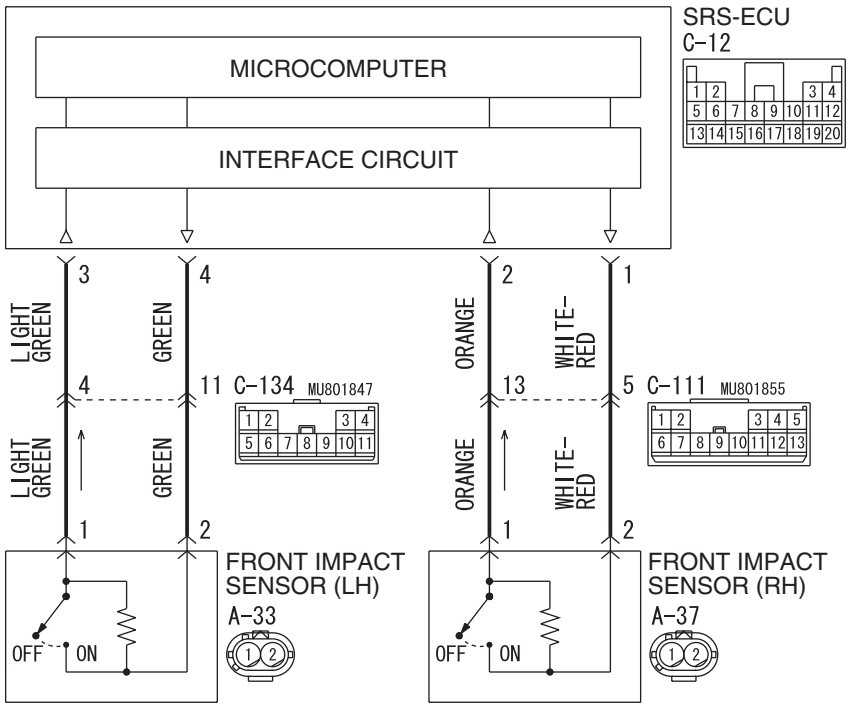
M1524003400570

SYMPTOM	INSPECTION PROCEDURE NO.	REFERENCE PAGE
Communication with scan tool MB991958 is not possible (Communication with all systems is not possible).	–	GROUP 13A, DIAGNOSIS P.13A-690.
Communication with scan tool MB991958 is not possible (Communication is not possible with SRS).	1	P.52B-150
When the ignition switch is turned to the "ON" position (engine stopped), the SRS warning light does not illuminate.	Refer to DTC No.43.	P.52B-96
After the ignition switch is turned to the "ON" position, the SRS warning light does not go off within approximately seven seconds.	Refer to DTC No.43.	P.52B-102

DIAGNOSTIC TROUBLE CODE PROCEDURES

DTC 1A Front impact sensor (LH) circuit short
DTC 1B Front impact sensor (LH) circuit open
DTC 1C Front impact sensor (LH) short-circuited to power supply
DTC 1D Front impact sensor (LH) short-circuited to ground
DTC 2A Front impact sensor (RH) circuit short
DTC 2B Front impact sensor (RH) circuit open
DTC 2C Front impact sensor (RH) short-circuited to power supply
DTC 2D Front impact sensor (RH) short-circuited to ground

Front Impact Sensor Circuit



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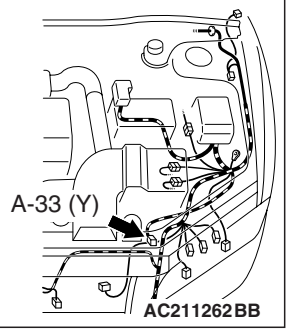
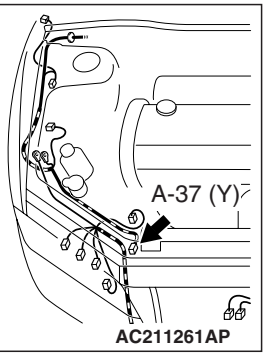
CONNECTOR : A-33



CONNECTOR: A-37



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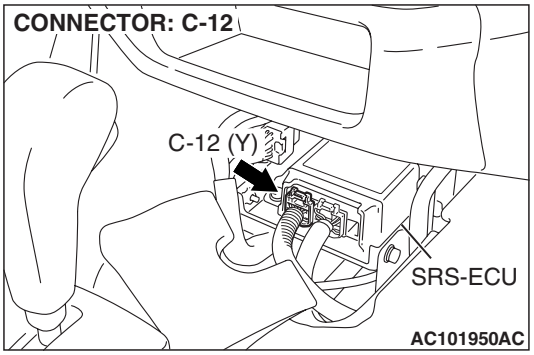
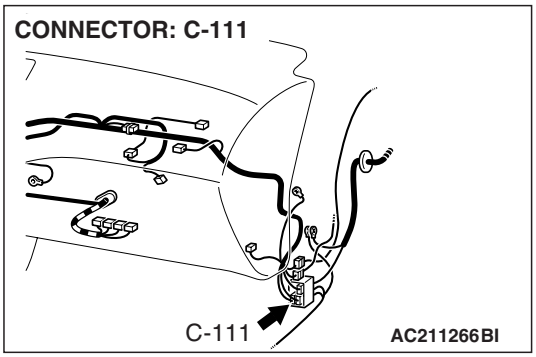
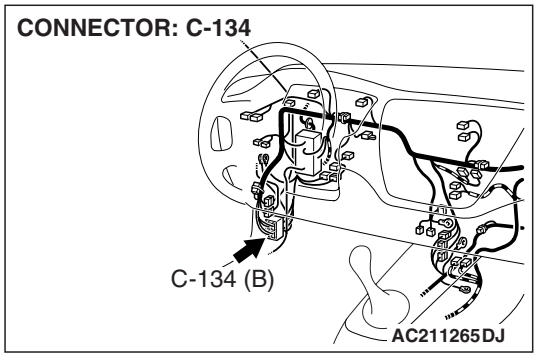






CIRCUIT OPERATION

- When the left and right front impact sensors detect a collision, the switches inside the sensors turn ON.
- SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.

DTC SET CONDITIONS

These DTCs are set if these are abnormal resistance between the input terminals of the front impact sensors.
The most likely causes for these codes to be set are shown in the table below:

DTC No.	SYMPTOM
1A	• Left front impact sensor or its wiring shorted
1B	• Left front impact sensor or wiring open circuit
1C	• Short to the power supply in the left front impact sensor harness
1D	• Short to body ground in the left front impact sensor harness
2A	• Right front impact sensor or its wiring shorted
2B	• Right front impact sensor or wiring open circuit
2C	• Short to the power supply in the right front impact sensor harness
2D	• Short to body ground in the right front impact sensor harness

TROUBLESHOOTING HINTS

- Damaged harness wires and connectors
- Front impact sensor failed
- Malfunction of the SRS-ECU

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

STEP 1. Check the front impact sensor.

Refer to P.52B-165.

Q: Is the check result satisfactory?

YES : Go to Step 2.

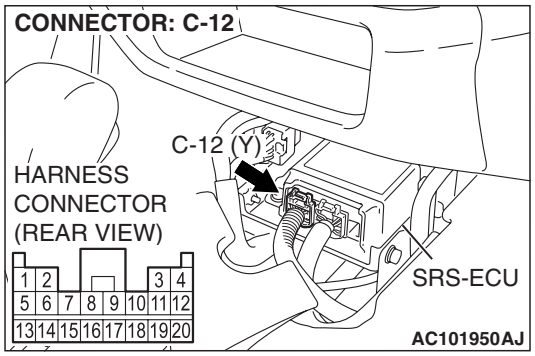
NO : Replace the front impact sensor (Refer to P.52B-163).

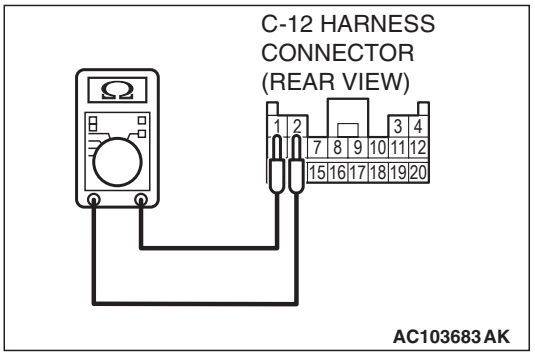
STEP 2. Measure the resistance and voltage at SRS-ECU connector C-12.

(1) Disconnect SRS-ECU connector C-12.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly as the connector contact pressure may be weakened.

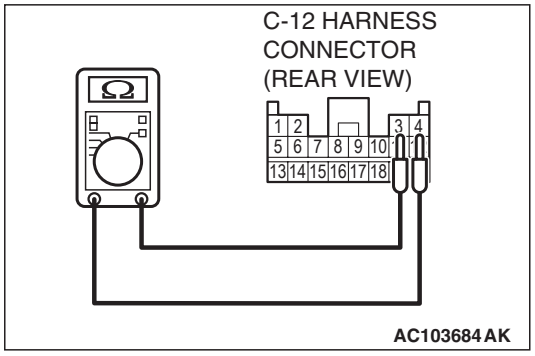




(2) Take the measurements below at harness-side connector C-12.

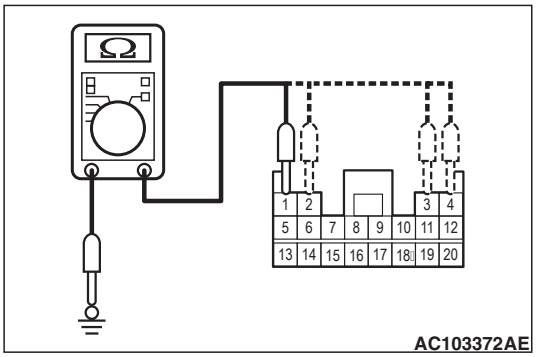
- Resistance between terminals 1 and 2 as well as 3 and 4.

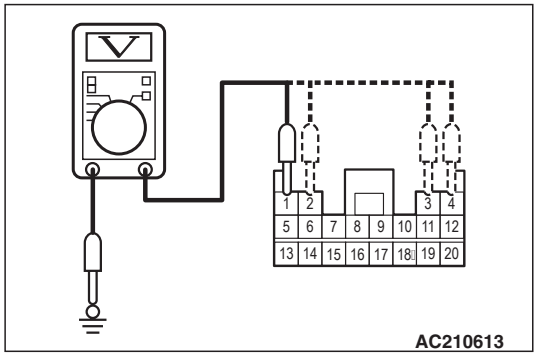
  NG: 2 ohms or less (short circuit) or 2 MΩ or more (open circuit)



- Continuity between terminals 1, 2, 3, 4 and body ground

  OK: No continuity



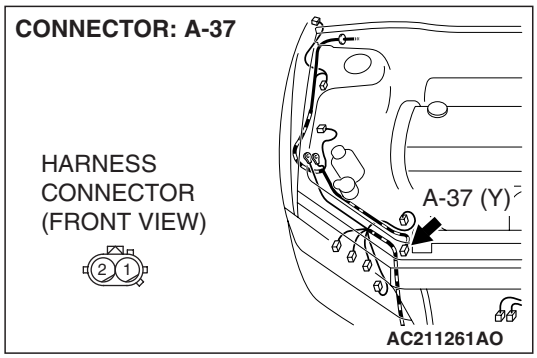


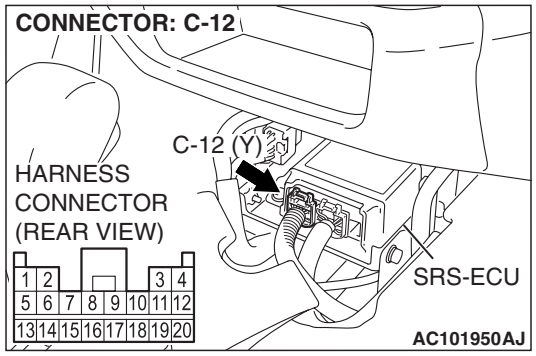
- Voltage between terminals 1, 2, 3, 4 and body ground
  OK: 0V

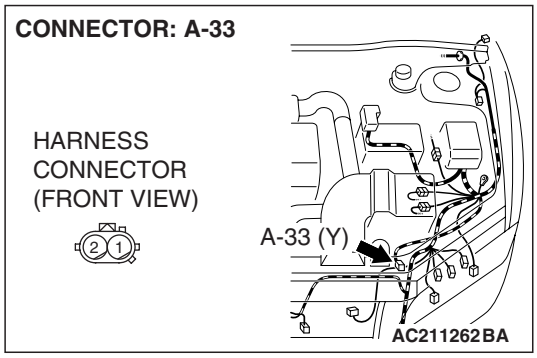
Q: Is the check result satisfactory?

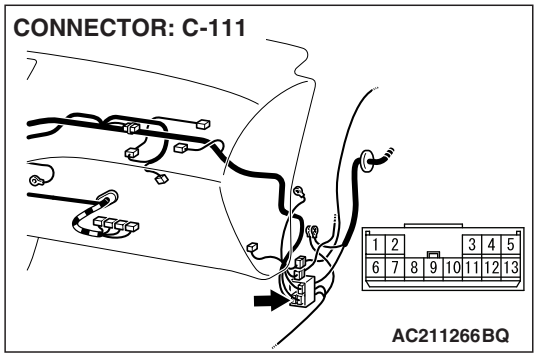
YES : Go to Step 4.
NO : Go to Step 3.

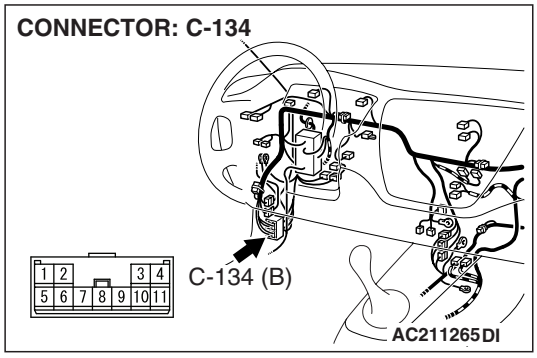
STEP 3. Check the wiring harness between the right front impact sensor connector A-37 (terminals 1 and 2) and SRS-ECU connector C-12 (terminals 1 and 2) as well as between left front impact sensor connector A-33 (terminals 1 and 2) and SRS-ECU connector C-12 (terminals 3 and 4).











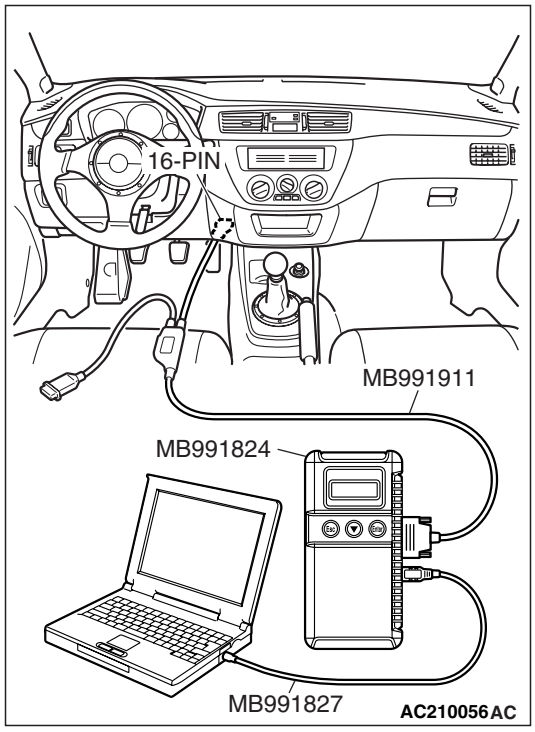
NOTE: Prior to the wiring harness inspection, check intermediate connectors C-111 and C-134, and repair if necessary.

- Check the front impact sensor output line for open or short circuit.

Q: Is the check result satisfactory?

YES : Go to Step 4.

NO : Repair the wiring harness.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is DTC 1A, 1B, 1C, 1D, 2A, 2B, 2C or 2D set?

YES : Replace the SRS-ECU (Refer to P.52B-166).

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 14: Analog G-Sensor System in the SRS-ECU
DTC 15: Safing G-Sensor Short Circuit
DTC 16: Safing G-Sensor Open Circuit
DTC 31: SRS-ECU Capacitor Circuit Voltage too High
DTC 32: SRS-ECU Capacitor Circuit Voltage too Low
DTC 45: SRS-ECU Non-Volatile Memory (EEPROM) and A/D Converter System
DTC 51: Driver's Air Bag Module (Squib Ignition Drive Circuit) System Detected Short Circuit
DTC 52: Driver's Air Bag Module (Squib Ignition Drive Circuit) System Detected Open Circuit
DTC 54: Passenger's (Front) Air Bag Module (Squib Ignition Drive Circuit) System Detected Short Circuit
DTC 55: Passenger's (Front) Air Bag Module (Squib Ignition Drive Circuit) System Detected Open Circuit
DTC 56: Driver's Seat Belt Pre-tensioner (Squib Ignition Drive Circuit) System Detected Short Circuit
DTC 57: Driver's Seat Belt Pre-tensioner (Squib Ignition Drive Circuit) System Detected Open Circuit
DTC 58: Passenger's (Front) Seat Belt Pre-tensioner (Squib Ignition Drive Circuit) System Detected Short Circuit
DTC 59: Passenger's (Front) Seat Belt Pre-tensioner (Squib Ignition Drive Circuit) System Detected Open Circuit

DTC SET CONDITIONS

- These DTC are set when a fault is detected in the SRS-ECU. The most likely causes for this code to be set are shown in the table below:

TROUBLESHOOTING HINTS

- Malfunction of the SRS-ECU

CODE NO.	DEFECTIVE PART	SYMPTOM
14	Analog G-sensor	• When the analog G-sensor is not operating • When the characteristics of the analog G-sensor are abnormal • When the output from the analog G-sensor is abnormal
15	Safing G-sensor (front air bag)	• Short circuit in the safing G-sensor
16		• Open circuit in the safing G-sensor
31	Capacitor	• Voltage at the capacitor terminal is higher than the specified value for five seconds or more
32		• Voltage at the capacitor terminal is lower than the specified value for five seconds or more (This is not detected if DTC No. 41 or 42 indicating battery positive voltage drop has been output.)
45	Non-volatile memory (EEPROM) and A/D converter	• When the non-volatile memory (EEPROM) and A/D converter system are abnormal
51	Driver's air bag module (squib ignition drive circuit)	• Short circuit in the squib ignition drive circuit
52		• Open circuit in the squib ignition drive circuit
54	Front passenger's air bag module (squib ignition drive circuit)	• Short circuit in the squib ignition drive circuit
55		• Open circuit in the squib ignition drive circuit
56	Driver's seat belt pre-tensioner (squib ignition drive circuit)	• Short circuit in the squib ignition drive circuit
57		• Open circuit in the squib ignition drive circuit
58	Passenger's seat belt pre-tensioner (squib ignition drive circuit)	• Short circuit in the squib ignition drive circuit
59		• Open circuit in the squib ignition drive circuit

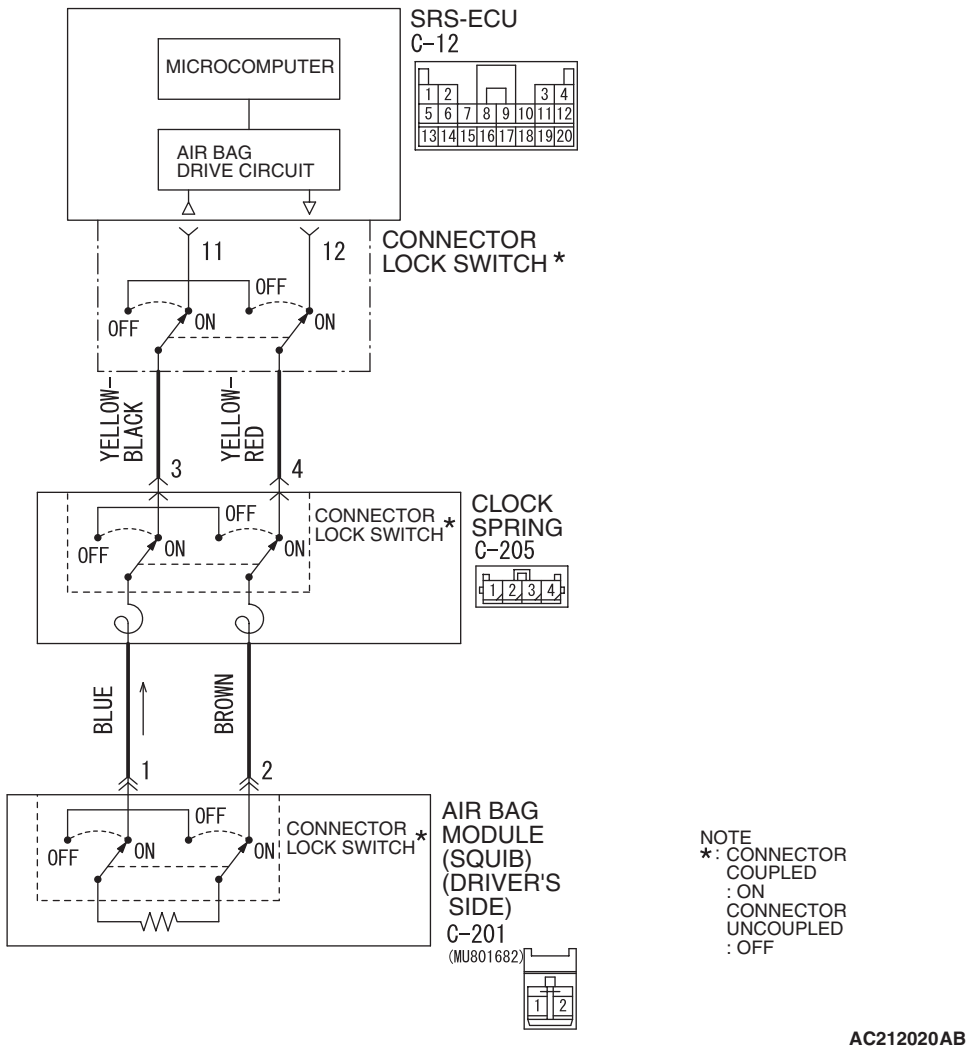
TSB Revision

DIAGNOSIS

Replace the SRS-ECU (Refer to P.52B-166).

DTC 21: Driver's Air Bag Module (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)

Driver's Air Bag Module (Squib) Circuit



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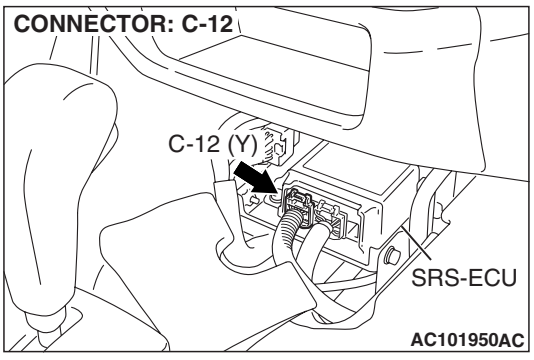

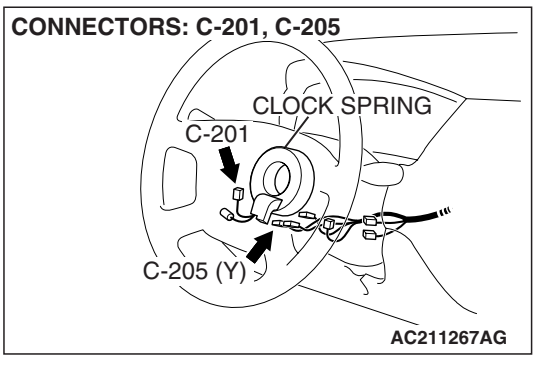

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CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module via the clock spring to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's air bag module (squib). The most likely causes for this code to be set are the following:

- Short circuit in driver's air bag module (squib) or harness
- Short circuit in the clock spring

However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TROUBLESHOOTING HINTS

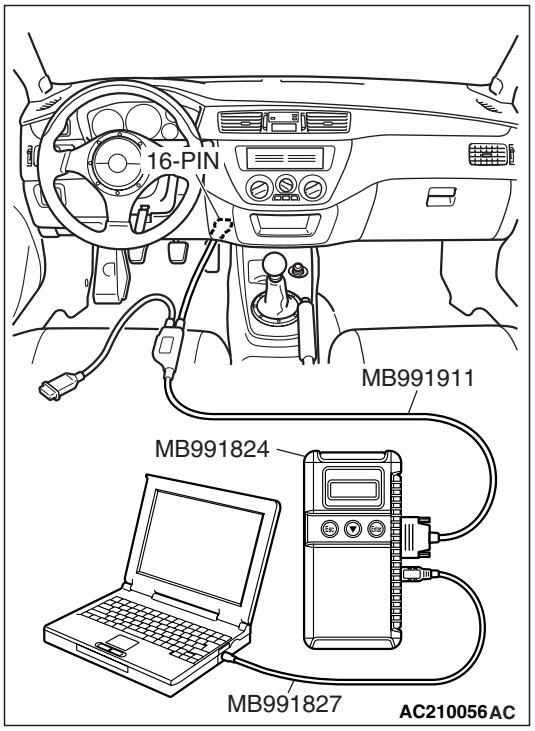
- Improper engaged connector or defective short spring*
- Short circuit in the clock spring
- Short circuit between the driver's air bag module (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

*NOTE: *: The squib circuit connectors integrate a "short" spring (which prevents the air bag from deploying unintentionally due to static electricity by shorting the positive wire to the ground wire in the squib circuit when the connectors are disconnected) (Refer to P.52B-3). Therefore, if connector C-12, C-205 or C-201 is damaged or improperly engaged, the short spring may not be released when the connector is connected.*

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness



STEP 1. Using scan tool MB991958, read the diagnostic trouble code.

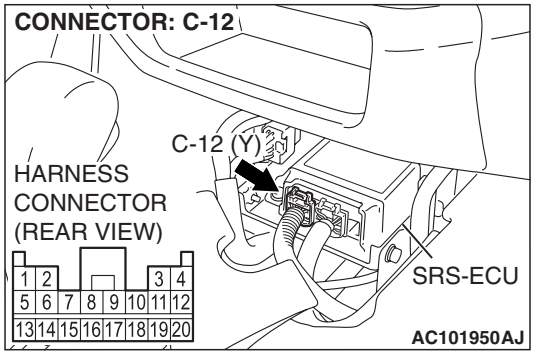
⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Turn the ignition switch to the "ON" position.
(2) Check if the DTC is set.
(3) Turn the ignition switch to the "LOOK" (OFF) position.

Q: Is DTC 34 set?

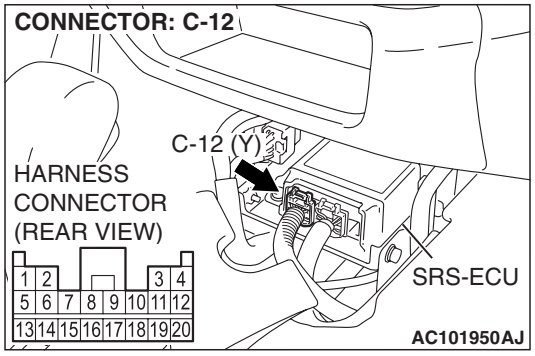
YES : Go to Step 2.
NO : Go to Step 3.

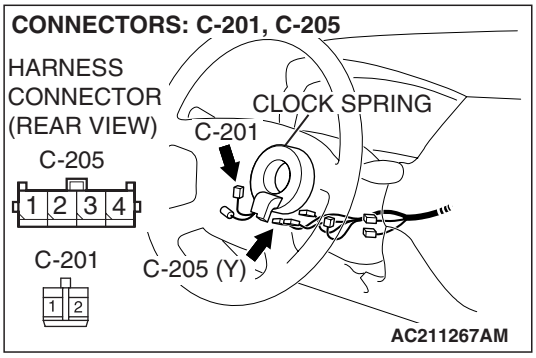


STEP 2. Check SRS-ECU connector C-12.

Q: Is the connector correctly engaged?

YES : Go to Step 3.
NO : Engage the connector correctly. Then go to Step 8.





STEP 3. Check SRS-ECU connector C-12, clock spring connector C-205 and driver's air bag module connector C-201 (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.
(2) Disconnect connectors C-12, C-205 and C-201, and then reconnect them.
(3) Connect the negative battery terminal.
(4) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

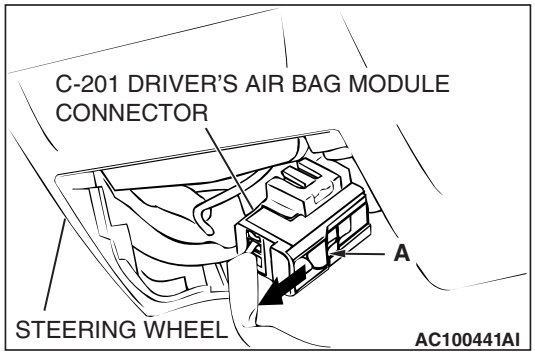
Q: Is DTC 21 set?

YES : Go to Step 4.

NO : The procedure is complete. It is assumed that DTC 21 set as connector C-12, C-205 or C-201 was engaged improperly.

STEP 4. Check the driver's air bag module (Using scan tool MB991958, read the diagnostic trouble code).

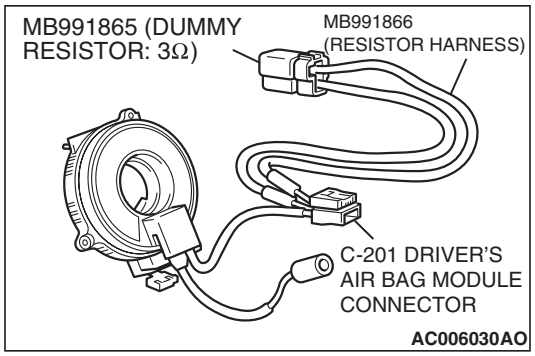
(1) Disconnect the negative battery terminal.
(2) By sliding the A section (in the figure) of driver's air bag module connector C-201 in the arrow direction, disconnect the connector.



(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Insert special tool MB991866 into clock spring side air bag module connector C-201 by backprobing.
(5) Connect the negative battery terminal.
(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.



Q: Is DTC 21 set?

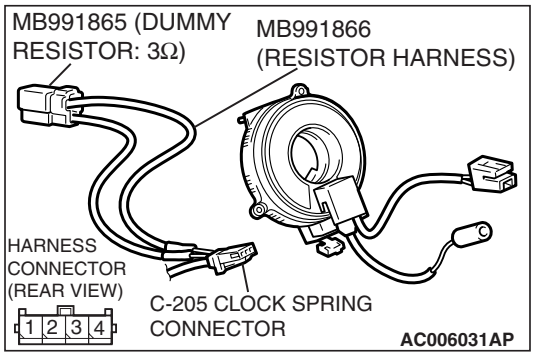
YES : Go to Step 5.
NO : Replace the driver's air bag module (Refer to P.52B-168). Then go to Step 8.

STEP 5. Check the clock spring (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.
(2) Disconnect the clock spring connector C-205.
(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Insert special tool MB991866 into clock spring harness side connector C-205 (terminal No.3 and 4) by backprobing.
(5) Connect the negative battery terminal.
(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

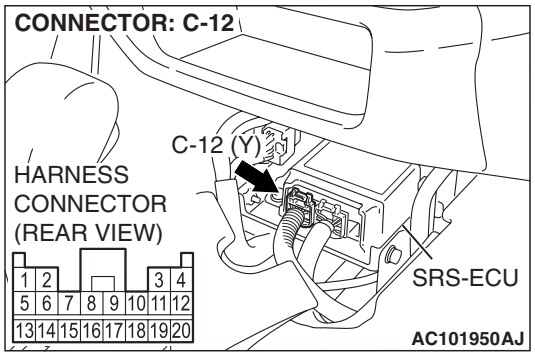


Q: Is DTC 21 set?

YES : Go to Step 6.
NO : Replace the clock spring (Refer to P.52B-168). Then go to Step 8.

STEP 6. Check the driver's air bag module circuit at the SRS-ECU connector C-12.

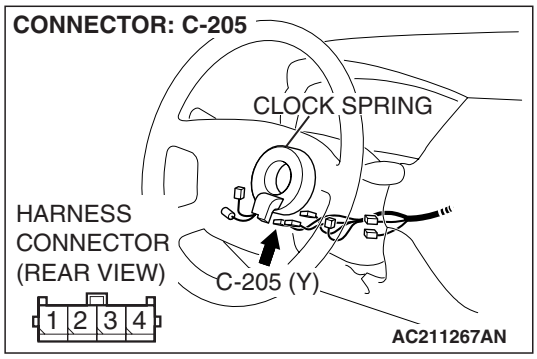
(1) Disconnect SRS-ECU connector C-12.



⚠ DANGER

To prevent the air bag from deploying unintentionally, disconnect the clock spring connector C-205 to short the squib circuit.

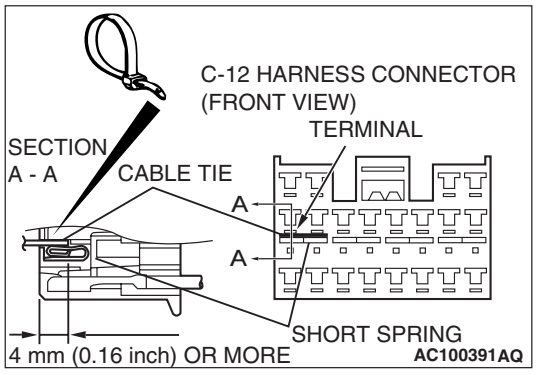
(2) Disconnect the clock spring connector C-205.



⚠ CAUTION

Insert an insulator such as a cable tie to a depth of 4mm (0.16 inch) or more, otherwise the short spring will not be released.

(3) Insert a cable tie [3 mm (0.12 inch) wide, 0.5 mm (0.02 inch) thick] between terminals 11, 12 and the short spring to release the short spring.



⚠ CAUTION

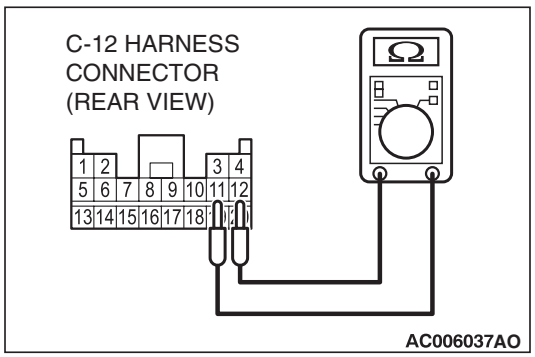
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

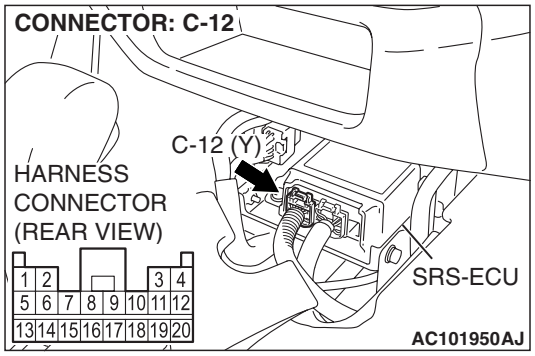
(4) Check for continuity between C-12 harness connector terminals 11 and 12.
It should be open circuit.

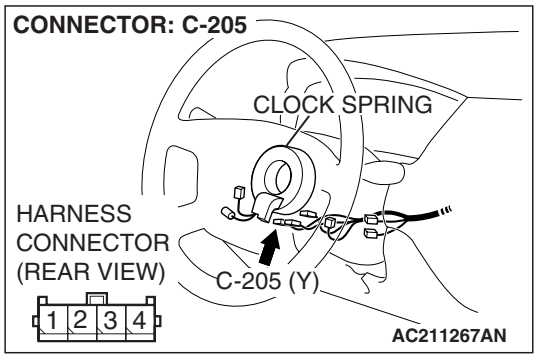
Q: Does continuity exist?

YES : Go to Step 7.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 21 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 8 .





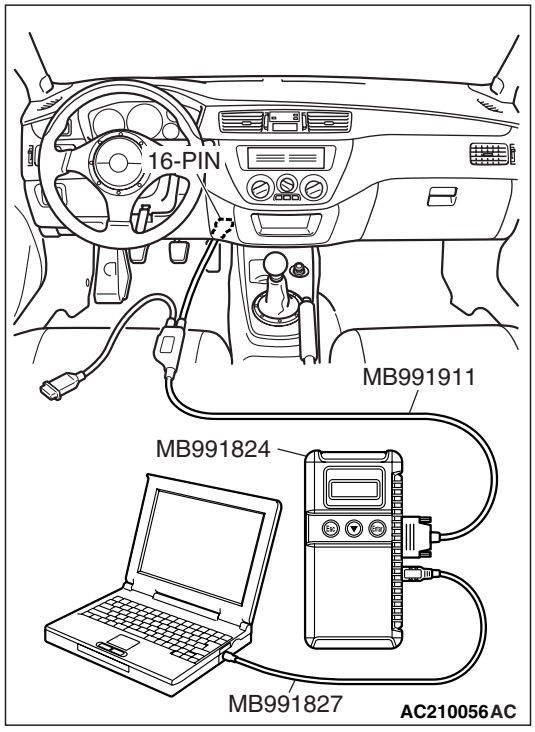


STEP 7. Check the harness for short circuit between SRS-ECU connector C-12 (terminal No.11 and 12) and clock spring connector C-205 (terminal No.3 and 4).

Q: Are harness wires between SRS-ECU connector C-12 (terminal No.11 and 12) and clock spring connector C-205 (terminal No.3 and 4) in good condition?

YES : Go to Step 8.

NO : Repair the harness wires between SRS-ECU connector C-12 and clock spring connector C-205. Then go to Step 8.



STEP 8. Recheck for diagnostic trouble code (Using scan tool MB991958, read the diagnostic trouble code).

Check again if the DTC is set.

(1) Erase the DTC.

(2) Turn the ignition switch to the "ON" position.

(3) Check if the DTC is set.

(4) Turn the ignition switch to the "LOCK" (OFF) position.

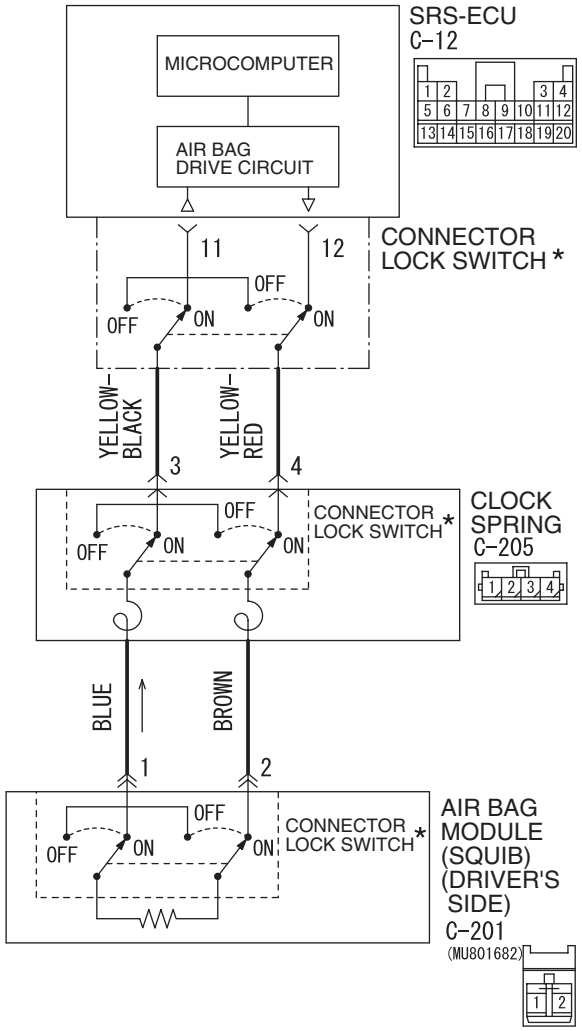
Q: Is DTC 21 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 22: Driver's Air Bag Module (Squib) System Fault 2 (Open in the Squib Circuit)

Driver's Air Bag Module (Squib) Circuit



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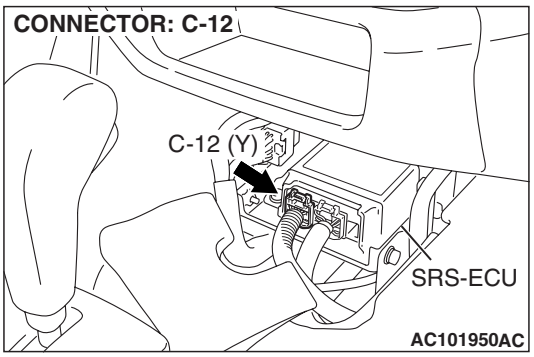
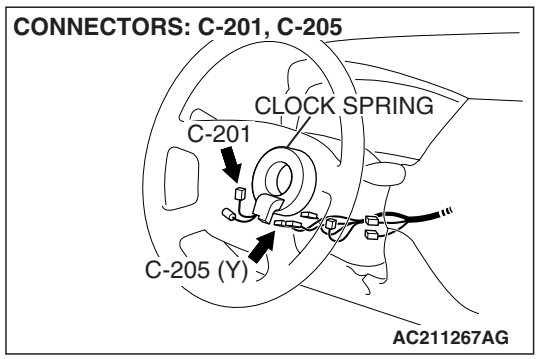




TSB Revision

CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module via the clock spring to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's air bag module (squib). The most likely causes for this code to be set are the following:

- Open circuit in the driver's air bag module (squib) or harness
- Open circuit in the clock spring
- Malfunction of connector contact

However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TROUBLESHOOTING HINTS

- Open circuit in the clock spring
- Open circuit due to improper neutral position of the clock spring
- Open circuit in the driver's air bag module (squib) circuit
- Disengaged driver's air bag module (squib) connector
- Improper connector contact
- Malfunction of the SRS-ECU

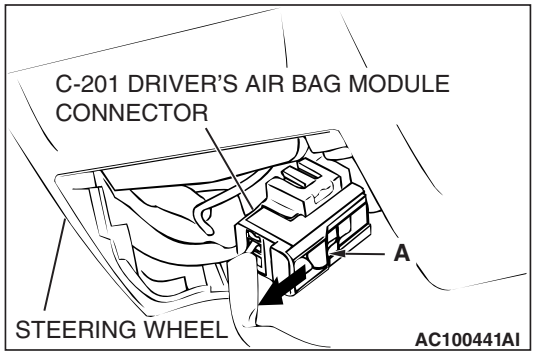
DIAGNOSIS

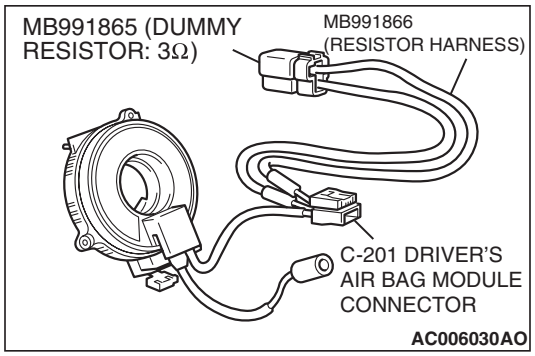
Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness

STEP 1. Check the driver's air bag module (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.
(2) By sliding the A section (in the figure) of driver's air bag module connector C-201 in the arrow direction, disconnect the connector.





(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Insert special tool MB991866 into clock spring side air bag module connector C-201 by backprobing.
(5) Connect the negative battery terminal.
(6) Erase the diagnosis trouble code memory, and check the diagnosis trouble code.

Q: Is DTC 22 set?

YES : Go to Step 2.
NO : Replace the driver's air bag module (Refer to P.52B-168). Then go to Step 4.

STEP 2. Check the clock spring (Using scan tool MB991958, read the diagnostic trouble code).

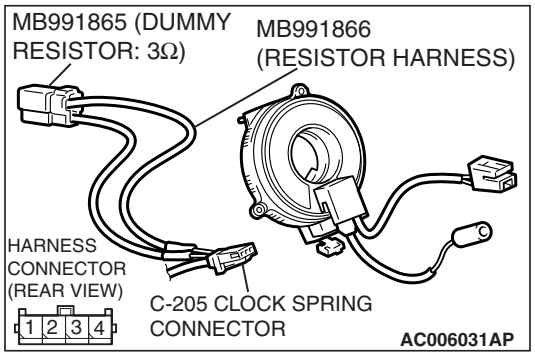
(1) Disconnect the negative battery terminal.
(2) Disconnect the clock spring connector C-205.
(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Insert special tool MB991866 into clock spring harness side connector C-205 by backprobing.
(5) Connect the negative battery terminal.
(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

Q: Is DTC 22 set?

YES : Go to Step 3.
NO : Replace the clock spring (Refer to P.52B-168). Then go to Step 4.

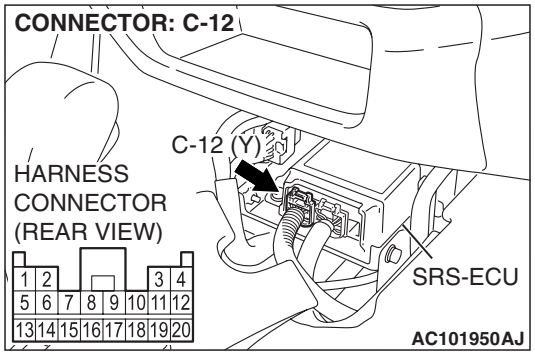


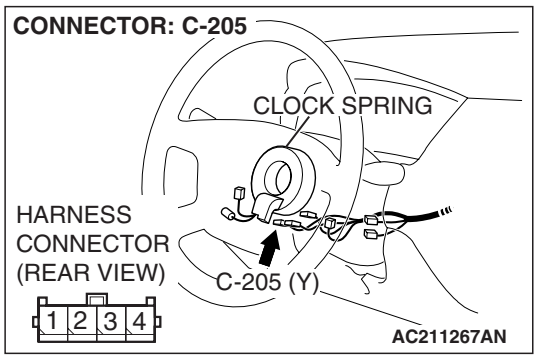
STEP 3. Check the harness between the SRS-ECU connector C-12 (terminal No.11 and 12) and the clock spring connector C-205 (terminal No.3 and 4) for open circuit.

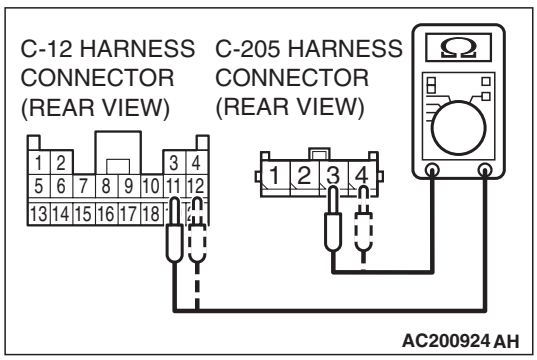
(1) Disconnect SRS-ECU connector C-12 and clock spring connector C-205.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.





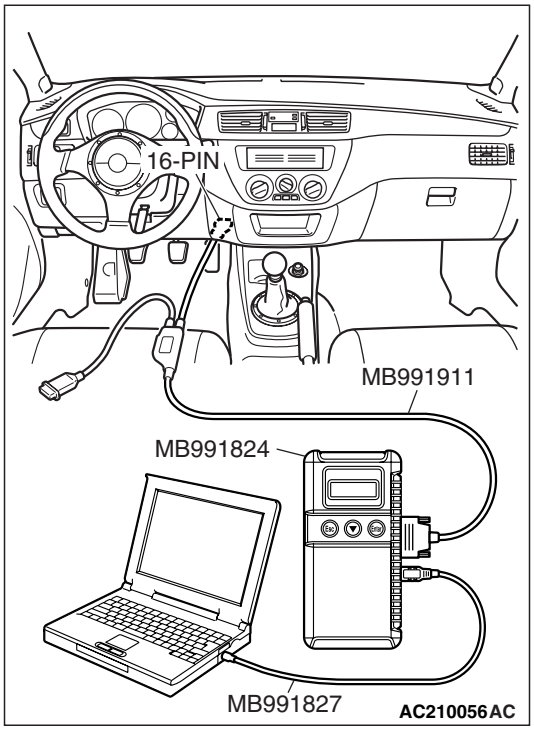


(2) Check for continuity between the following terminals. It should be less than 2 ohms.
- SRS-ECU connector C-12 (terminal No.11) and the clock spring connector C-205 (terminal No.3)
- SRS-ECU connector C-12 (terminal No.12) and the clock spring connector C-205 (terminal No.4)

Q: Does continuity exist?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 22 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4.

NO : Repair the harness wires between SRS-ECU connector C-12 and clock spring connector C-205. Then go to Step 4.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

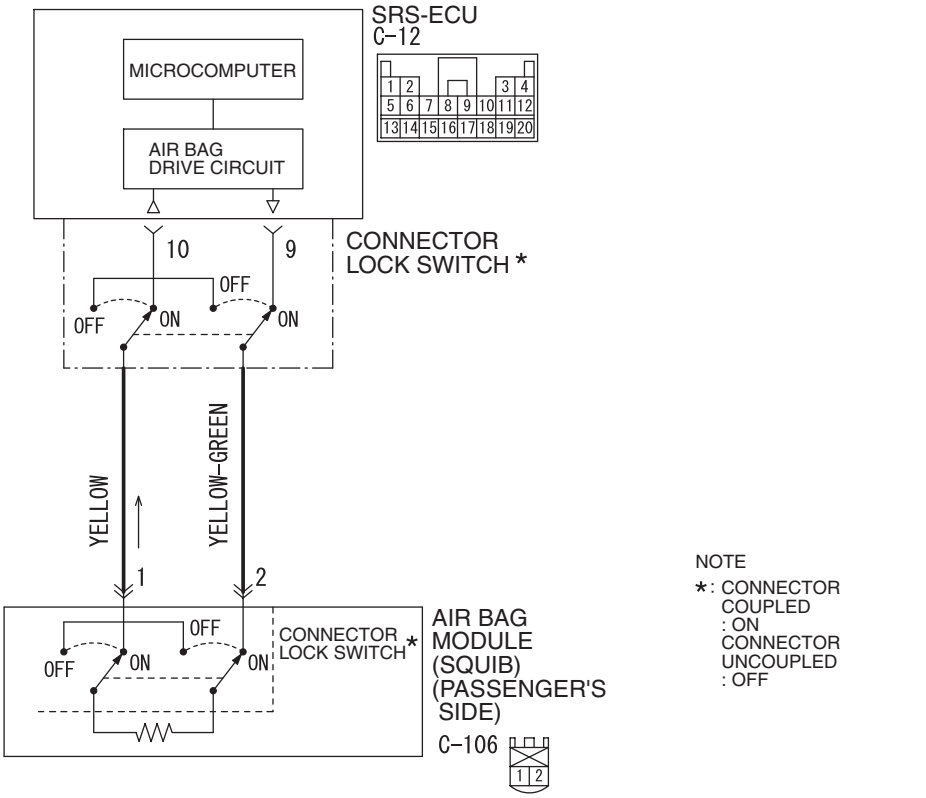
Q: Is DTC 22 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 24: Passenger's (Front) Air Bag Module (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)

Passenger's (Front) Air Bag Module (Squib) Circuit



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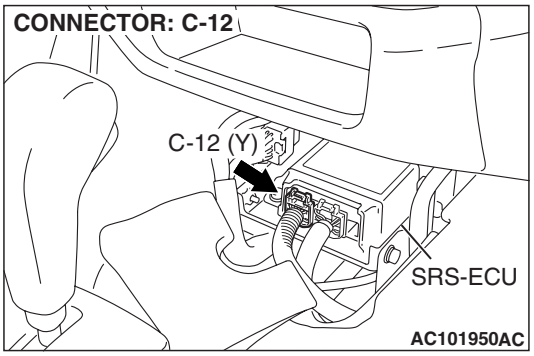
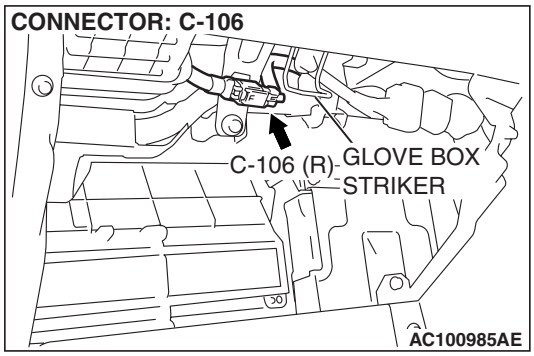




CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) air bag module (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TSB Revision

TROUBLESHOOTING HINTS

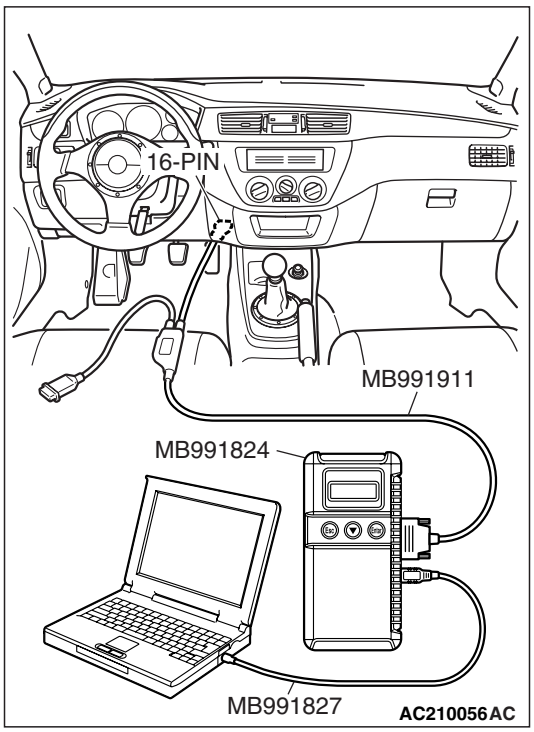
- Improper engaged connector or defective short spring*
- Short circuit between the passenger's (front) air bag module (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

*NOTE: *: The squib circuit connectors integrate a "short" spring (which prevents the air bag from deploying unintentionally due to static electricity by shorting the positive wire to the ground wire in the squib circuit when the connectors are disconnected) (Refer to P.52B-3). Therefore, if connector C-12 or C-106 is damaged or improperly engaged, the short spring may not be released when the connector is connected.*

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness



STEP 1. Using scan tool MB991958, read the diagnostic trouble code.

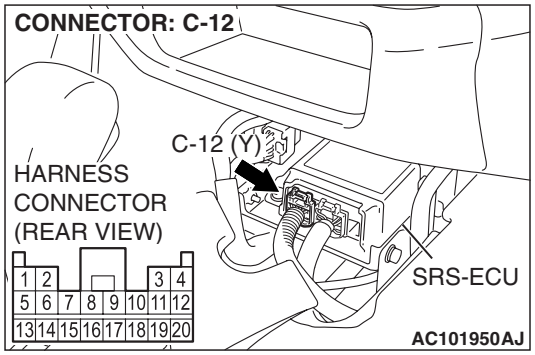
⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Turn the ignition switch to the "ON" position.
(2) Check if the DTC is set.
(3) Turn the ignition switch to the "LOOK (OFF)" position.

Q: Is DTC 34 set?

YES : Go to Step 2.
NO : Go to Step 3.

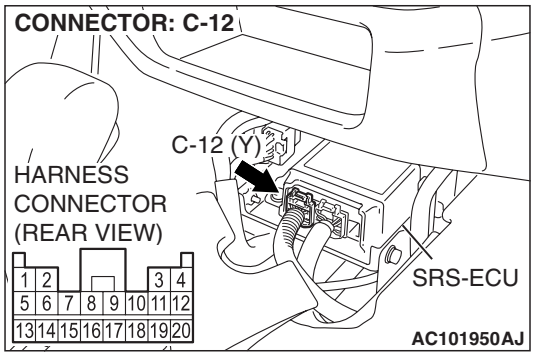


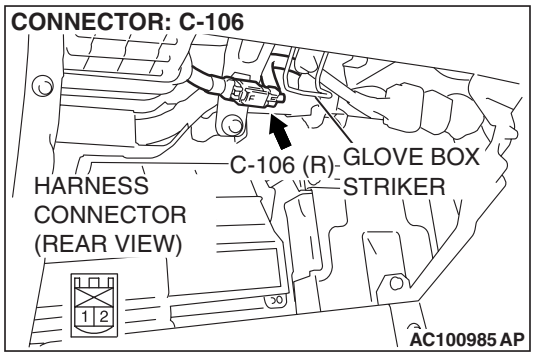
STEP 2. Check SRS-ECU connector C-12.

Q: Is the connector correctly engaged?

YES : Go to Step 3.

NO : Engage the connector correctly. Then go to Step 7.





STEP 3. Check SRS-ECU connector C-12 and passenger's (front) air bag module connector C-106 (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.
(2) Disconnect connectors C-12 and C-106, and then reconnect them.
(3) Connect the negative battery terminal.
(4) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

Q: Is DTC 24 set?

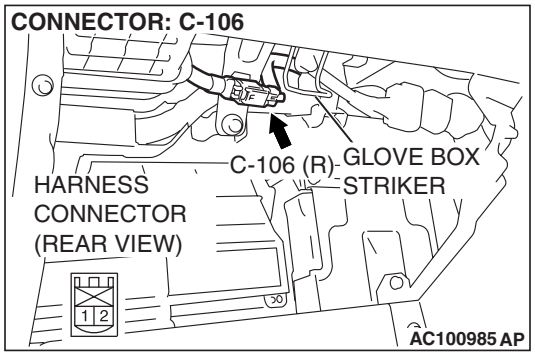
YES : Go to Step 4.

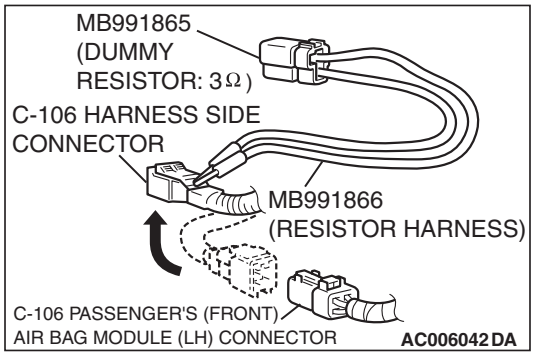
NO : The procedure is complete. It is assumed that DTC 24 set as connector C-12 or C-106 was engaged improperly.

STEP 4. Check the passenger's (front) air bag module (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect passenger's (front) air bag module connector C-106.





(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Disconnect the passenger's (front) air bag module connector C-106, and insert special tool MB991866 into the harness connector by backprobing.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

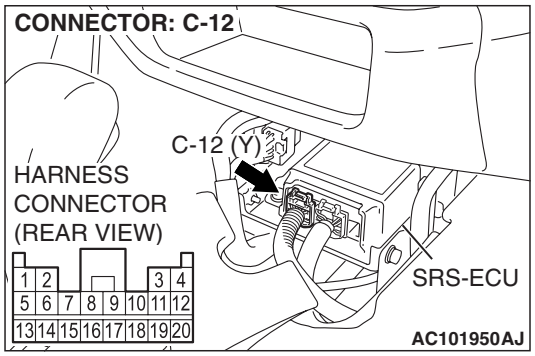
Q: Is DTC 24 set?

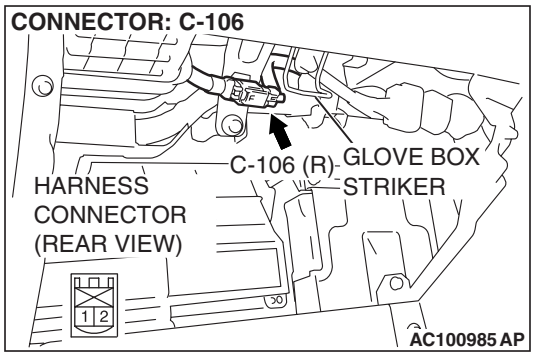
YES : Go to Step 5.

NO : Replace the passenger's (front) air bag module (Refer to P.52B-168). Then go to Step 7.

STEP 5. Check the passenger's (front) air bag module circuit at SRS-ECU connector C-12.

(1) Disconnect SRS-ECU connector C-12.

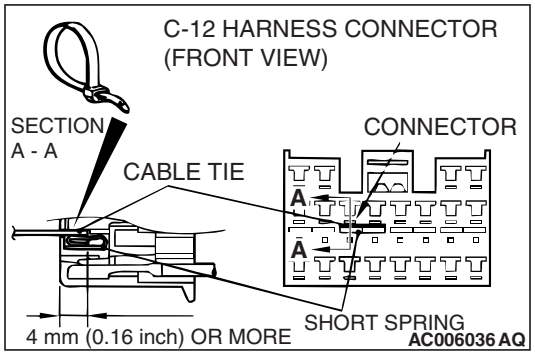




⚠ ***DANGER***

To prevent the (front) air bag from deploying unintentionally, disconnect the passenger's (front) air bag module connector C-106 to short the squib circuit.

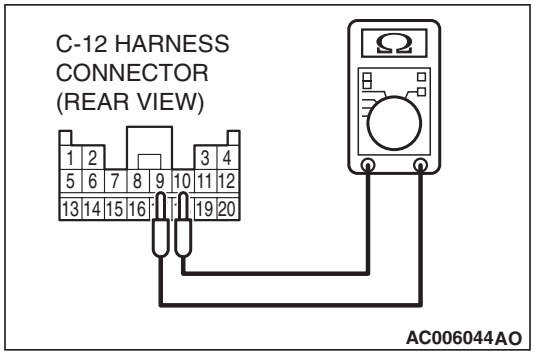
(2) Disconnect the passenger's (front) air bag module connector C-106.



⚠ **CAUTION**

Insert an insulator such as a cable tie to a depth of 4mm (0.16 inch) or more, otherwise the short spring will not be released.

(3) Insert a cable tie [3 mm (0.12 inch) wide, 0.5 mm (0.02 inch) thick] between terminals 9, 10 and the short spring to release the short spring.



⚠ **CAUTION**

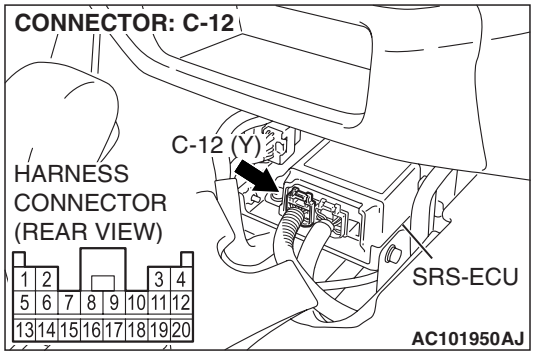
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

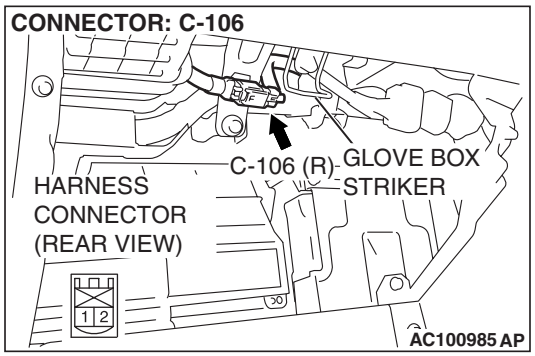
(4) Check for continuity between C-12 harness connector terminals 9 and 10.
It should be open circuit.

Q: Does continuity exist?

YES : Go to Step 6.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 24 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 7.



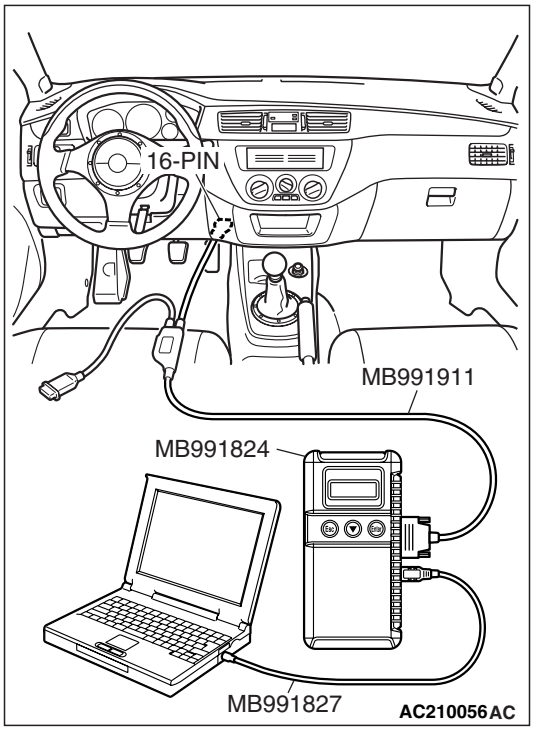


STEP 6. Check the harness for short circuit between SRS-ECU connector C-12 (terminal No.9 and 10) and passenger's (front) air bag module connector C-106 (terminal No.1 and 2).

Q: Are harness wires between SRS-ECU connector C-12 (terminal No.9 and 10) and passenger's (front) air bag module connector C-106 (terminal No.1 and 2) in good condition?

YES : Go to Step 7.

NO : Repair the harness wires between SRS-ECU connector C-12 and passenger's (front) air bag module connector C-106. Then go to Step 7.



STEP 7. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

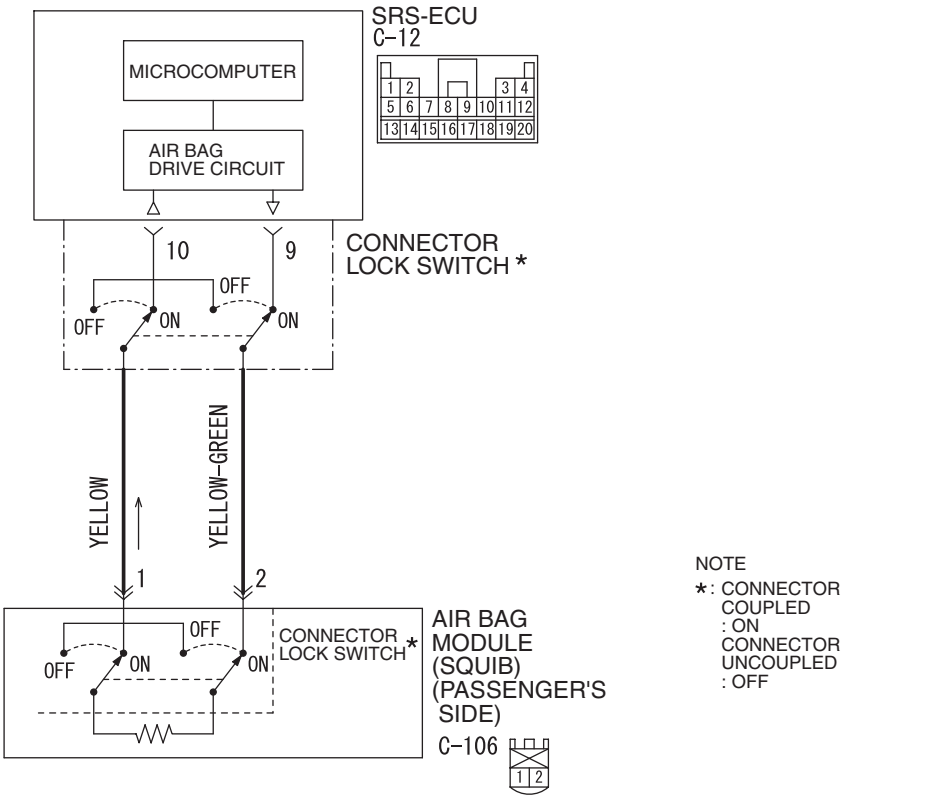
Q: Is DTC 24 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 25: Passenger's (Front) Air Bag Module (Squib) System Fault 2 (Open in the Squib Circuit)

Passenger's (Front) Air Bag Module (Squib) Circuit



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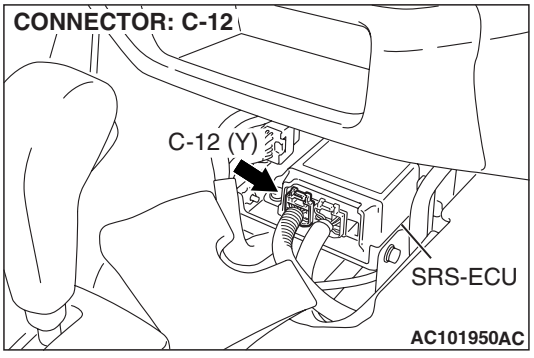
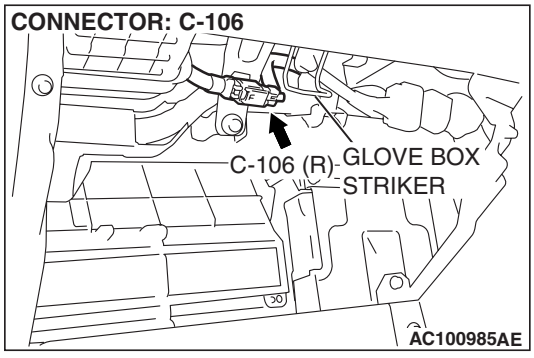
W3J19M03AA





CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) air bag module (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TROUBLESHOOTING HINTS

- Open circuit in the passenger's (front) air bag module (squib) circuit
- Improper connector contact
- Malfunction of the SRS-ECU

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DIAGNOSIS

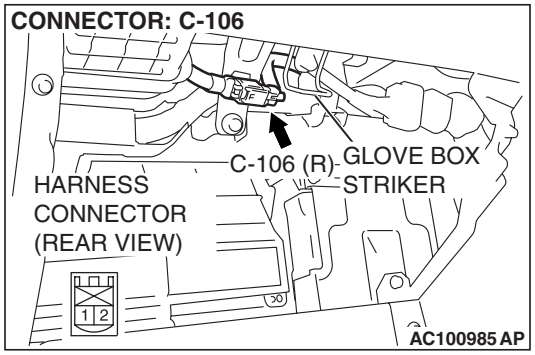
Required Special Tools:

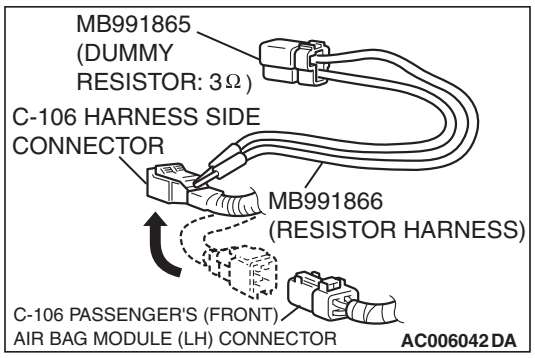
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness

STEP 1. Check the passenger's (front) air bag module (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect passenger's (front) air bag module connector C-106.





(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Disconnect the passenger's (front) air bag module connector C-106, and insert special tool MB991866 into the harness connector by backprobing.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

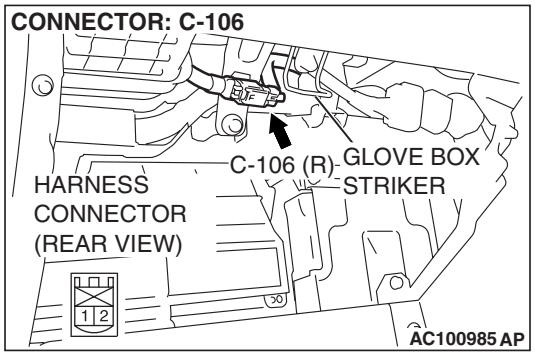
Q: Is DTC 25 set?

YES : Go to Step 2.

NO : Replace the passenger's (front) air bag module (Refer to P.52B-168). Then go to Step 3.

STEP 2. Check the harness for open circuit between SRS-ECU connector C-12 (terminal No.9 and 10) and the passenger's (front) air bag module connector C-106 (terminal No.1 and 2).

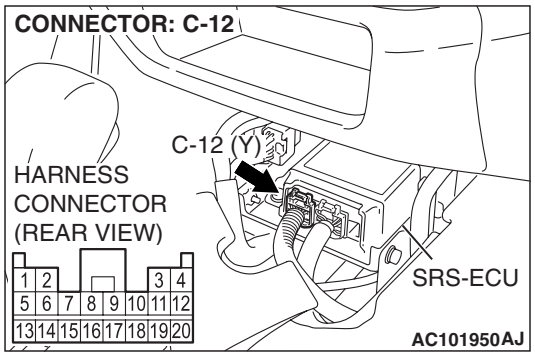
(1) Disconnect passenger's (front) air bag module connector C-106.



(2) Disconnect SRS-ECU connector C-12.

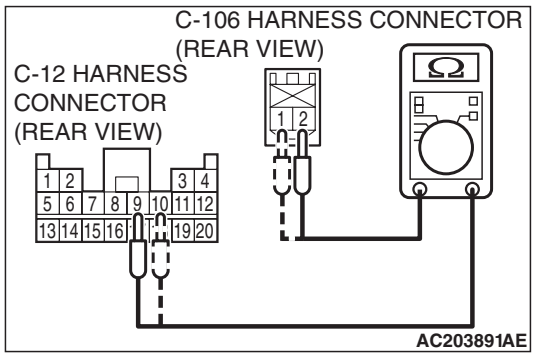
⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.



(3) Check for continuity between the following terminals. It should be less than 2 ohms.

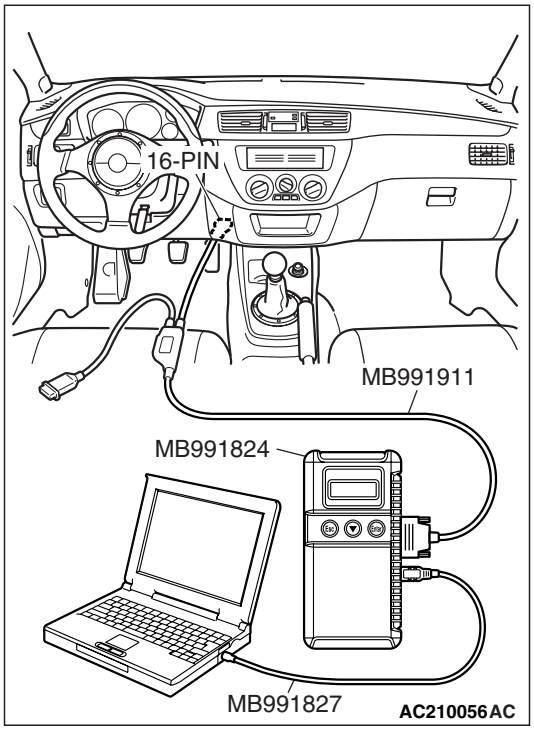
- SRS-ECU connector C-12 (terminal No.9) and the passenger's (front) air bag module connector C-106 (terminal No.2)
- SRS-ECU connector C-12 (terminal No.10) and the passenger's (front) air bag module connector C-106 (terminal No.1)



Q: Does continuity exist?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 25 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 3.

NO : Repair the harness wires between SRS-ECU connector C-12 and passenger's (front) air bag module connector C-106. Then go to Step 3.



STEP 3. Recheck the diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

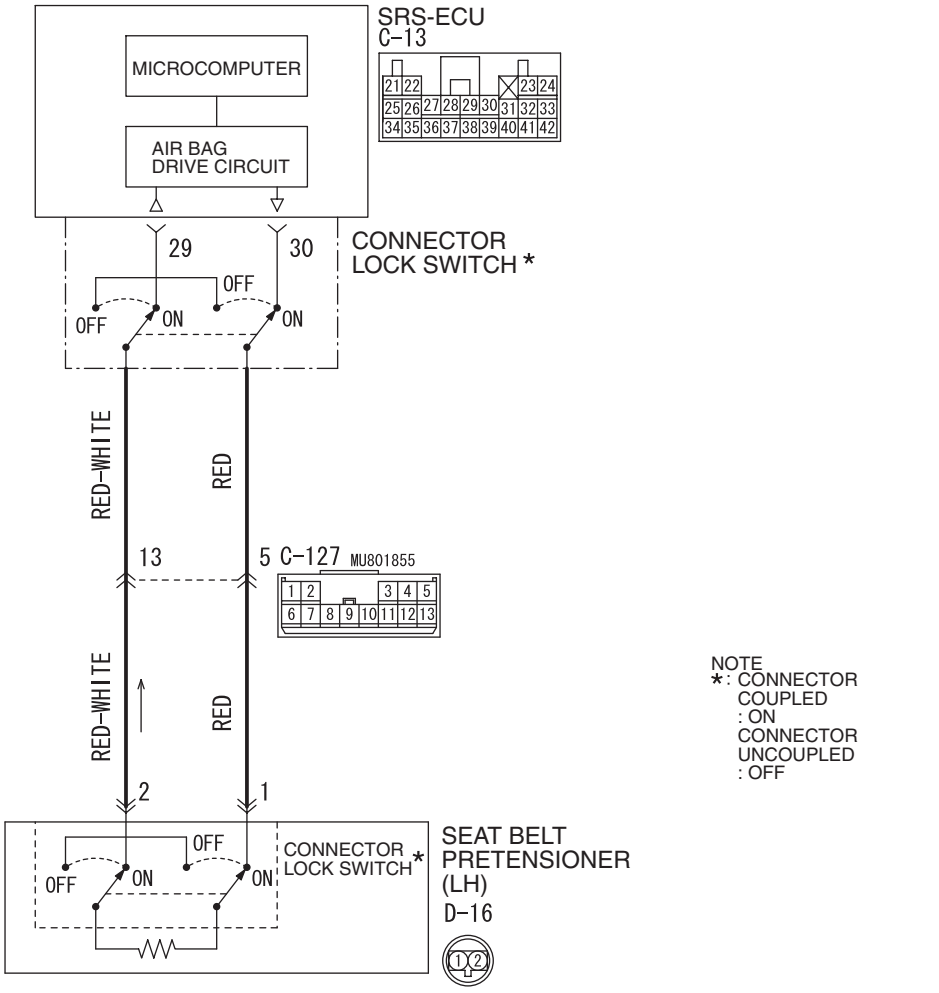
Q: Is DTC 25 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 26: Driver's Seat Belt Pre-Tensioner (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)

Driver's Seat Belt Pre-tensioner (Squib)



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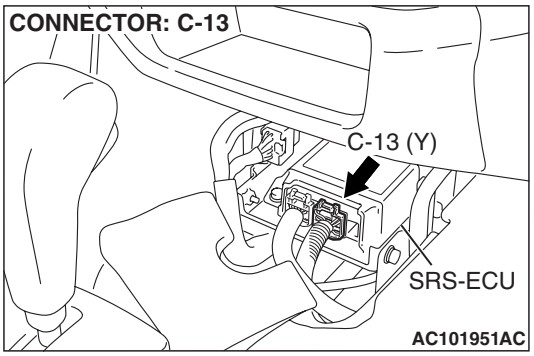

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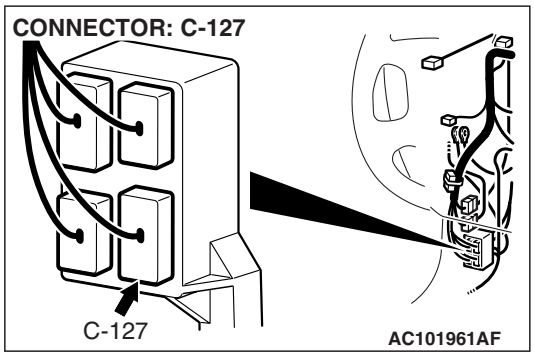

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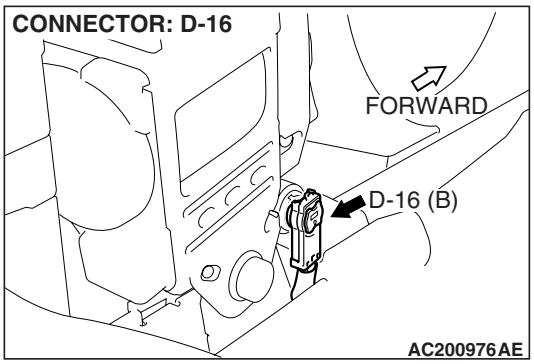
TSB Revision



CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's seat belt pre-tensioner (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TROUBLESHOOTING HITS

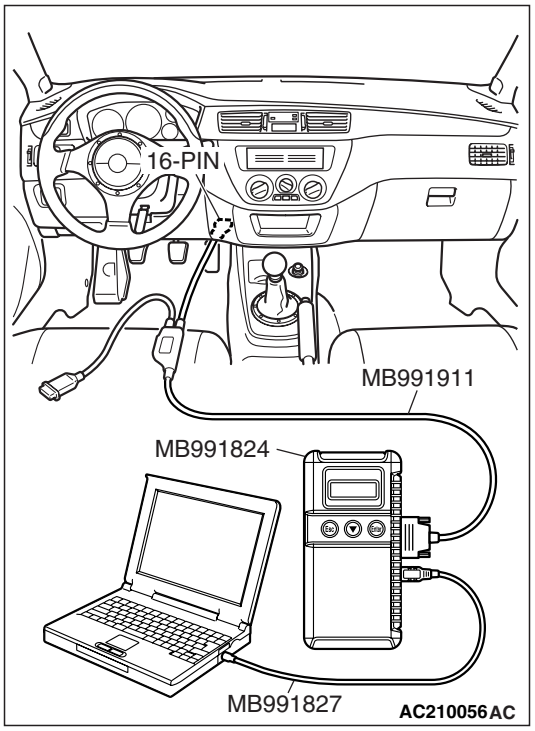
- Improper engaged connector or defective short spring*
- Short circuit between the driver's seat belt pre-tensioner (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

*NOTE: *: The squib circuit connectors integrate a "short" spring (which prevents the seat belt pre-tensioner from deploying unintentionally due to static electricity by shorting the positive wire to the ground wire in the squib circuit when the connectors are disconnected) (Refer to P.52B-3). Therefore, if connector C-13 or D-16 is damaged or improperly engaged, the short spring may not be released when the connector is connected.*

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)



STEP 1. Using scan tool MB991958, read the diagnostic trouble code.

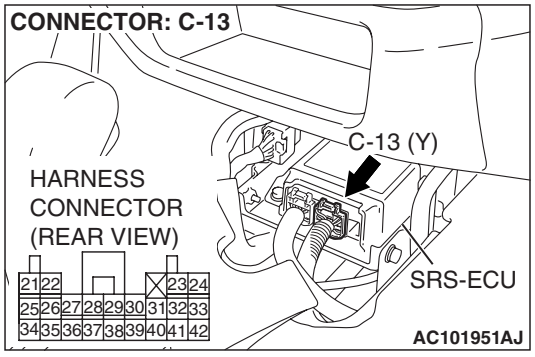
⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Turn the ignition switch to the "ON" position.
(2) Check if the DTC is set.
(3) Turn the ignition switch to the "LOOK" (OFF) position.

Q: Is DTC 34 set?

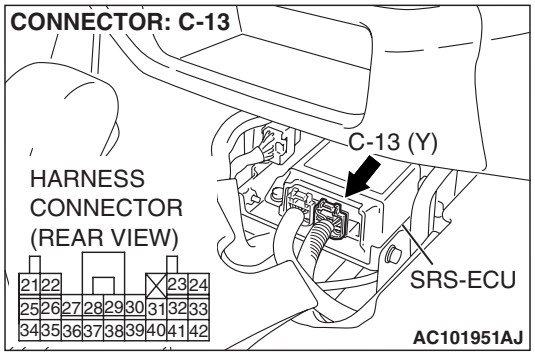
YES : Go to Step 2.
NO : Go to Step 3.

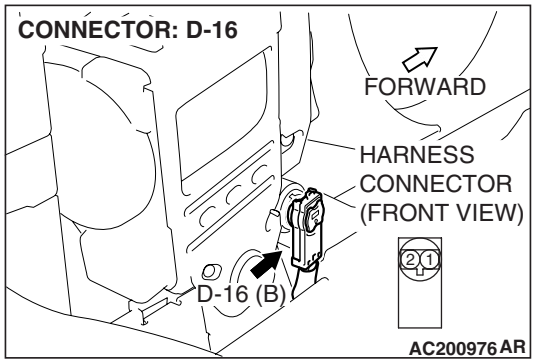


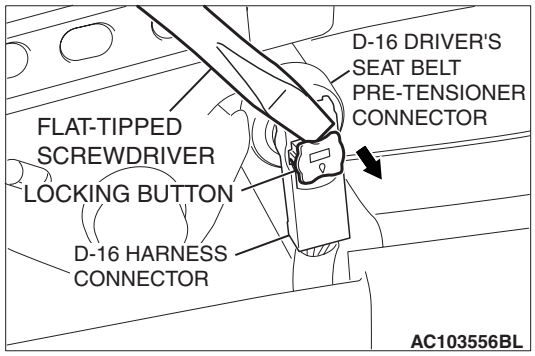
STEP 2. Check the SRS-ECU connector C-13.

Q: Is the connector correctly engaged?

YES : Go to Step 3.
NO : Engage the connector correctly. Then go to Step 7.







STEP 3. Check SRS-ECU connector C-13 and driver's seat belt pre-tensioner connector D-16 (Using scan tool MB991958, read the diagnostic trouble code).

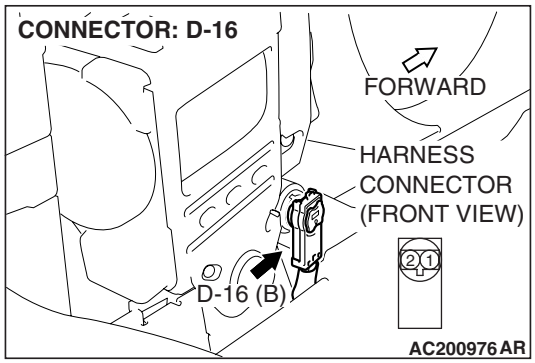
(1) Disconnect the negative battery terminal.
(2) Disconnect connectors C-13 and D-16, and then reconnect them. For connector D-16, use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.
(3) Connector the negative battery terminal.
(4) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

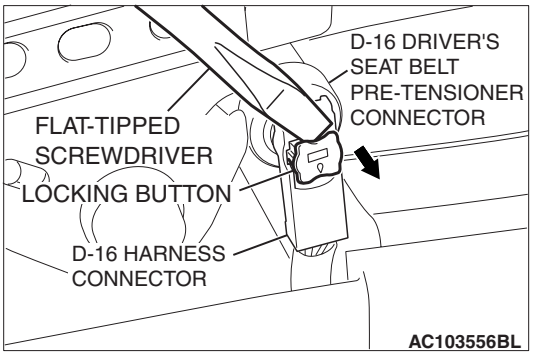
Q: Is DTC 26 set?

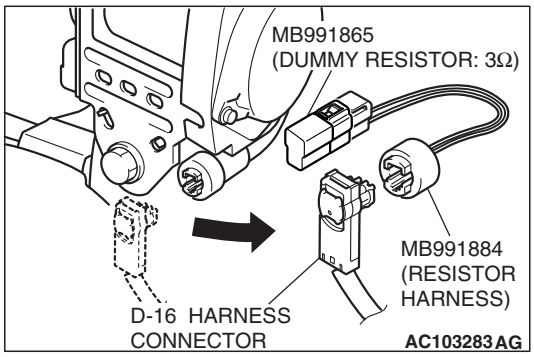
YES : Go to Step 4.
NO : The procedure is complete. It is assumed that DTC 26 set as connector C-13 or D-16 was engaged improperly.

STEP 4. Check the driver's seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.
(2) Disconnect driver's seat belt pre-tensioner connector D-16. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.







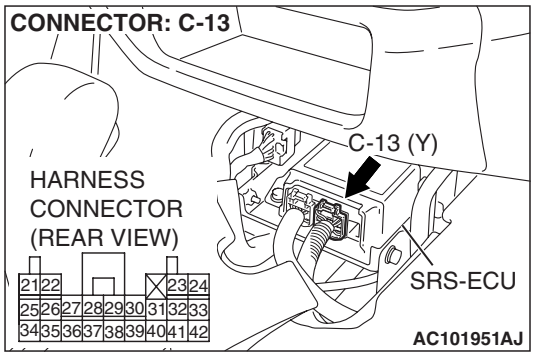
(3) Connect special tool MB991865 to special tool MB991884.
(4) Connect special tool MB991884 to the D-16 harness connector.
(5) Connect the negative battery terminal.
(6) Erase diagnostic trouble code memory, and check the diagnostic trouble code.

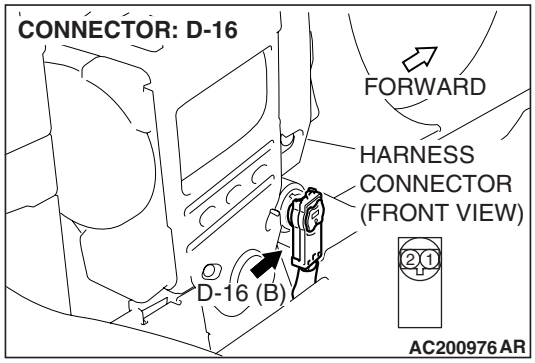
Q: Is DTC 26 set?

YES : Go to Step 5.
NO : Replace the driver's seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 7.

STEP 5. Check the driver's seat belt pre-tensioner circuit at the SRS-ECU connector C-13.

(1) Disconnect SRS-ECU connector C-13.

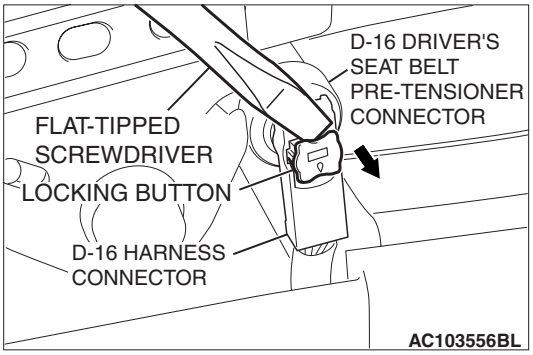




⚠ DANGER

To prevent the seat belt pre-tensioner from deploying unintentionally, disconnect the driver's seat belt pre-tensioner connector D-16 to short the squib circuit.

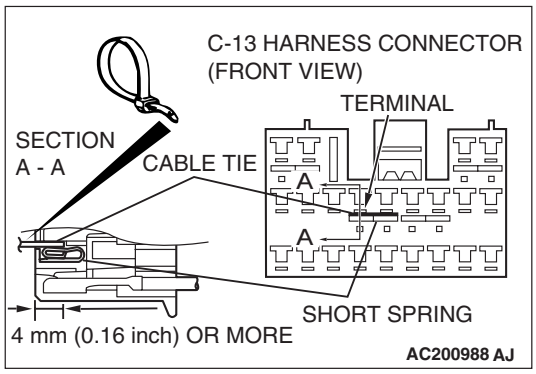
(2) Disconnect driver's seat belt pre-tensioner connector D-16. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.

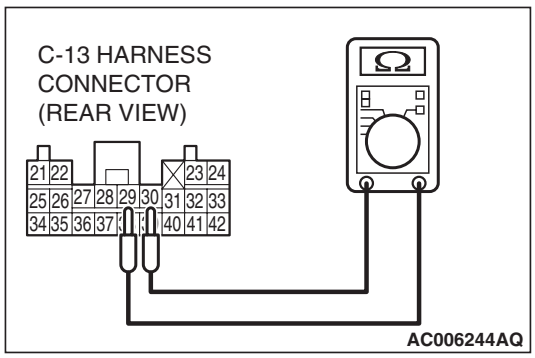


⚠ CAUTION

Insert an insulator such as a cable tie to a depth of 4mm (0.16 inch) or more, otherwise the short spring will not be released.

(3) Insert a cable tie [3 mm (0.12 inch) wide, 0.5 mm (0.02 inch) thick] between terminals 29, 30 and the short spring to release the short spring.





⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

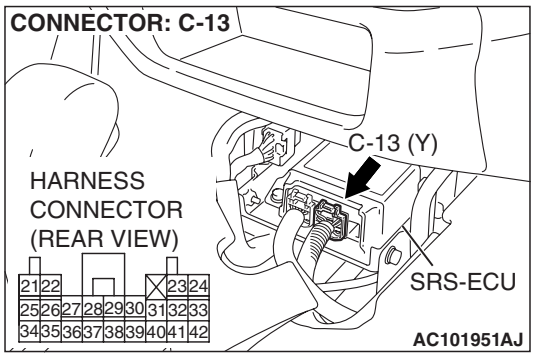
(4) Check for continuity between terminals 29 and 30.
It should be open circuit.

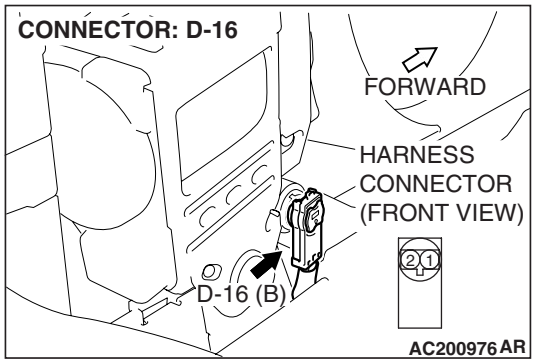
Q: Does continuity exist?

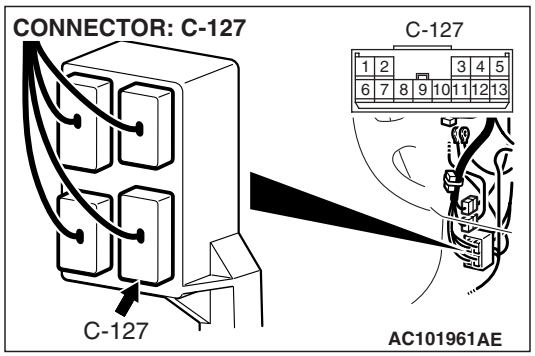
YES : Go to Step 6.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 26 sets, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 7.

STEP 6. Check the harness for short circuit between SRS-ECU connector C-13 (terminal No.29 and 30) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2).







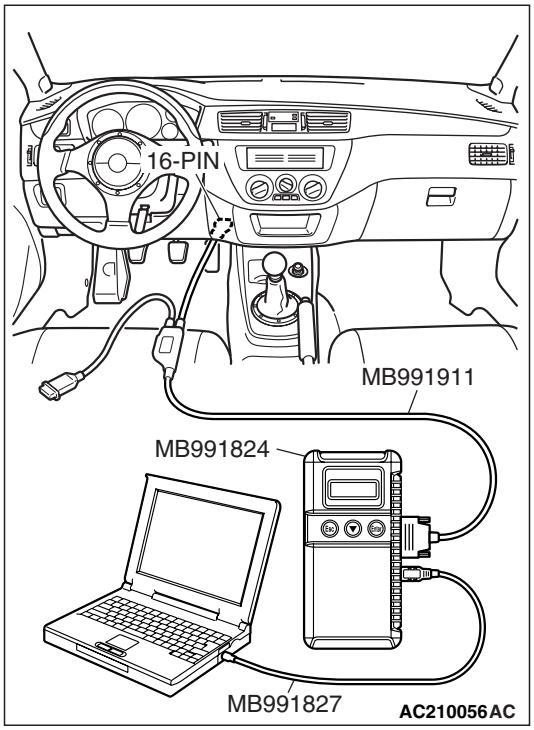
NOTE: After inspecting intermediate connector C-127 inspect the wiring harness.
If the intermediate connector C-127 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are harness wires between SRS-ECU connector C-13 (terminal No.29 and 30) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2) in good condition?

YES : Go to Step 7.

NO : Repair the harness wires between SRS-ECU connector C-13 and driver's seat belt pre-tensioner connector D-16. Then go to Step 7.

TSB Revision



STEP 7. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

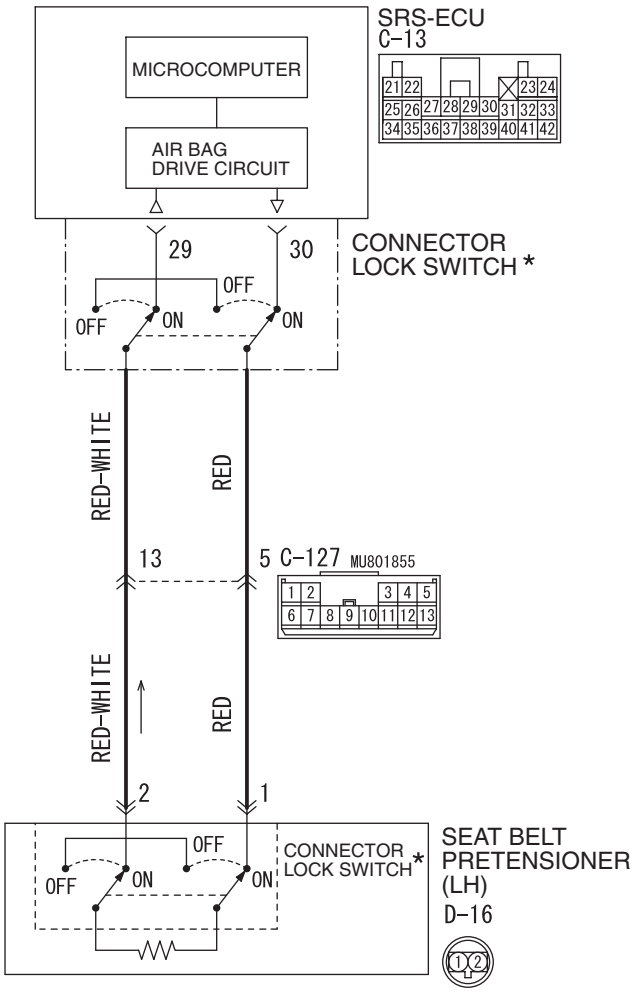
Q: Is DTC 26 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 27: Driver's Seat Belt Pre-Tensioner (Squib) System Fault 2 (Open in the Squib Circuit)

Driver's Seat Belt Pre-tensioner (Squib)



NOTE
*: CONNECTOR COUPLED : ON
CONNECTOR UNCOUPLED : OFF

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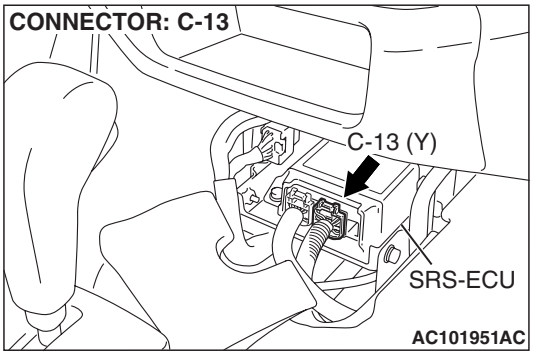
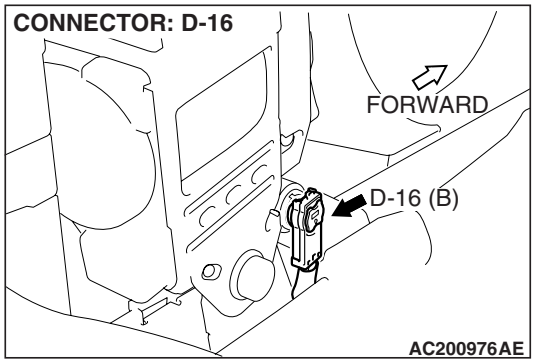
W3J19M04AA

CONNECTOR: C-13



AC101951AC

CONNECTOR: D-16



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TSB Revision

CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's seat belt pre-tensioner (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TROUBLESHOOTING HITS

- Improper connector contact
- Open circuit in the driver's seat belt pre-tensioner (squib) circuit
- Malfunction of the SRS-ECU

DIAGNOSIS

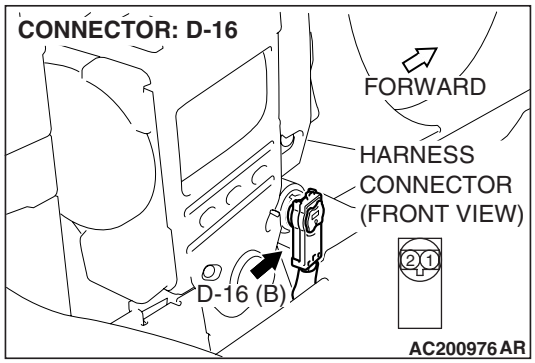
Required Special Tools:

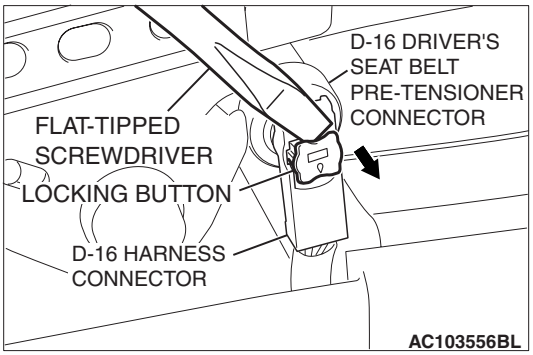
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)

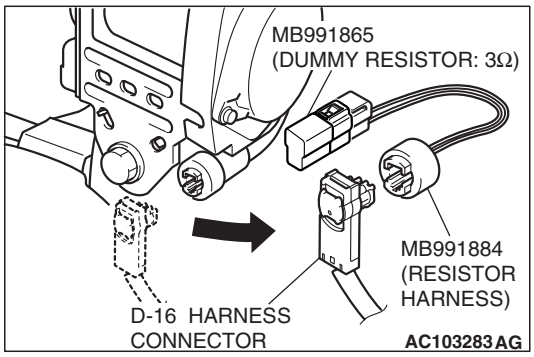
STEP 1. Check the driver's seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect the driver's seat belt pre-tensioner connector D-16. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.







(3) Connect special tool MB991865 to special tool MB991884.

(4) Connect special tool MB991884 to the D-16 harness connector.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

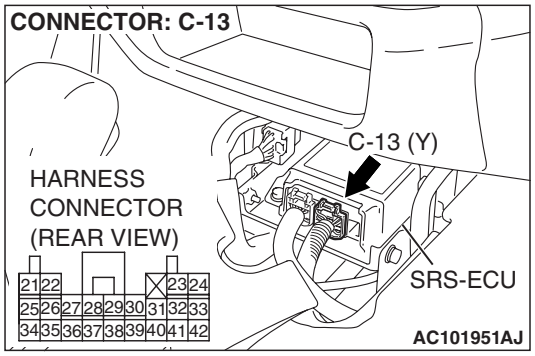
Q: Is DTC 27 set?

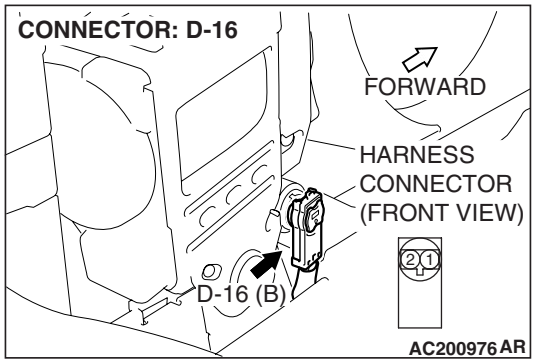
YES : Go to Step 2.

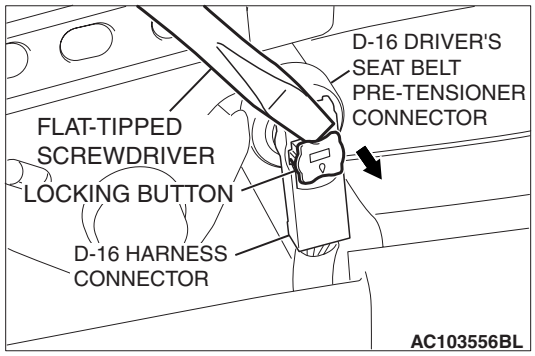
NO : Replace the driver's seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 3.

STEP 2. Check the harness for open circuit between SRS-ECU connector C-13 (terminal No.29 and 30) and the driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2).

(1) Disconnect SRS-ECU connector C-13 and driver's seat belt pre-tensioner connector D-16, and measure at the wiring harness side. For connector D-16, use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.



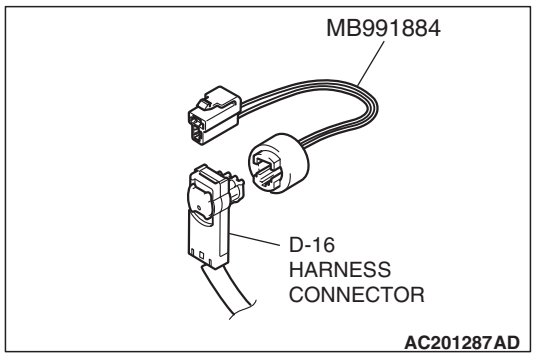


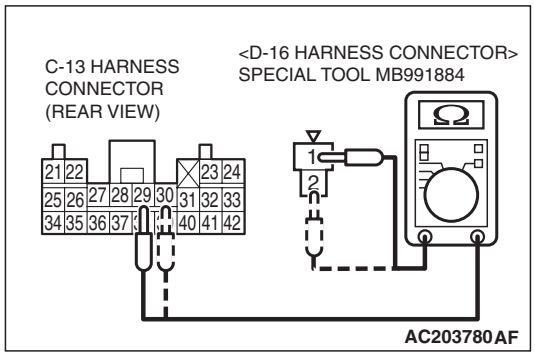


(2) Connect D-16 harness connector to special tool MB991884.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.



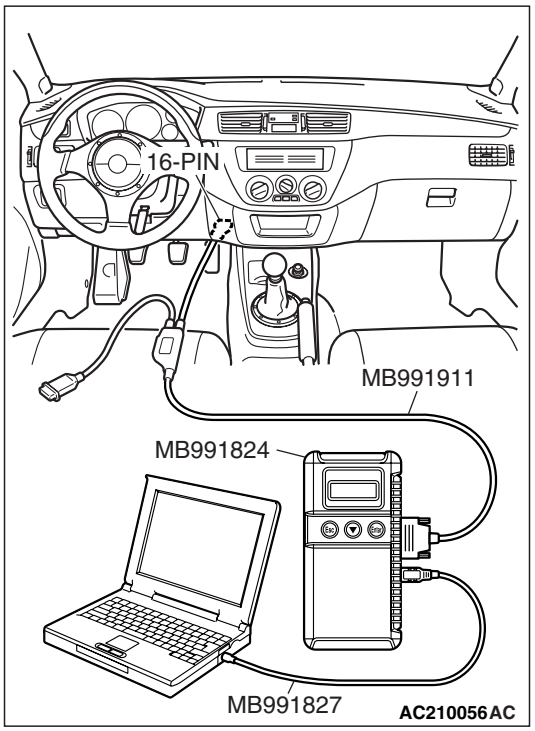


(3) Check for continuity between the following terminals. It should be less than 2 ohms.
- SRS-ECU connector C-13 (terminal No.29) and the special tool (terminal No.1)
- SRS-ECU connector C-13 (terminal No.30) and the special tool (terminal No.2)

Q: Does continuity exist?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 27 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 3.

NO : Repair harness wires between SRS-ECU connector C-13 and driver's seat belt pre-tensioner connector D-16. Then go to Step 3.



STEP 3. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

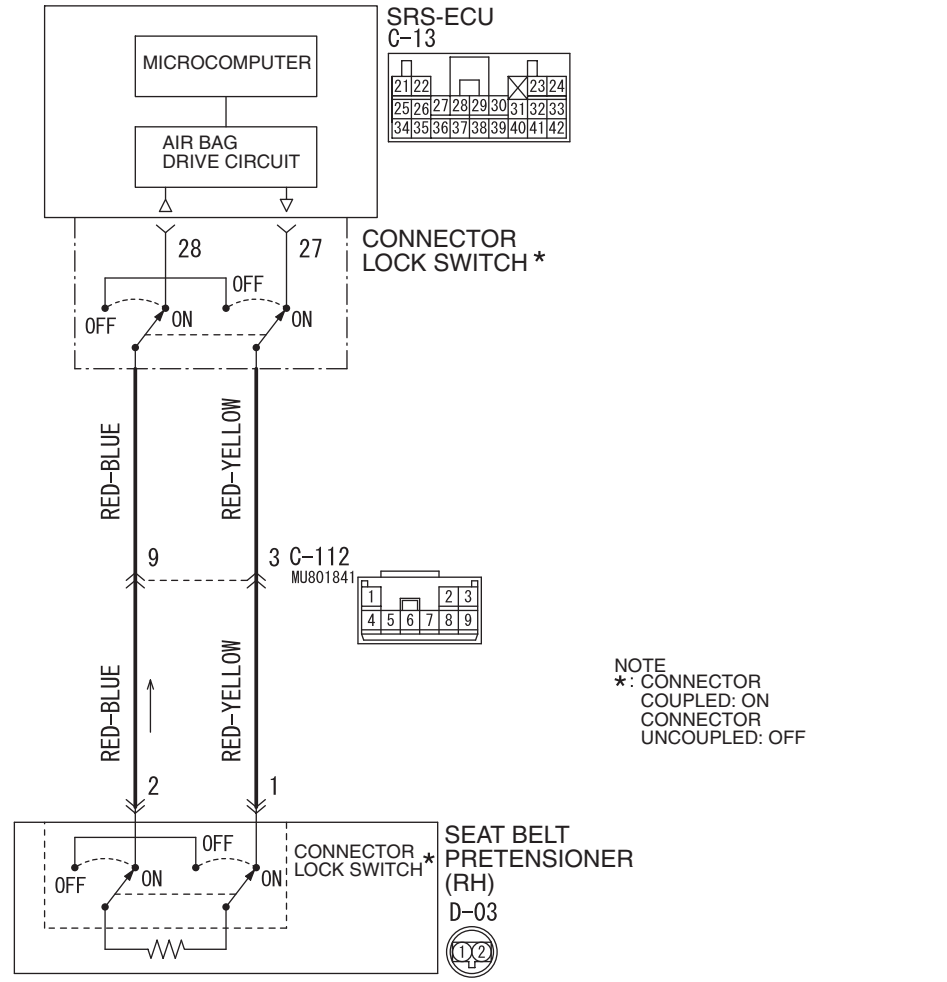
Q: Is DTC 27 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 28: Passenger's (Front) Seat Belt Pre-Tensioner (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)

Passenger's (Front) Seat Belt Pre-tensioner (Squib)



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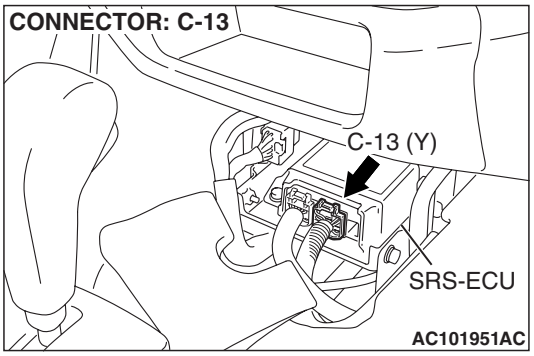
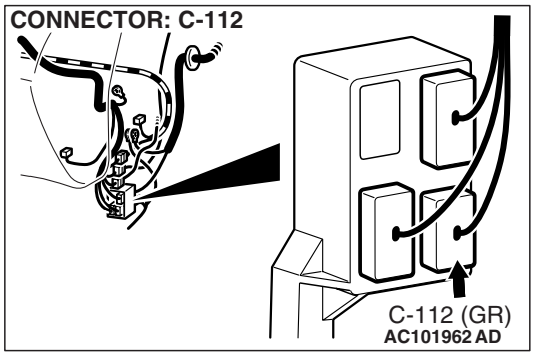
W3J19M05AA





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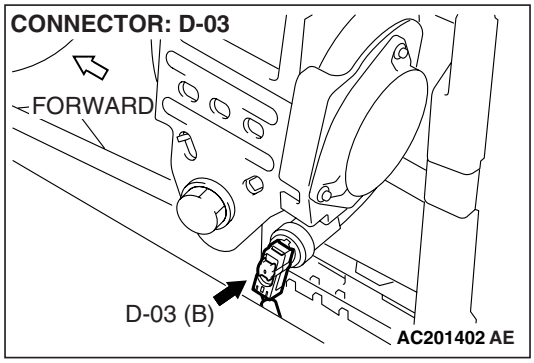


CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) seat belt pre-tensioner (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TROUBLESHOOTING HITS

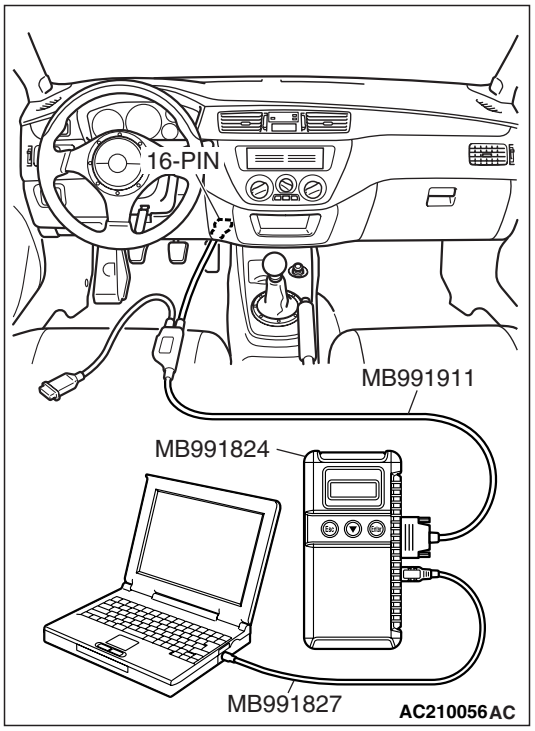
- Improper engaged connector or defective short spring*
- Short circuit between the passenger's (front) seat belt pre-tensioner (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

*NOTE: *: The squib circuit connectors integrate a "short" spring (which prevents the seat belt pre-tensioner from deploying unintentionally due to static electricity by shorting the positive wire to the ground wire in the squib circuit when the connectors are disconnected) (Refer to P.52B-3). Therefore, if connector C-13 or D-03 is damaged or improperly engaged, the short spring may not be released when the connector is connected.*

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)



STEP 1. Using scan tool MB991958, read the diagnostic trouble code.

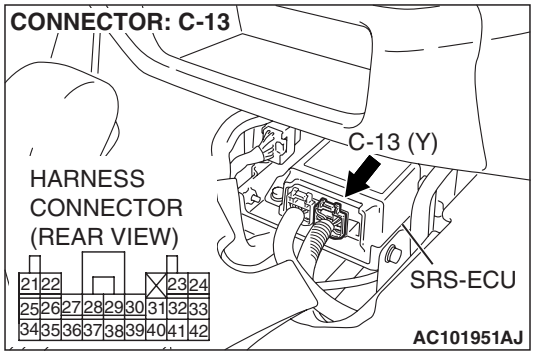
⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

(1) Turn the ignition switch to the "ON" position.
(2) Check if the DTC is set.
(3) Turn the ignition switch to the "LOOK" (OFF) position.

Q: Is DTC 34 set?

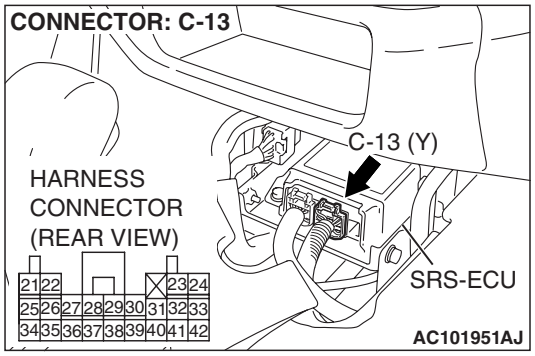
YES : Go to Step 2.
NO : Go to Step 3.

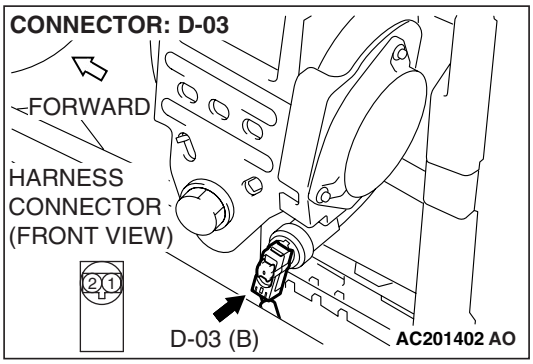


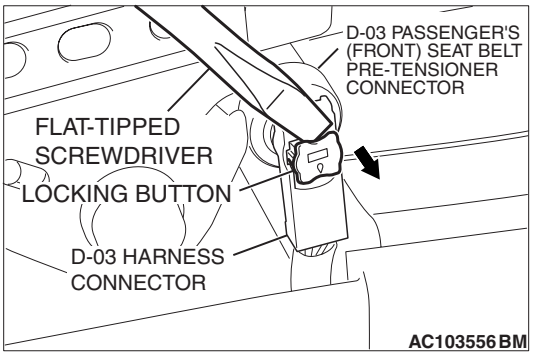
STEP 2. Check the SRS-ECU connector C-13.

Q: Is connector correctly engaged?

YES : Go to Step 3.
NO : Engage the connector correctly. Then go to Step 7.







STEP 3. Check SRS-ECU connector C-13 and passenger's (front) seat belt pre-tensioner connector D-03 (Using scan tool MB991958, read the diagnostic trouble code).

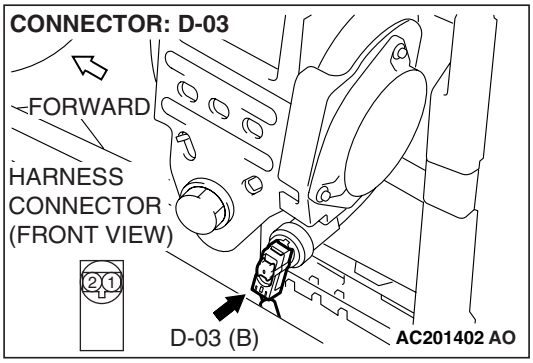
(1) Disconnect the negative battery terminal.
(2) Disconnect connectors C-13 and D-03, and then reconnect them. For connector D-03, use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.
(3) Connector the negative battery terminal.
(4) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

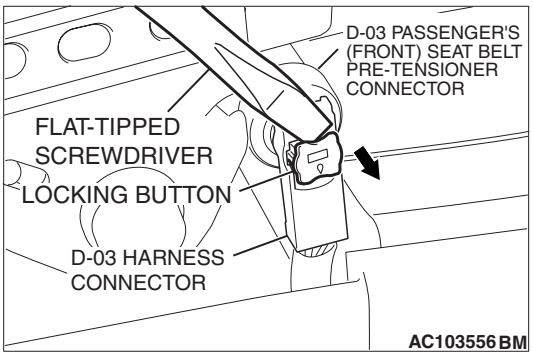
Q: Is DTC 28 set?

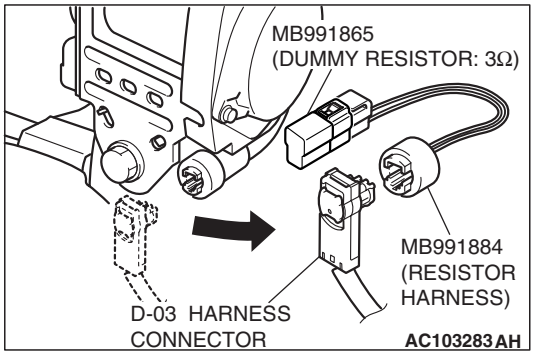
YES : Go to Step 4.
NO : The procedure is complete. It is assumed that DTC 28 set as connector C-13 or D-03 was engaged improperly.

STEP 4. Check the passenger's (front) seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.
(2) Disconnect passenger's (front) seat belt pre-tensioner connector D-03. Use a flat-tipped screwdriver to unlock the locking button at the harness connector by withdrawing it toward you in two stages, and then disconnect the connector.







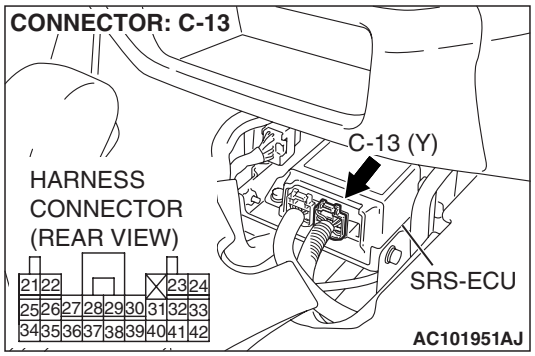
(3) Connect special tool MB991865 to special tool MB991884.
(4) Connect special tool MB991884 to the D-03 harness connector.
(5) Connect the negative battery terminal.
(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

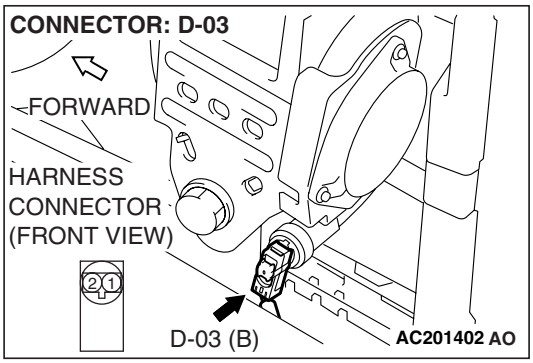
Q: Is DTC 28 set?

YES : Go to Step 5.
NO : Replace the passenger's seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 7.

STEP 5. Check the passenger's (front) seat belt pre-tensioner circuit at the SRS-ECU connector C-13.

(1) Disconnect SRS-ECU connector C-13.

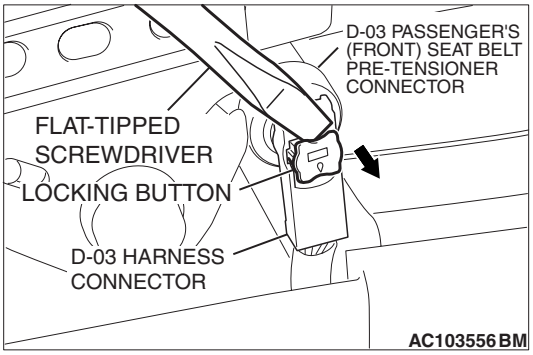




⚠ ***DANGER***

To prevent the seat belt pre-tensioner from deploying unintentionally, disconnect the passenger's (front) seat belt pre-tensioner connector D-03 to short the squib circuit.

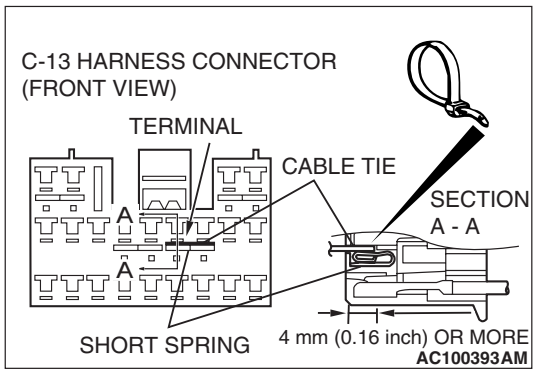
(2) Disconnect passenger's (front) seat belt pre-tensioner connector D-03. Use a flat-tipped screwdriver to unlock the locking button at the harness connector by withdrawing it toward you in two stages, and then disconnect the connector.

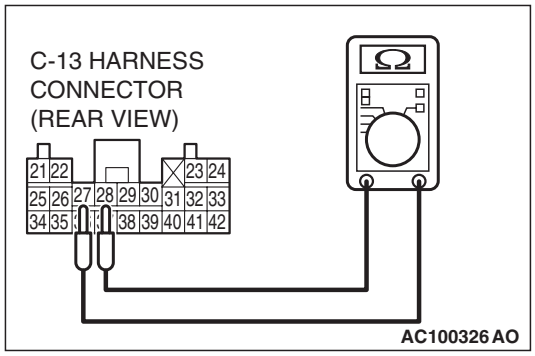


⚠ **CAUTION**

Insert an insulator such as a cable tie to a depth of 4mm (0.16 inch) or more, otherwise the short spring will not be released.

(3) Insert a cable tie [3 mm (0.12 inch) wide, 0.5 mm (0.02 inch) thick] between terminals 27, 28 and the short spring to release the short spring.





⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

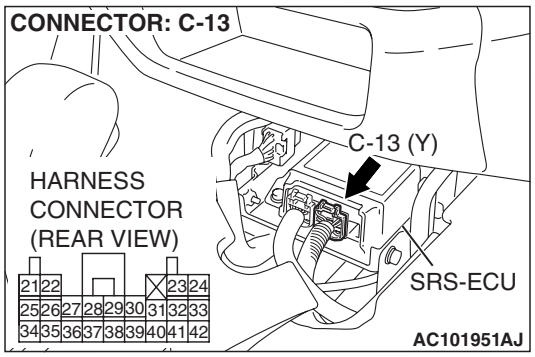
(4) Check for continuity between C-13 harness connector terminals 27 and 28.
It should be open circuit.

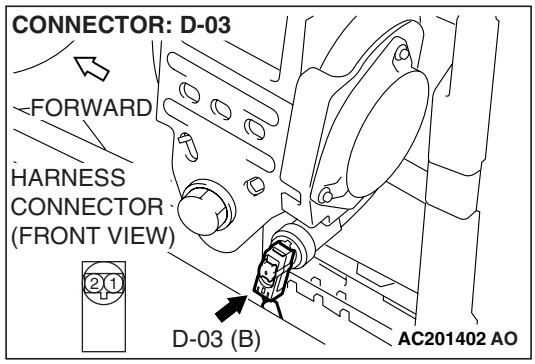
Q: Does continuity exist?

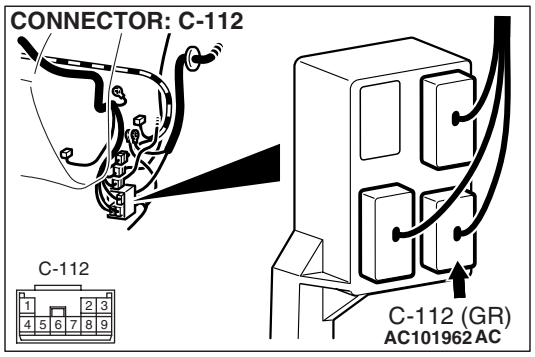
YES : Go to Step 6.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 28 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 7.

STEP 6. Check the harness for short circuit between SRS-ECU connector C-13 (terminal No. 27 and 28) and passenger's (front) seat belt pre-tensioner connector D-03 (terminal No.1 and 2).







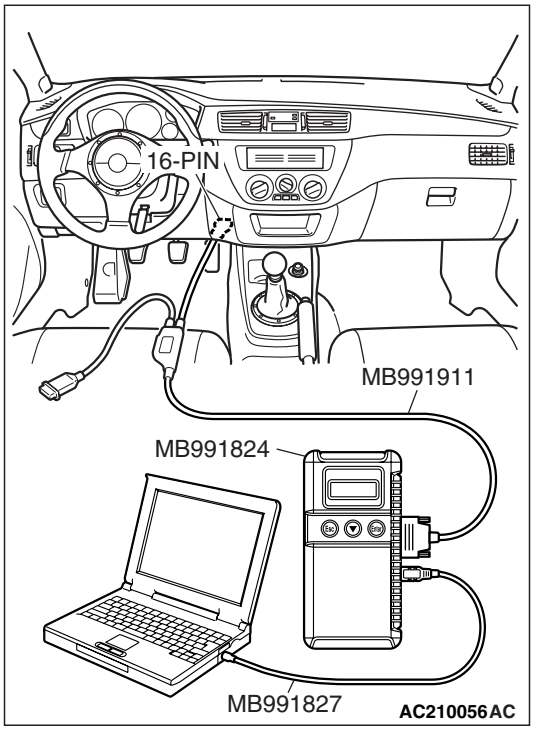
NOTE: After inspecting intermediate connector C-112, inspect the wiring harness.
If the intermediate connector C-112 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are harness wires between SRS-ECU connector C-13 (terminal No. 27 and 28) connector and passenger's (front) seat belt pre-tensioner connector D-03 (terminal No.1 and 2) in good condition?

YES : Go to Step 7.

NO : Repair the harness wires between SRS-ECU connector C-13 and passenger's (front) seat belt pre-tensioner connector D-03. Then go to Step 7.

TSB Revision



STEP 7. Recheck for diagnostic trouble code DTC.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

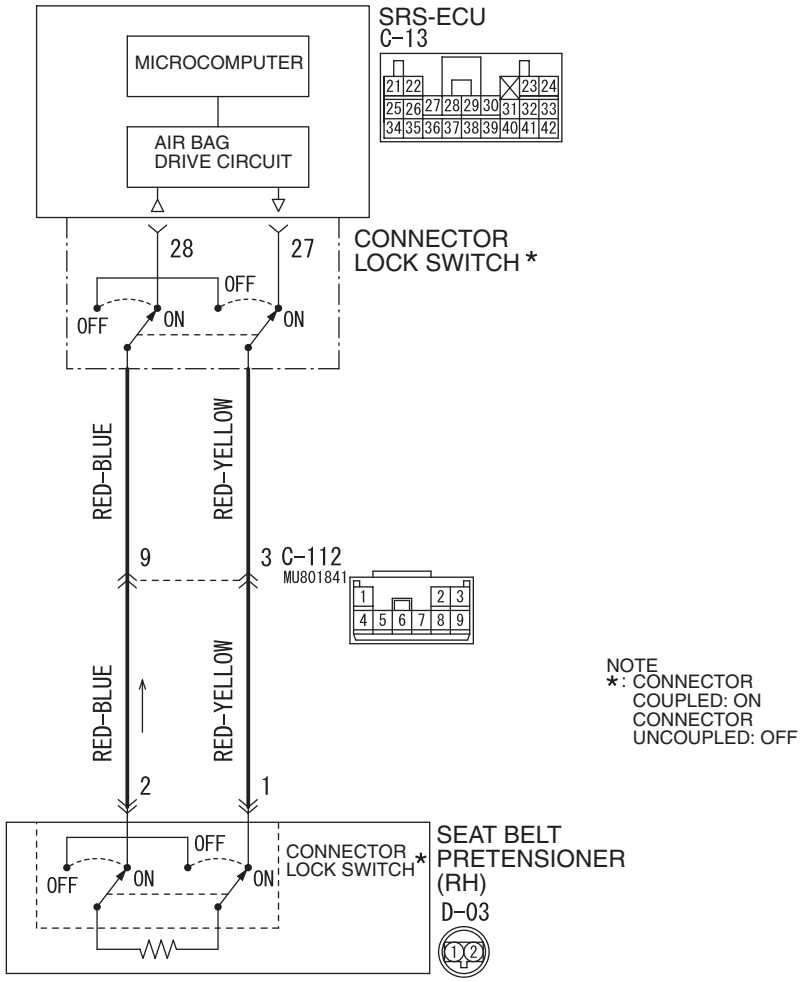
Q: Is DTC 28 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 29: Passenger's (Front) Seat Belt Pre-Tensioner (Squib) System Fault 2 (Open in the Squib Circuit)

Passenger's (Front) Seat Belt Pre-tensioner (Squib)



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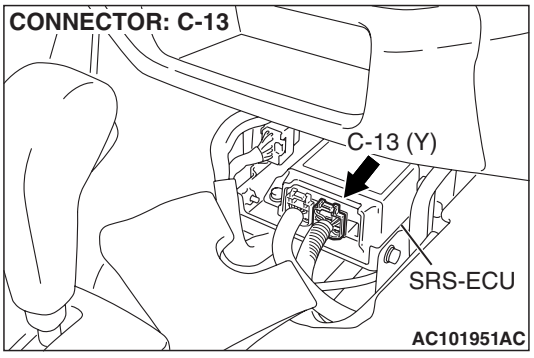
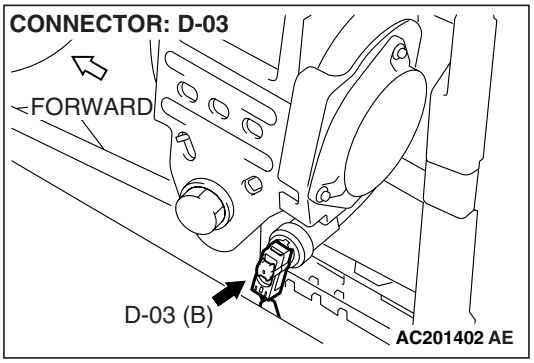




TSB Revision

CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) seat belt pre-tensioner (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

TROUBLESHOOTING HITS

- Open circuit in the passenger's (front) seat belt pre-tensioner (squib) circuit
- Improper connector contact
- Malfunction of the SRS-ECU

DIAGNOSIS

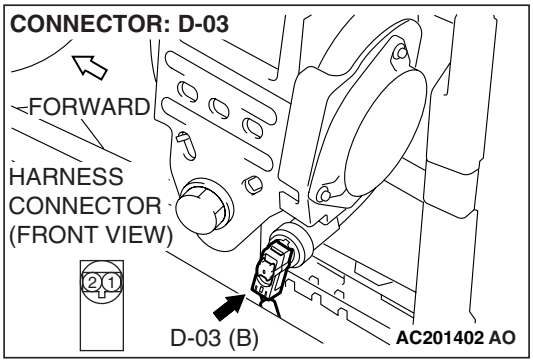
Required Special Tools:

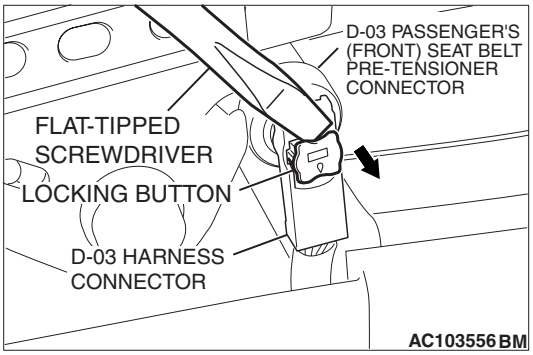
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)

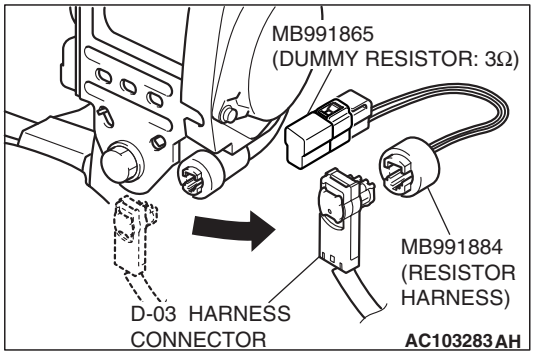
STEP 1. Check the passenger's (front) seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect passenger's (front) seat belt pre-tensioner connector D-03. Use a flat-tipped screwdriver to unlock the locking button at the harness connector side connector by withdrawing it toward you in two stages, and then disconnect the connector.







(3) Connect special tool MB991865 to special tool MB991884.

(4) Connect special tool MB991884 to the D-03 harness connector.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

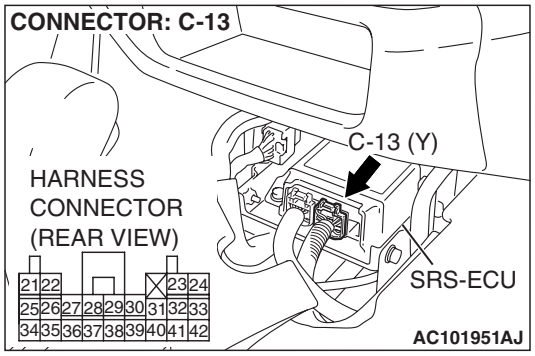
Q: Is DTC 29 set?

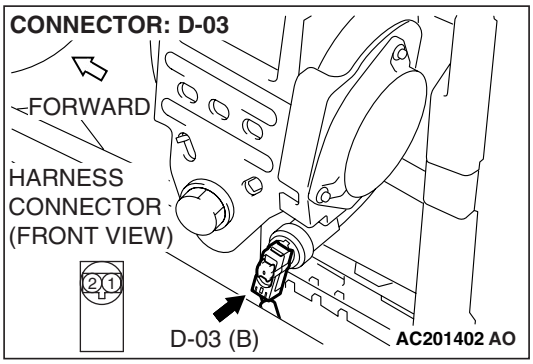
YES : Go to Step 2.

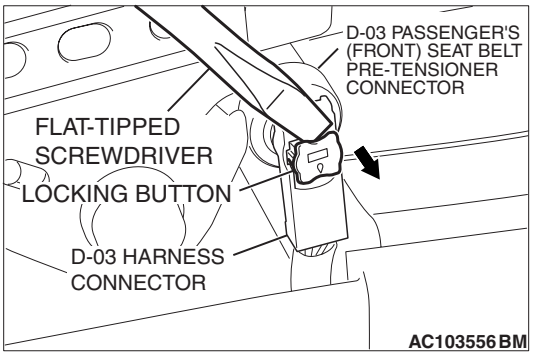
NO : Replace the passenger's (front) seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 3.

STEP 2. Check the harness for open circuit between SRS-ECU connector C-13 (terminal No.27 and 28) and the passenger's (front) seat belt pre-tensioner connector D-03 (terminal No.1 and 2).

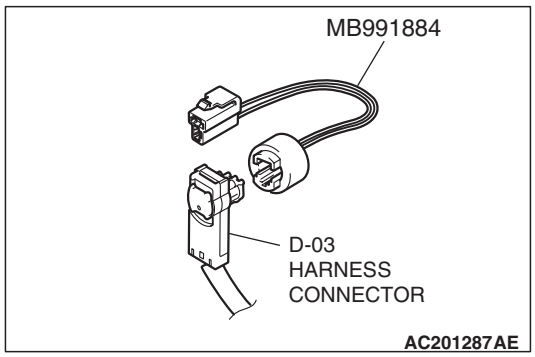
(1) Disconnect SRS-ECU connector C-13 and passenger's (front) seat belt pre-tensioner connector D-03, and measure at the wiring harness side. For connector D-03, use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.

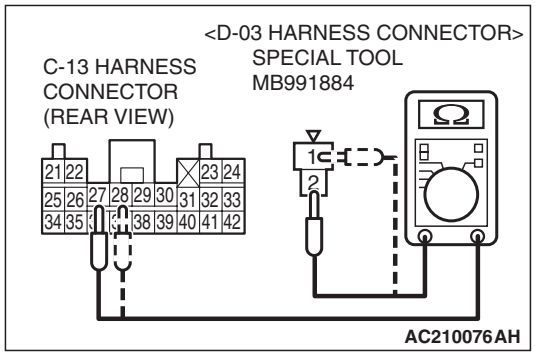






(2) Connect D-03 harness connector to special tool MB991884.





⚠ CAUTION

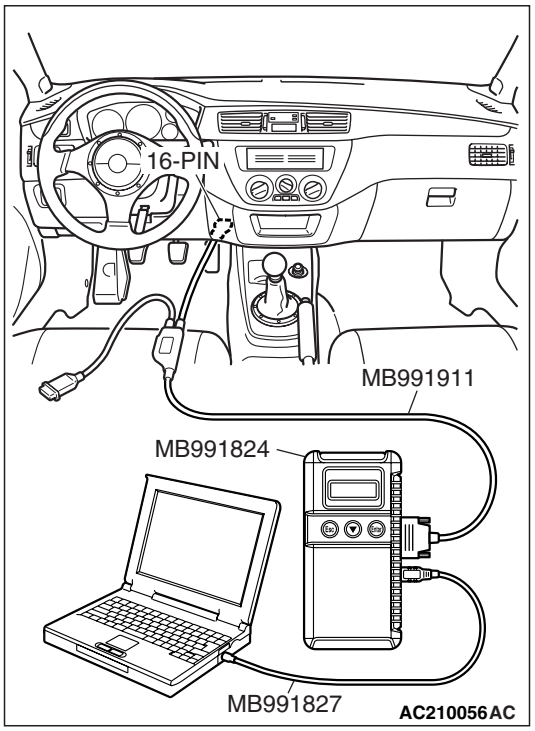
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(3) Check for continuity between the following terminals. It should be less than 2 ohms.
- SRS-ECU connector C-13 (terminal No.27) and the special tool (terminal No.2)
- SRS-ECU connector C-13 (terminal No.28) and the special tool (terminal No.1)

Q: Does continuity exist?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 29 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 3.

NO : Repair the harness wires between SRS-ECU connector C-13 passenger's (front) seat belt pre-tensioner connector D-03. Then go to Step 3.



STEP 3. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is DTC 29 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 34: Connector Lock System Detects Connector Unlocked

DTC SET CONDITIONS

This DTC is set if a poor connection at the SRS-ECU is detected. However, if the vehicle condition returns to normal, DTC number 34 will be automatically erased, and the SRS warning light will switch off.

TROUBLESHOOTING HINTS

- Damaged connectors
- Malfunction of the SRS-ECU

DIAGNOSIS

Required Special Tools:

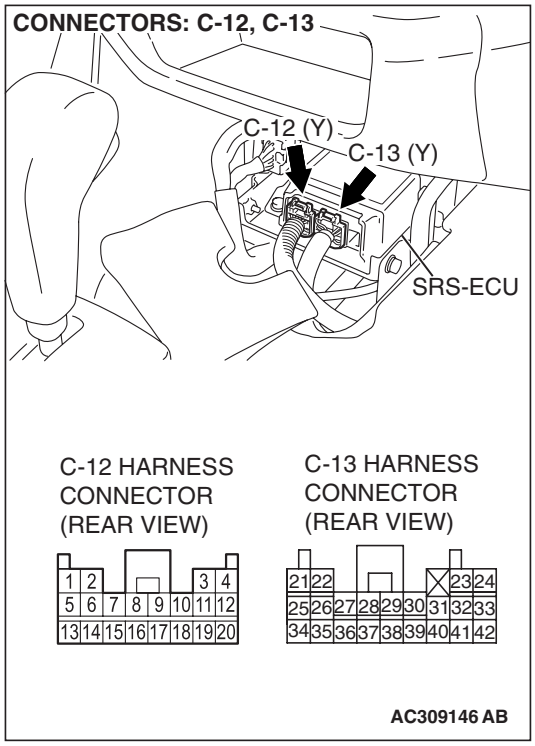
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

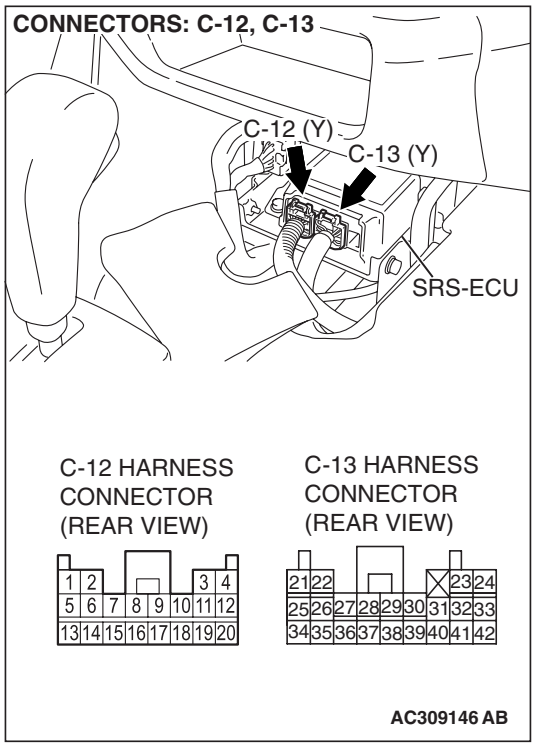
STEP 1. Check the SRS-ECU connector C-12, C-13.

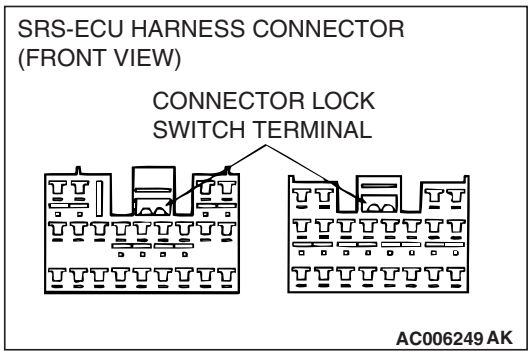
Q: Are connectors correctly engaged?

YES : Go to Step 2.

NO : Engage the connectors correctly. Then go to Step 3.







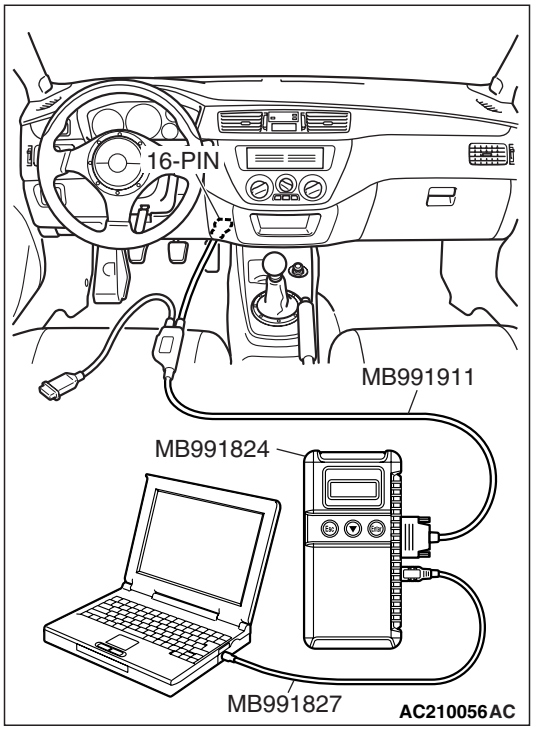
STEP 2. Check SRS-ECU connector C-12, C-13 for damage.

(1) Disconnect SRS-ECU connectors C-12 and C-13.
(2) Check the connector lock switch terminal inside the harness side connector for improper contact or deformation.

Q: Are the SRS-ECU connector C-12, C-13 in good condition?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 34 sets, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 3.

NO : Repair or replace the SRS-ECU connector C-12, C-13. (Refer to GROUP 00E, Harness Connector Inspection P.00E-2.) Then go to Step 3.



STEP 3. Recheck the diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is DTC 34 set?

YES : There is no action to be taken.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 35: SRS-ECU Air Bag Condition Monitor Detects Deployed Air Bag

DTC SET CONDITIONS

This DTC is set after the air bag has deployed. If this DTC is set before the air bag has deployed, the cause is probably a malfunction inside the SRS-ECU.

TROUBLESHOOTING HINTS

Malfunction of the SRS-ECU

DIAGNOSIS

Replace the SRS-ECU (Refer to P.52B-166).

DTC 39 Air bags Deployed Simultaneously

DTC SET CONDITIONS

This code is set when the air bags have deployed simultaneously. If this code is set before the air bags have deployed, an internal failure may have occurred in the SRS-ECU.

TROUBLESHOOTING HINTS

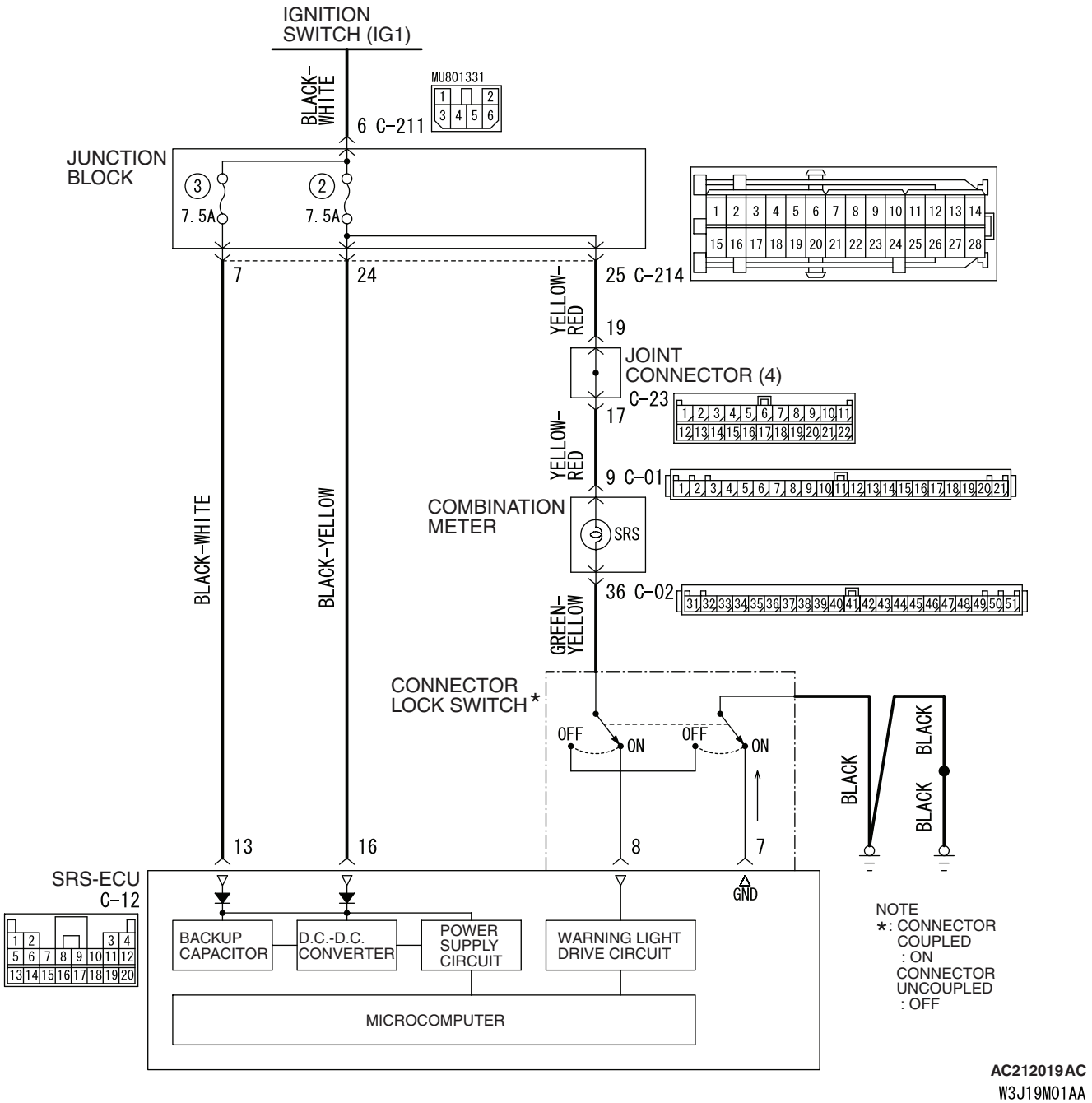
Malfunction of the SRS-ECU

DIAGNOSIS

Replace the SRS-ECU (Refer to P.52B-166).

DTC 41: IG1 Power Supply Circuit System (Fuse No.2 Circuit)

IG1 Power Supply Circuit System (Fuse No.2 Circuit)



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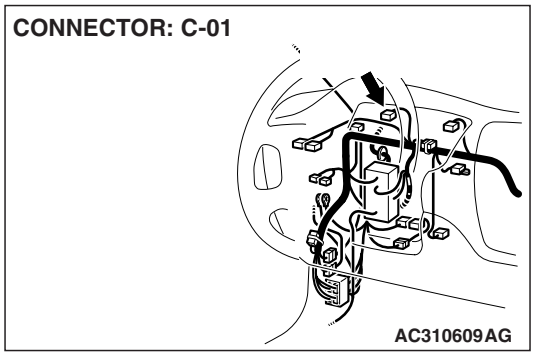
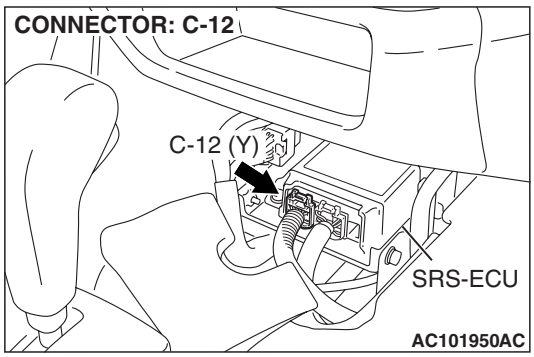
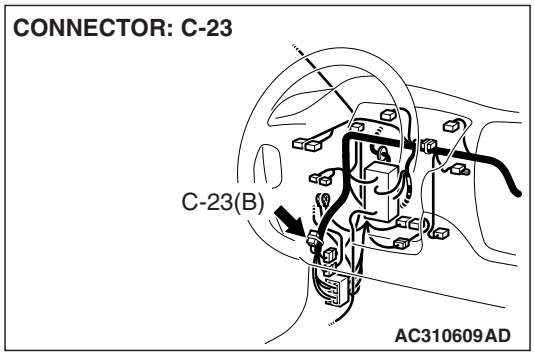
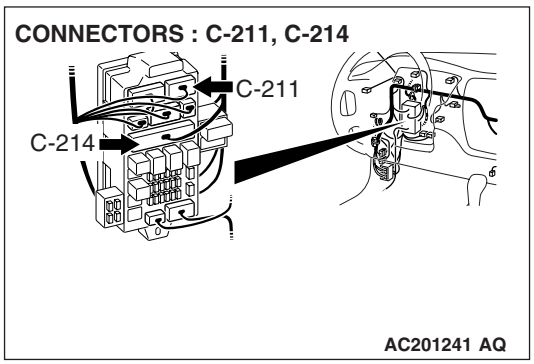








CIRCUIT OPERATION

- The SRS-ECU is powered from the ignition switch (IG1).
- The SRS-ECU power is supplied from two circuits. Even if one circuit is shut off, the air bag can inflate.

DTC SET CONDITIONS

This DTC is set if the voltage between the IG1 terminals (fuse No.2 circuit) and ground is lower than a predetermined value for a continuous period of five second or more. However, if the vehicle condition returns to normal, DTC number 41 will be automatically erased, and the SRS warning light will switch off.

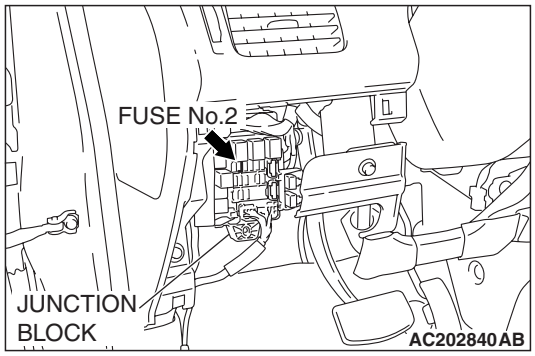
TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

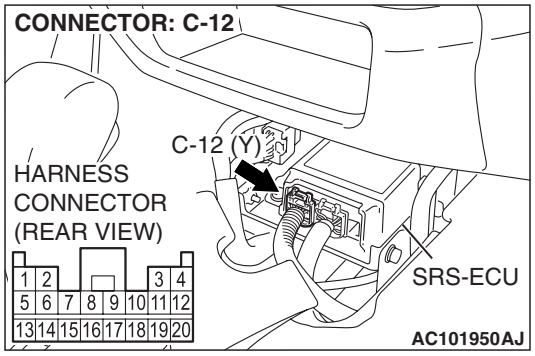


STEP 1. Check junction block fuse number 2.

Q: Is the fuse burned out?

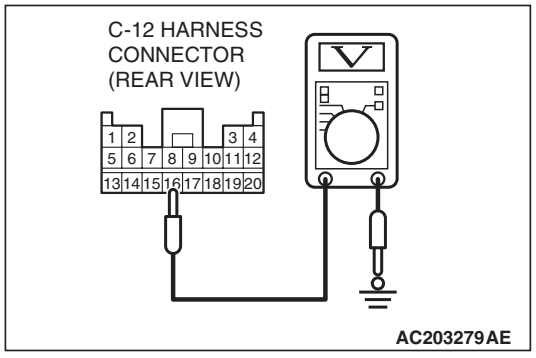
YES : Go to Step 4.

NO : Go to Step 2.



STEP 2. Check the power supply circuit for open circuit at the SRS-ECU connector C-12.

(1) Disconnect the negative battery terminal.
(2) Disconnect SRS-ECU connector C-12.
(3) Connect the negative battery terminal.
(4) Turn the ignition switch to the "ON" position.



⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

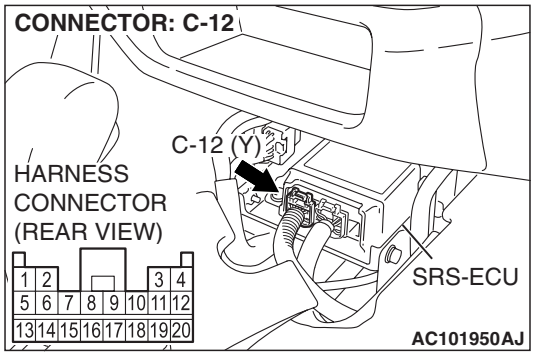
(5) Measure the voltage between C-12 harness connector terminal 16 and body ground.
Voltage should measure 9 volts or more.

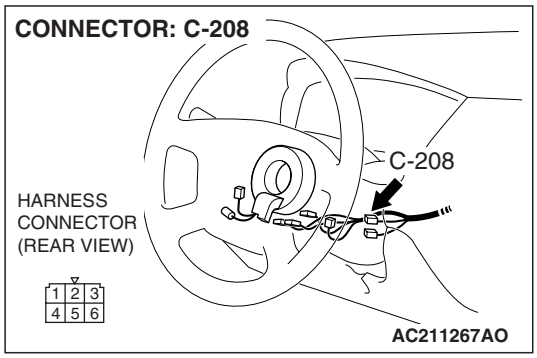
Q: Is the measured voltage within the specified range?

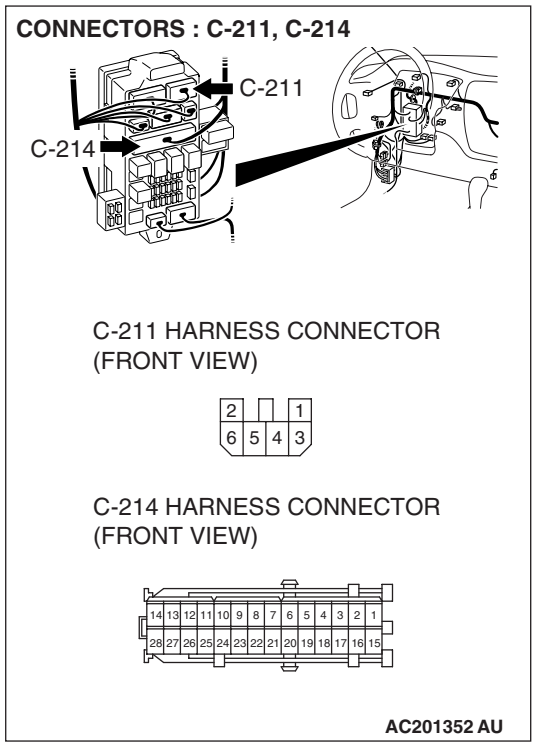
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 41 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 10.

NO : Go to Step 3.

STEP 3. Check the harness for open circuit between SRS-ECU connector C-12 (terminal No.16) and the ignition switch connector C-208 (terminal No.2).







NOTE: After inspecting intermediate connectors C-214 and C-211, inspect the wiring harness. If intermediate connectors are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Is harness between SRS-ECU connector C-12 (terminal No.16) and the ignition switch connector C-208 (terminal No.2) in good condition?

YES : Go to Step 10.

NO : Repair the harness wire between SRS-ECU connector C-12 and the ignition switch connector C-208. Then go to Step 10.

STEP 4. Check for a burned-out fuse.

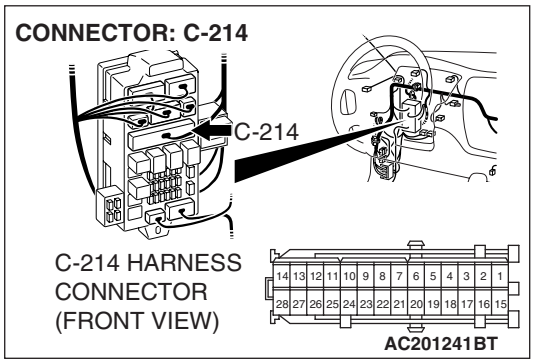
(1) Replace the fuse.
(2) Turn the ignition switch to the "ON" position, wait for at least one minute and then turn the ignition switch to the "LOCK" (OFF) position.
(3) Check the fuse.

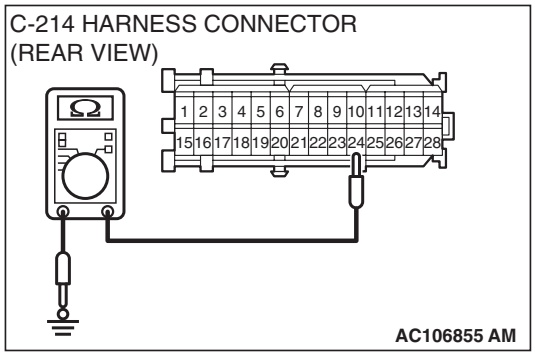
Q: Is the fuse in good condition?

YES : Go to Step 10.
NO : Go to Step 5.

STEP 5. Check the SRS-ECU power supply circuit for short circuit to ground at the junction block connector C-214.

(1) Disconnect junction block connector C-214, and measure at the wiring harness side.





⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

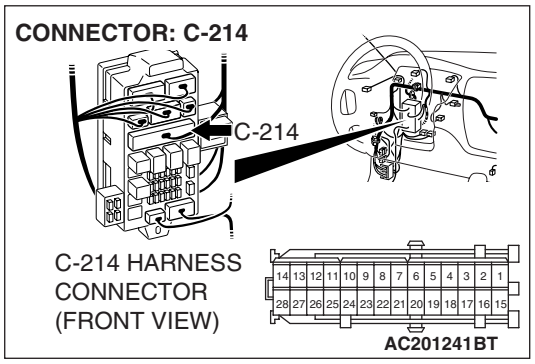
(2) Check for continuity between terminal 24 and body ground. It should be open circuit.

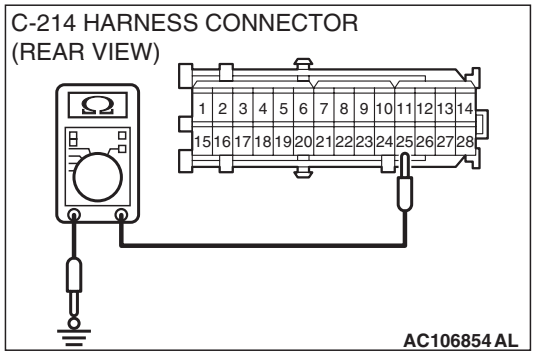
Q: Does continuity exist?

YES : Go to Step 8.
NO : Go to Step 6.

STEP 6. Check the fuse number 2-related circuit at junction block connector C-214.

(1) Disconnect junction block connector C-214, and measure at the wiring harness side.





⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

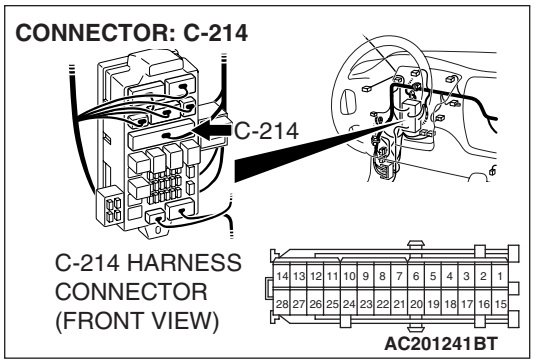
(2) Check for continuity between C-214 harness connector terminal 25 and body ground.
It should be open circuit.

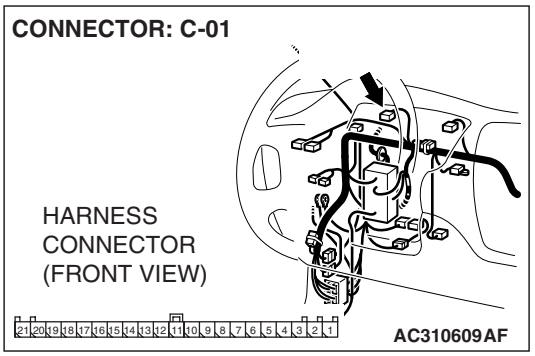
Q: Does continuity exist?

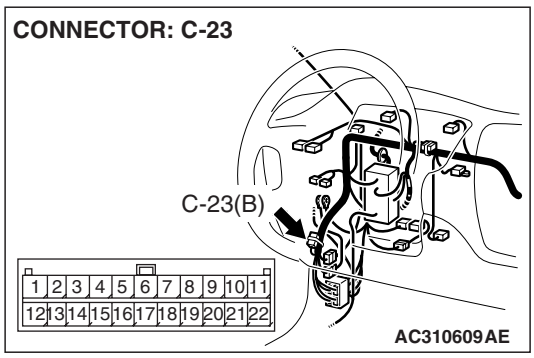
YES : Go to Step 7.

NO : Check the other circuit, which flows through multi-purpose fuse number 2.

STEP 7. Check the harness for short circuit to ground between junction block connector C-214 (terminal No.25) and combination meter connector C-01 (terminal No.9).







NOTE: After inspecting intermediate connector C-23, inspect the wiring harness. If intermediate connectors are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

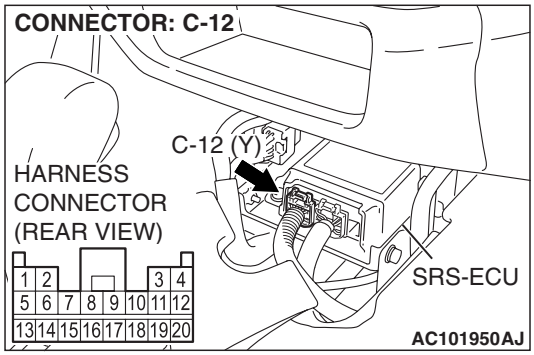
Q: Is the harness wire between junction block connector C-214 (terminal No.25) and combination meter connector C-01 (terminal No.9) in good condition?

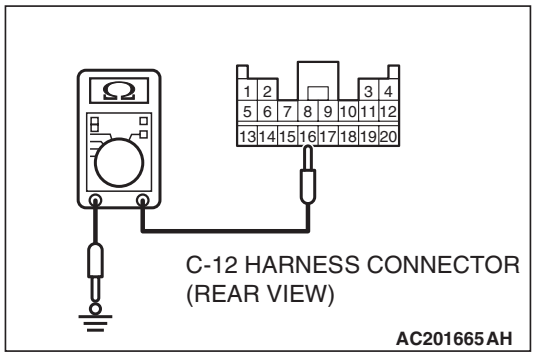
YES : Go to Step 10.

NO : Repair the harness wire between junction block connector C-214 and combination meter connector C-01. Then go to Step 10.

STEP 8. Check the power supply circuit for short circuit to ground at the SRS-ECU connector C-12.

(1) Disconnect SRS-ECU connector C-12, and measure at the wiring harness side.





⚠ CAUTION

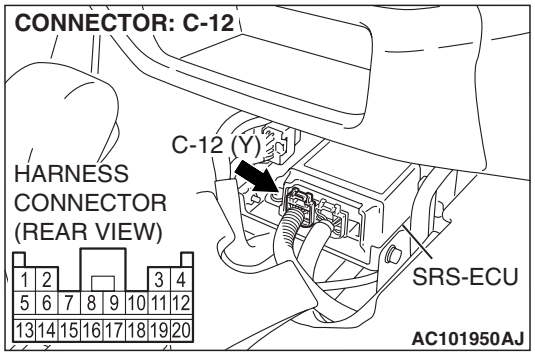
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

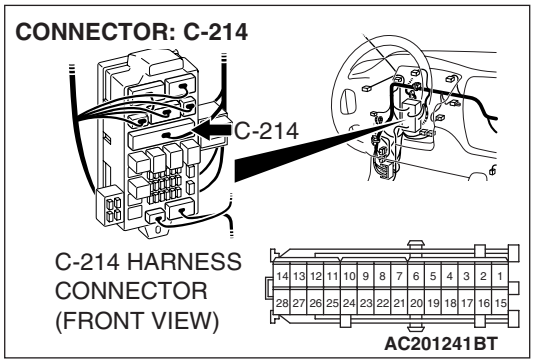
(2) Check for continuity between terminal 16 and body ground. It should be open circuit.

Q: Dose continuity exist?

YES : Go to Step 9.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 41 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 10.



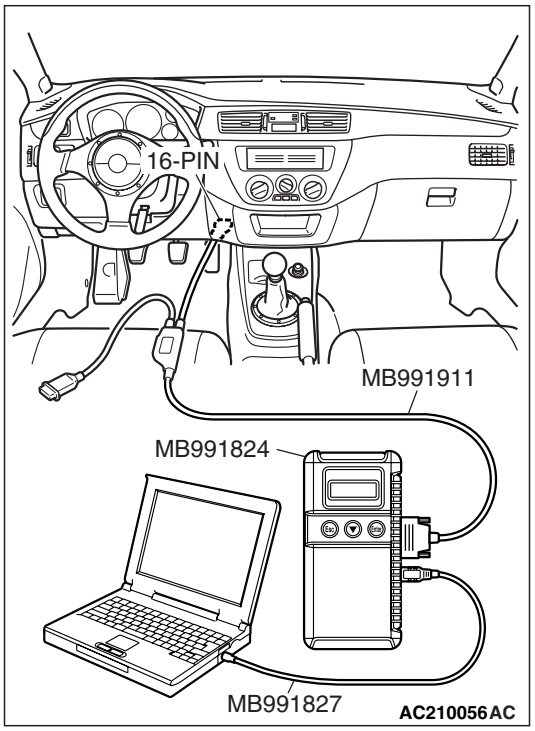


STEP 9. Check the harness for short circuit to ground between SRS-ECU connector C-12 (terminal No.16) and junction block connector C-214 (terminal No.24).

Q: Are the harness wires between SRS-ECU connector C-12 (terminal No.16) and junction block connector C-214 (terminal No.24) in good condition?

YES : Go to Step 10.

NO : Repair the harness wires between SRS-ECU connector C-12 and junction block connector C-214. Then go to Step 10.



STEP 10. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.

(2) Turn the ignition switch to the "ON" position.

(3) Check if the DTC is set.

(4) Turn the ignition switch to the "LOCK" (OFF) position.

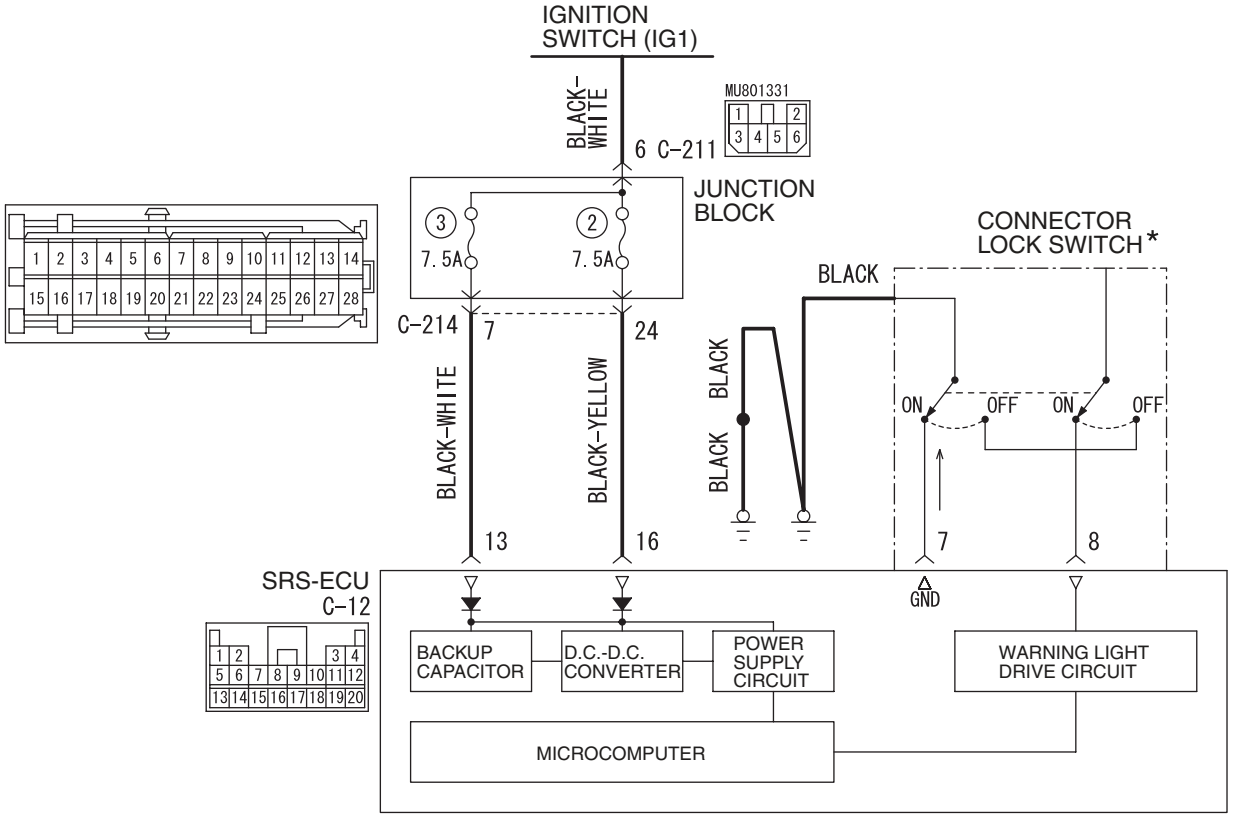
Q: Is DTC 41 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 42: IG1 Power Supply Circuit System (Fuse No.3 Circuit)

IG1 Power Supply Circuit System (Fuse No.3 Circuit)



NOTE
*: CONNECTOR COUPLED : ON
CONNECTOR UNCOUPLED : OFF

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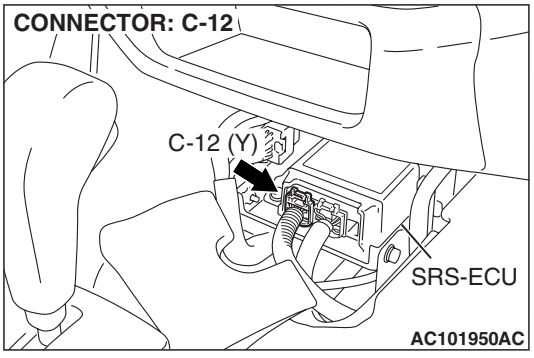

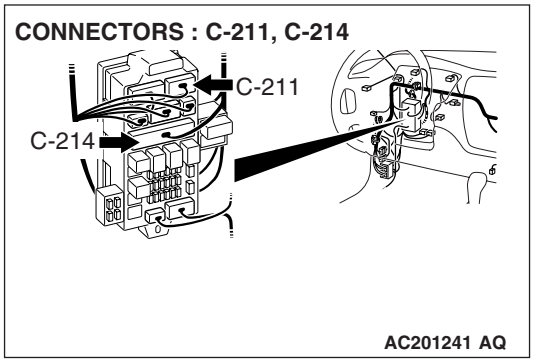

CIRCUIT OPERATION

- The SRS-ECU is powered from the ignition switch (IG1).
- The SRS-ECU power is supplied from two circuits. Even if one circuit is shut off, the air bag can inflate.

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DTC SET CONDITIONS

This DTC is set if the voltage between the IG1 terminals (fuse No.3 circuit) and ground is lower than a predetermined value for a continuous period of five second or more. However, if the vehicle condition returns to normal, DTC number 42 will be automatically erased, and the SRS warning light will switch off.

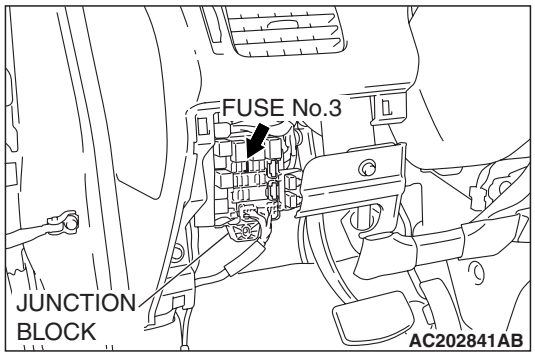
TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B



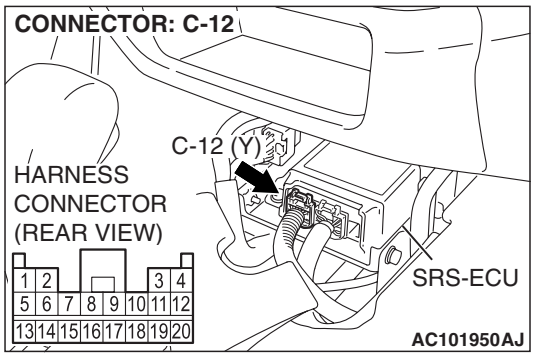
STEP 1. Check junction block fuse number 3.
Q: Is the fuse burned out?

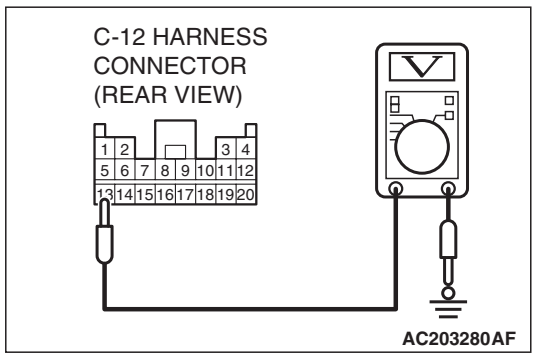
YES : Go to Step 4.
NO : Go to Step 2.

STEP 2. Check the power supply circuit harness for open circuit at the SRS-ECU connector C-12.

(1) Disconnect the negative battery terminal.
(2) Disconnect SRS-ECU connector C-12.
(3) Connect the negative battery terminal.
(4) Turn the ignition switch to the "ON" position.

⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.



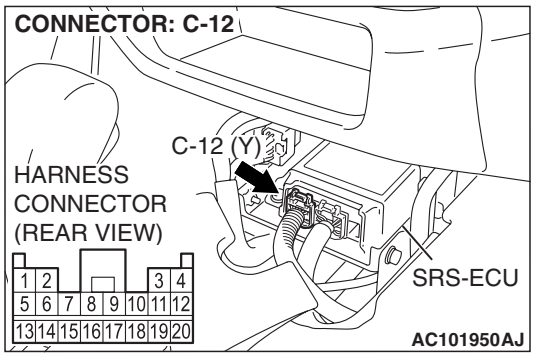


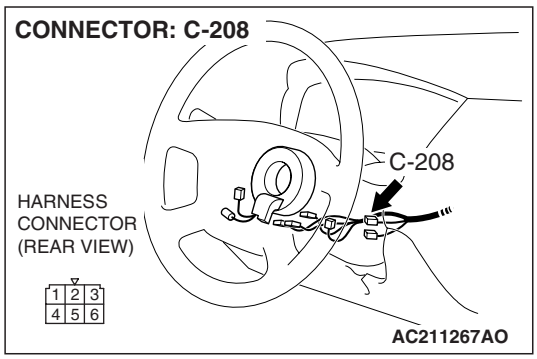
(5) Measure the voltage between C-12 harness connector terminal 13 and body ground.
Voltage should measure 9 volts or more.

Q: Is the measured voltage within the specified range?

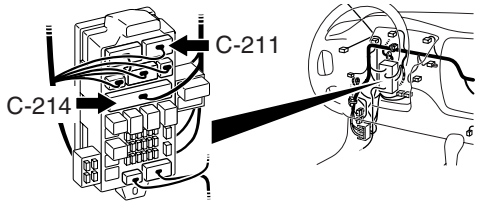
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 42 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 8.
NO : Go to Step 3.

STEP 3. Check the harness for open circuit between SRS-ECU connector C-12 (terminal No.13) and the ignition switch connector C-208 (terminal No.2).

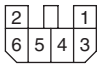




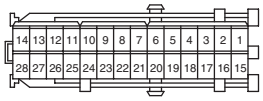
CONNECTORS : C-211, C-214



C-211 HARNESS CONNECTOR
(FRONT VIEW)



C-214 HARNESS CONNECTOR
(FRONT VIEW)



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NOTE: After inspecting intermediate connectors C-214 and C-211, inspect the wiring harness. If intermediate connectors are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Is the harness wire between SRS-ECU connector C-12 (terminal No.13) and the ignition switch connector C-208 (terminal No.2) in good condition?

YES : Go to Step 8.
NO : Repair the harness wire between SRS-ECU connector C-12 and the ignition switch connector C-208. Then go to Step 8.

STEP 4. Check for a burned-out fuse.

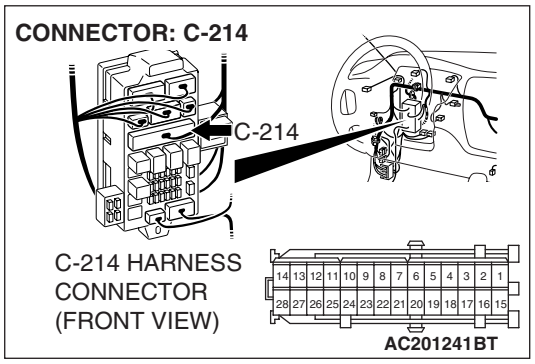
(1) Replace the fuse.
(2) Turn the ignition switch to the "ON" position, wait for at least one minute and then turn the ignition switch to the "LOCK" (OFF) position.
(3) Check the fuse.

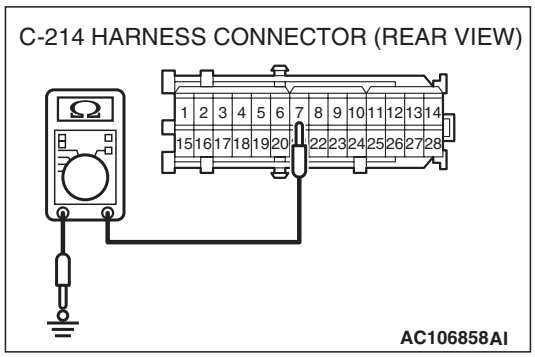
Q: Is the fuse in good condition?

YES : Go to Step 8.
NO : Go to Step 5.

STEP 5. Check the SRS-ECU power supply circuit for short circuit to ground at the junction block connector C-214.

(1) Disconnect junction block connector C-214, and measure at the wiring harness side.





⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

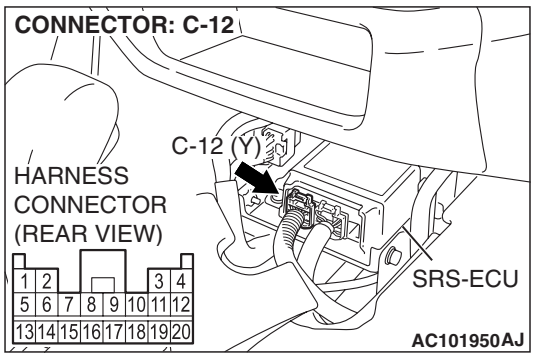
(2) Check for continuity between C-214 harness connector terminal 7 and body ground.
It should be open circuit.

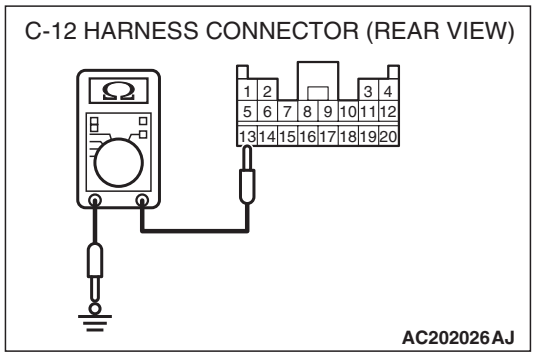
Q: Does continuity exist?

YES : Go to Step 6.
NO : Check the other circuit, which flows through fuse number 3.

STEP 6. Check the power supply circuit for short circuit to ground at the SRS-ECU connector C-12.

(1) Disconnect SRS-ECU connector C-12, and measure at the wiring harness side.



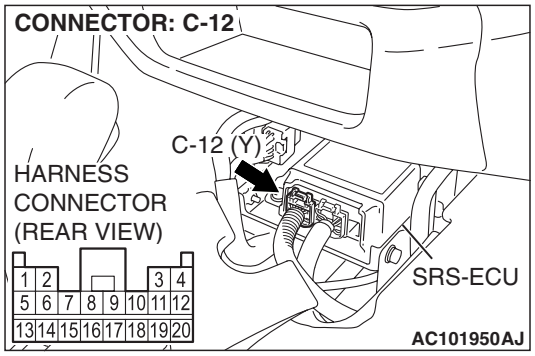


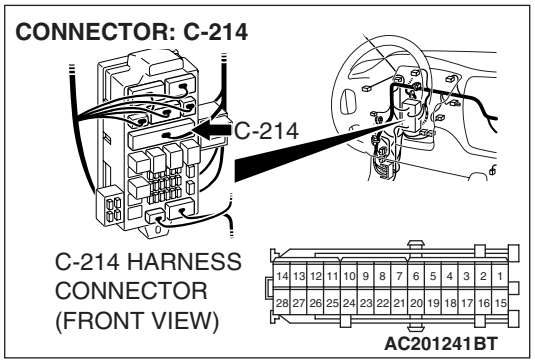
⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(2) Check for continuity between C-12 harness connector terminal 13 and body ground.
It should be open circuit.

Q: Does continuity exist?

YES : Go to Step 7.
NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 42 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 8.



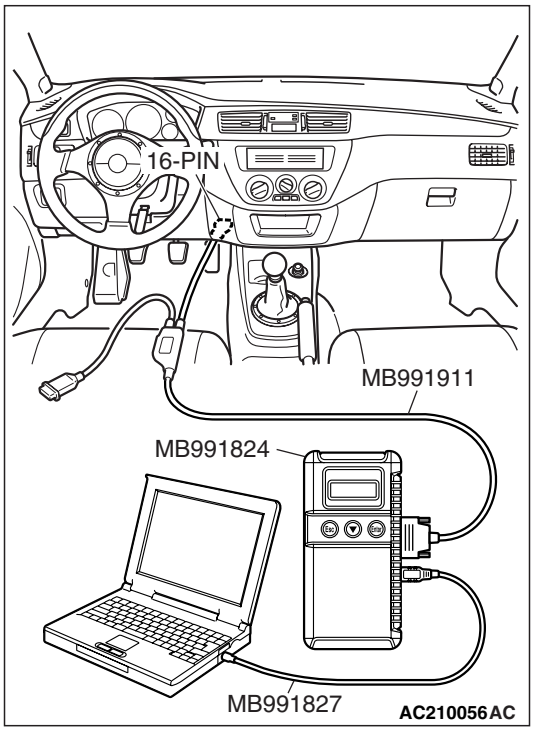


STEP 7. Check the harness for short circuit to ground between SRS-ECU connector C-12 (terminal No.13) and junction block connector C-214 (terminal No.7).

Q: Is the harness wire between SRS-ECU connector C-12 (terminal No.13) and junction block connector C-214 (terminal No.7) in good condition?

YES : Go to Step 8.

NO : Repair the harness wire between SRS-ECU connector C-12 and junction block connector C-214. Then go to Step 8.



STEP 8. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.

(2) Turn the ignition switch to the "ON" position.

(3) Check if the DTC is set.

(4) Turn the ignition switch to the "LOCK" (OFF) position.

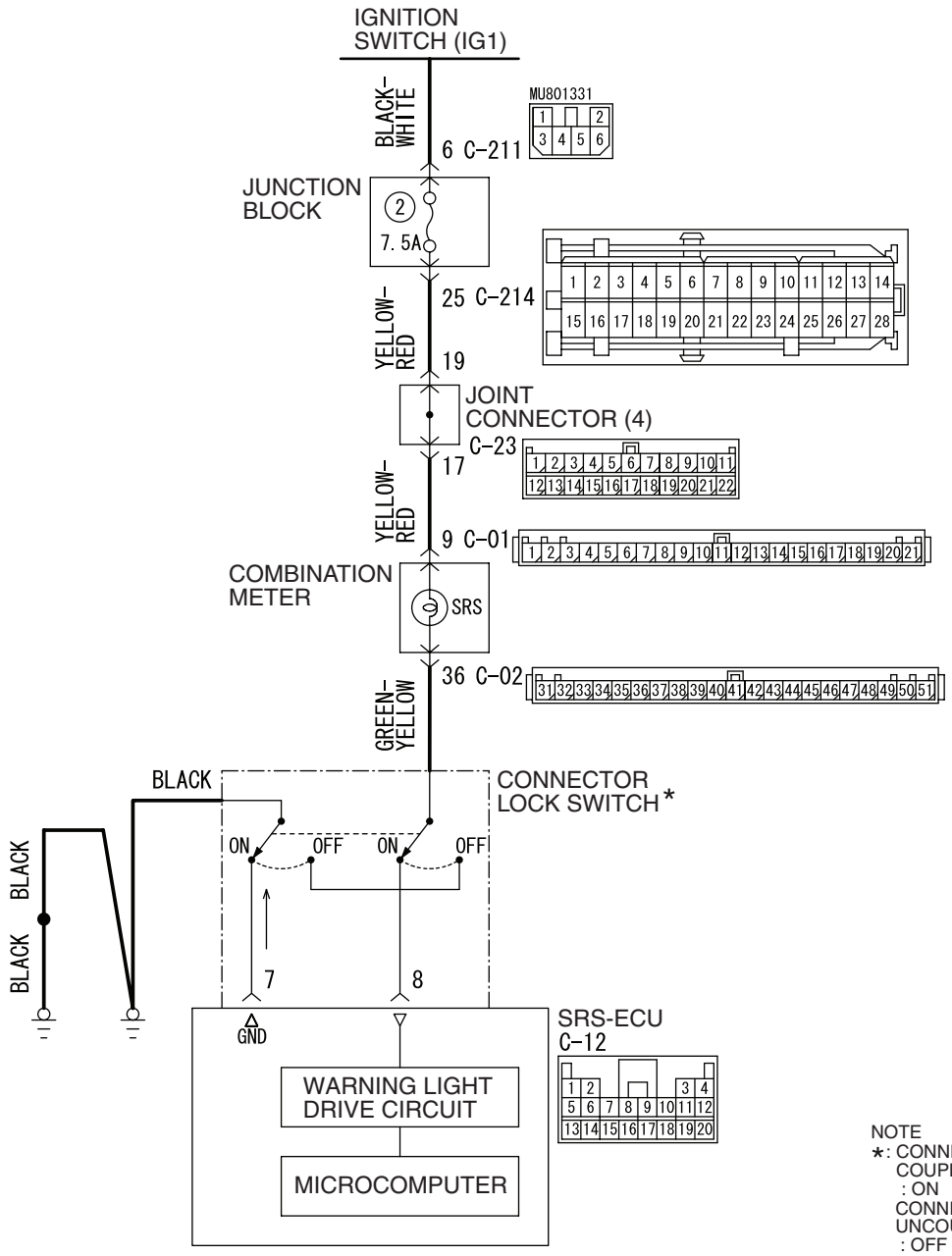
Q: Is DTC 42 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 43: SRS Warning Light Drive Circuit System Fault 1 (Light does not Illuminate.)

SRS Warning Light Drive Circuit



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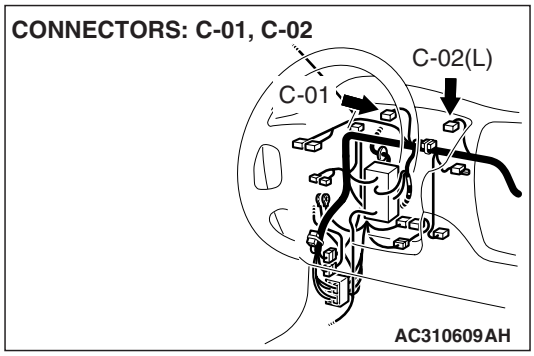
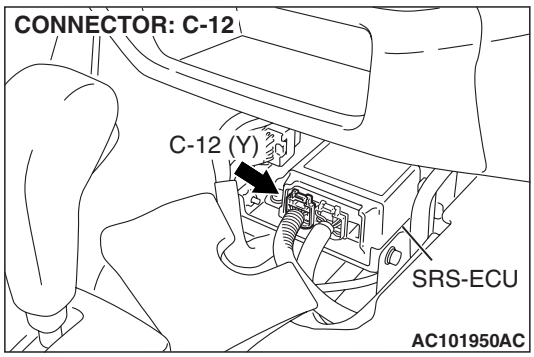
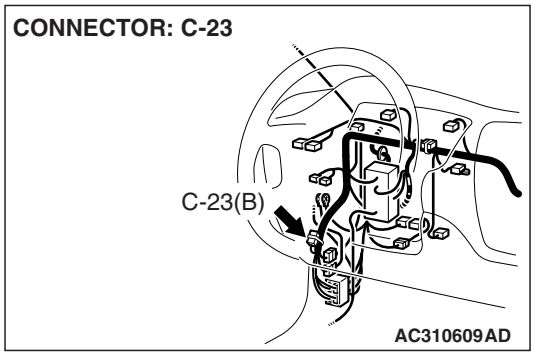
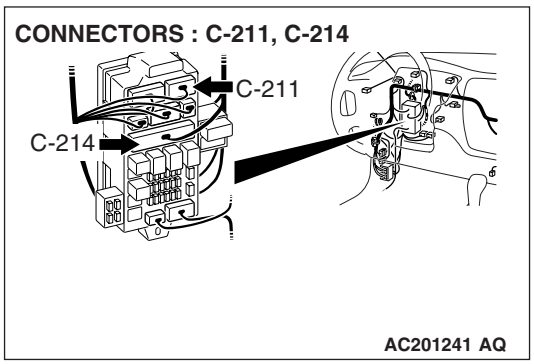








CIRCUIT OPERATION

- Power for the SRS warning light is supplied from the ignition switch (IG1).
- The SRS warning light illuminates when the ignition switch is turned to the "ON" position and goes out after approximately seven seconds if there is not a malfunction in the SRS system.

DTC SET CONDITIONS

This DTC is set when an open circuit is detected for a continuous period of five seconds while the SRS-ECU is monitoring the SRS warning light and the light is OFF. (transistor OFF.) However, If the vehicle condition returns to normal, DTC number 43 will be automatically erased, and the SRS warning light will switch off.

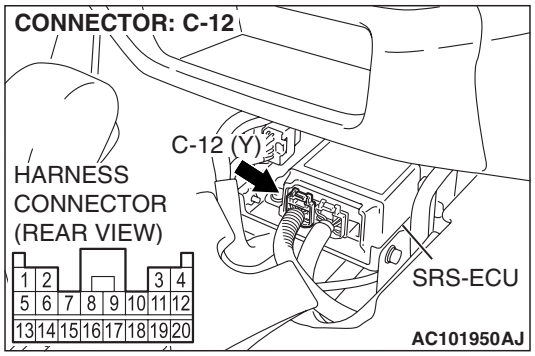
TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Blown bulb
- Malfunction of the SRS-ECU
- Malfunction of the combination meter

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

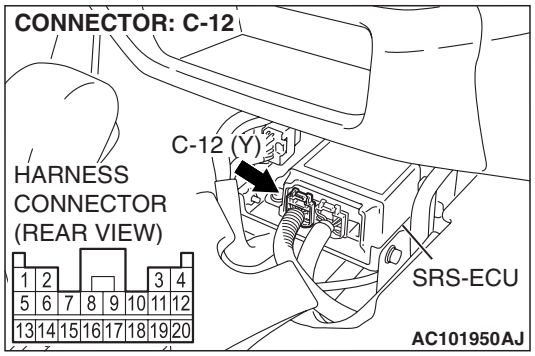


STEP 1. Check the SRS warning light.

(1) Connect the negative battery terminal.
(2) Disconnect SRS-ECU connector C-12.
(3) Turn the ignition switch to the "ON" position.

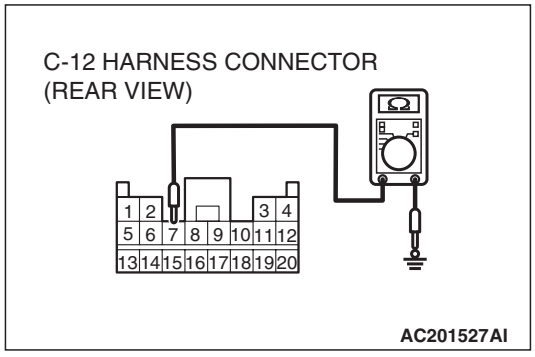
Q: Does the warning light illuminate?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 43 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 6.
NO : Go to Step 2.



STEP 2. Check the ground line at the SRS-ECU connector C-12.

(1) Disconnect the negative battery terminal.
(2) Disconnect SRS-ECU connector C-12.

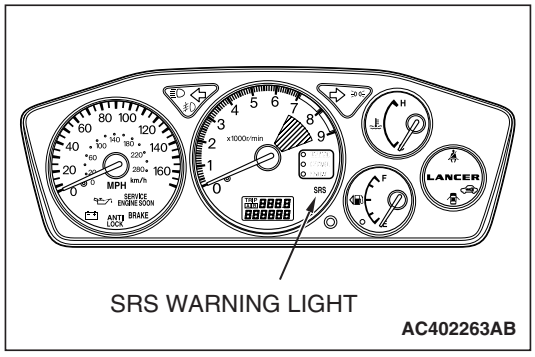


⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(3) Check for continuity between C-12 harness connector terminal 7 and ground.
It should be less than 2 ohms.

Q: Does continuity exist?

YES : Go to Step 3.
NO : Go to Step 5.

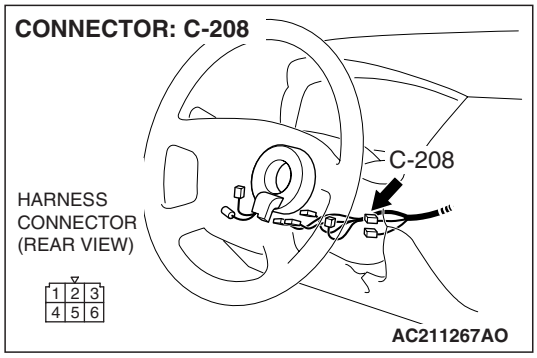


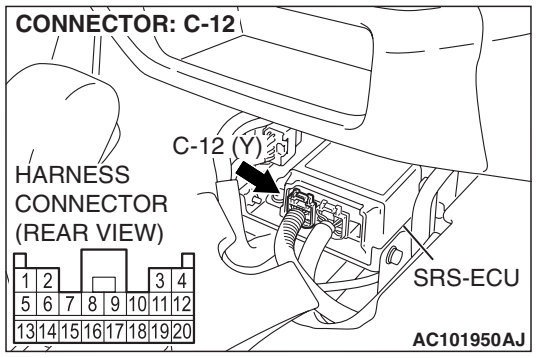
STEP 3. Check the SRS warning light bulb.

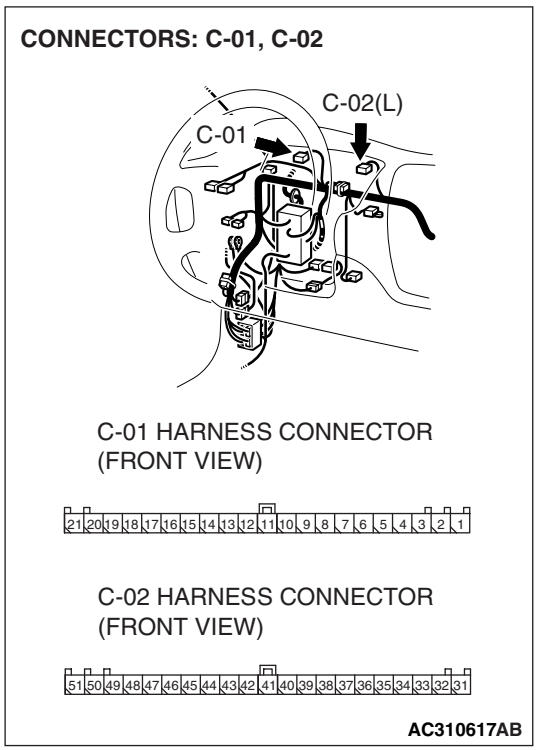
Q: Has the SRS warning light bulb blown?

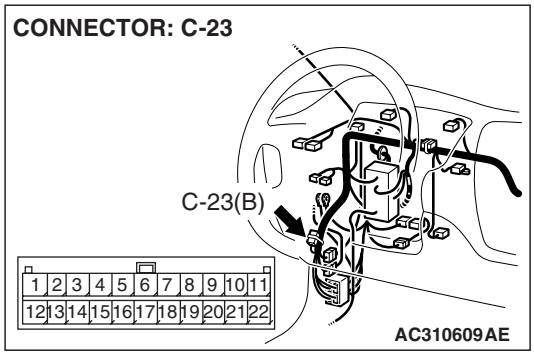
YES : Replace the SRS warning light bulb. Then go to Step 6.
NO : Go to Step 4.

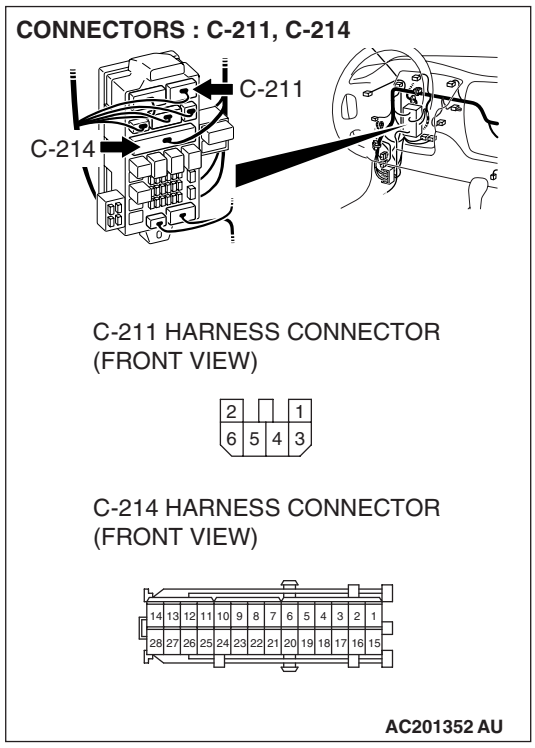
STEP 4. Check the harness for open circuit between ignition switch connector C-208 (terminal No.2) and combination meter connector C-01 (terminal No.9), and between combination meter connector C-02 (terminal No.36) and SRS-ECU connector C-12 (terminal No.8).









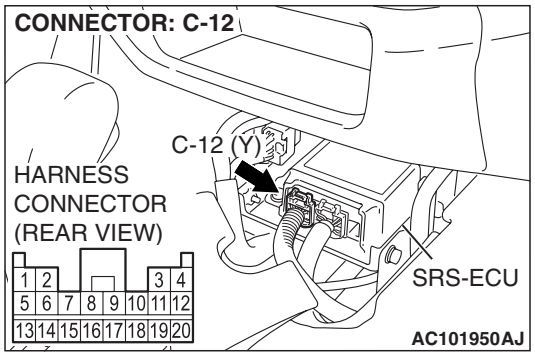


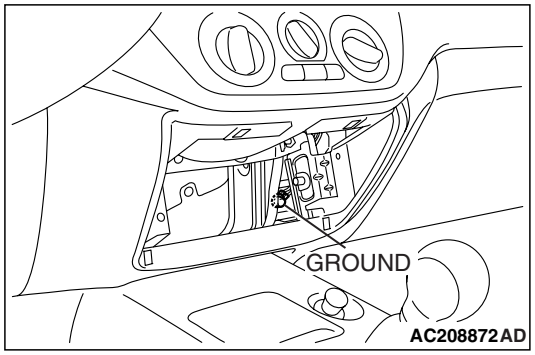
NOTE: After inspecting intermediate connectors C-01, C-02, C-23, C-211, C-214 inspect the wiring harness. If intermediate connectors C-01, C-02, C-23, C-211, C-214 are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are the harness wires between SRS-ECU connector C-12 and the ignition switch connector C-208 in good condition?

YES : Replace the combination meter (Refer to GROUP 54A, Combination Meters Assembly P.54A-76). Then go to Step 6.

NO : Repair the harness wires between SRS-ECU connector C-12 and the ignition switch connector C-208. Then go to Step 6.



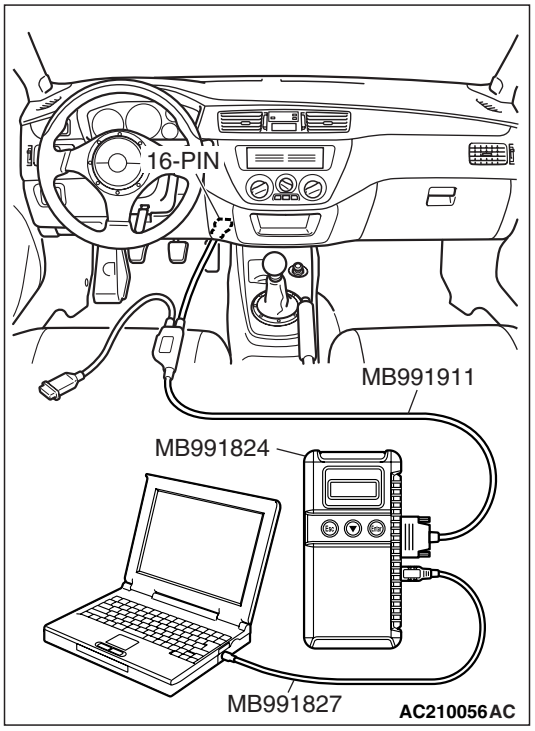


STEP 5. Check the harness for open circuit between SRS-ECU connector C-12 (terminal No.7) and ground.

Q: Is the harness wire between SRS-ECU connector C-12 (terminal No.7) and ground in good condition?

YES : Go to Step 6.

NO : Repair the harness wires between SRS-ECU connector C-12 and ground. Then go to Step 6.



STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.

(2) Turn the ignition switch to the "ON" position.

(3) Check if the DTC is set.

(4) Turn the ignition switch to the "LOCK" (OFF) position.

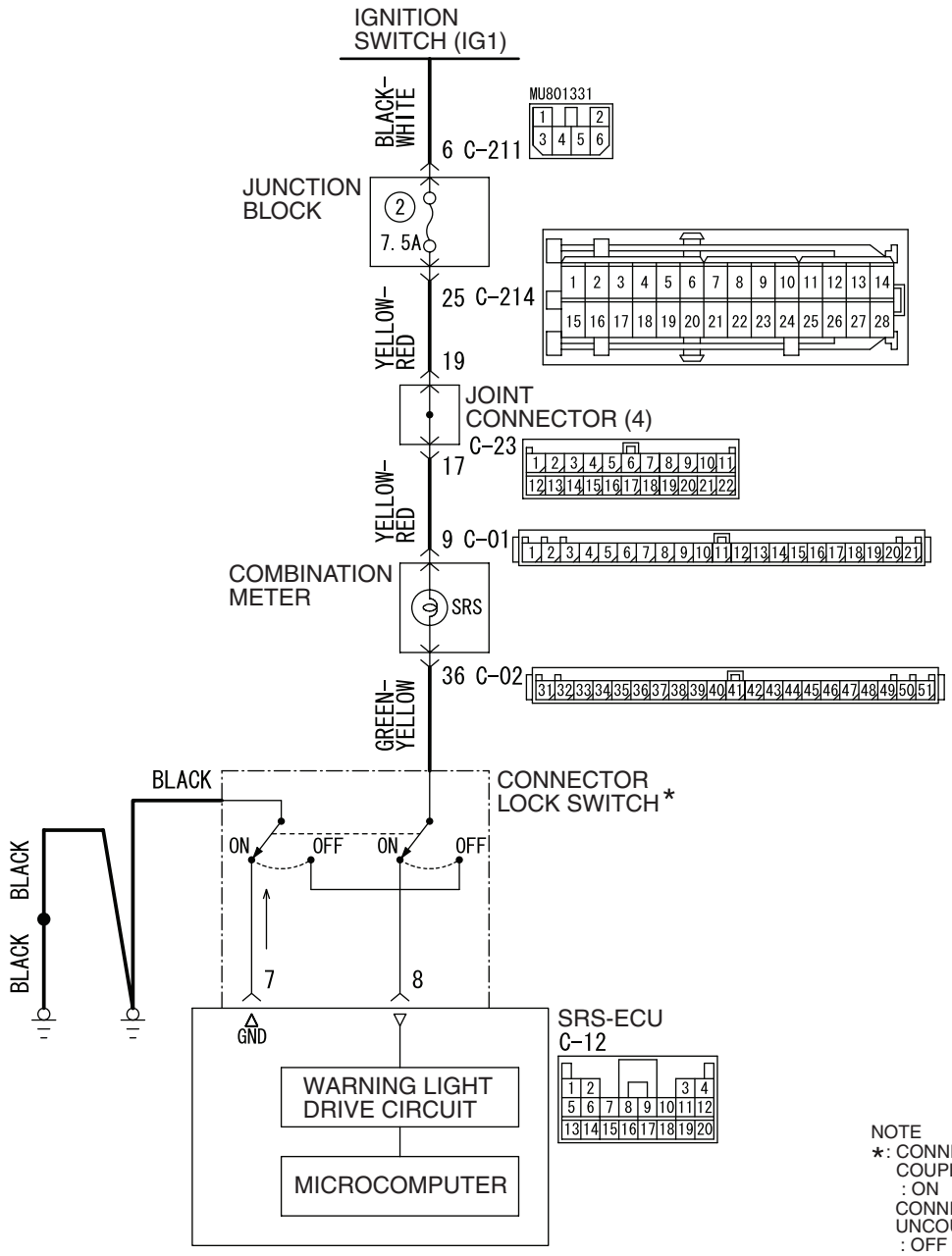
Q: Is DTC 43 set?

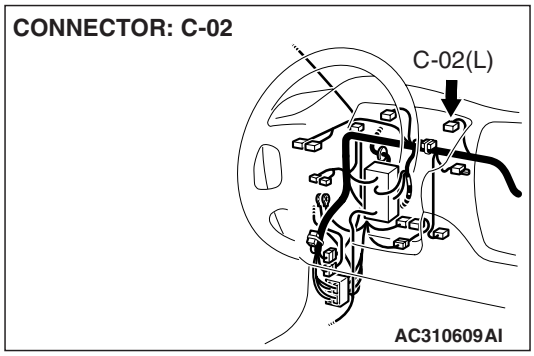
YES : Return to Step 1.

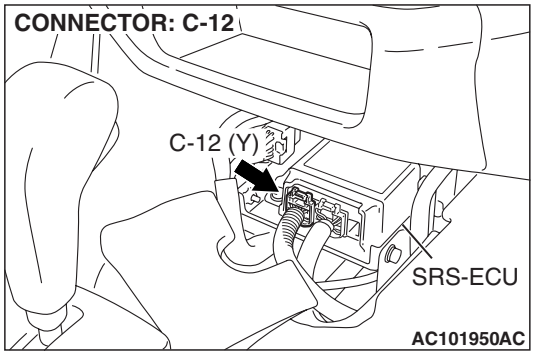
NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 43: SRS Warning Light Drive Circuit System Fault 1 (Light does not Switch Off.)

SRS Warning Light Drive Circuit







CIRCUIT OPERATION

- Power for the SRS warning light is supplied from the ignition switch (IG1).
- The SRS warning light illuminates when the ignition switch is turned to the "ON" position and goes out after approximately seven seconds if there is not a malfunction in the SRS system.

DTC SET CONDITIONS

This DTC is set when a short to ground occurs in the harness between the SRS warning light and SRS-ECU while SRS-ECU is monitoring the light and the light is ON.

TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU
- Malfunction of the combination meter

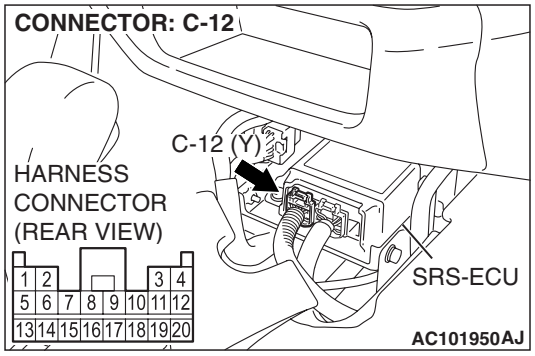
DIAGNOSIS

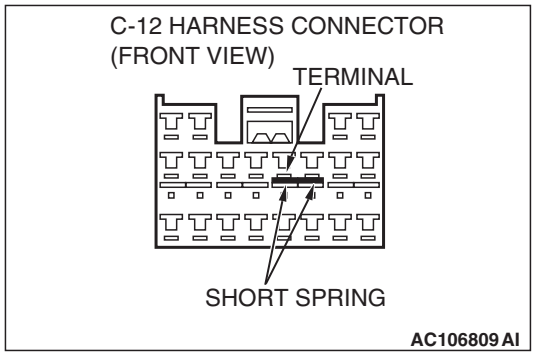
Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

STEP 1. Check SRS-ECU connector C-12 for damage.

(1) Disconnect SRS-ECU connector C-12.



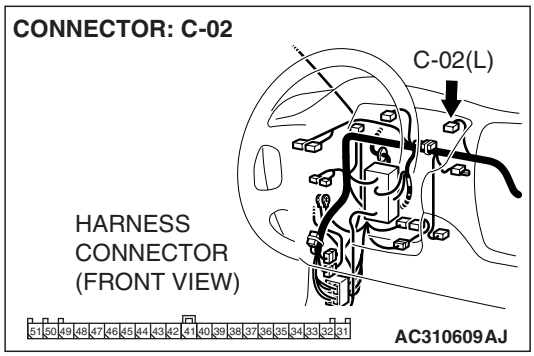


(2) Check the short bar for warning light inside the harness connector for improper contact or deformation.

Q: Is SRS-ECU connector C-12 in good condition?

YES : Then go to Step 2.

NO : Repair or replace the SRS-ECU connector C-12 (Refer to P.52B-166). Then go to Step 4.

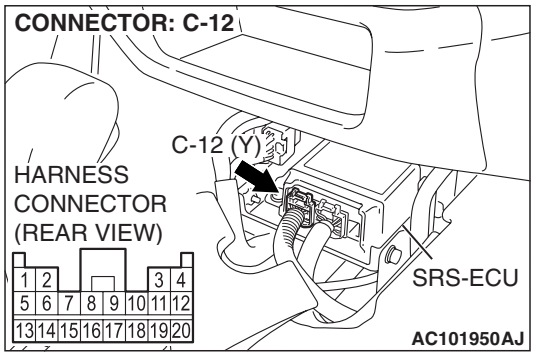


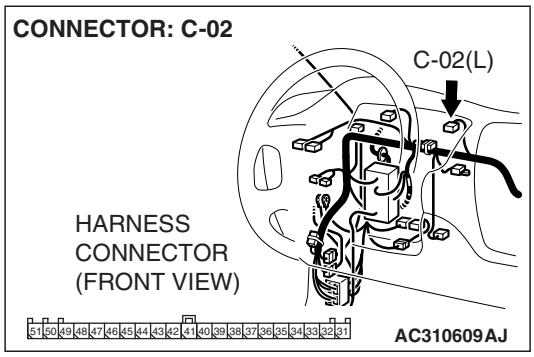
STEP 2. Check the SRS warning light.

(1) Disconnect the negative battery cable.
(2) Disconnect the combination meter connector C-02.
(3) Connect the negative battery cable.
(4) Turn the ignition switch to the "ON" position.

Q: Does the SRS warning light go out?

YES : Go to Step 3.
NO : Replace the combination meter (Refer to GROUP 54A, Combination Meter Assembly P.54A-76). Then go to Step 4.

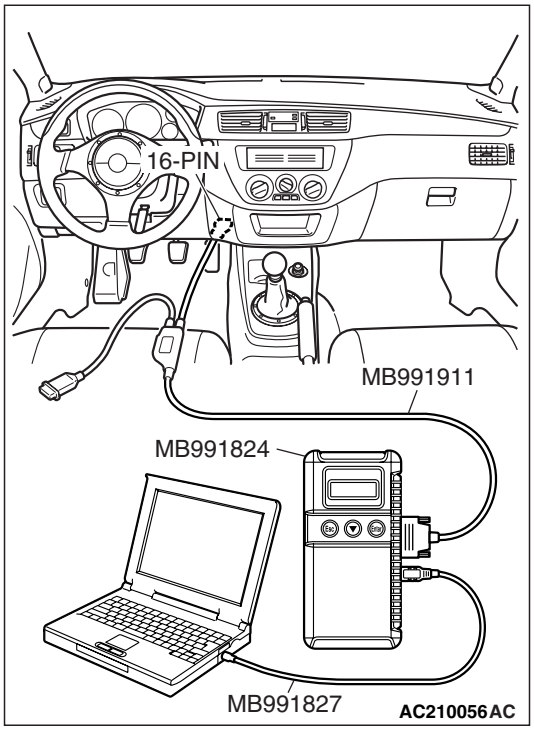




STEP 3. Check the harness for short circuit to ground between SRS-ECU connector C-12 (terminal No.8) and combination meter connector C-02 (terminal No.36).

Q: Is the harness wire between the SRS-ECU connector C-12 (terminal No.8) and combination meter connector C-02 (terminal No.36) in good condition?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 43 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4.
NO : Repair the harness wire between SRS-ECU connector C-12 and combination meter connector C-02. Then go to Step 4.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

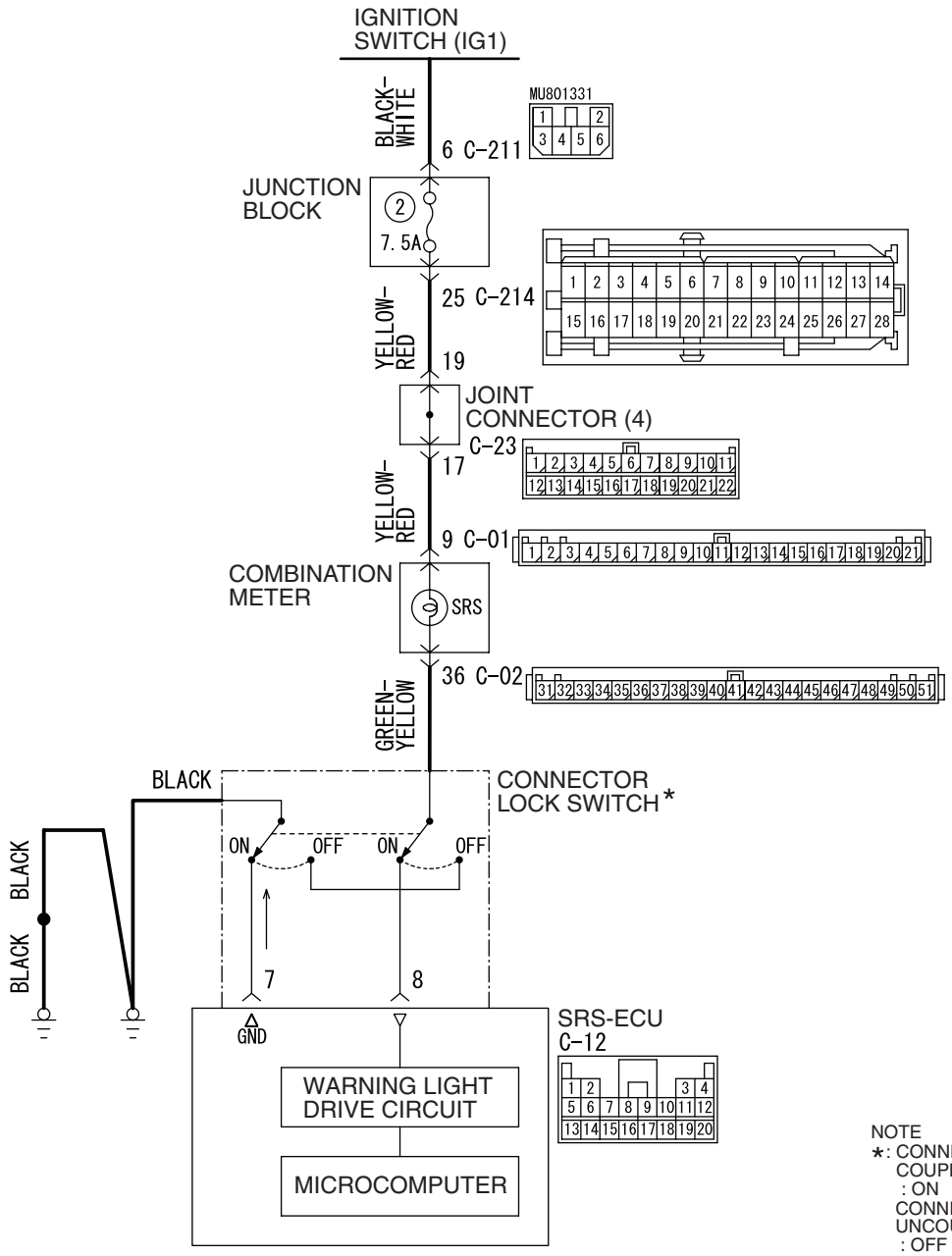
Q: Is DTC 43 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 44: SRS Warning Light Drive Circuit System Fault 2

SRS Warning Light Drive Circuit



CIRCUIT OPERATION

- Power for the SRS warning light is supplied from the ignition switch (IG1).
- The SRS warning light illuminates when the ignition switch is turned to the "ON" position and goes out after approximately seven seconds if there is not a malfunction in the SRS system.

DTC SET CONDITIONS

- This DTC is set under one of the following cases while the SRS-ECU is monitoring the warning light drive circuit:
  - When a short circuit occurs in the warning light drive circuit.
  - When a malfunction is detected in the output transistor inside the SRS-ECU.

TSB Revision

- However, If the vehicle condition returns to normal, DTC number 44 will be automatically erased, and the SRS warning light will switch off.

TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU

DIAGNOSIS

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

STEP 1. Check the SRS warning light drive circuit system. Refer to P.52B-102.

Q: Is the SRS warning light drive circuit normal?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 43 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 2.

NO : Repair the harness wires or replace the SRS-ECU (Refer to P.52B-166). Then go to Step 2.

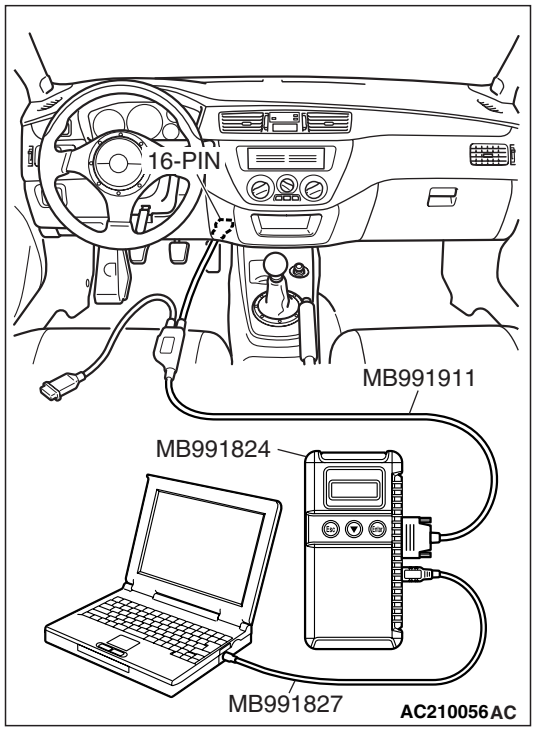
STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.
(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is DTC 44 set?

YES : There is no action to be taken.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).



DTC 46 Improper installation of SRS-ECU

DTC SET CONDITIONS

This DTC is set when an SRS-ECU designed only for the driver's airbag, is installed on vehicle, which has both driver's and passenger's side air bags. However, If the vehicle condition returns to normal, DTC number 46 will be automatically erased, and the SRS warning light will switch off.

TROUBLESHOOTING HINTS

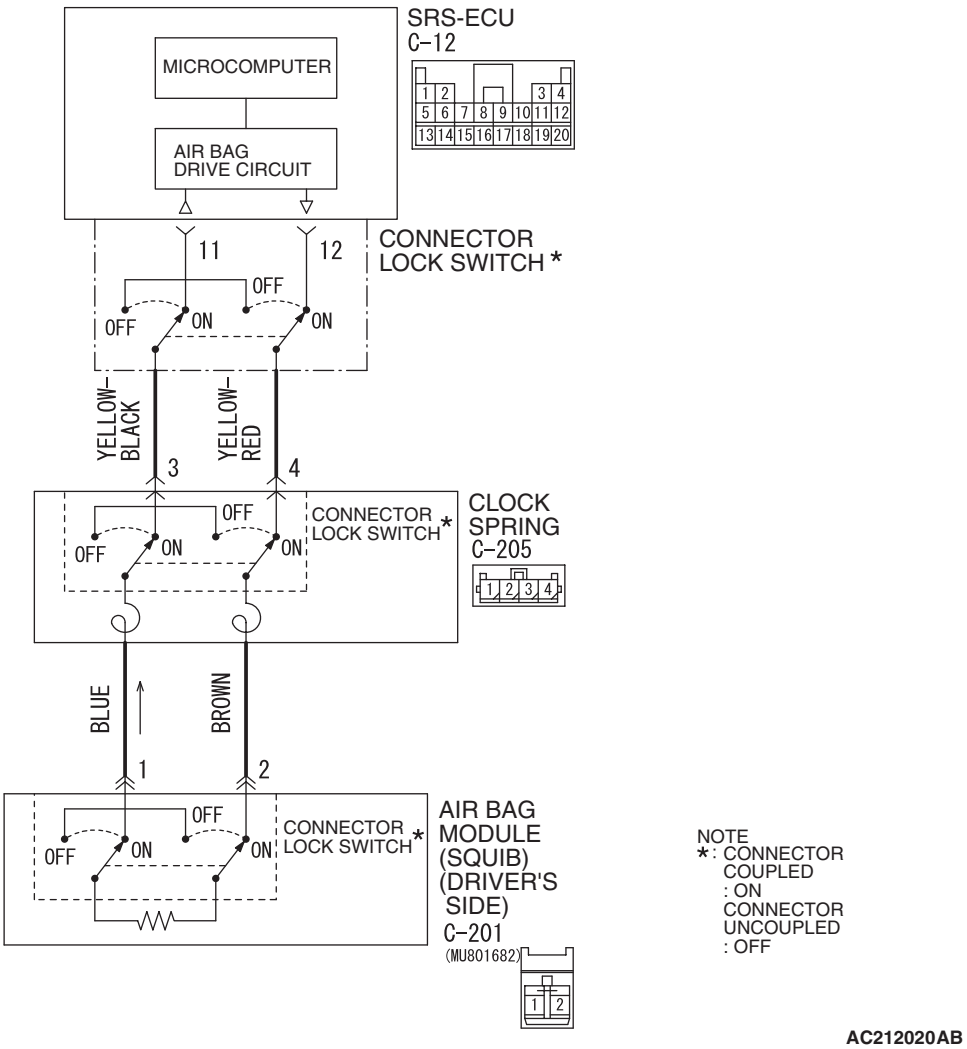
Incorrect SRS-ECU

DIAGNOSIS

Replace the SRS-ECU (Refer to P.52B-166).

DTC 61: Driver's Air Bag Module (Squib) System Fault for Power Supply Circuit (Short-Circuited to Power Supply)

Driver's Air Bag Module (Squib) Circuit



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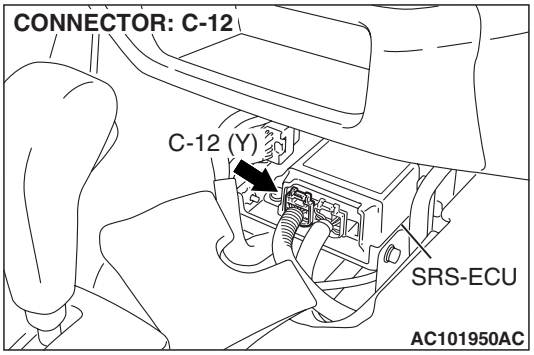
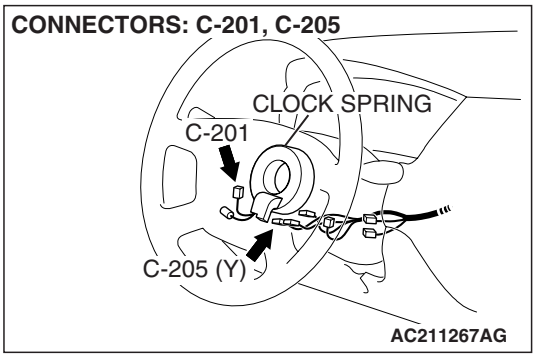




CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module via the clock spring to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's air bag module (squib).

TROUBLESHOOTING HINTS

- Malfunction of the clock spring
- Damaged harness wires and connectors
- Short to the power supply in the driver's air bag module (squib) harness
- Malfunction of the SRS-ECU

DIAGNOSIS

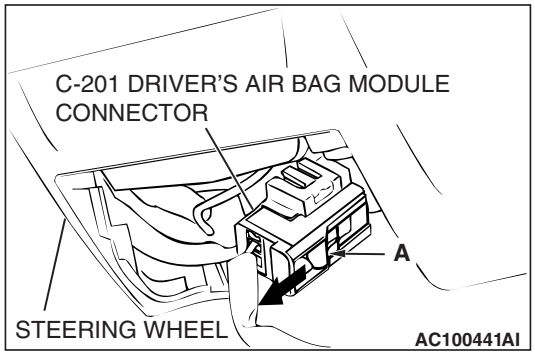
Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness

STEP 1. Check the driver's air bag module (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) By sliding the A section (in the figure) of driver's air bag module connector C-201 in arrow direction, disconnect the connector.



(3) Connect special tool MB991865 to special tool MB991866.

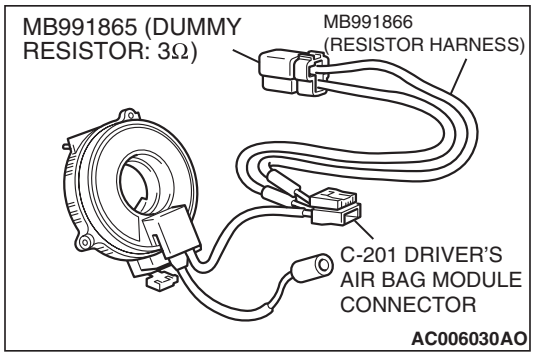
⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Insert special tool MB991866 into clock spring side air bag module connector C-201 by backprobing.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.



Q: Is DTC 61 out put?

YES : Go to Step 2.

NO : Replace the driver's air bag module (Refer to P.52B-168). Then go to Step 5.

STEP 2. Check the clock spring (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect the clock spring connector C-205.

(3) Connect special tool MB991865 to special tool MB991866.

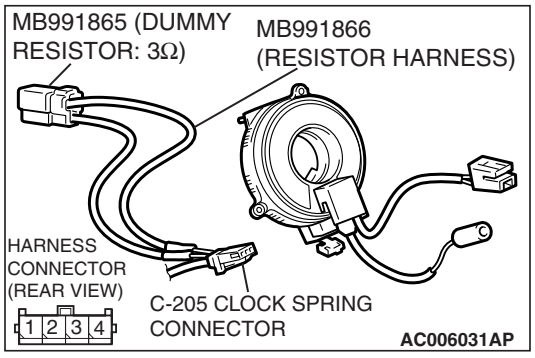
⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Insert special tool MB991866 into clock spring harness side connector C-205 (terminal No.3 and 4) by backprobing.

(5) Connect the negative battery terminal.

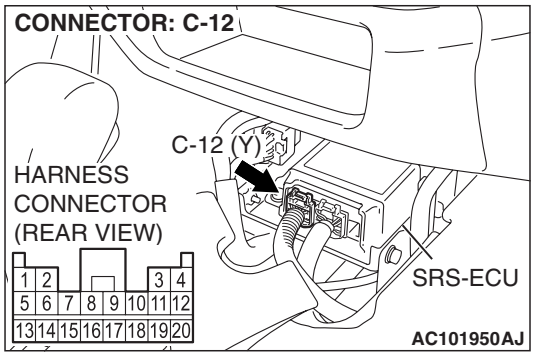
(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

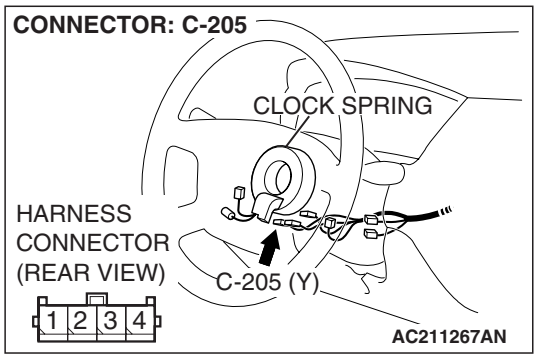


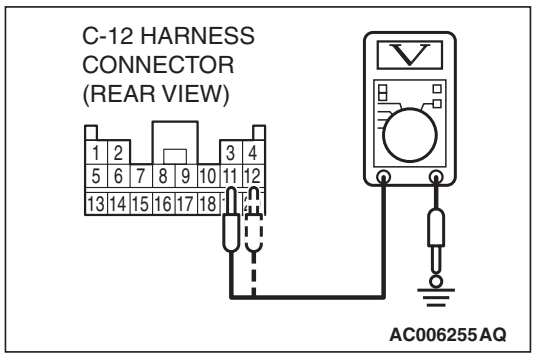
Q: Is DTC 61 set?

YES : Go to Step 3.

NO : Replace the clock spring (Refer to P.52B-168). Then go to Step 5.







STEP 3. Check the driver's air bag module circuit at the SRS-ECU connector C-12.

(1) Disconnect SRS-ECU connector C-12.

⚠ ***DANGER***

To prevent the air bag from deploying unintentionally, disconnect the clock spring connector C-205 to short the squib circuit.

(2) Disconnect the clock spring connector C-205.

(3) Turn the ignition switch to the "ON" position.

⚠ **CAUTION**

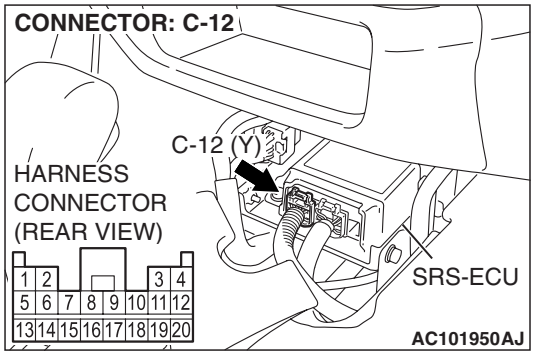
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

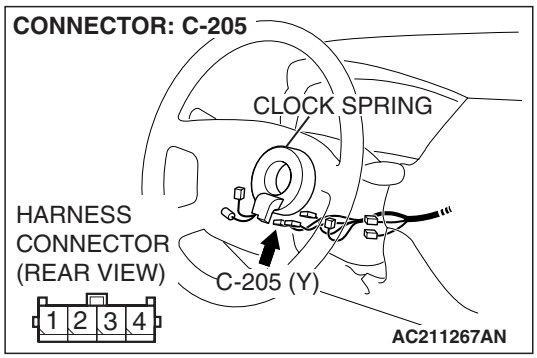
(4) Measure the voltage between C-12 harness connector terminals 11, 12 and body ground.
Voltage should measure 0 volt.

Q: Is the measured voltage 0 volt?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 61 sets, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 5.

NO : Go to Step 4.



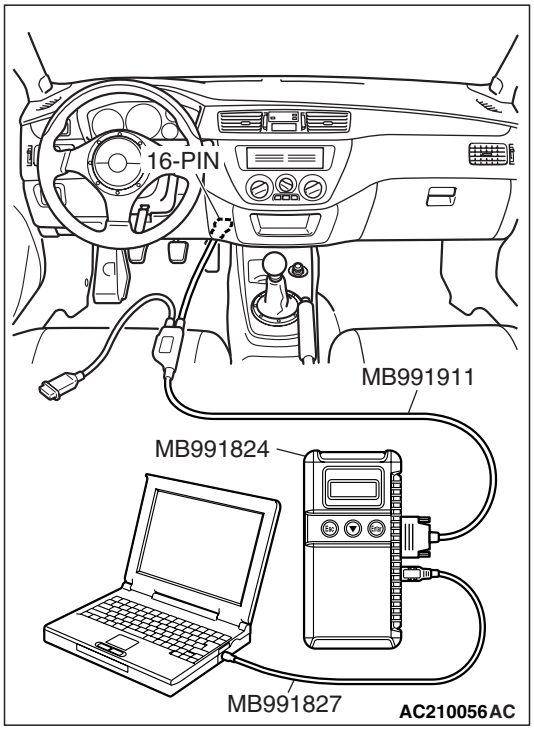


STEP 4. Check the harness for short circuit to power supply between SRS-ECU connector C-12 (terminal No.11 and 12) and clock spring connector C-205 (terminal No.3 and 4).

Q: Are the harness wires between the SRS-ECU connector C-12 (terminal No.11 and 12) and clock spring connector C-205 (terminal No.3 and 4) in good condition?

YES : Go to Step 5.

NO : Repair the harness wires between SRS-ECU connector C-12 and clock spring connector C-205. Then go to Step 5.



STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

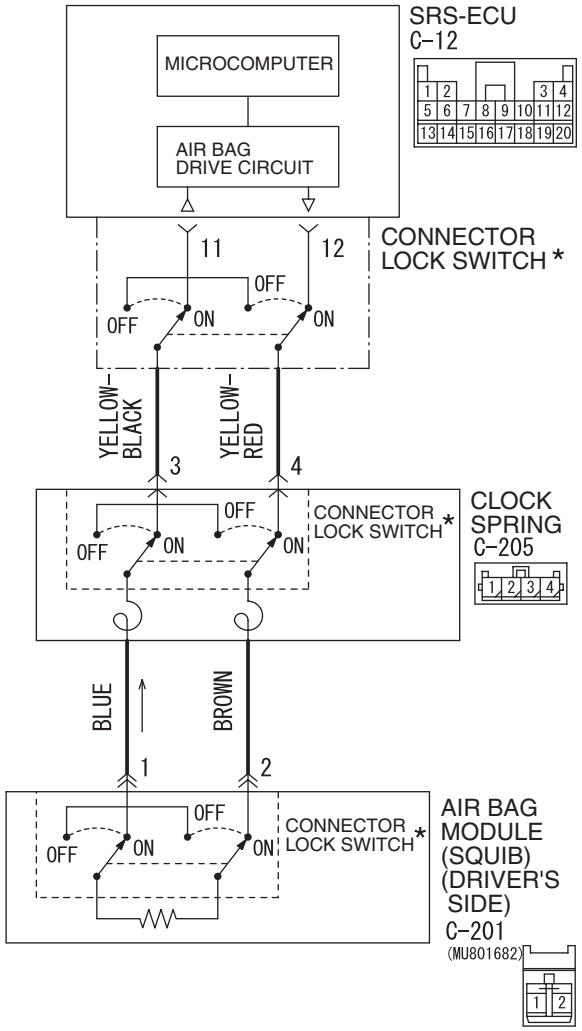
Q: Is DTC 61 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 62: Driver's Air Bag Module (Squib) System Fault for Ground Circuit (Short-Circuited to Ground)

Driver's Air Bag Module (Squib) Circuit



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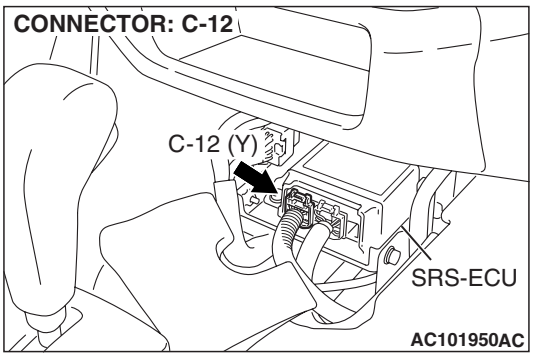
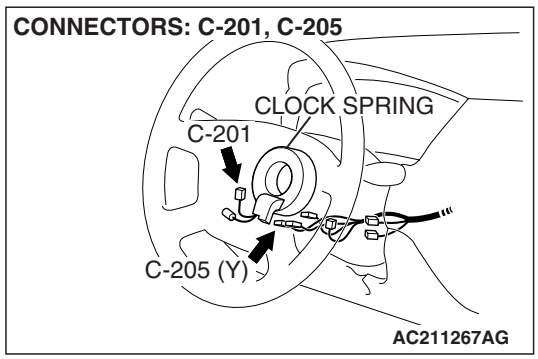




TSB Revision

CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module via the clock spring to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's air bag module (squib).

TROUBLESHOOTING HINTS

- Malfunction of the clock spring
- Damaged harness wires and connectors
- Short to the ground in the driver's air bag module (squib) harness
- Malfunction of the SRS-ECU

DIAGNOSIS

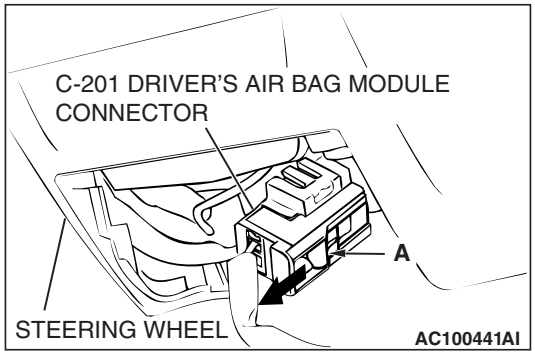
Required Special Tools:

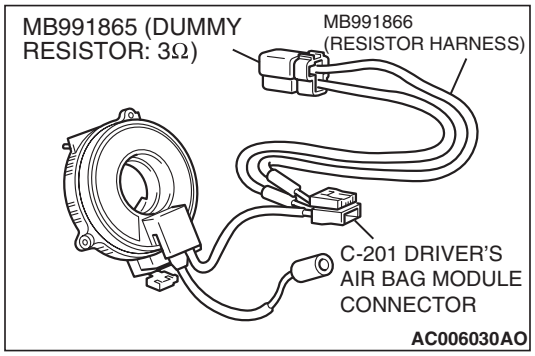
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness

STEP 1. Check the driver's air bag module (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) By sliding the A section (in the figure) of driver's air bag module connector C-201 in arrow direction, disconnect the connector.





(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Insert special tool MB991866 into clock spring side air bag module connector C-201 by backprobing.

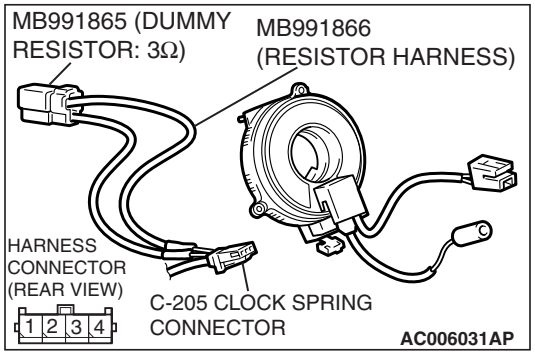
(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

Q: Is DTC 62 set?

YES : Go to Step 2.

NO : Replace the driver's air bag module (Refer to P.52B-168). Then go to Step 5.



STEP 2. Check the clock spring (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the clock spring connector C-205.
(2) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

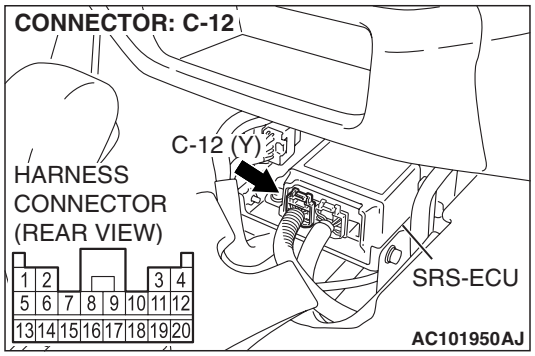
(3) Insert special tool MB991866 into clock spring harness side connector C-205 (terminal No.3 and 4) by backprobing.
(4) Connect the negative battery terminal.
(5) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

Q: Is DTC 62 set?

YES : Go to Step 3.
NO : Replace the clock spring (Refer to P.52B-168). Then go to Step 5.

STEP 3. Check the driver's air bag module circuit at the SRS-ECU connector C-12.

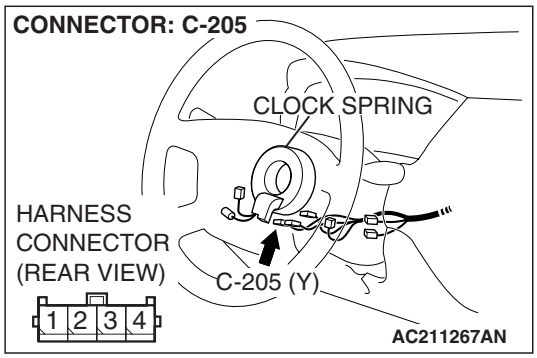
(1) Disconnect SRS-ECU connector C-12.



⚠ DANGER

To prevent the air bag from deploying unintentionally, disconnect the clock spring connector C-205 to short the squib circuit.

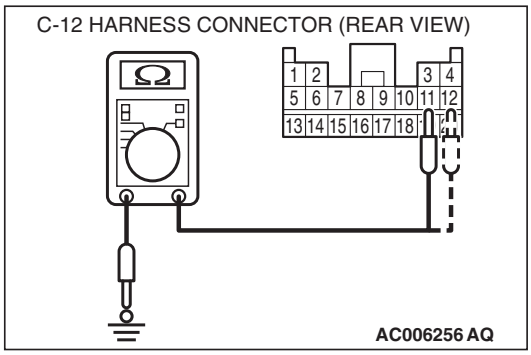
(2) Disconnect the clock spring connector C-205.



⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

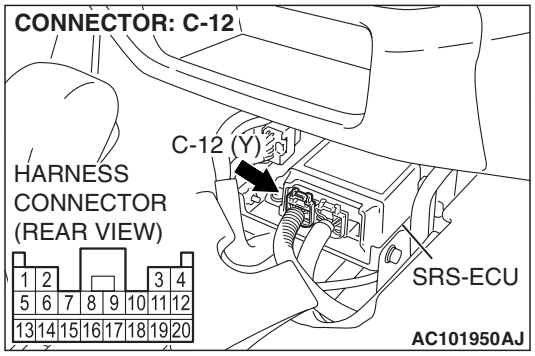
(3) Check for continuity between C-12 harness connector terminals 11, 12 and body ground.
It should be open circuit.

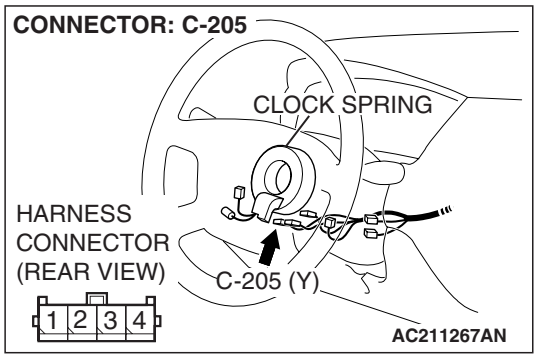


Q: Does continuity exist?

YES : Go to Step 5.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 62 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 5.



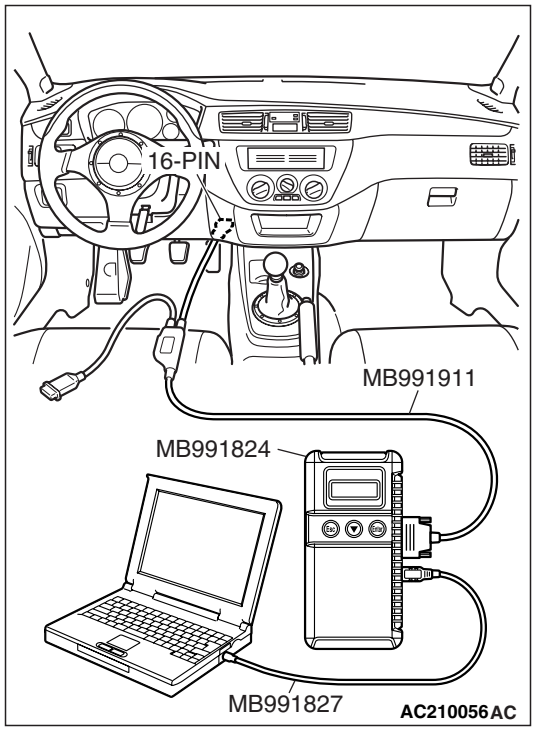


STEP 4. Check the harness for short circuit to ground between SRS-ECU connector C-12 (terminal No.11 and 12) and clock spring connector C-205 (terminal No.3 and 4).

Q: Are the harness wires between SRS-ECU connector C-12 (terminal No.11 and 12) and clock spring connector C-205 (terminal No.3 and 4) in good condition?

YES : Go to Step 5.

NO : Repair the harness wires between SRS-ECU connector C-12 and clock spring connector C-205. Then go to Step 5.



STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

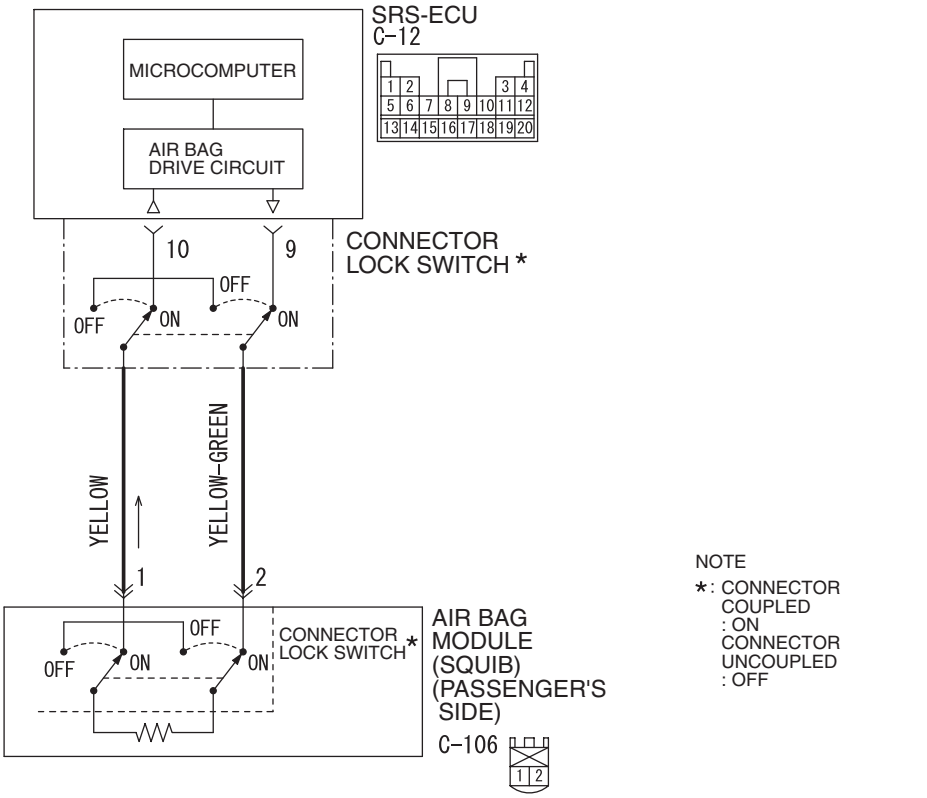
Q: Is DTC 62 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 64: Passenger's (Front) Air Bag Module (Squib) System Fault for Power Supply Circuited (Short-Circuit to Power Supply)

Passenger's (Front) Air Bag Module (Squib) Circuit



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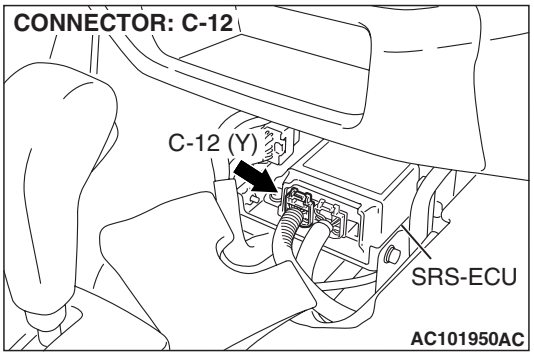
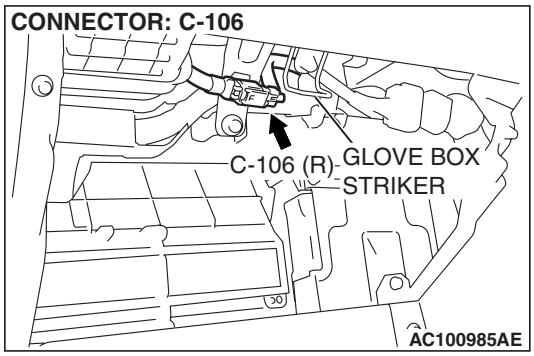




CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) air bag module (squib).

TROUBLESHOOTING HINTS

- Damaged harness wires and connectors
- Short to the power supply in the passenger's (front) air bag module (squib) harness
- Malfunction of the SRS-ECU

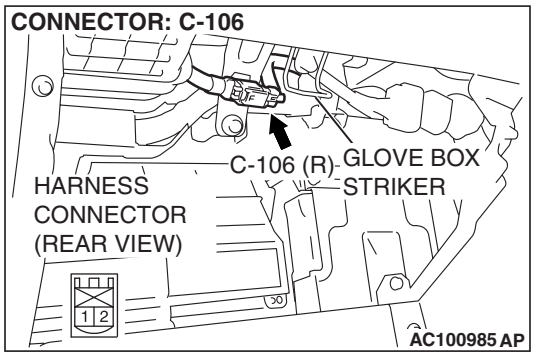
TSB Revision

DIAGNOSIS

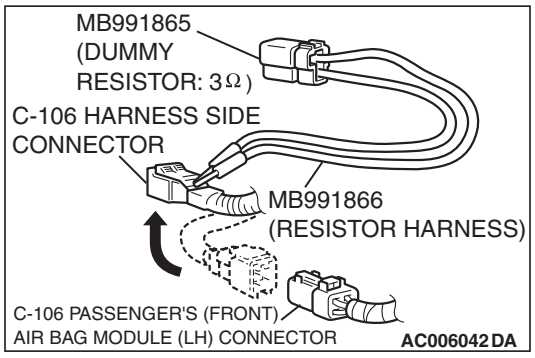
Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness

STEP1. Check the passenger's (front) air bag module (Using scan tool MB991958, read the diagnostic trouble code).



(1) Disconnect passenger's (front) air bag module connector C-106.



(2) Connect special tool MB991865 to special tool MB991866.

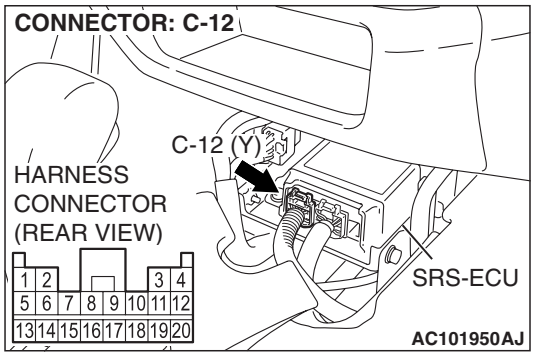
⚠ CAUTION

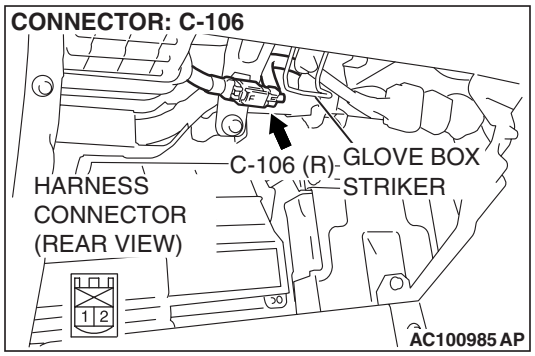
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

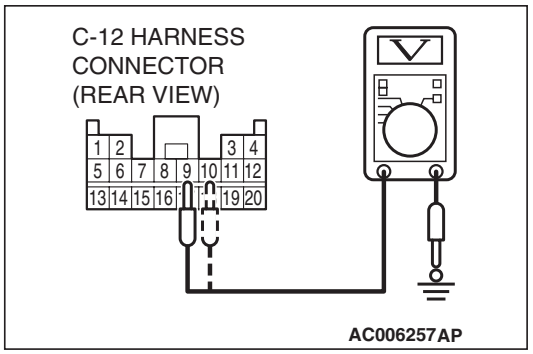
(3) Disconnect the passenger's (front) air bag module connector C-106, and insert special tool MB991866 into the harness connector by backprobing.
(4) Connect the negative battery terminal.
(5) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

Q: Is DTC 64 set?

YES : Go to Step 2.
NO : Replace the passenger's (front) air bag module (Refer to P.52B-168). Then go to Step 4.







STEP 2. Check the passenger's (front) air bag module circuit at the SRS-ECU connector C-12.

(1) Disconnect SRS-ECU connector C-12.

⚠ ***DANGER***

To prevent the air bag from deploying unintentionally, disconnect the passenger's (front) air bag module connector C-106 to short the squib circuit.

(2) Disconnect the passenger's (front) air bag module connector C-106.

(3) Turn the ignition switch to the "ON" position.

⚠ **CAUTION**

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Measure the voltage between C-12 harness connector terminals 9, 10 and body ground.
Voltage should measure 0 volt.

Q: Is the measured voltage 0 volt?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 64 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4.

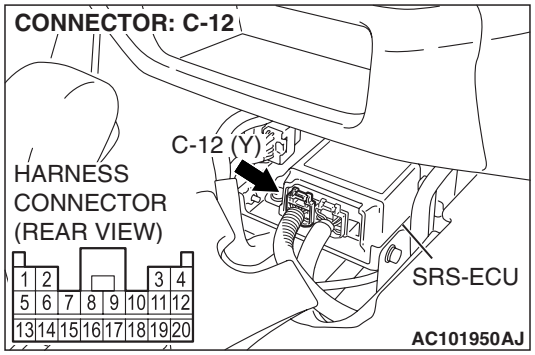
NO : Go to Step 3.

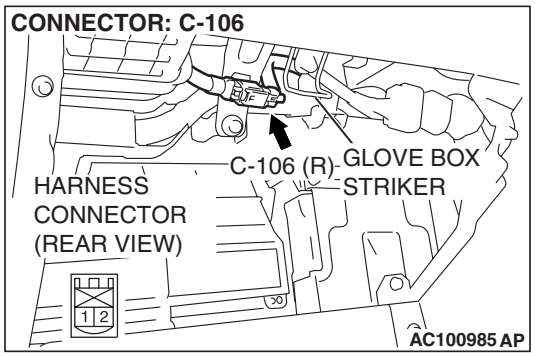
STEP 3. Check the harness wires for short circuit to power supply between SRS-ECU connector C-12 (terminal No. 9 and 10) and passenger's (front) air bag module connector C-106 (terminal No.1 and 2).

Q: Are the harness wires between SRS-ECU connector C-12 (terminal No. 9 and 10) and passenger's (front) air bag module connector C-106 (terminal No.1 and 2) in good condition?

YES : Go to Step 4.

NO : Repair the harness wires between SRS-ECU connector C-12 and passenger's (front) air bag module connector C-106. Then go to Step 4.





STEP 4. Recheck for diagnostic trouble code.

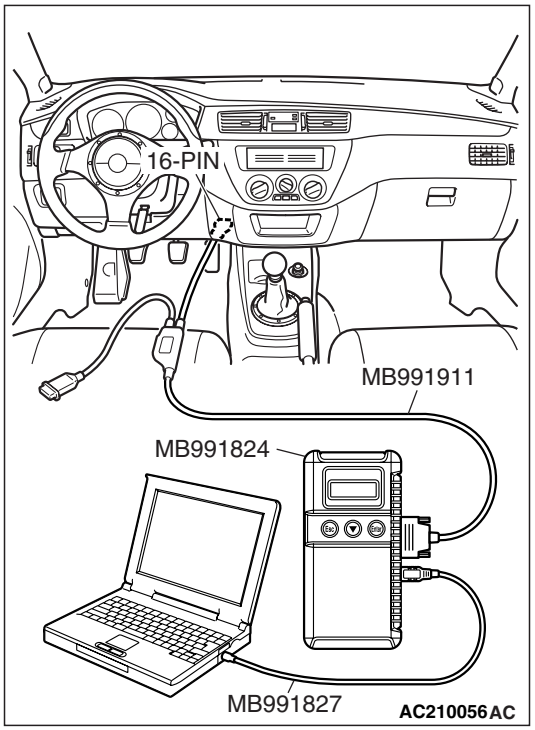
Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is DTC 64 set?

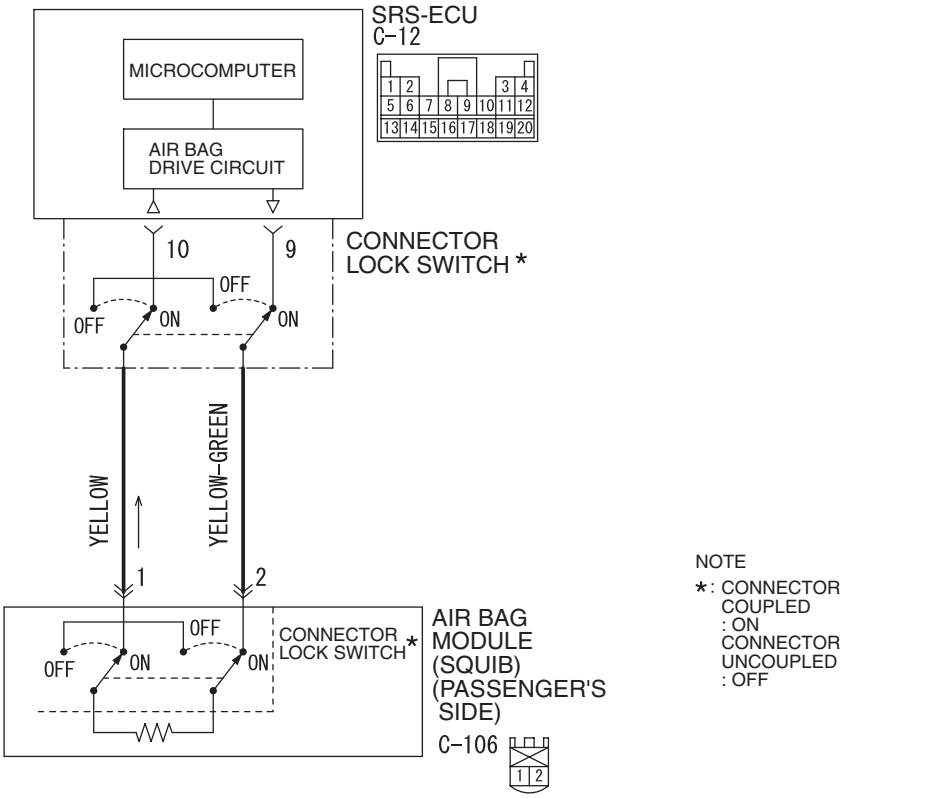
YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).



DTC 65: Passenger's (Front) Air Bag Module (Squib) System Fault for Ground Circuit (Short-Circuited to Ground)

Passenger's (Front) Air Bag Module (Squib) Circuit



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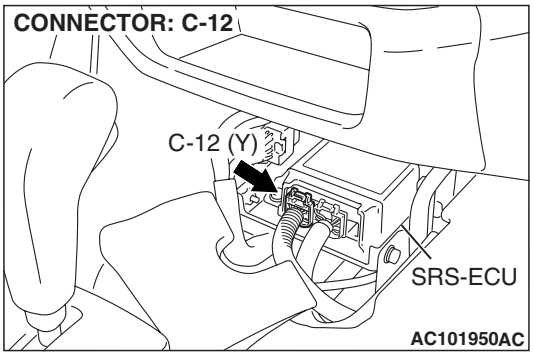
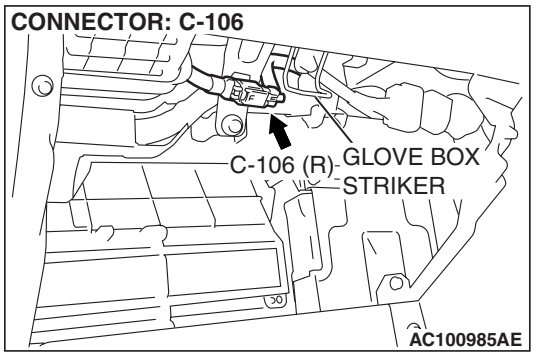




CIRCUIT OPERATION

- The SRS-ECU judges how severe a collision is by detecting signals from the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the SRS air bag will inflate.
- The ignition signal is input to the air bag module to inflate the air bag.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) air bag module (squib).

TROUBLESHOOTING HINTS

- Damaged harness wires and connectors
- Short to the ground in the passenger's (front) air bag module (squib) harness
- Malfunction of the SRS-ECU

TSB Revision

DIAGNOSIS

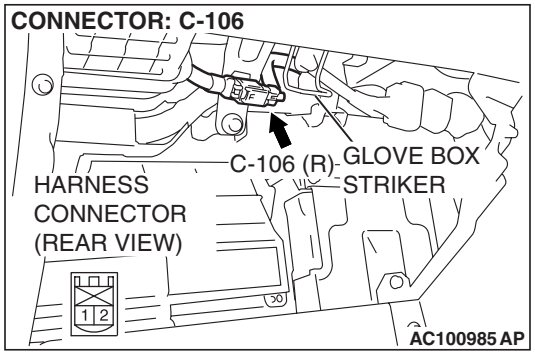
Required Special Tools:

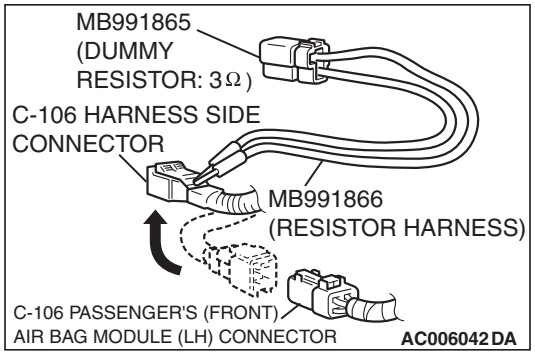
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness

STEP 1. Check the passenger's (front) air bag module (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect passenger' (front) air bag module connector C-106.





(3) Connect special tool MB991865 to special tool MB991866.

⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(4) Disconnect the passenger's (front) air bag module connector C-106, and insert special tool MB991866 into the harness connector by backprobing.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

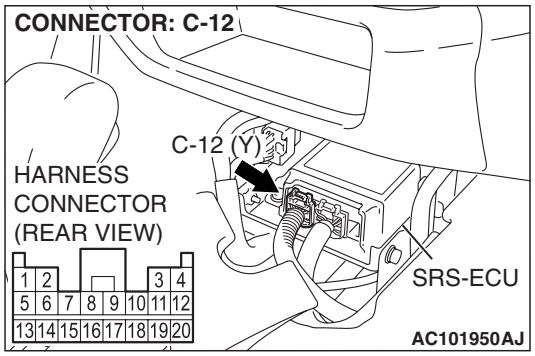
Q: Is DTC 65 set?

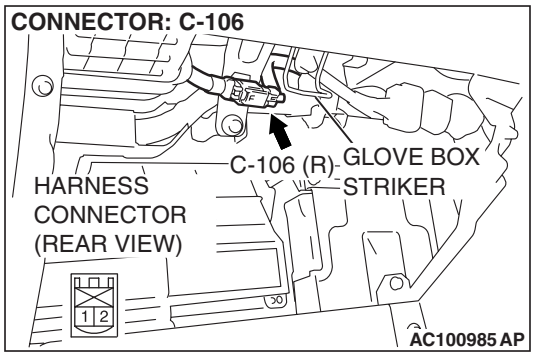
YES : Go to Step 2.

NO : Replace the passenger's (front) air bag module (Refer to P.52B-168). Then go to Step 4.

STEP 2. Check the passenger's (front) air bag module circuit at the SRS-ECU connector C-12.

(1) Disconnect SRS-ECU connector C-12.

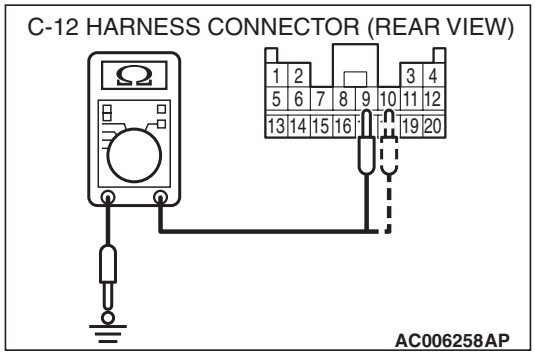




⚠ DANGER

To prevent the air bag from deploying unintentionally, disconnect the passenger's (front) air bag module connector C-106 to short the squib circuit.

(2) Disconnect the passenger's (front) air bag module connector C-106.



⚠ CAUTION

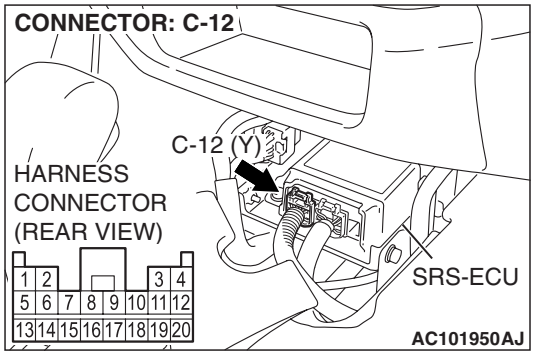
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

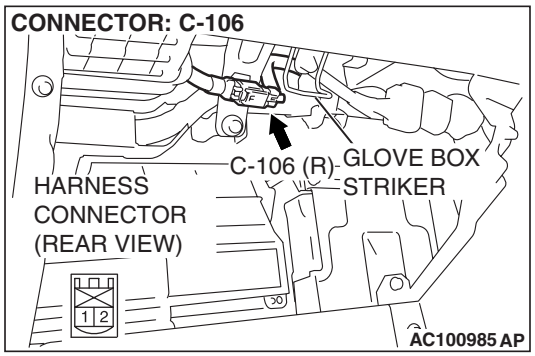
(3) Check for continuity between C-12 harness connector terminals 9, 10 and body ground.
It should be open circuit.

Q: Does continuity exist?

YES : Go to Step 3.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 65 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4 .



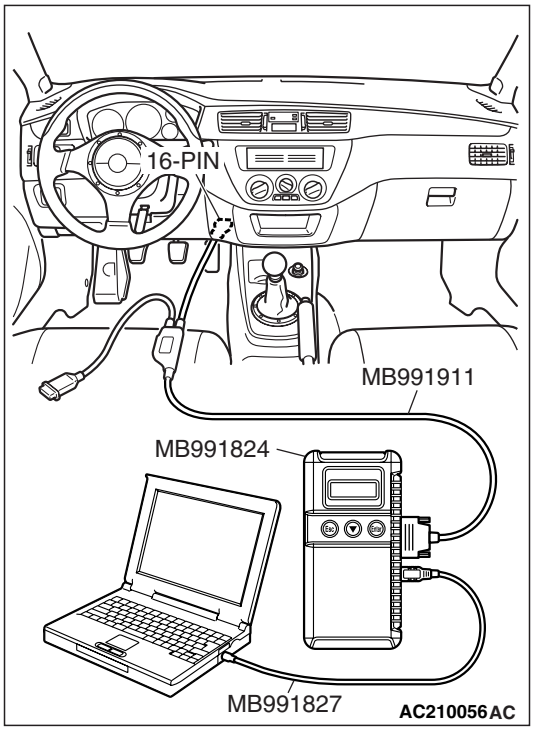


STEP 3. Check the harness wires for short circuit to ground between SRS-ECU connector C-12 (terminal No.9 and 10) and passenger's (front) air bag module connector C-106 (terminal No.1 and 2).

Q: Are the harness wires between SRS-ECU connector C-12 (terminal No.9 and 10) and passenger's (front) air bag module connector C-106 (terminal No.1 and 2) in good condition?

YES : Go to Step 4.

NO : Repair the harness wires between SRS-ECU connector C-12 and passenger's (front) air bag module connector C-106. Then go to Step 4.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.

(2) Turn the ignition switch to the "ON" position.

(3) Check if the DTC is set.

(4) Turn the ignition switch to the "LOCK" (OFF) position.

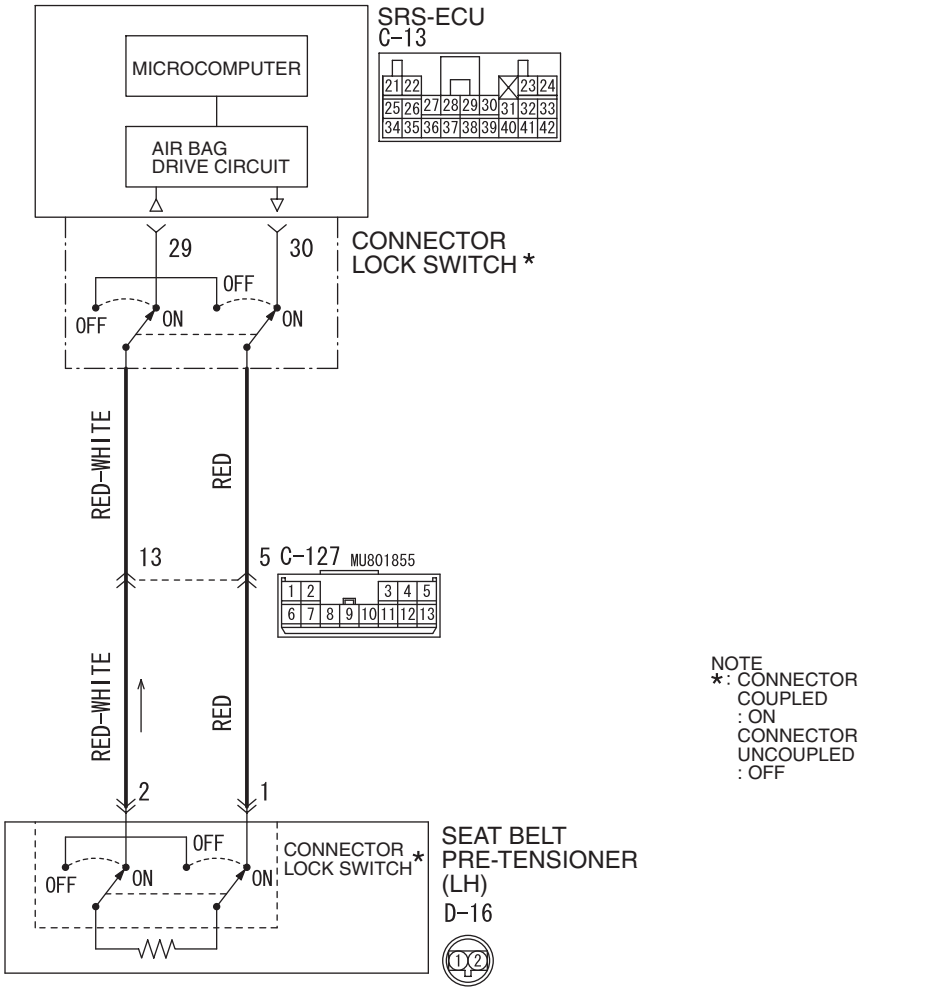
Q: Is DTC 65 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 66: Driver's Seat Belt Pre-Tensioner (Squib) System Fault for Power Supply Circuit (Short-Circuit to Power Supply)

Driver's Seat Belt Pre-tensioner (Squib)



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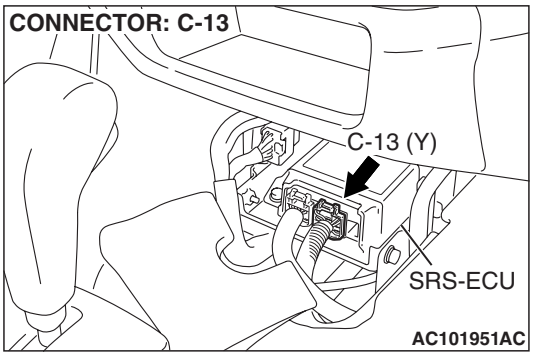
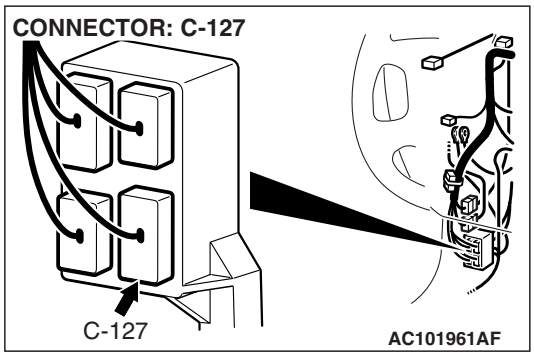
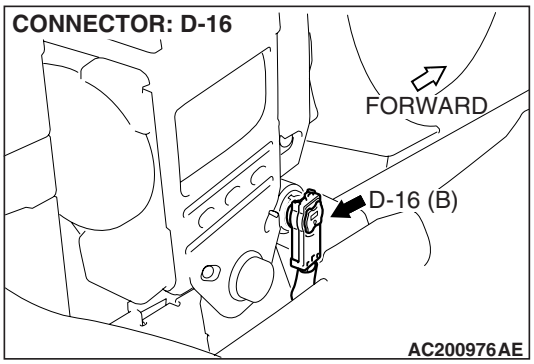




TSB Revision



CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's seat belt pre-tensioner (squib).

TROUBLESHOOTING HITS

- Damaged wiring harnesses or connectors
- Short to the power supply in the driver's seat belt pre-tensioner (squib) harness
- Malfunction of the SRS-ECU

DIAGNOSIS

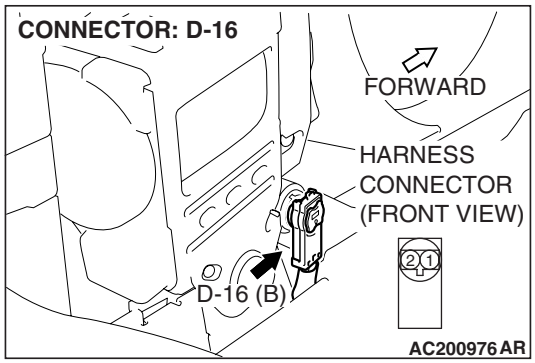
Required Special Tools:

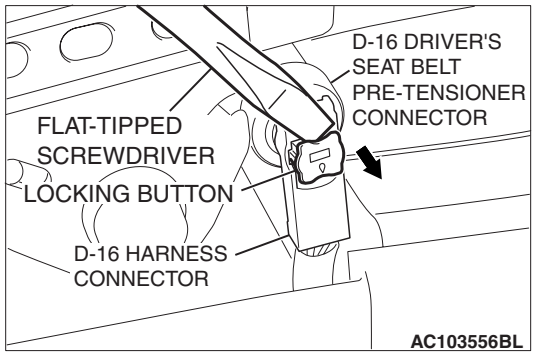
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)

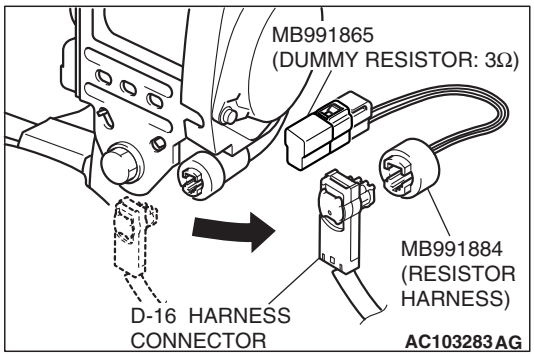
STEP 1. Check the driver's seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect driver's seat belt pre-tensioner connector D-16. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.







(3) Connect special tool MB991865 to special tool MB991884.

(4) Connect special tool MB991884 to the D-16 harness connector.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

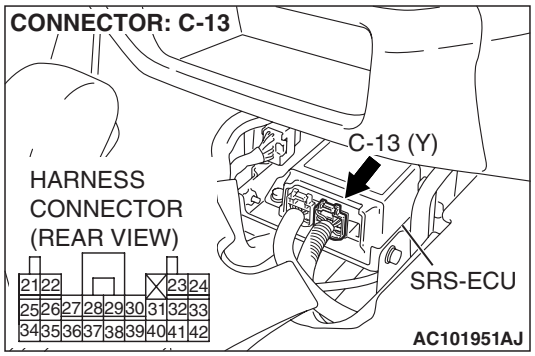
Q: Is DTC 66 set?

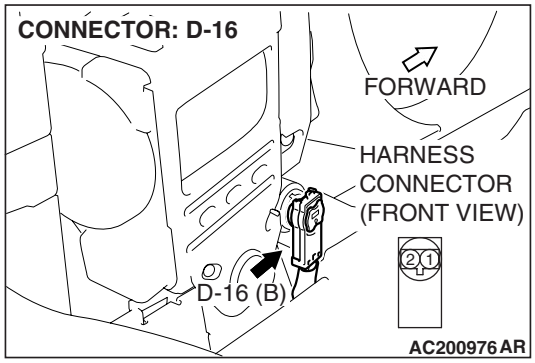
YES : Go to Step 2.

NO : Replace the driver's seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 4.

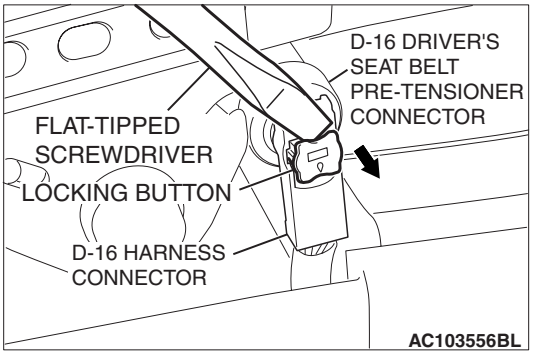
STEP 2. Check the driver's seat belt pre-tensioner circuit at the SRS-ECU connector C-13.

(1) Disconnect SRS-ECU connector C-13.

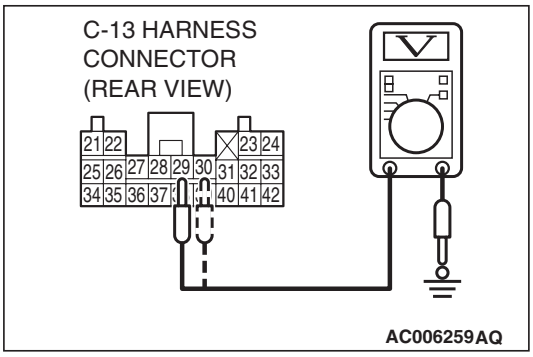




(2) Disconnect driver's seat belt pre-tensioner connector D-16. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.
(3) Turn the ignition switch to the "ON" position.



⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

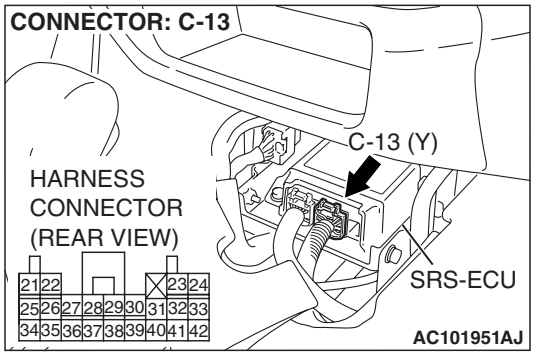


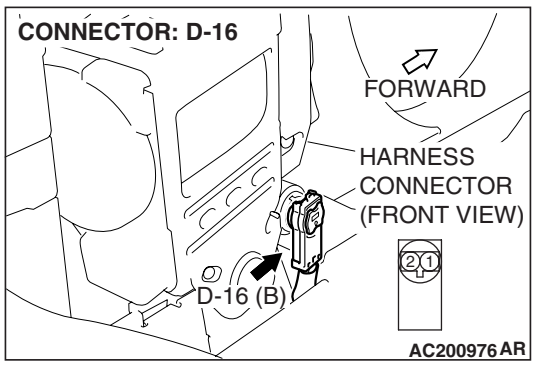
(4) Measure the voltage between C-13 harness connector terminals 29, 30 and body ground.
Voltage should measure 0 volt.

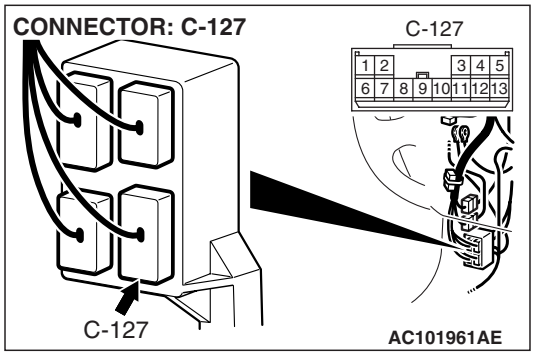
Q: Is the measured voltage 0 volt?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 65 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4.
NO : Go to Step 3.

STEP 3. Check the harness wires for short circuit to power supply between SRS-ECU connector C-13 (terminal No.29 and 30) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2).





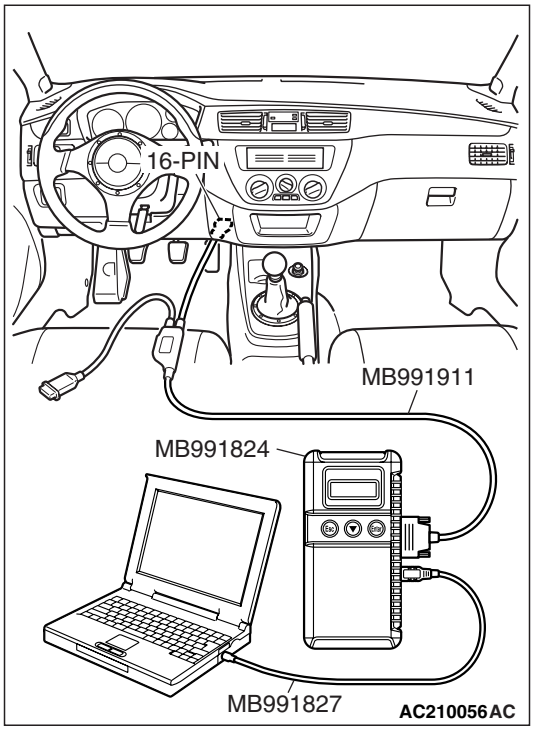


NOTE: After inspecting intermediate connector C-127 inspect the wiring harness.
If the intermediate connector C-127 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are the harness wires between SRS-ECU connector C-13 (terminal No.29 and 30) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2) in good condition?

YES : Go to Step 4.

NO : Repair the harness wires between SRS-ECU connector C-13 and driver's seat belt pre-tensioner connector D-16. Then go to Step 4.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

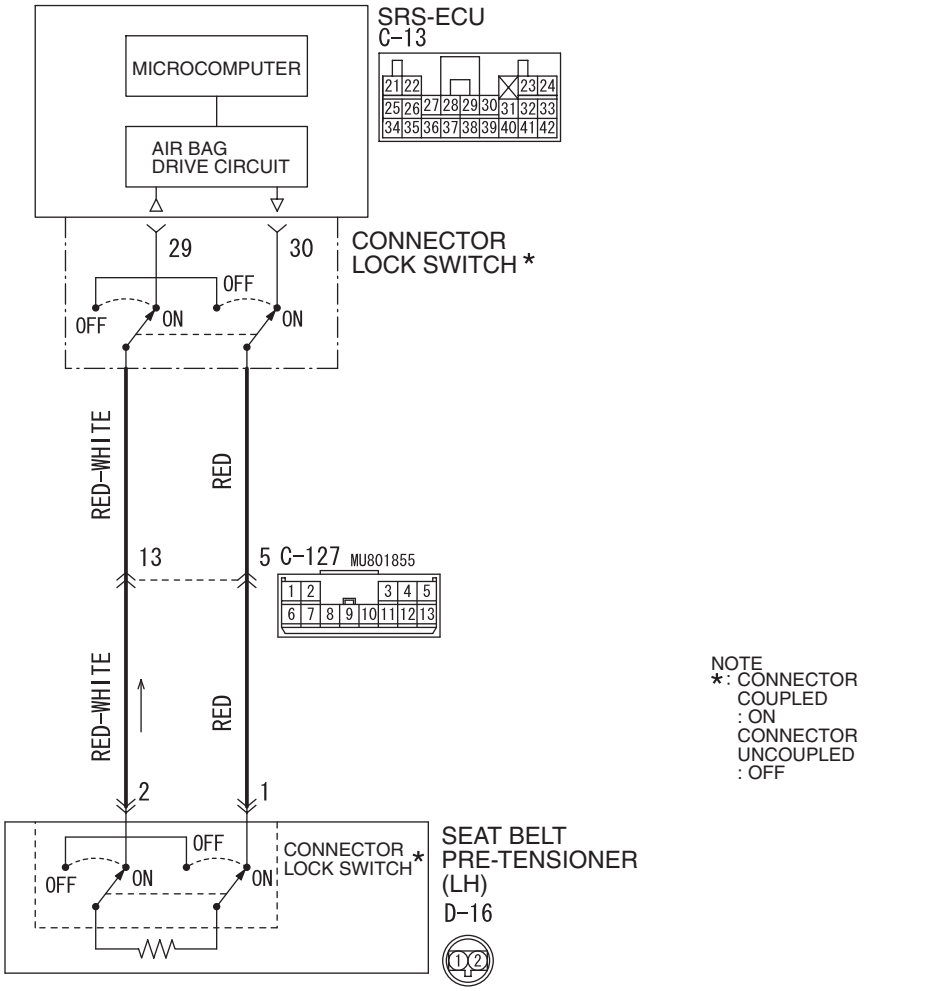
Q: Is DTC 66 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 67: Driver's Seat Belt Pre-Tensioner (Squib) System Fault for Ground Circuit (Short-Circuited to Ground)

Driver's Seat Belt Pre-tensioner (Squib)



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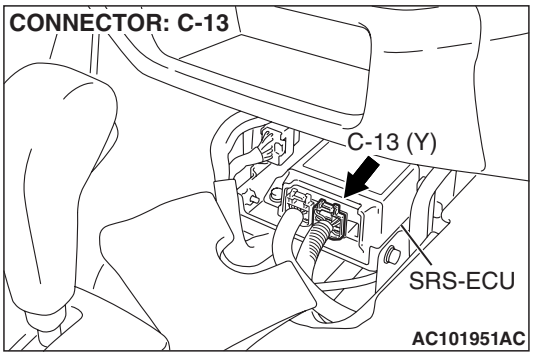
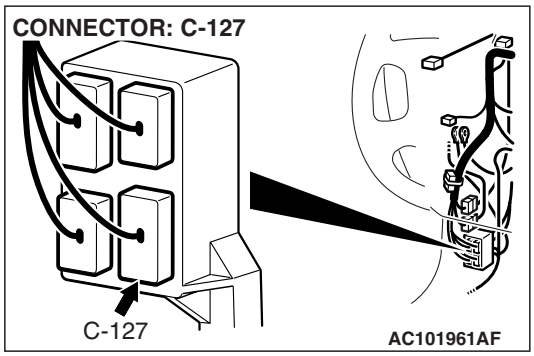
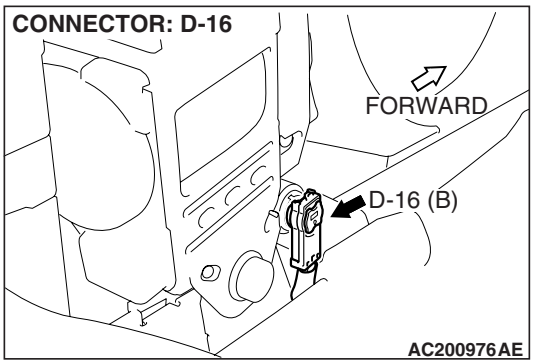




TSB Revision



CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the driver's seat belt pre-tensioner (squib).

TROUBLESHOOTING HITS

- Damaged wiring harnesses or connectors
- Short to the ground in the driver's seat belt pre-tensioner (squib) harness
- Malfunction of the SRS-ECU

DIAGNOSIS

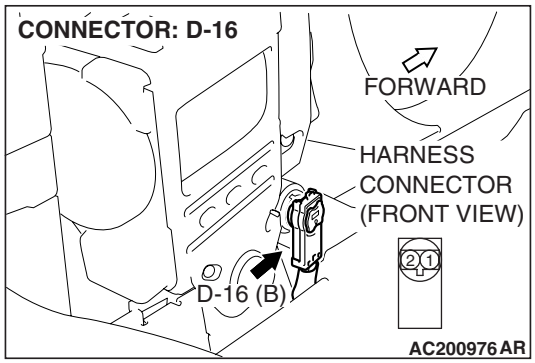
Required Special Tools:

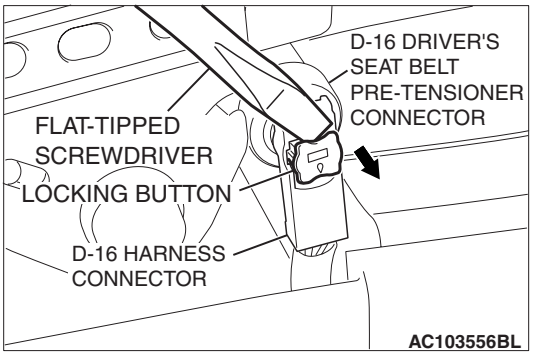
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)

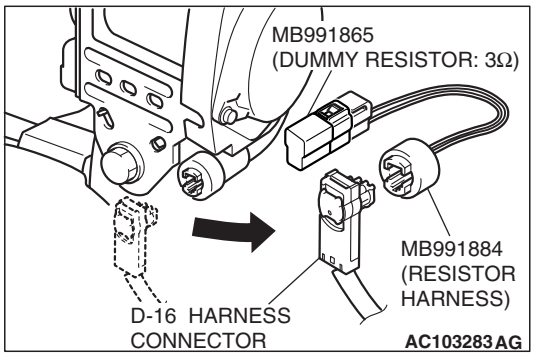
STEP 1. Check the driver's seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect driver's seat belt pre-tensioner connector D-16. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.







(3) Connect special tool MB991865 to special tool MB991884.

(4) Connect special tool MB991884 to the D-16 harness connector.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

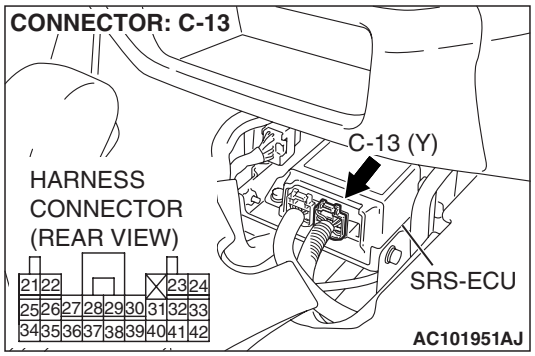
Q: Is DTC 67 set?

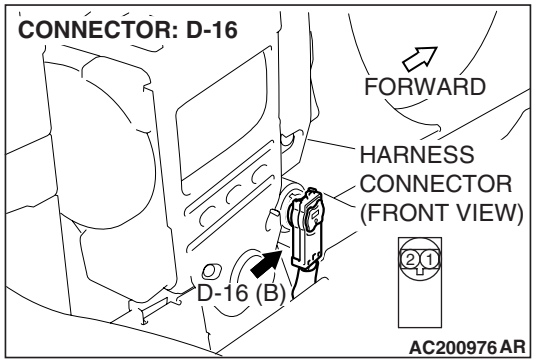
YES : Go to Step 2.

NO : Replace the driver's seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 4.

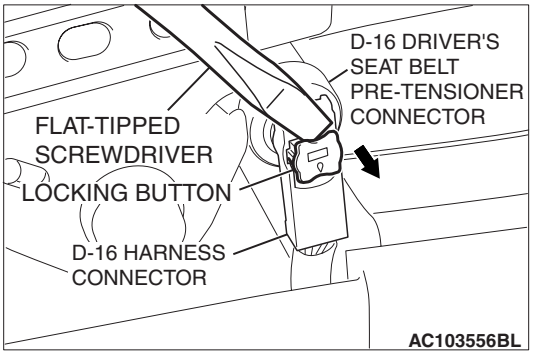
STEP 2. Check the driver's seat belt pre-tensioner circuit at the SRS-ECU connector C-13.

(1) Disconnect SRS-ECU connector C-13.

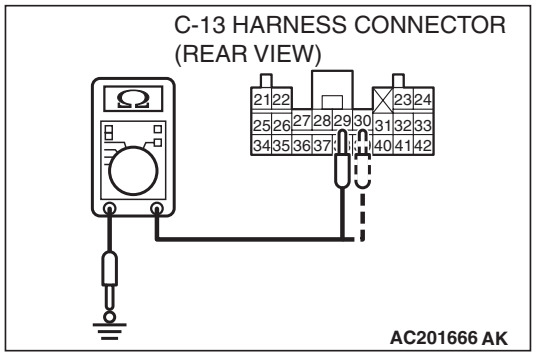




(2) Disconnect driver's seat belt pre-tensioner connector D-16. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.



⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.



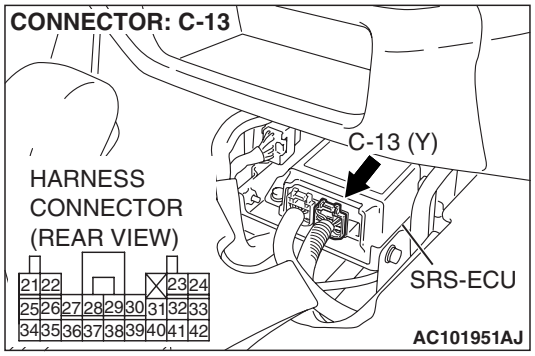
(3) Check for continuity between C-13 harness connector terminals 29, 30 and body ground.
It should be open circuit.

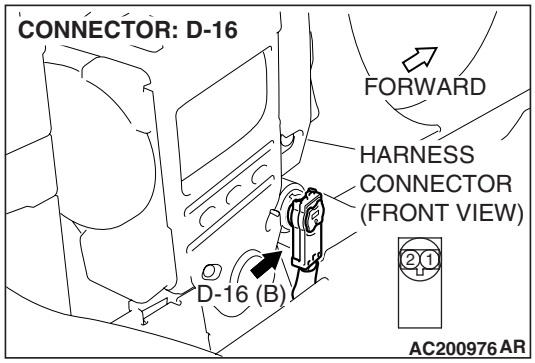
Q: Does continuity exist?

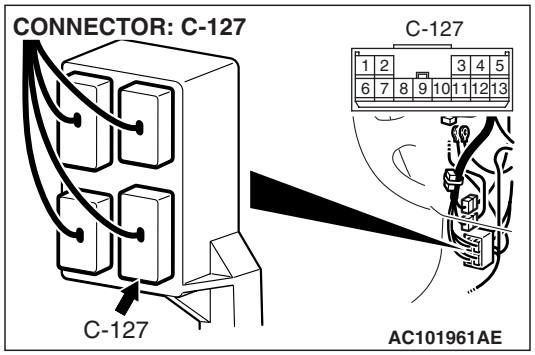
YES : Go to Step 3.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 67 set, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4.

STEP 3. Check harness wires for short circuit to ground between SRS-ECU connector C-13 (terminal No.29 and 30) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2).





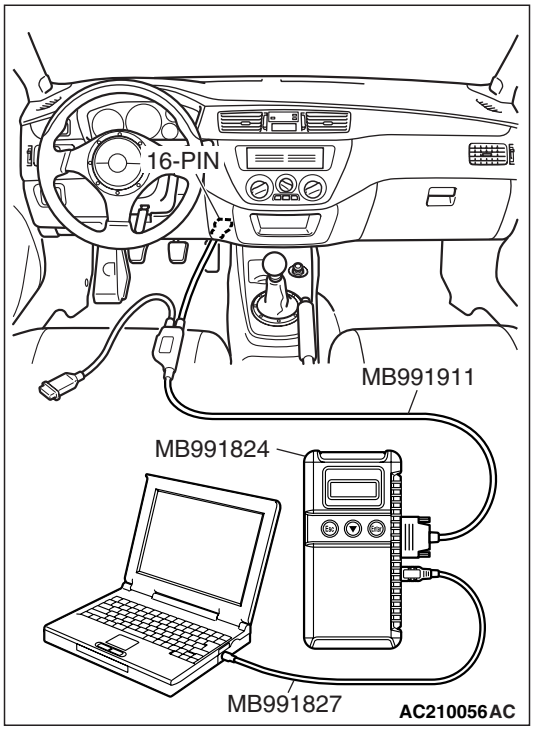


NOTE: After inspecting intermediate connector C-127, inspect the wiring harness.
If the intermediate connector C-127 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are the harness wires between SRS-ECU connector C-13 (terminal No.29 and 30) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2) in good condition?

YES : Go to Step 4.

NO : Repair the harness wires between SRS-ECU connector C-13 and driver's seat belt pre-tensioner connector D-16. Then go to Step 4.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

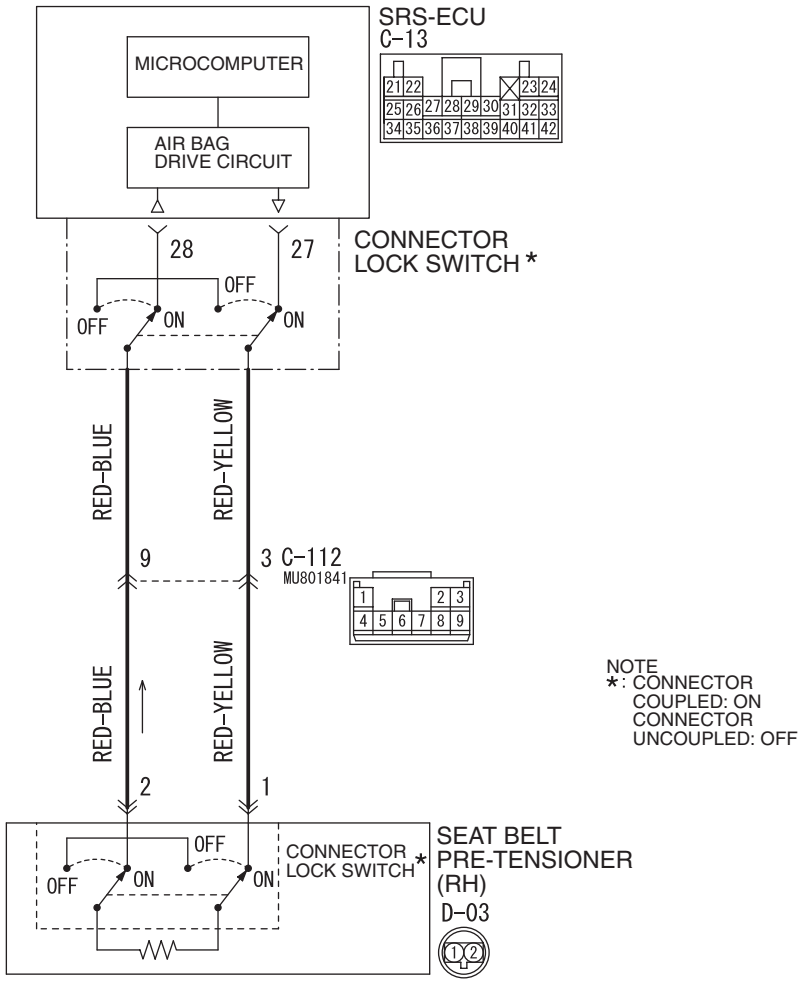
Q: Is DTC 67 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 68: Passenger's (Front) Seat Belt Pre-Tensioner (Squib) System Fault for Power Supply Circuit (Short-Circuited to Power Supply)

Passenger's (Front) Seat Belt Pre-tensioner (Squib)



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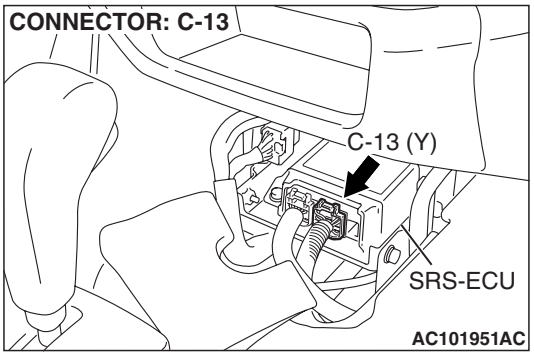
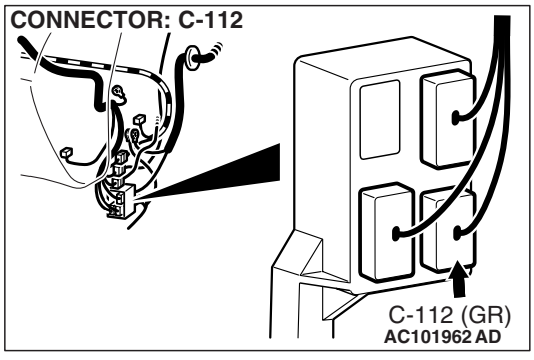
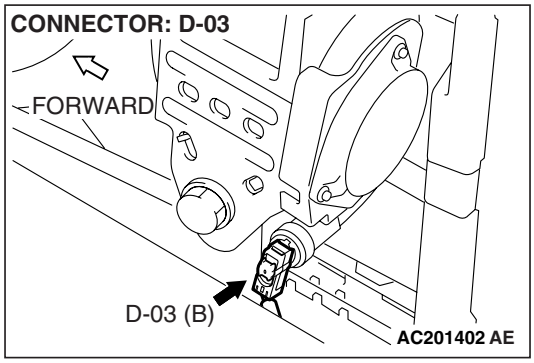




TSB Revision



CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) seat belt pre-tensioner (squib).

TROUBLESHOOTING HITS

- Damaged wiring harnesses or connectors
- Short to the power supply in the passenger's (front) seat belt pre-tensioner (squib) harness
- Malfunction of the SRS-ECU

DIAGNOSIS

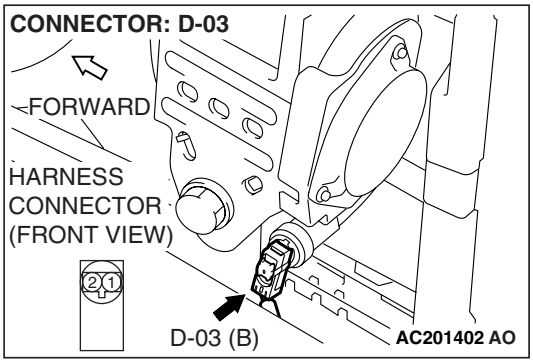
Required Special Tools:

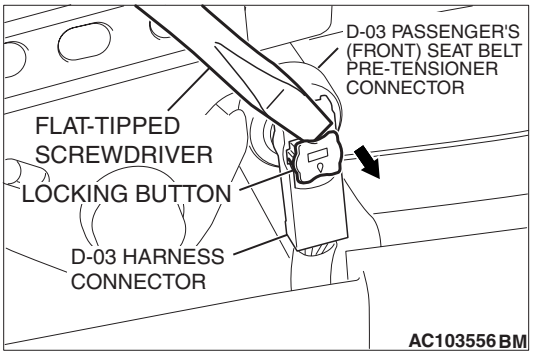
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)

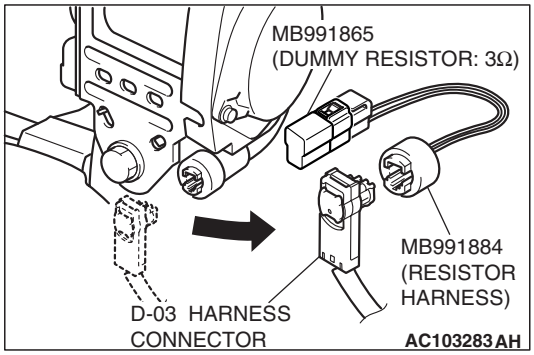
STEP 1. Check the passenger's (front) seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect passenger's (front) seat belt pre-tensioner connector D-03. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.







(3) Connect special tool MB991865 to special tool MB991884.

(4) Connect special tool MB991884 to the D-03 harness connector.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

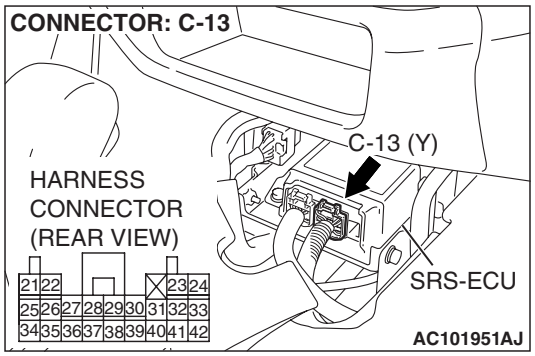
Q: Is DTC 68 set?

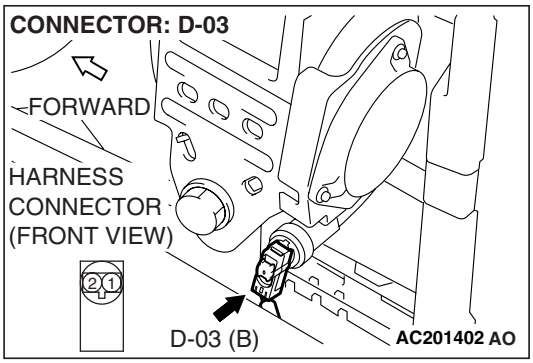
YES : Go to Step 2.

NO : Replace the passenger's seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 4.

STEP 2. Check the passenger's (front) seat belt pre-tensioner circuit at the SRS-ECU connector C-13.

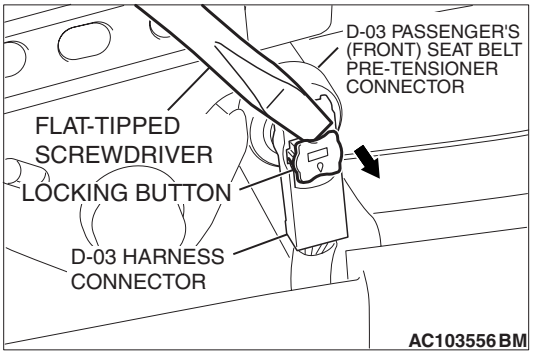
(1) Disconnect SRS-ECU connector C-13.





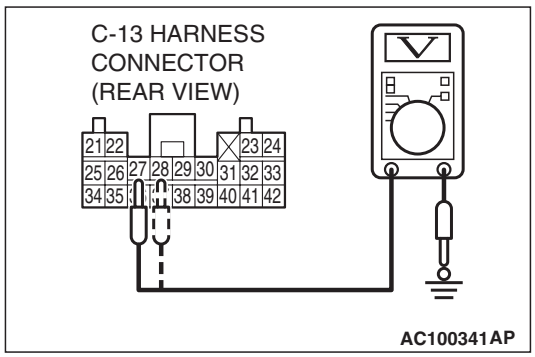
(2) Disconnect passenger's (front) seat belt pre-tensioner connector D-03. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.

(3) Turn the ignition switch to the "ON" position,



⚠ CAUTION

Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.



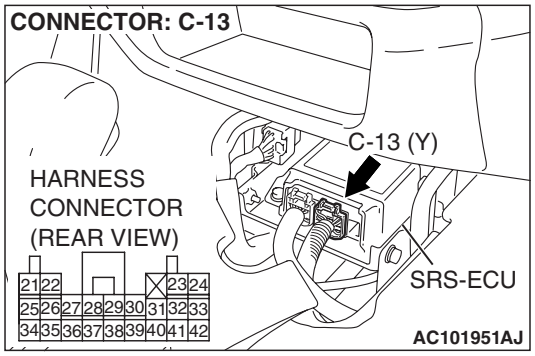
(4) Measure the voltage between C-13 harness connector terminals 27, 28 and body ground.
Voltage should measure 0 volt.

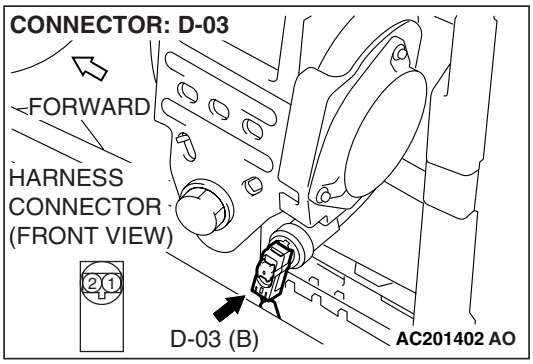
Q: Is the circuit normal?

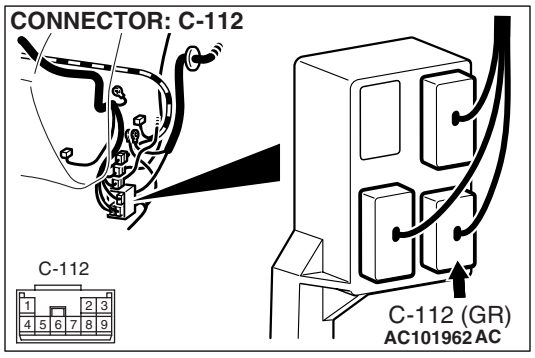
YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 68 sets, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4.

NO : Go to Step 3.

STEP 3. Check the harness wires for short circuit to power supply between SRS-ECU connector C-13 (terminal No.27 and 28) and passenger's (front) seat belt pre-tensioner connector D-03 (terminal No.1 and 2).





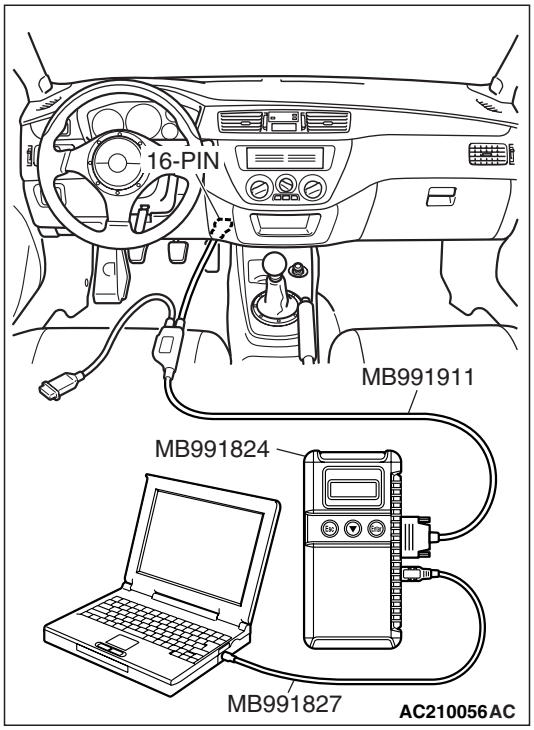


NOTE: After inspecting intermediate connector C-112 inspect the wiring harness.
If the intermediate connector C-112 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are the harness wires between SRS-ECU connector C-13 (terminal No.27 and 28) and passenger's (front) seat belt pre-tensioner connector D-03 (terminal No.1 and 2) in good condition?

YES : Go to Step 4.

NO : Repair the harness wires between SRS-ECU connector C-13 and passenger's (front) seat belt pre-tensioner connector D-03. Then go to Step 4.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

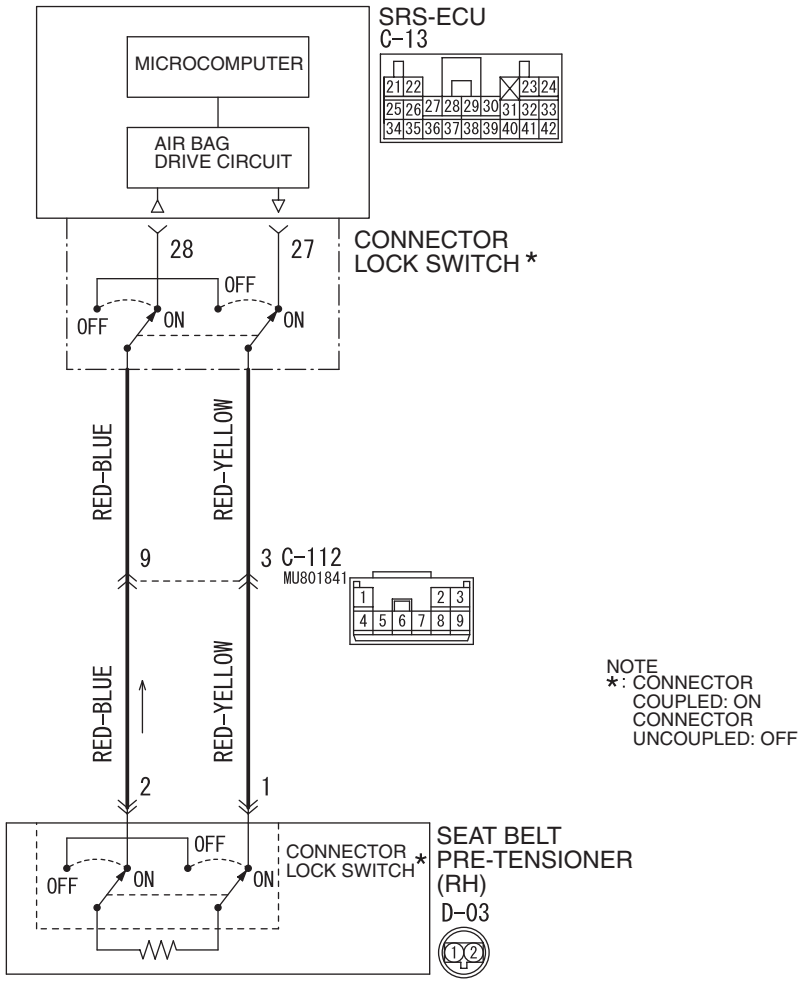
Q: Is DTC 68 set?

YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

DTC 69: Passenger's (Front) Seat Belt Pre-Tensioner (Squib) System Fault for Ground Circuit (Short-Circuit to Ground)

Passenger's (Front) Seat Belt Pre-tensioner (Squib)



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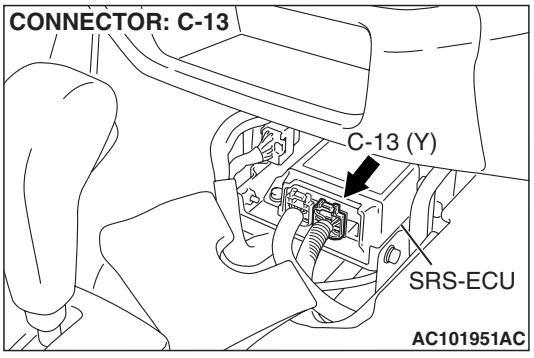
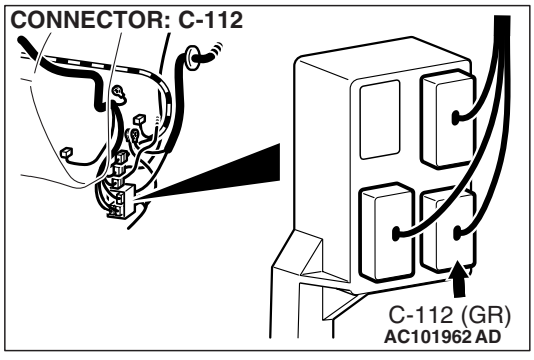
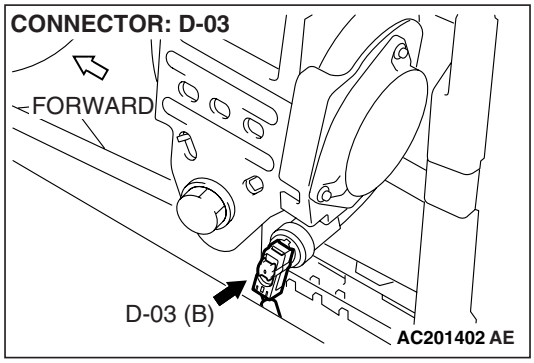




TSB Revision



CIRCUIT OPERATION

The SRS-ECU judges how severe a collision is by detecting signals from the front impact sensors and the front air bag analog G-sensor. If the impact is over a predetermined level, the SRS-ECU outputs an ignition signal. At this time, if the front air bag safing G-sensor is on, the seat belt pre-tensioner will deploy.

DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the passenger's (front) seat belt pre-tensioner (squib).

TROUBLESHOOTING HITS

- Damaged wiring harnesses or connectors
- Short to the ground in the passenger's (front) seat belt pre-tensioner (squib) harness
- Malfunction of the SRS-ECU

DIAGNOSIS

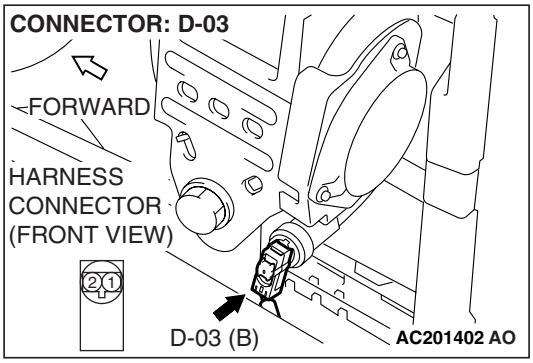
Required Special Tools:

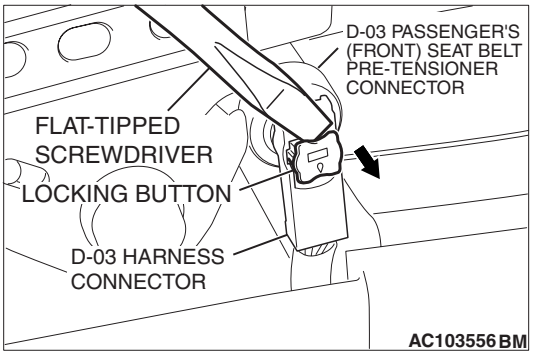
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB991865: Dummy resister
- MB991866: Resister harness (For Pre-tensioner)

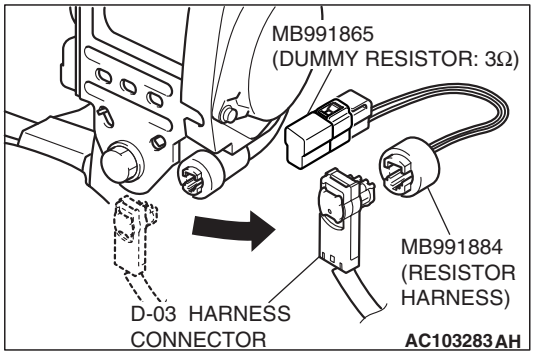
STEP 1. Check the passenger's (front) seat belt pre-tensioner (Using scan tool MB991958, read the diagnostic trouble code).

(1) Disconnect the negative battery terminal.

(2) Disconnect passenger's (front) seat belt pre-tensioner connector D-03. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.







(3) Connect special tool MB991865 to special tool MB991884.

(4) Connect special tool MB991884 to the D-03 harness connector.

(5) Connect the negative battery terminal.

(6) Erase the diagnostic trouble code memory, and then check the diagnostic trouble code.

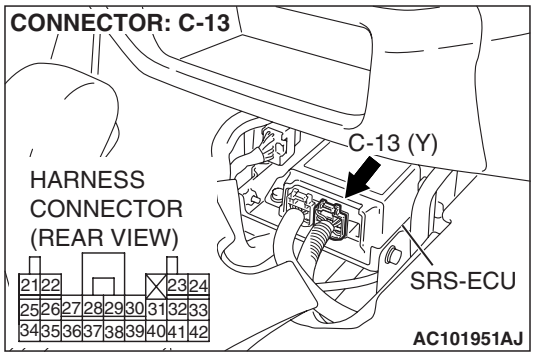
Q: Is DTC 69 set?

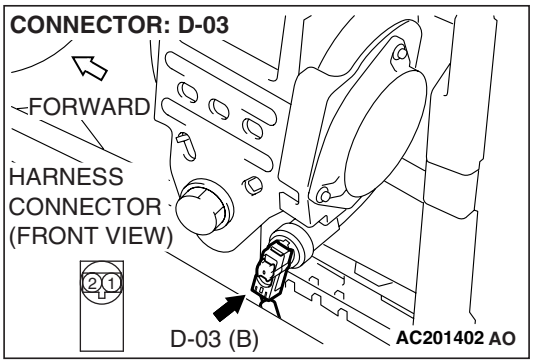
YES : Go to Step 2.

NO : Replace the passenger's (front) seat belt with pre-tensioner (Refer to P.52B-176). Then go to Step 3.

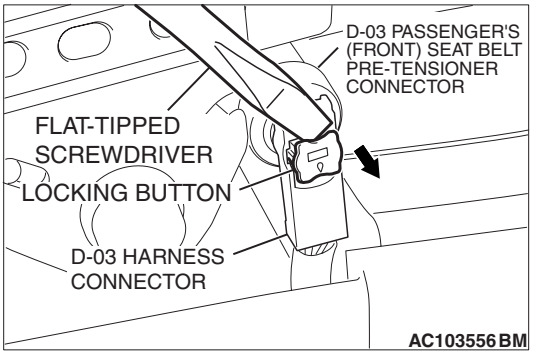
STEP 2. Check the passenger's (front) seat belt pre-tensioner circuit at the SRS-ECU connector C-13.

(1) Disconnect SRS-ECU connector C-13.

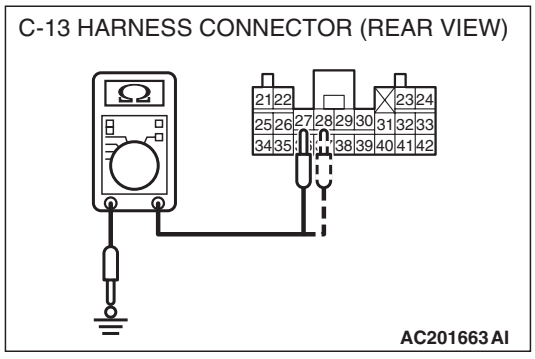




(2) Disconnect passenger's (front) seat belt pre-tensioner connector D-03. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.



⚠ CAUTION
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.



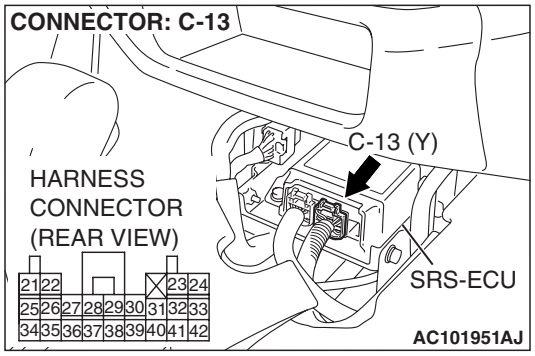
(3) Check for continuity between C-13 harness connector terminals 27, 28 and body ground.
It should be open circuit.

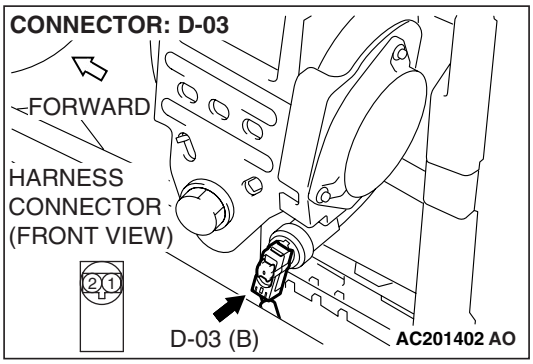
Q: Does continuity exist?

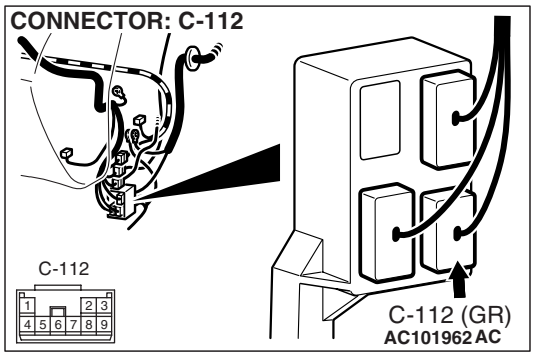
YES : Go to Step 3.

NO : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC 69 sets, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 4.

STEP 3. Check harness wires for short circuit to ground between SRS-ECU connector C-13 (terminal No.27 and 28) and passenger's (front) seat belt pre-tensioner connector D-03 (terminal No.1 and 2).





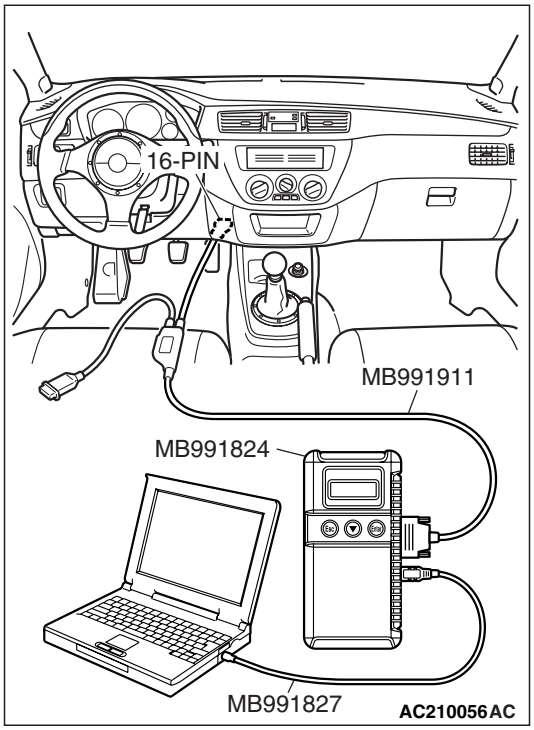


NOTE: After inspecting intermediate connector C-112 inspect the wiring harness.
If the intermediate connector C-112 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are the harness wires between SRS-ECU connector C-13 (terminal No.27 and 28) and passenger's (front) seat belt pre-tensioner connector D-03 (terminal No.1 and 2) in good condition?

YES : Go to Step 4.

NO : Repair the harness wires between SRS-ECU connector C-13 and passenger's (front) seat belt pre-tensioner connector D-03. Then go to Step 4.



STEP 4. Recheck for diagnostic trouble code.

Check again if the DTC is set.

(1) Erase the DTC.
(2) Turn the ignition switch to the "ON" position.
(3) Check if the DTC is set.
(4) Turn the ignition switch to the "LOCK" (OFF) position.

Q: Is DTC 69 set?

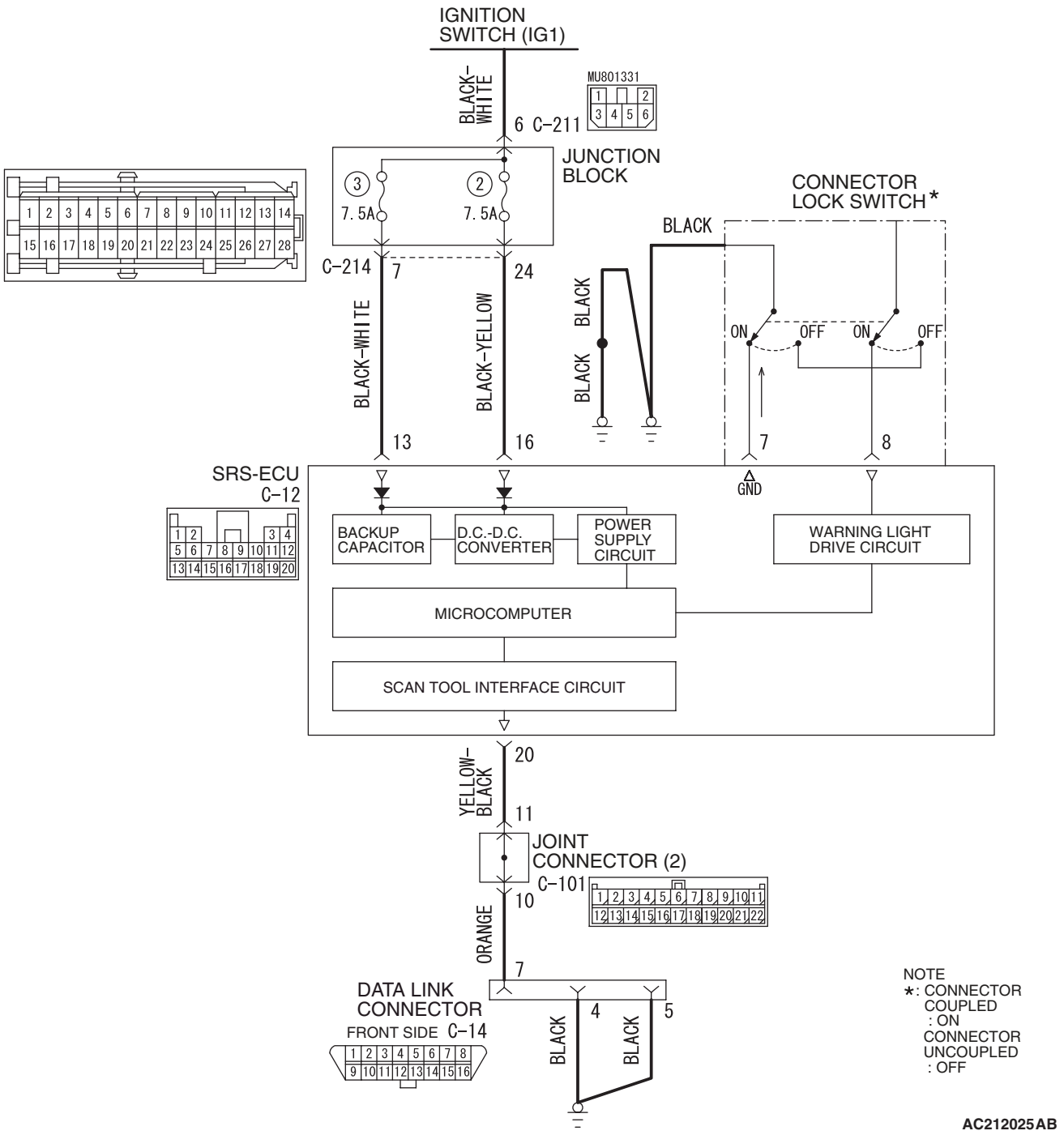
YES : Return to Step 1.

NO : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Communication with scan tool MB991958 is not possible (Communication is not possible with SRS).

SRS-ECU Power Supply Circuit



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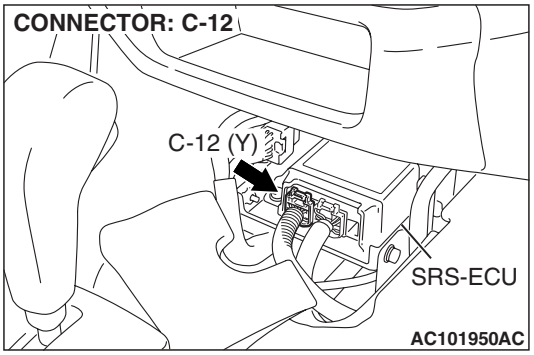
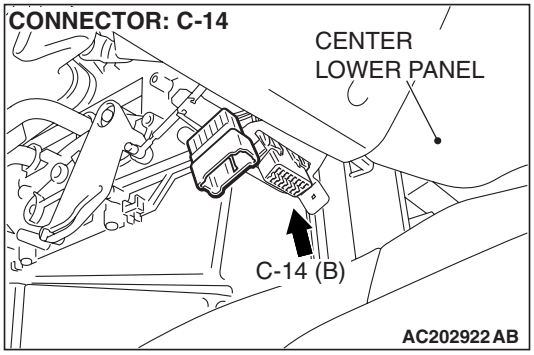
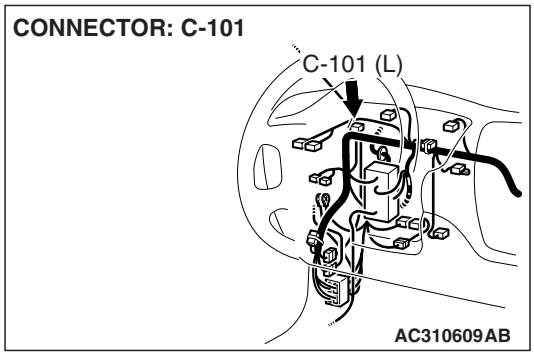
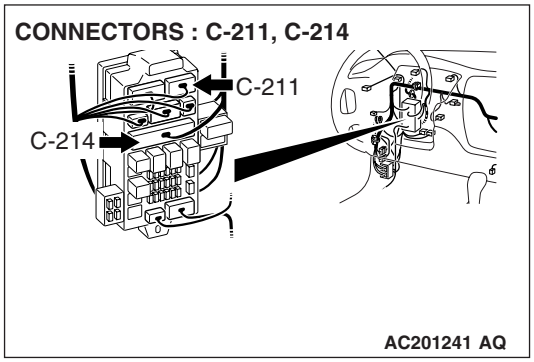








CIRCUIT OPERATION

- The SRS-ECU is powered from the ignition switch (IG1).
- The SRS-ECU power is supplied from two circuits. Even if one circuit is shut off, the air bag can inflate.
- The SRS system diagnosis can be done by connecting scan tool MB991958 to the data link connector.

TECHNICAL DESCRIPTION (COMMENT)

If communication is not possible with the SRS only, the cause is probably an open circuit in the on-board diagnostic output circuit of the SRS or in the power circuit (including ground circuit).

TROUBLESHOOTING HINTS

- Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU

DIAGNOSIS

STEP 1. Check that the scan tool can communicate with the other systems.

Q: Can the scan tool communicate with the other systems?

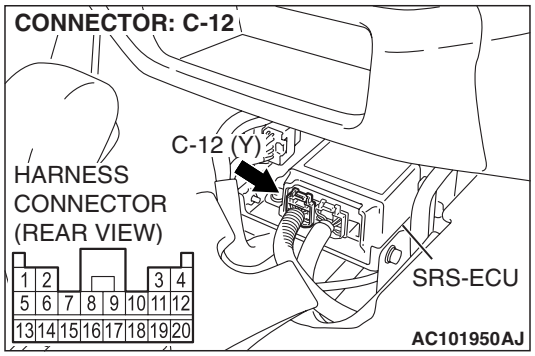
YES : Go to Step 2.
NO : Refer to GROUP 13A, Diagnosis P.13A-690.

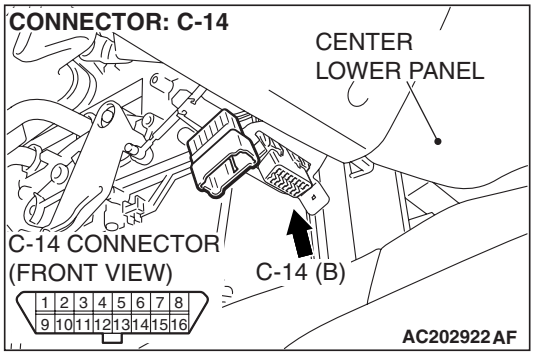
STEP 2. Check the communication line between the SRS-ECU and the scan tool.

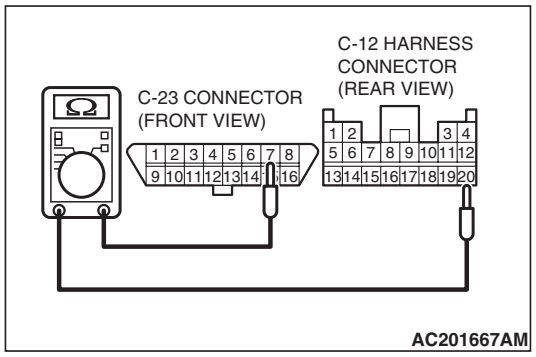
(1) Disconnect SRS-ECU connector C-12 and data link connector C-14 and measure at the wiring harness side.

⚠ CAUTION

Do not insert a test probe into the terminal of the SRS-ECU connector C-12 from its front side directly as the connector contact pressure may be weakened.



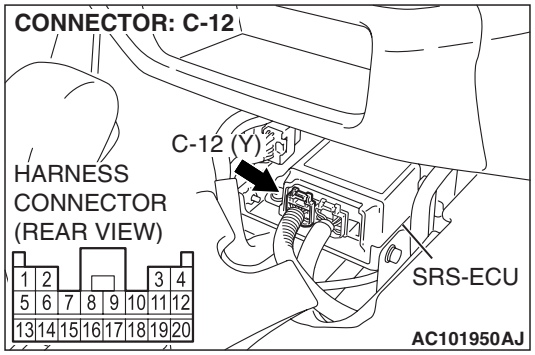


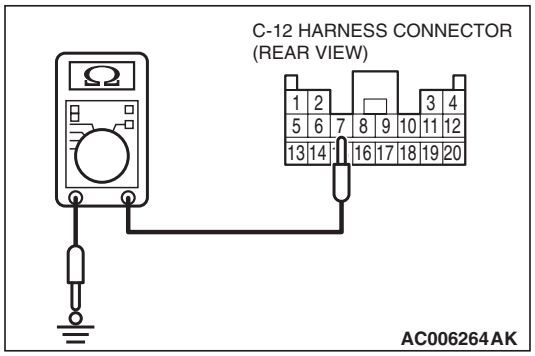


(2) Check for continuity between the following terminals.
SRS-ECU connector C-12 (terminal No.20) and date ling connector C-14 (terminal No.7)
It should be less than 2 ohms.

Q: Does continuity exist?

YES : Go to Step 3.
NO : Go to Step 5.





STEP 3. Check the ground circuit to the SRS-ECU.

(1) Disconnect SRS-ECU connector C-12, and measure at the wiring harness side.

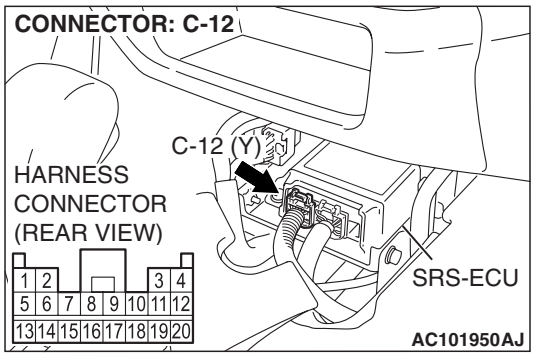
⚠ CAUTION

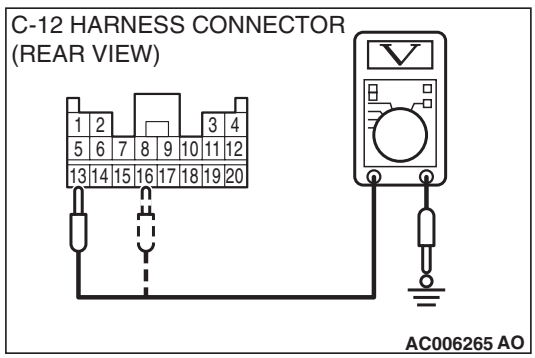
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(2) Check for continuity between terminal 7 and body ground.
It should be less than 2 ohms.

Q: Does continuity exist?

YES : Go to Step 4.
NO : Go to Step 6.





STEP 4. Check the power supply circuit to the SRS-ECU.

(1) Disconnect the negative battery terminal.
(2) Disconnect SRS-ECU connector C-12, and measure at the wiring harness side.
(3) Connect the negative battery terminal.
(4) Turn the ignition switch to the "ON" position.

⚠ CAUTION

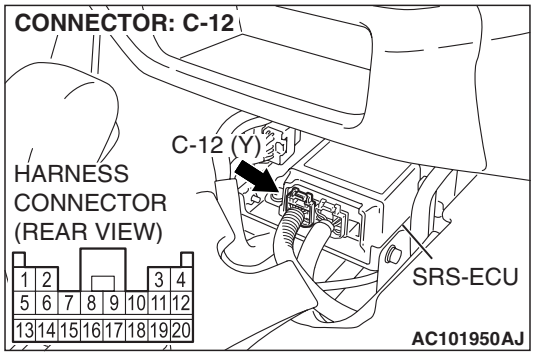
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

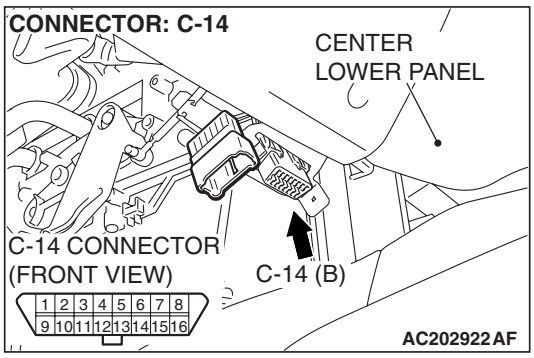
(5) Measure the voltage between terminals 13, 16 and body ground.
Voltage should measure 9 volts or more.

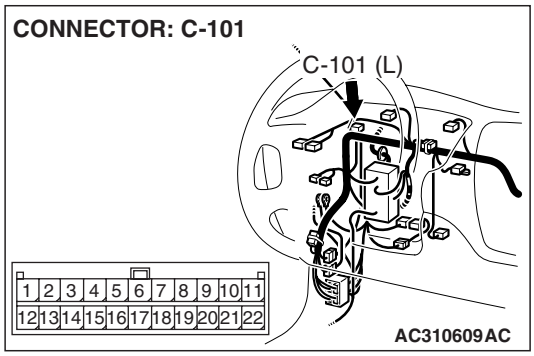
Q: Is the measured voltage within the specified range?

YES : Recheck the trouble symptom. If it is not solved, replace the SRS-ECU (Refer to P.52B-166). Then go to Step 8.
NO : Go to Step 7.

STEP 5. Check the harness wires between SRS-ECU connector C-12 (terminal No.20) and data link connector C-14 (terminal No.7).







NOTE: After inspecting intermediate connector C-101, inspect the wiring harness.
If the intermediate connector C-101, is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are the harness wires between SRS-ECU connector C-12 (terminal No.20) and data link connector C-14 (terminal No.7) in good condition?

YES : Go to step 8.

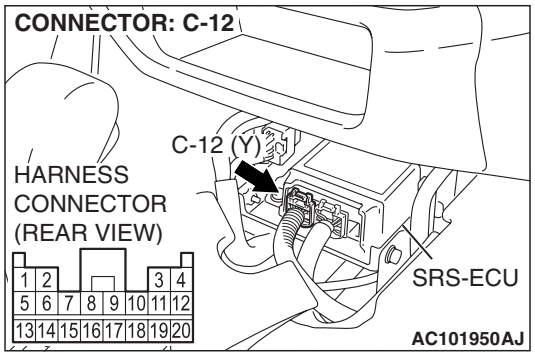
NO : Repair the harness wires between SRS-ECU connector C-12 and data link connector C-14. Then go to Step 8.

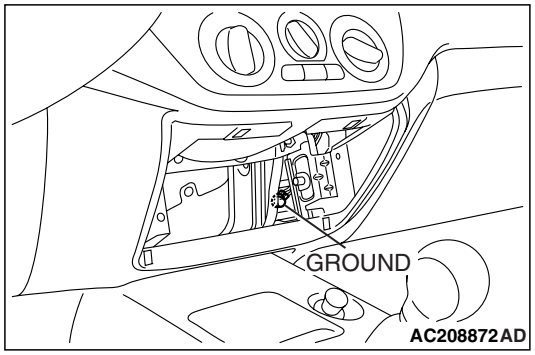
STEP 6. Check the harness wire between SRS-ECU connector C-12 (terminal No.7) and ground.

Q: Are the harness wire between SRS-ECU connector C-12 (terminal No.7) and ground in good condition?

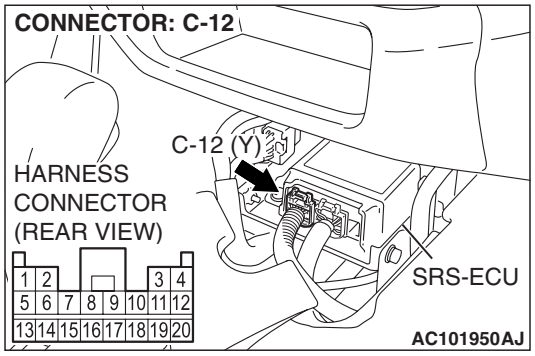
YES : Go to Step 8.

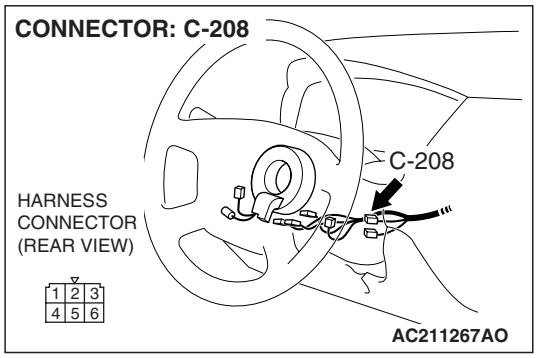
NO : Repair the harness wire between SRS-ECU connector C-12 and ground. Then go to Step 8.

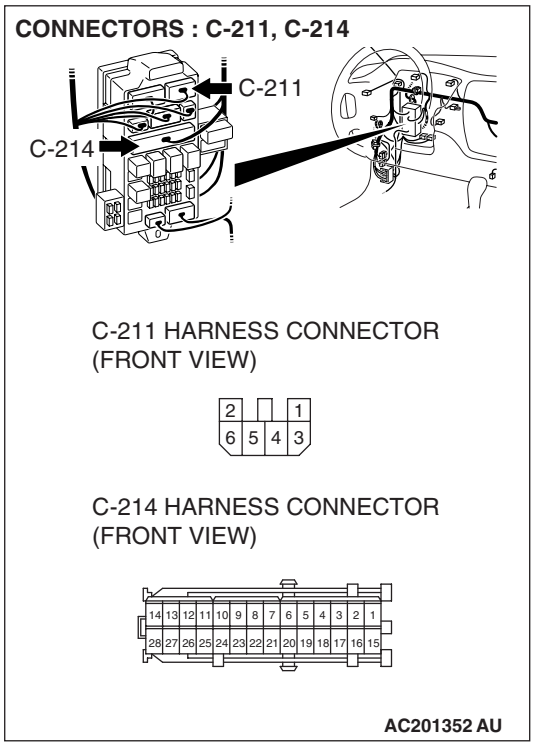




STEP 7. Check the harness wires between SRS-ECU connector C-12 (terminal No.13 and 16) and ignition switch connector C-208 (terminal No.2).







NOTE: After inspecting intermediate connector C-214 and C-211, inspect the wiring harness.
If the intermediate connector C-214 or C-211 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Are the harness wires between SRS-ECU connector C-12 (terminal No.13 and 16) and ignition switch connector C-208 (terminal No.2) in good condition?

YES : Go to Step 8.

NO : Repair the harness wires between SRS-ECU connector C-12 and ignition switch connector C-208. Then go to Step 8.

STEP 8. Retest the system.

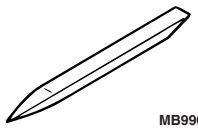
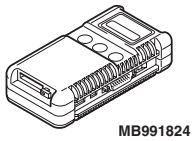
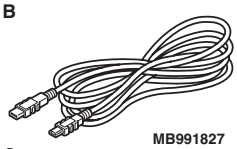
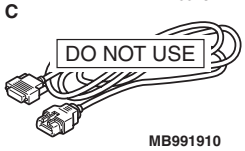
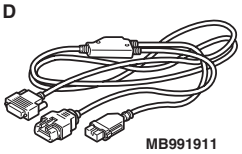
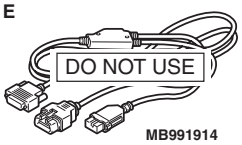
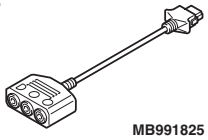
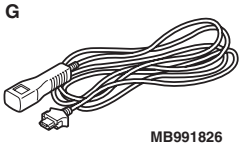
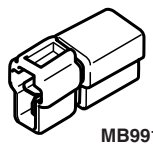
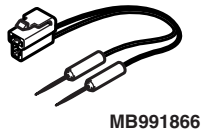
Q: Does the scan tool communicate normally with the SRS system?

YES : The procedure is complete (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunction P.00-13).

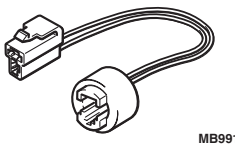
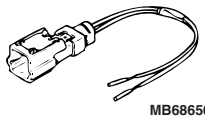
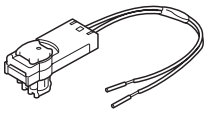
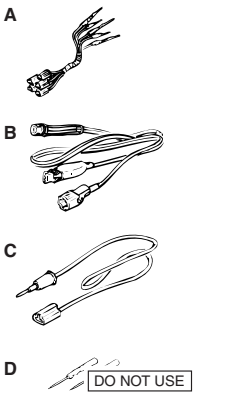
NO : There is no action to be taken.

SPECIAL TOOLS

M1524000700657

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 MB990784	MB990784 Ornament remover	General service tool	Removal of cover.
A  MB991824 B  MB991827 C  MB991910 D  MB991911 E  MB991914 F  MB991825 G  MB991826 MB991958	MB991958 A: MB991824 B: MB991827 C: MB991910 D: MB991911 E: MB991914 F: MB991825 G: MB991826 Scan tool (M.U.T.-III sub assembly) A: Vehicle communication interface (V.C.I.) B: M.U.T.-III USB cable C: M.U.T.-III main harness A (Vehicles with CAN communication system) D: M.U.T.-III main harness B (Vehicles without CAN communication system) E: M.U.T.-III main harness C (for Daimler Chrysler models only) F: M.U.T.-III measurement adapter G: M.U.T.-III trigger harness	MB991824-KIT *NOTE: G: MB991826 M.U.T.-III trigger harness is not necessary when pushing V.C.I. ENTER key.*	Checking diagnostic trouble code ⚠ **CAUTION** **M.U.T.-III main harness B (MB991911) should be used. M.U.T.-III main harness A and C should not be used for this vehicle.**
 MB991865	MB991865 Dummy resistor		SRS air bag circuit check
 MB991866	MB991866 Resistor harness		

TSB Revision

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 MB991884	MB991884 Resistor harness	Resistor harness (For Pre-tensioner)	Seat belt with pre-tensioner circuit check
 MB686560	MB686560 SRS air bag adapter harness	General service tool	• Deployment of passenger's (front) air bag module inside the vehicle • Deployment of passenger's (front) air bag module
 MB991885	MB991885 Adapter harness	Pre-tensioner adapter harness	• Deployment of seat belt with pre-tensioner inside the vehicle • Deployment of seat belt with pre-tensioner outside the vehicle
 MB991223AZ	MB991223 A: MB991219 B: MB991220 C: MB991221 D: MB991222 Harness set A: Test harness B: LED harness C: LED harness adapter D: Probe	General service tools	Checking the continuity and measuring the voltage at the SRS-ECU harness connector
MB992006	MB992006 Extra fine probe	General service tool	Continuity check and voltage measurement at harness wire or connector for loose, corroded or damaged terminals, or terminals pushed back in the connector.

TEST EQUIPMENT

M1524000800342

TOOL	NAME	USE
AC000019AB	Digital multi-meter Use a multi-meter for which the maximum test current is 2 mA or less at the minimum range of resistance measurement	Checking the SRS electrical circuitry with SRS check harness

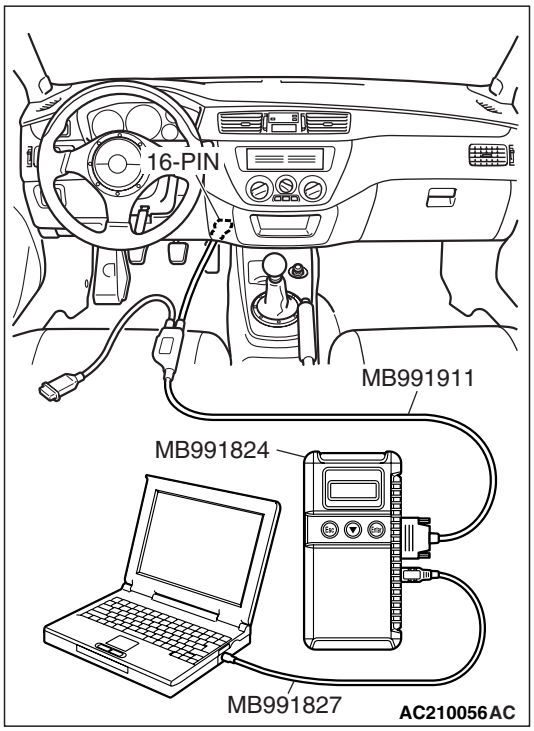
TSB Revision

POST-COLLISION DIAGNOSIS

M1524001100863

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

SRS-ECU MEMORY CHECK



Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

1. Connect scan tool MB991958 to the data link connector (16-pin).

   NOTE: If the battery power supply has been disconnected or disrupted by the collision, scan tool MB991958 cannot communicate with the SRS-ECU. Check the battery then check and, if necessary, repair the front wiring harness and the instrument panel wiring harness before proceeding.
2. Read (and write down) all displayed DTC (Refer to P.52B-21).
3. Read the data list (fault duration and how many times memories are erased) using scan tool MB991958.

DATA LIST

DTC No.	DATA LIST ITEM	APPLICABILITY
92	Number indicating how often the memory is cleared	Maximum time to be stored: 250 times
93	How long a problem has lasted (How long it takes from the occurrence of the problem till the first air bag squib igniting signal.)	Maximum time to be stored: 9,999 minutes (approximately 7 days)
94	How long a problem has lasted (how long it takes from the first air bag squib igniting signal till now.)	

4. Erase DTC's and after waiting 5 seconds or more read (and write down) all displayed DTC's (Refer to P.52B-21).

REPAIR PROCEDURE

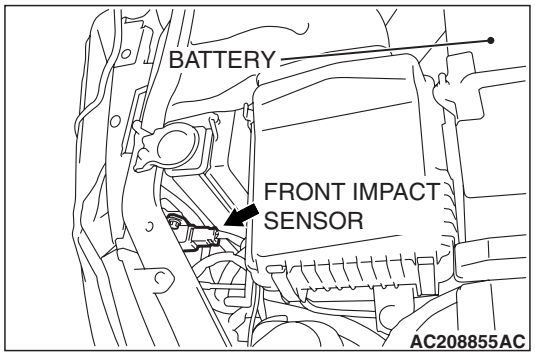
WHEN FRONT AIR BAGS DEPLOY IN A COLLISION.

1. Replace the following parts with new ones.
   - Front impact sensor (Refer to P.52B-163).
   - SRS-ECU (Refer to P.52B-166).
   - Air bag module (Refer to P.52B-168).
   - Seat belt with pre-tensioner (Refer to P.52B-176).
   - Instrument panel (Refer to P.52A-3).
2. Check the following parts and replace if there are any malfunctions.
   - Clock spring (Refer to P.52B-168).
   - Steering wheel, steering column and shaft assembly
     (1) Check the wiring harness (built into the steering wheel) and connectors for damage, and terminals for deformation.
     (2) Install the air bag module to check fit or alignment with the steering wheel.
     (3) Check the steering wheel for noise, binding or difficult operation and excessive free play.
     (4) Check the steering column shaft shock absorbing mechanism (Refer to GROUP 37, On-vehicle Service – Steering Column Shaft Assembly Shock Absorbing Mechanism Check P.37-23).
3. Check the wiring harnesses for binding, the connectors for damage, poor connections, and the terminals for deformation. (Refer to P.52B-16).

WHEN AIR BAGS DO NOT DEPLOY IN LOW-SPEED COLLISION.

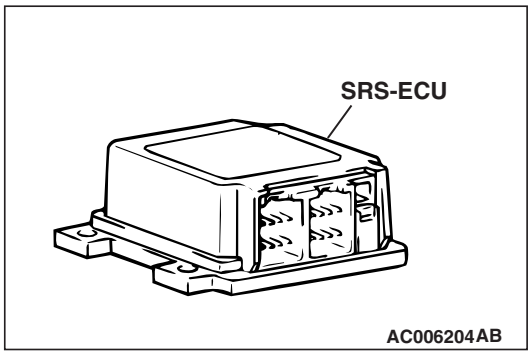
Check the SRS components. If the SRS components are showing any visible damage such as dents, cracks, or deformation, replace them with new ones. Concerning parts removed for inspection, replacement with new parts and cautionary points for working, refer to appropriate INDIVIDUAL COMPONENT SERVICE P.52B-162.

FRONT IMPACT SENSOR



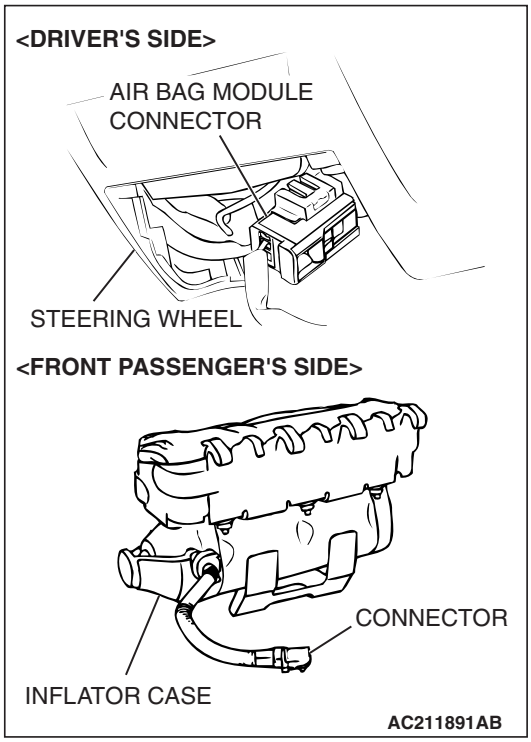
1. Check the radiator support panel for distortion and rust.
2. Check the front impact sensor for dents, cracks, deformation or rust.
3. Check the front impact sensor wiring harness for binding, check the connector for damage, and check the terminals for deformation.

SRS-ECU



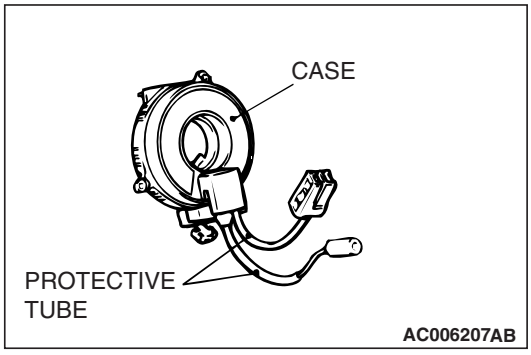
1. Check the SRS-ECU case and brackets for dents, cracks or deformation.
2. Check the connector for damage, and the terminals for deformation.
3. Check the fit of the SRS-ECU and its bracket.

AIR BAG MODULES



1. Check the pad cover for dents, cracks or deformation.
2. Check the connector for damage, terminals deformities, and the harness for binding.
3. Check the air bag inflator case for dents, cracks or deformities.
4. Install the air bag module (driver's side) to the steering wheel to check fit or alignment with the steering wheel.
5. Install the air bag module (front passenger's side) to the instrument panel and front deck crossmember to check fit or alignment.

CLOCK SPRING



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

STEERING WHEEL, STEERING COLUMN AND SHAFT ASSEMBLY

1. Check the wiring harness (built into the steering wheel) and the connectors for damage, and the terminals for deformation.
2. Install the driver's air bag module to check fit or alignment with the steering wheel.
3. Check the steering wheel for noise, binding or difficult operation and excessive free play.
4. Check the steering column shaft shock absorbing mechanism (Refer to GROUP 37, On-vehicle Service – Steering Column Shaft Assembly Shock Absorbing Mechanism Check P.37-23).

SEAT BELT WITH PRE-TENSIONER

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

HARNESS CONNECTOR (FLOOR WIRING HARNESS)

Check the harnesses for binding, the connectors for damage, poor connection, and the terminals for deformation (Refer to P.52B-16).

INDIVIDUAL COMPONENT SERVICE

M1524002900721

⚠ ***WARNING***

- ***If heat damage occurs during paint work, remove front impact sensor, the SRS-ECU, the air bag module, the clock spring, the seat belt with pre-tensioner. Recheck the SRS system operability after reinstalling them.***
  - ***Front impact sensor, SRS-ECU, air bag module, clock spring: 93° C (200° F) or more***
  - ***Seat belt with pre-tensioner: 90°C (194° F) or more***
- ***If the SRS components are removed for the purpose of check, sheet metal repair, painting, etc., they should be stored in a clean, dry place until they are reinstalled.***

If the SRS components are to be removed or replaced as a result of maintenance, diagnosis, etc., follow the appropriate procedure in this section (Front impact sensor: refer toP.52B-163, SRS-ECU: refer to P.52B-166, Air Bag Modules and Clock Spring: refer to P.52B-168, Seat Belt with Pre-tensioner: refer to P.52B-176).

FRONT IMPACT SENSORS

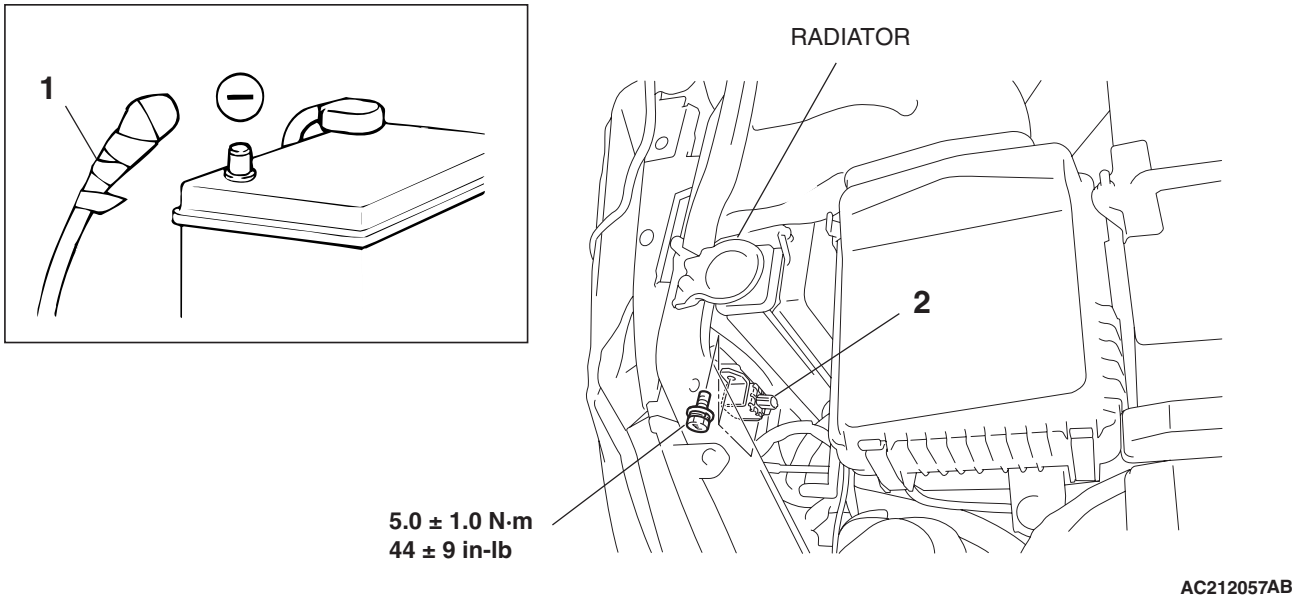
REMOVAL AND INSTALLATION

M1524001500526

⚠ WARNING

- ***Never attempt disassemble or repair the front impact sensor. If faulty, replace it.***
- ***Handle the front impact sensors very carefully, taking care not to drop them or otherwise a new one is required.***
- ***After deployment of an air bag, replace the sensors with new ones.***

Pre-removal Operation
- Turn the ignition switch to the "LOCK" (OFF) position.



REMOVAL STEPS

<<**A**>> 1. NEGATIVE (–) BATTERY CABLE CONNECTION
2. FRONT IMPACT SENSOR

INSTALLATION STEPS

>>**A**<< • PRE-INSTALLATION INSPECTION
>>**B**<< 2. FRONT IMPACT SENSOR
1. NEGATIVE (–) BATTERY CABLE CONNECTION
>>**C**<< • POST-INSTALLATION INSPECTION

NOTE: The illustration above shows the front impact sensor (LH). The position of the front impact sensor (RH) is symmetrical to this.

TSB Revision

REMOVAL SERVICE POINT

<<A>>NEGATIVE (–) BATTERY CABLE DISCONNECTION

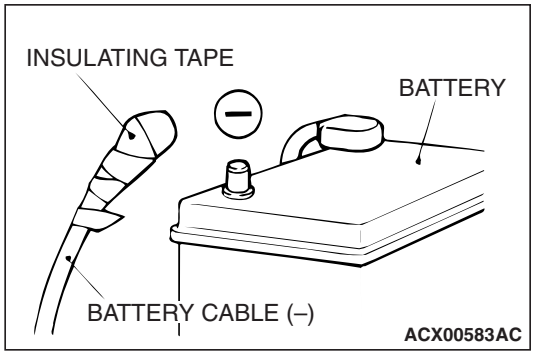
⚠ DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work (Refer to P.52B-16).

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

Disconnect the negative (–) battery cable from the battery and tape the terminal to prevent accidental connection and air bag(s) deployment.



INSTALLATION SERVICE POINTS

>>A<<PRE-INSTALLATION INSPECTION

when the new front impact sensor refer to the previous item "INSPECTION."

>>B<<FRONT IMPACT SENSOR INSTALLATION

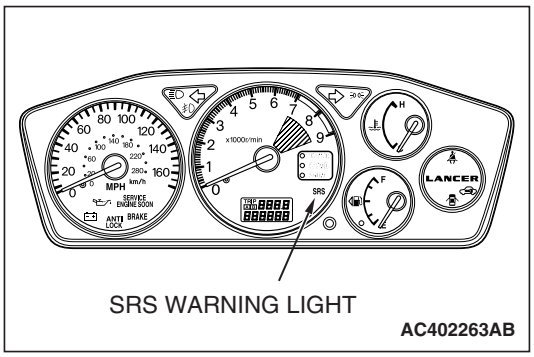
⚠ WARNING

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

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

>>C<<POST-INSTALLATION INSPECTION

1. Connect the negative (–) battery cable.
2. Turn the ignition switch to "ON" position.



3. Does the SRS warning light illuminate for approximately seven seconds, and then goes out?
4. If yes, the SRS system is functioning properly.
   If no, consult page P.52B-20.

INSPECTION

M1524001600460

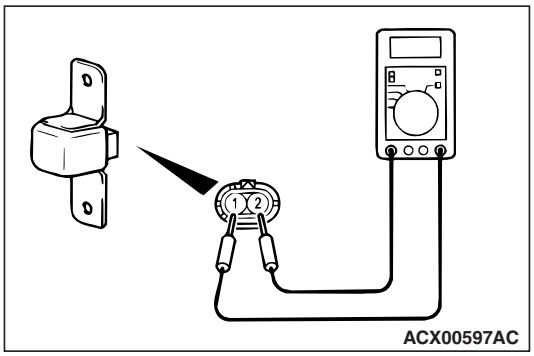
⚠ ***WARNING***

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

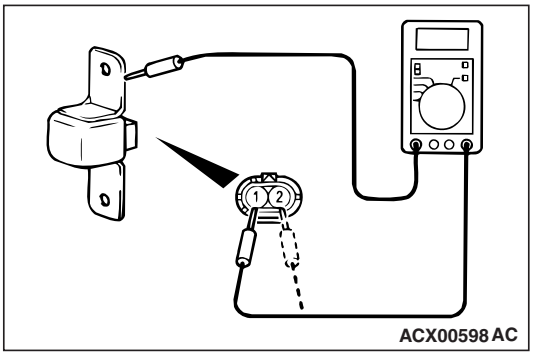
1. Check the front impact sensor for dents, cracks, deformation or rust.

⚠ ***WARNING***

If the resistance value shows the short-circuit or the open-circuit, be sure to replace the front impact sensor with a new one.



2. Check the short-circuit or the open-circuit between the front impact sensor terminals.
   When short-circuit: 2 ohm and less
   When open-circuit: 2 MΩ and over



3. Check for continuity between the terminal and the bracket.
   When there is continuity, it shows insufficient insulation of the sensor. Replace the sensor with a new one.
4. Check for deformation and rust on the radiator support panel.

SRS CONTROL UNIT (SRS-ECU)

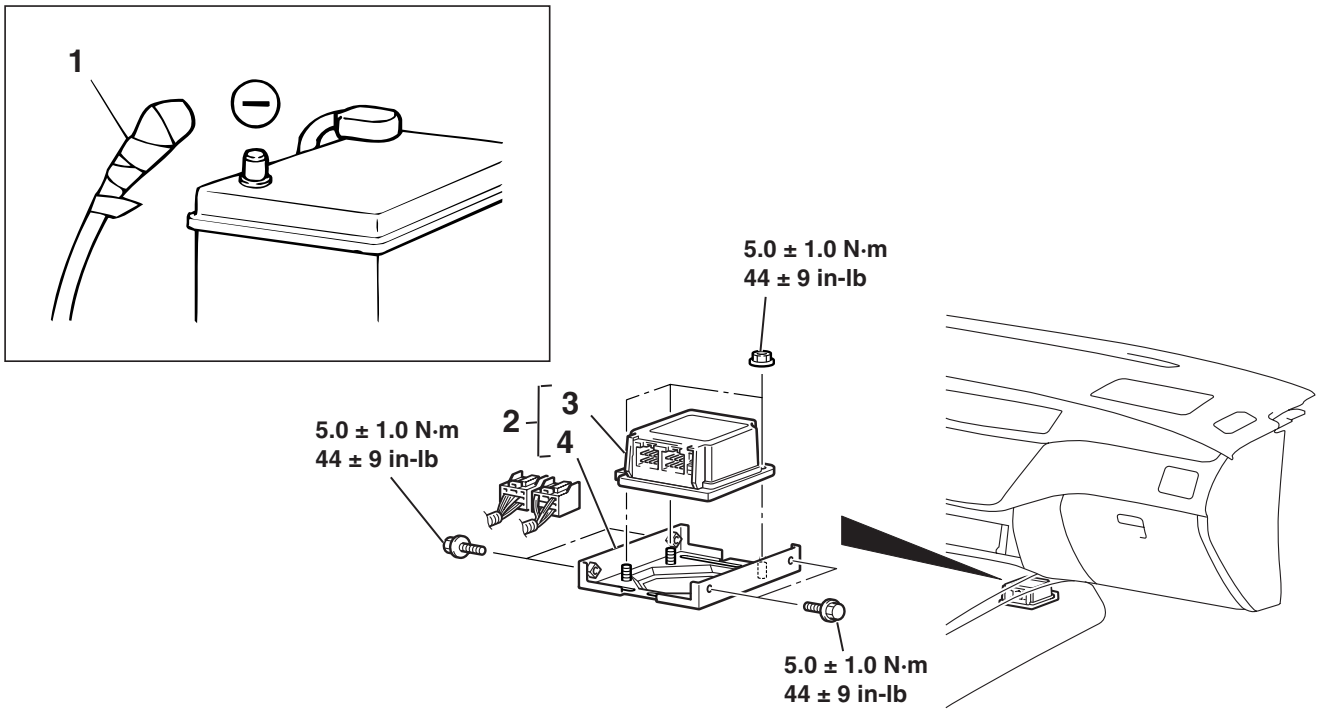
REMOVAL AND INSTALLATION

M1524002100640

⚠ WARNING

- ***Never attempt to disassemble or repair the SRS-ECU. If faulty, replace it.***
- ***Do not drop or subject the SRS-ECU to impact or vibration. If denting, cracking, deformation, or rust are discovered in the SRS-ECU, replace it with a new SRS-ECU. Discard the old one.***
- ***After deployment of an air bag, replace the SRS-ECU with a new one.***
- ***Never use an ohmmeter on or near the SRS-ECU, and use only the special test equipment described on P.52B-158.***

Pre-removal Operation
- Turn the ignition switch to the "LOCK" (OFF) position.



AC100671AD

REMOVAL STEPS

<<A>> 1. NEGATIVE (–) BATTERY CABLE CONNECTION
2. SRS-ECU BRACKET ASSEMBLY
3. SRS-ECU
4. SRS-ECU BRACKET

INSTALLATION STEPS

4. SRS-ECU BRACKET
>>A<< 3. SRS-ECU
2. SRS-ECU BRACKET ASSEMBLY
1. NEGATIVE (–) BATTERY CABLE CONNECTION
>>B<< • POST-INSTALLATION INSPECTION

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REMOVAL SERVICE POINT

<<A>> NEGATIVE (–) BATTERY CABLE DISCONNECTION

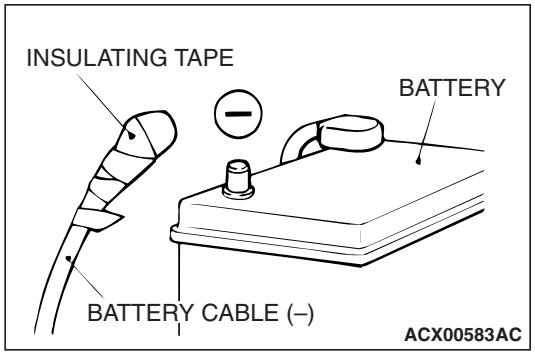
⚠ ***DANGER***

Wait at least 60 seconds after disconnecting the battery cable before doing any further work (Refer to P.52B-16).

⚠ ***WARNING***

Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

Disconnect the negative (–) battery cable from the battery and tape the terminal to prevent accidental connection and deployment.



INSTALLATION SERVICE POINTS

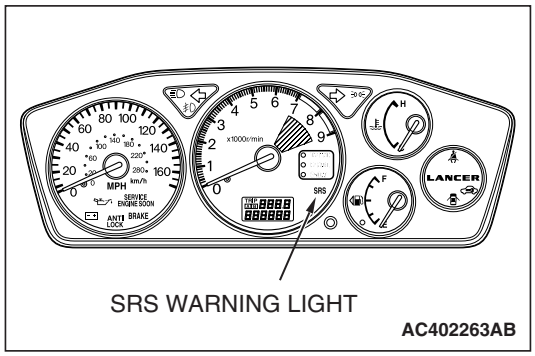
>>A<< SRS-ECU INSTALLATION

⚠ ***WARNING***

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.

>>B<< POST-INSTALLATION INSPECTION

1. Connect the negative (–) battery cable.
2. Turn the ignition switch to the "ON" position.
3. Does the SRS warning light illuminate for approximately seven seconds, and then goes out?
4. If yes, the SRS system is functioning properly. If no, refer to P.52B-20.



INSPECTION

M1524002200506

⚠ ***WARNING***

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

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

NOTE: Refer to P.52B-23 for inspection of SRS-ECU for other than physical damage.

AIR BAG MODULE(S) AND CLOCK SPRING

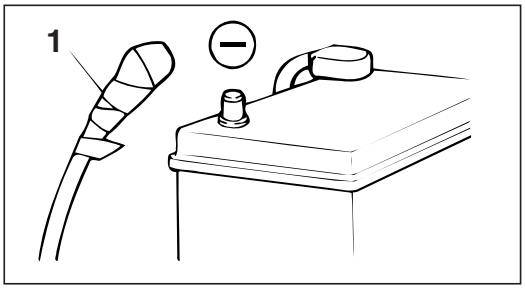
REMOVAL AND INSTALLATION

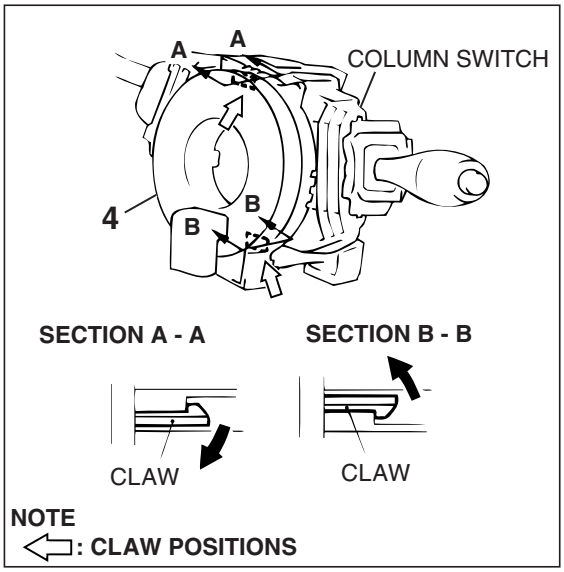
M1524002400823

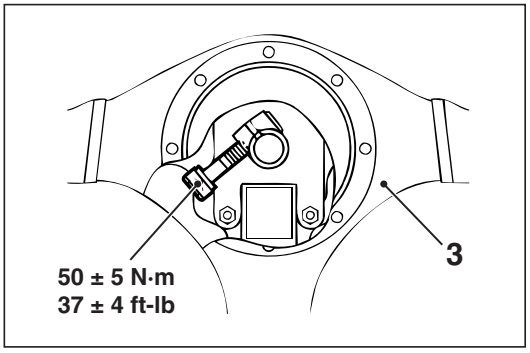
⚠ ***WARNING***

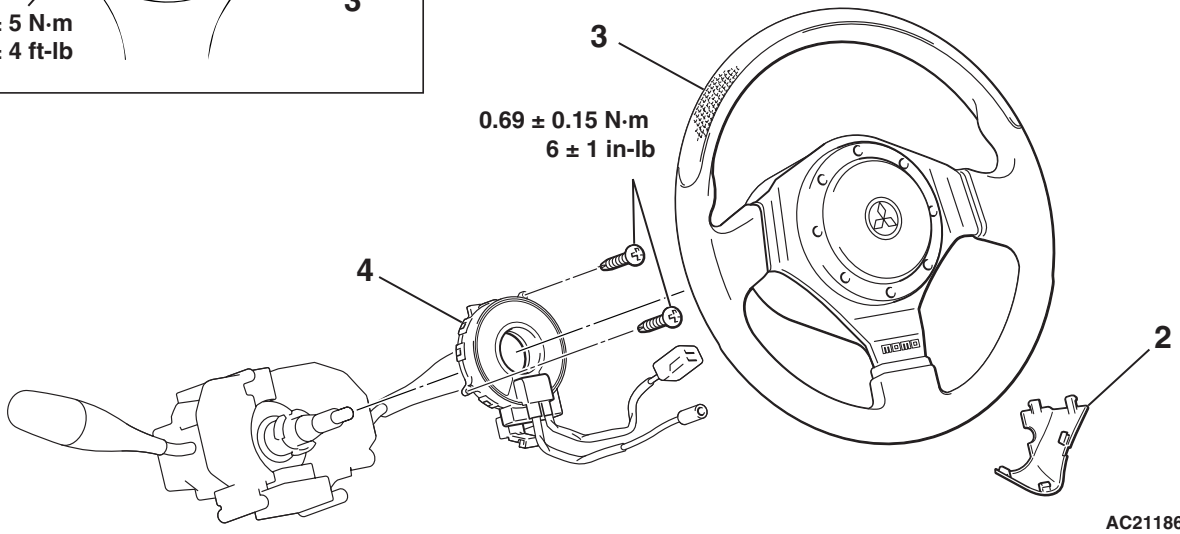
- ***Never attempt to disassemble or repair the air bag modules or clock spring. If faulty, replace it.***
- ***Do not drop the air bag modules or clock spring or allow contact with water, grease or oil. Replace it if a dent, crack, deformation or rust is detected.***
- ***The air bag modules should be stored on a flat surface facing upward. Do not place anything on top of it.***
- ***Do not expose the air bag modules to temperatures over 93° C (200° F).***
- ***After deployment of an air bag, check the clock spring.***
- ***Wear gloves and safety glasses when handling air bags that have already deployed.***
- ***An undeployed air bag module should only be disposed of in accordance with the procedures in this manual (Refer to P.52B-180).***

<DRIVER'S AIR BAG MODULE AND CLOCK SPRING>









AC211864AB

DRIVER'S AIR BAG MODULE REMOVAL STEPS

<<A>> 1. NEGATIVE (–) BATTERY CABLE CONNECTION
<<B>> 2. COVER
<<C>> 3. STEERING WHEEL-DRIVER'S AIR BAG MODULE ASSEMBLY

CLOCK SPRING REMOVAL STEPS

<<A>> 1. NEGATIVE (–) BATTERY CABLE CONNECTION
<<B>> 2. COVER
<<C>> 3. STEERING WHEEL-DRIVER'S AIR BAG MODULE ASSEMBLY
- COLUMN COVER LOWER (REFER TO GROUP 37, STEERING SHAFT P.37-26.)

<<D>> 4. CLOCK SPRING

DRIVER'S AIR BAG MODULE INSTALLATION STEPS

>>A<< • PRE-INSTALLATION INSPECTION
>>C<< 3. STEERING WHEEL-DRIVER'S AIR BAG MODULE ASSEMBLY
2. COVER
1. NEGATIVE (–) BATTERY CABLE CONNECTION
>>D<< • POST-INSTALLATION INSPECTION

CLOCK SPRING INSTALLATION STEPS

>>A<< • PRE-INSTALLATION INSPECTION
>>B<< 4. CLOCK SPRING
- COLUMN COVER LOWER (REFER TO GROUP 37, STEERING SHAFT P.37-26.)

>>C<< 3. STEERING WHEEL-DRIVER'S AIR BAG MODULE ASSEMBLY
2. COVER

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CLOCK SPRING INSTALLATION STEPS (Continued)

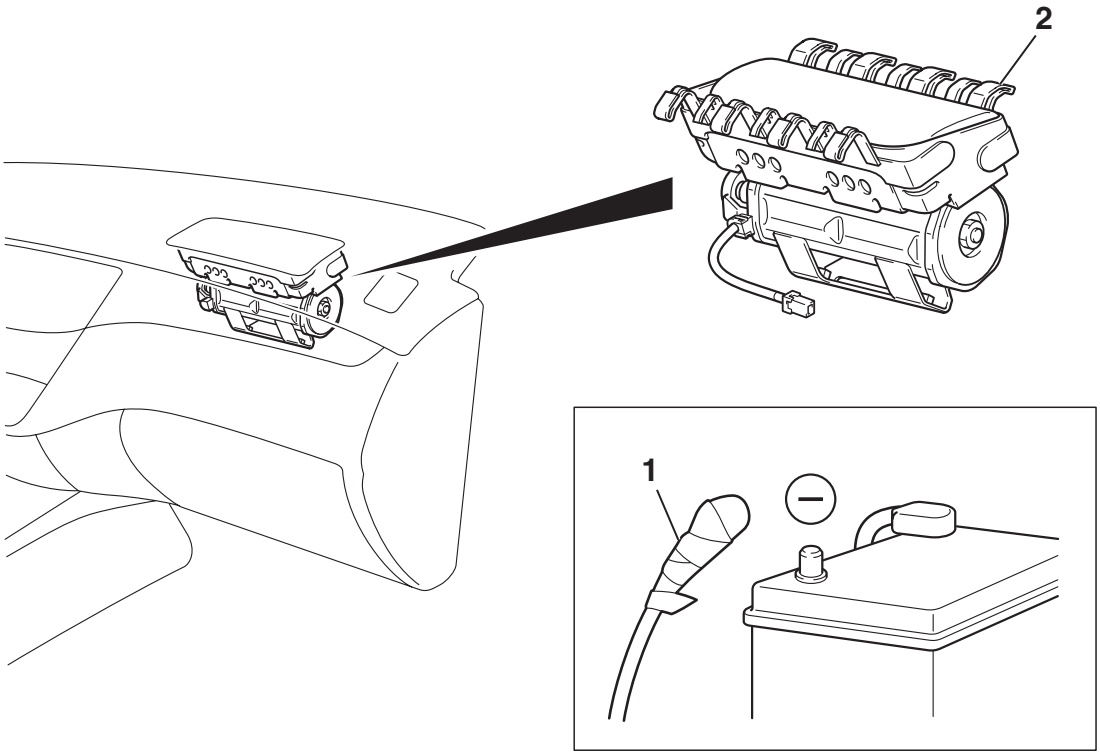
1. NEGATIVE (–) BATTERY CABLE CONNECTION

>>D<< • POST-INSTALLATION INSPECTION

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B
- MB992006: Extra Fine Probe
- MB990784: Ornament remover

<PASSENGER'S (FRONT) AIR BAG MODULE>



AC100438AB

PASSENGER'S (FRONT) AIR BAG MODULE REMOVAL STEPS

<<A>> 1. NEGATIVE (–) BATTERY CABLE CONNECTION

• INSTRUMENT PANEL (REFER TO GROUP 52A, INSTRUMENT PANEL P.52A-3.)

<<E>> 2. PASSENGER'S (FRONT) AIR BAG MODULE

PASSENGER'S (FRONT) AIR BAG MODULE INSTALLATION STEPS

>>A<< • PRE-INSTALLATION INSPECTION

2. PASSENGER'S (FRONT) AIR BAG MODULE

PASSENGER'S (FRONT) AIR BAG MODULE INSTALLATION STEPS

• INSTRUMENT PANEL (REFER TO GROUP 52A, INSTRUMENT PANEL P.52A-3.)

1. NEGATIVE (–) BATTERY CABLE CONNECTION

>>D<< • POST-INSTALLATION INSPECTION

Required Special Tools:

- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

REMOVAL SERVICE POINT

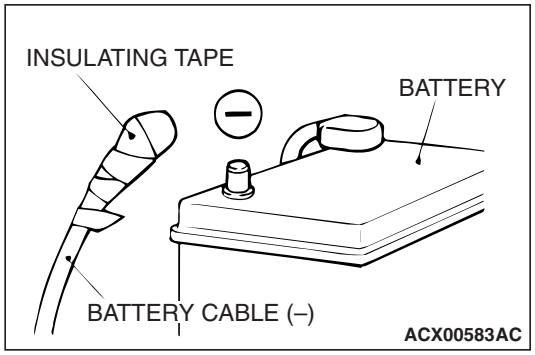
<<A>> NEGATIVE (–) BATTERY CABLE DISCONNECTION

⚠ ***DANGER***

Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-16.)

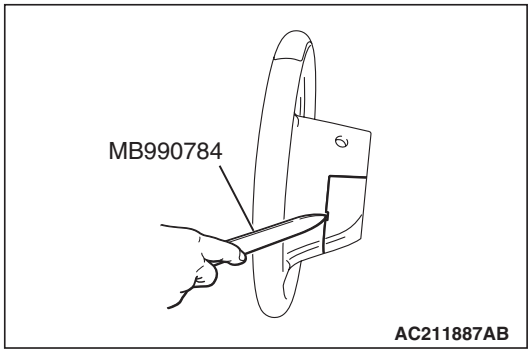
⚠ ***WARNING***

Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.



Disconnect the negative (–) battery cable from the battery and tape the terminal to prevent accidental connection and air bag(s) deployment.

<<B>>COVER REMOVAL

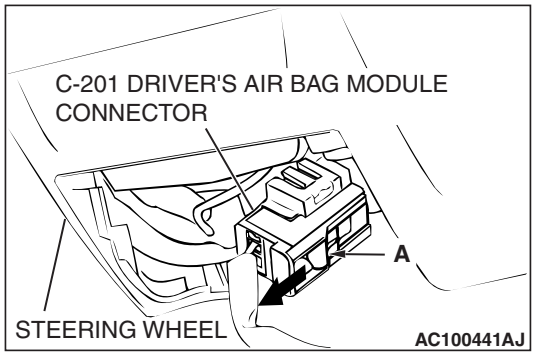


Insert the special tool MB990784 as shown in the illustration to remove the cover.

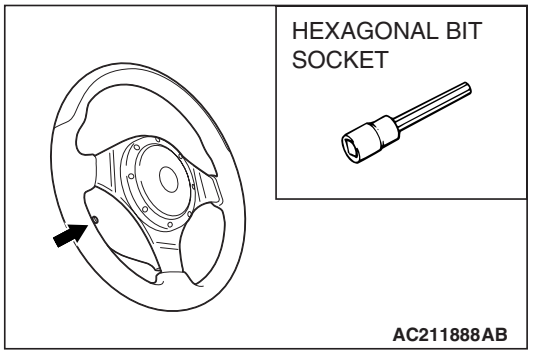
<<C>> STEERING WHEEL-DRIVER'S AIR BAG MODULE ASSEMBLY REMOVAL

⚠ ***WARNING***

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



1. By sliding the A section (in the figure) of the driver's air bag module 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 air bag module assembly.

   NOTE: Use a hexagonal bit socket or a hexagonal wrench having an effective length of 75 mm (3.0 inches) or more in the hexagonal section and diameter of 8 mm (0.3 inch) or more.

<<D>> CLOCK SPRING REMOVAL

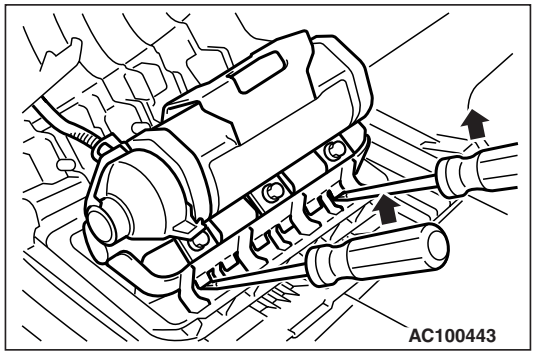
⚠ ***WARNING***

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

<<E>> PASSENGER'S (FRONT) AIR BAG MODULE REMOVAL

⚠ ***WARNING***

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



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 (front) air bag module.

INSTALLATION SERVICE POINTS

>>A<< PRE-INSTALLATION INSPECTION

⚠ WARNING

Dispose of air bag modules only according to the specified procedure (Refer to P.52B-180).

1. When installing the new air bag modules and clock spring, refer to “INSPECTION” (P.52B-175).
2. Connect the negative (–) battery cable.

⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition, switch to the “LOCK” (OFF) position before connecting or disconnecting scan tool MB991958.

3. Connect scan tool MB991958 to the data link connector.
4. Turn the ignition switch to the “ON” position.
5. Check DTCs using scan tool MB991958 to ensure entire SRS operates properly.
   Confirm that no DTCs other than 24 and 21 are set.

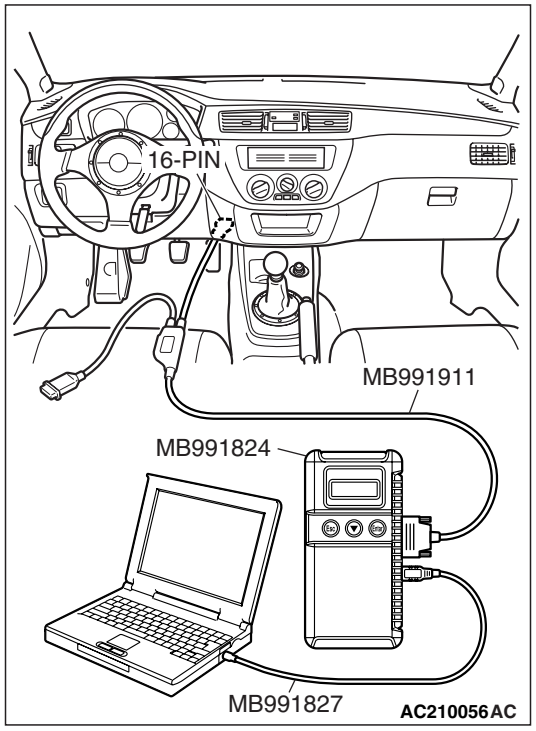
⚠ DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work (Refer to P.52B-16).

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

6. Turn the ignition switch to the "LOCK" (OFF) position. Disconnect the negative (–) battery cable and tape the terminal to prevent accidental connection and air bags deployment.

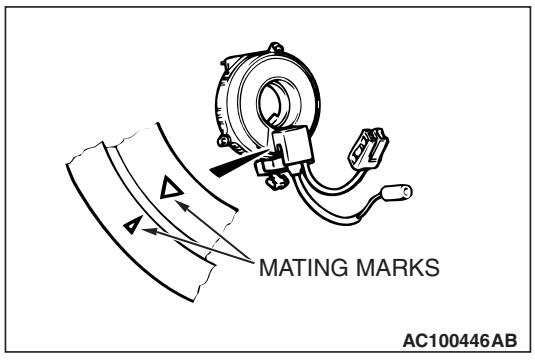


>>B<< CLOCK SPRING INSTALLATION

⚠ WARNING

Ensure that the clock spring’s mating marks are properly aligned. If not, the steering wheel may not rotate completely during a turn, or the flat cable in the clock spring could be damaged, This would prevent normal SRS operation and possibly cause serious injury to the driver.

1. Align the mating marks of the clock spring.
   <Mating Mark Alignment>
   Turn the clock spring clockwise fully. Then turn it back approximately 3-3/4 turns counterclockwise to align the mating marks.
2. Turn the front wheels to the straight-ahead position. Then install the clock spring to the column switch.



>>C<< STEERING WHEEL-DRIVER'S AIR BAG MODULE ASSEMBLY INSTALLATION

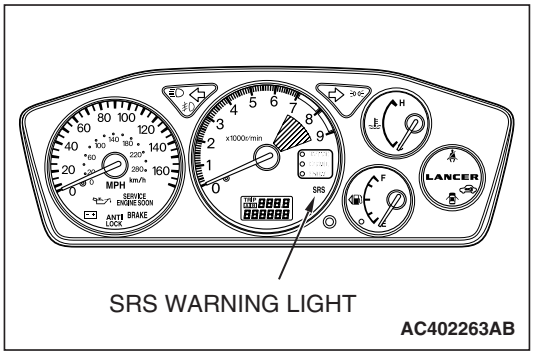
⚠ CAUTION

When installing the steering wheel-driver's air bag module ensure that the harness of the clock spring does not become caught or tangled.

1. Before installing the steering wheel-driver's air bag module turn the vehicle's front wheels to the straight-ahead position and align the mating marks of the clock spring.
2. After securing the steering wheel, turn the steering wheel all the way in both directions to confirm that the steering wheel rotation is normal.

>>D<< POST-INSTALLATION INSPECTION

1. Connect the negative (–) battery cable.
2. Turn the ignition switch to "ON" position.
3. Does the "SRS" warning light illuminate for approximately seven seconds, and goes out?
4. If yes, the SRS system is functioning properly. If no, refer to P.52B-20.



INSPECTION

M1524002500585

AIR BAG MODULE CHECK

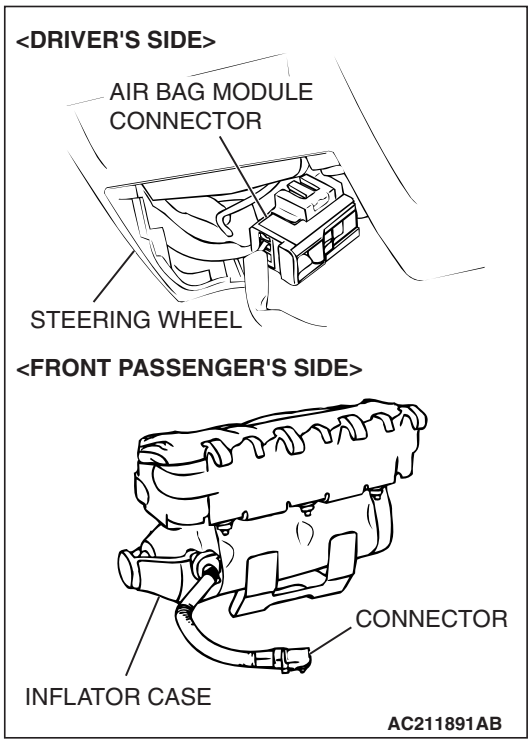
⚠ ***DANGER***

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

⚠ ***WARNING***

If any component damage is found during the following inspection, replace the air bag module with a new one. Dispose of the old one according to the specified procedure (Refer to P.52B-180).

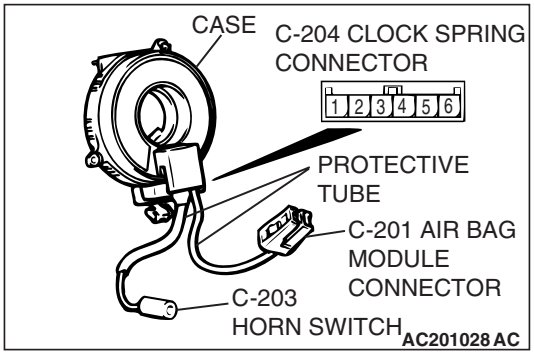
1. Check the pad cover for dents, cracks or deformation.
2. Check the connectors for damage, the terminals for deformation, and the harness for binds.
3. Check the air bag inflator case for dents, cracks or deformation.
4. Install the driver's air bag module to the steering wheel and check fit and alignment with the wheel.
5. Install the passenger's (front) air bag module to the instrument panel and front deck crossmember and check fit and alignment.

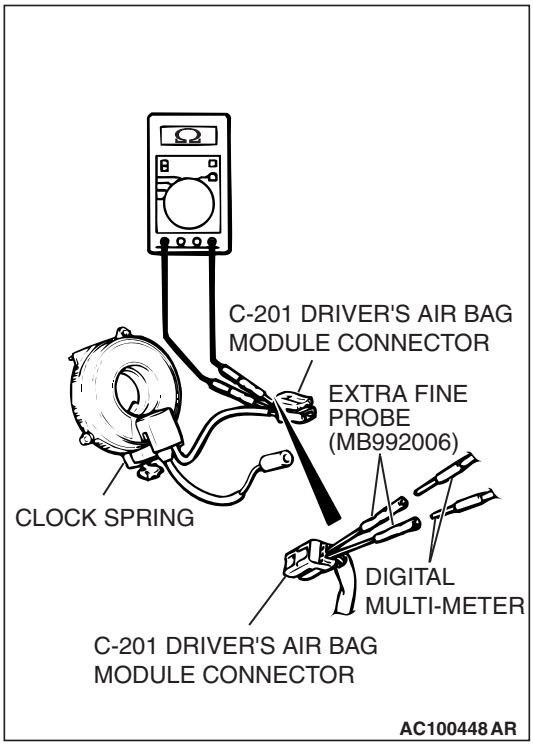


CLOCK SPRING CHECK

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

1. Check the connectors and protective tube for damage, and the terminals for deformation.
2. Visually check the case for damage.
3. Check to see that there is a charge (continuity) between the C-204 clock spring connector terminal and C-203 horn switch.





⚠ CAUTION
Do not directly insert a probe, etc. into the terminal from the front of the connector.

4. Insert the special tool (MB992006) from behind the driver's air bag module connector of the C-201 driver's seat.
5. As shown in the Figure, connect the circuit tester to the special tool (MB992006) and check to see that there is a charge between the terminals.

SEAT BELTS WITH PRE-TENSIONER

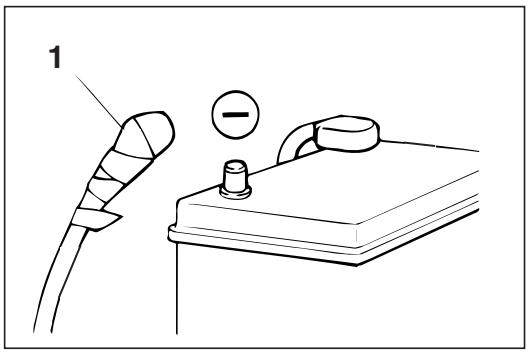
REMOVAL AND INSTALLATION

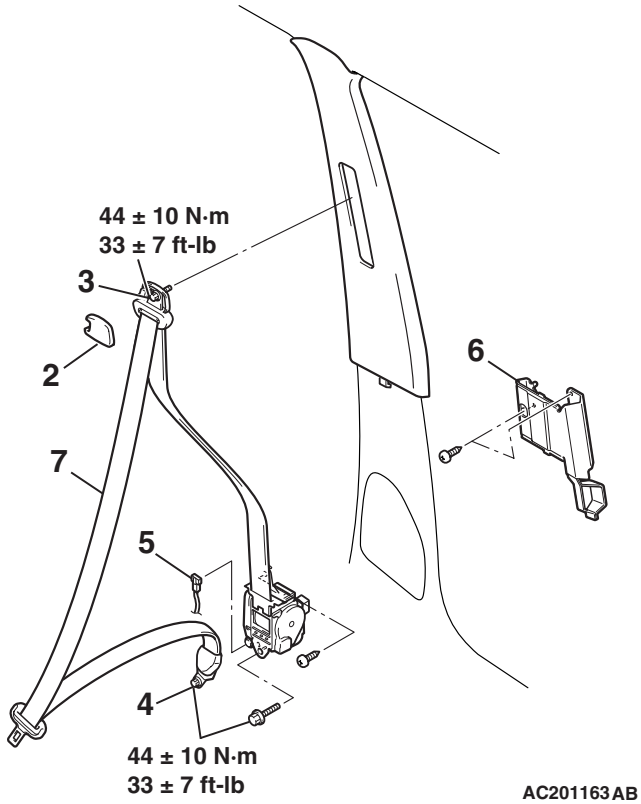
M1524004100516

⚠ WARNING

- ***Never attempt to disassemble or repair the seat belt with pre-tensioner. If faulty, replace it.***
- ***Be extremely careful when handling the seat with pre-tensioner. Do not subject it to shocks, drop it, bring it close to strong magnets or allow contact with water, grease or oil. Always replace it with a new part if any dents, cracks or deformation is found.***
- ***Do not place anything on top of the seat belt pre-tensioner.***
- ***Do not expose the seat belt with pre-tensioner to temperatures over 90°C (194°F).***
- ***After operating the seat belt pre-tensioner, replace the seat belt with pre-tensioner with a new part.***
- ***Wear gloves and safety glasses when handling seat belt pre-tensioners that have already deployed.***
- ***If disposing of a seat belt with pre-tensioner which has not yet been used, its seat belt pre-tensioner should be operated first before disposal (Refer to P.52B-180).***

Pre-removal Operation
- Turn the ignition switch to the "LOCK" (OFF) position.





REMOVAL STEPS

<<A>> 1. NEGATIVE (–) BATTERY CABLE CONNECTION
2. SASH GUIDE COVER
3. SEAT BELT SHOULDER ANCHOR BOLT
4. SEAT BELT LOWER ANCHOR BOLT
- CENTER PILLAR TRIM, LOWER (REFER TO GROUP 52A, TRIMS P.52A-11.)

<<B>> 5. SEAT BELT PRE-TENSIONER CONNECTOR CONNECTION
6. BRACKET
7. SEAT BELT WITH PRE-TENSIONER

INSTALLATION STEPS

>>A<< • PRE-INSTALLATION INSPECTION
7. SEAT BELT WITH PRE-TENSIONER
6. BRACKET

INSTALLATION STEPS (Continued)

>>B<< 5. SEAT BELT PRE-TENSIONER CONNECTOR CONNECTION
- CENTER PILLAR TRIM, LOWER (REFER TO GROUP 52A, TRIMS P.52A-11.)

4. SEAT BELT LOWER ANCHOR BOLT
3. SEAT BELT SHOULDER ANCHOR BOLT
2. SASH GUIDE COVER
1. NEGATIVE (–) BATTERY CABLE CONNECTION

>>C<< • POST-INSTALLATION INSPECTION

Required Special Tools:
- MB991958: Scan Tool (M.U.T.-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: M.U.T.-III USB Cable
  - MB991911: M.U.T.-III Main Harness B

TSB Revision

REMOVAL SERVICE POINTS

<<A>> NEGATIVE (–) BATTERY CABLE DISCONNECTION

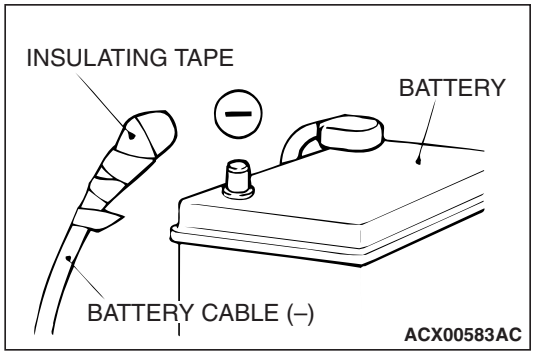
⚠ ***DANGER***

Wait at least 60 seconds after disconnecting the battery cable before doing any further work (Refer to P.52B-16).

⚠ ***WARNING***

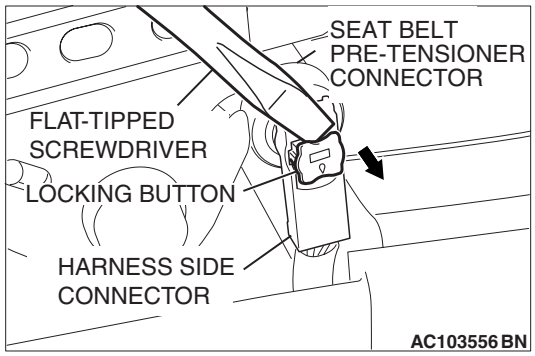
Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

Disconnect the negative (–) battery cable from the battery and tape the terminal to prevent accidental connection and seat belt pre-tensioner operation.



<<B>>SEAT BELT PRE-TENSIONER CONNECTOR DISCONNECTION

1. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages.
2. Disconnect the pretensioner connector.



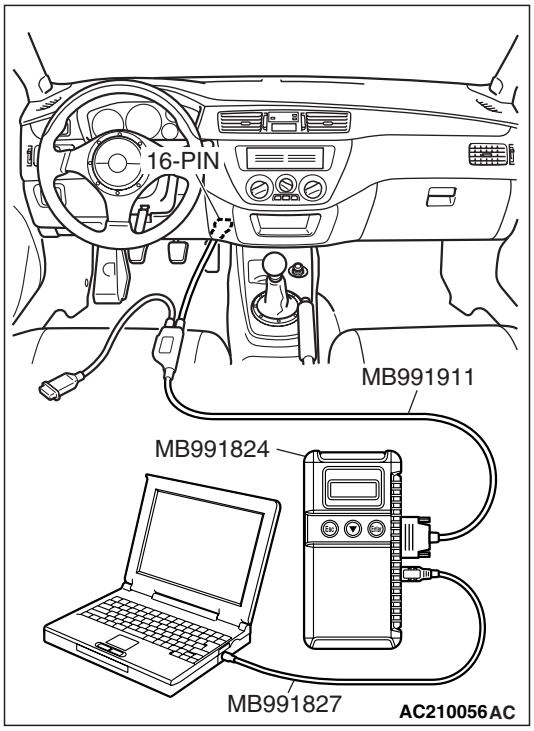
INSTALLATION SERVICE POINTS

>>A<< PRE-INSTALLATION INSPECTION

⚠ ***WARNING***

Dispose of seat belt pre-tensioner only according to the specified procedure (Refer to P.52B-180).

1. When installing the new seat belt pre-tensioner, refer to “INSPECTION” (Refer to P.52B-180).
2. Connect the negative (–) battery cable.



⚠ CAUTION

To prevent damage to scan tool MB991958, always turn the ignition, switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

3. Connect scan tool MB991958 to the data link connector.
4. Turn the ignition switch to the "ON" position.
5. Check DTCs using scan tool MB991958 to ensure entire SRS operates properly.
   Confirm that no DTCs other than 26 and 28 are set.

⚠ DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work (Refer to P.52B-16).

⚠ WARNING

Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

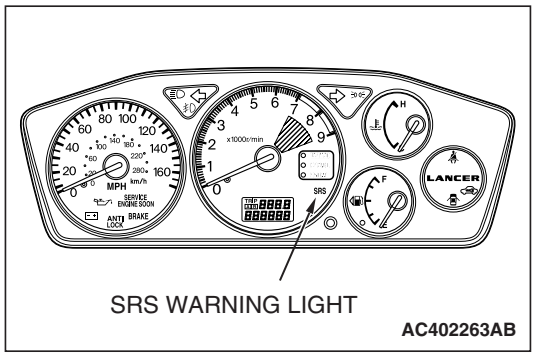
6. Turn the ignition switch to the "LOCK" (OFF) position. Disconnect the negative (–) battery cable and tape the terminal to prevent accidental connection and seat belt pre-tensioner operation.

>>B<< PRE-TENSIONER CONNECTOR CONNECTION

Connect the pretensioner connector, then securely lock the locking button of the harness-side connector.

>>C<< POST-INSTALLATION INSPECTION

1. Connect the negative (–) battery cable.
2. Turn the ignition switch to the "ON" position.
3. Does the SRS warning light illuminate for approximately seven seconds, and goes out?
4. If yes, the SRS system is functioning properly. If no, refer to P.52B-20.



INSPECTION

M1524004200375

SEAT BELT WITH PRE-TENSIONER CHECK

⚠ ***WARNING***

- ***If any component damage is found during the following inspection, replace the seat belt with pre-tensioner with a new one. Dispose of the old one according to the specified procedure (Refer to P.52B-180).***
- ***Never attempt to measure the circuit resistance of the seat belt pre-tensioner even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental seat belt pre-tensioner operation will result in serious personal injury.***

1. Check seat belt pre-tensioner for dents, cracks or deformation.
2. Check the connectors for damage, the terminals for deformation, and the harness for binding.

AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES

M1524001200752

Before disposing of an air bag or a vehicle equipped with an air bag, follow the procedures below to deploy the air bag.

UNDEPLOYED AIR BAG MODULE DISPOSAL

Required Special Tools:

- MB686560: SRS Air Bag Adapter Harness
- MB991885: Adapter Harness (For pre-tensioner)

⚠ ***WARNING***

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

DEPLOYMENT INSIDE THE VEHICLE (WHEN DISPOSING OF A VEHICLE) <DRIVER'S AIR BAG MODULE>

1. Move the vehicle to an isolated spot.

⚠ ***DANGER***

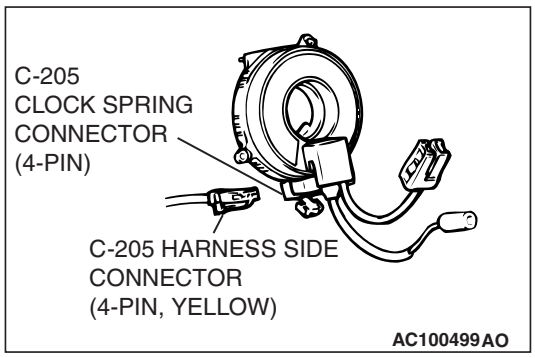
Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-16).

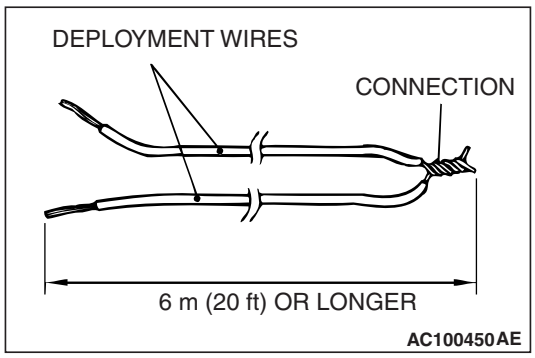
⚠ ***WARNING***

Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

2. Disconnect the negative (–) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.
3. Remove the steering column cover lower (Refer to GROUP 52A, Instrument Panel P.52A-3).
4. Remove the connection between the C-205 clock spring connector (four-pin) and the harness side connector (four-pin, yellow).

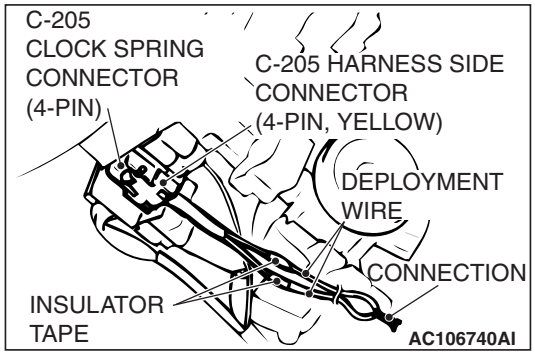
   NOTE: If the clock spring connector is disconnected from the instrument panel wiring harness, both electrodes of the clock spring connector will be automatically shorted to prevent unintended deployment of the air bag due to static electricity, etc.





5. Obtain two suitable wires, which are 6 meters (20 feet) or longer, as deployment wires. Then connect the wires at one end to short.

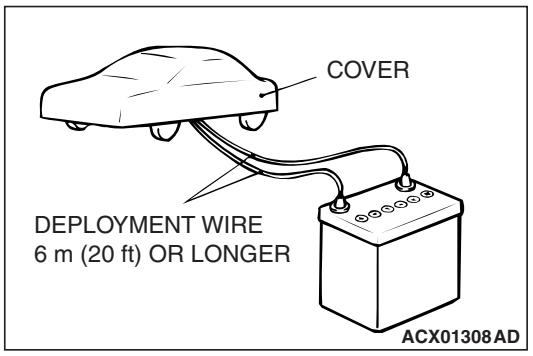
   NOTE: This prevents the air bag from unintentional deployment caused by static electricity, etc.



6. Cut with a nipper, etc. the instrument panel wiring harness shown in the Figure of the instructions, while the C-205 clock spring connector is disconnected.

   NOTE: The disconnection location should be sufficiently away from the C-205 harness side connector with consideration to the expansion harness connection location upon disconnections.

7. Individually connect a harness on the two harnesses disconnected, cover the connection areas with insulator tape and then pull out the expansion harness outside the vehicle.
8. Connect the C-205 harness side connector connected with an expansion harness to the C-205 clock spring connector.



⚠ WARNING

If the glass is scratched, air bag deployment could cause it to crack and fly out of the vehicle, so always put a cover over the vehicle.

9. To suppress the operation sound as much as possible completely close all door windows, close the doors and put the cover on the vehicle.

⚠ WARNING

- ***Before deploying the air bag in this manner, first check to be sure that there is no one in or near the vehicle. Wear safety glasses.***
- ***The inflator will be quite hot immediately following the deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from the air bag deployment. See Deployed Air Bag Module Disposal (Refer to P.52B-192) for post-deployment handling instructions.***
- ***If the air bag module fails to deploy, do not go near the module.***

10. At a location as far away from the vehicle as possible, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.
11. After deployment, dispose of the air bag module according to the Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-192).

DEPLOYMENT INSIDE THE VEHICLE (WHEN DISPOSING OF A VEHICLE) <PASSENGER'S (FRONT) AIR BAG MODULE>

1. Move the vehicle to an isolated spot.

⚠ DANGER

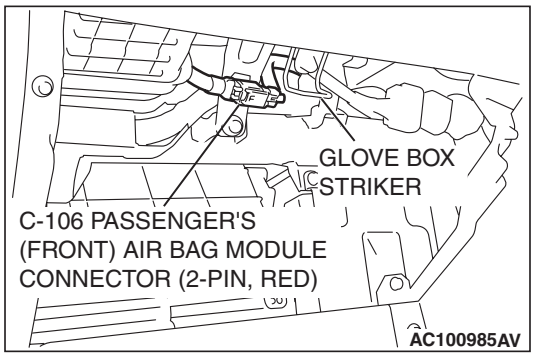
Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-16).

⚠ WARNING

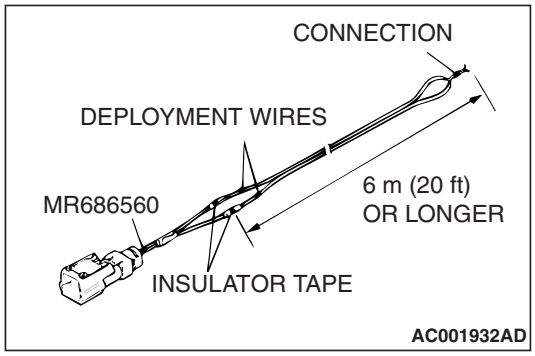
Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

2. Disconnect the negative (–) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.
3. Remove the glove box (Refer to GROUP 52A, Instrument Panel P.52A-3).
4. Remove the connection between the C-106 passenger's (front) air bag module connector (two-pin, red) and the instrument panel wiring harness connector (two-pin, red).

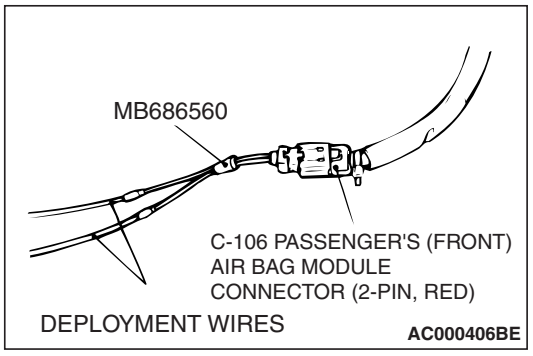
   NOTE: If the air bag module connector is disconnected from the instrument panel wiring harness, both electrodes of the air bag module connector will be automatically shorted to prevent unintended deployment of the air bag due to static electricity, etc.

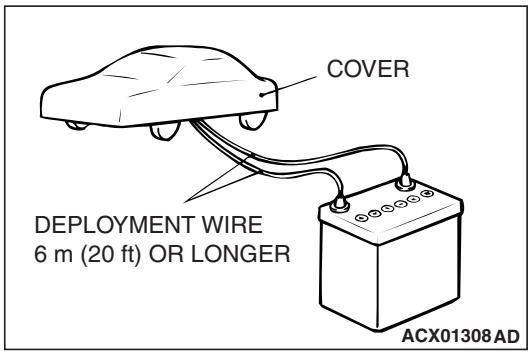


5. Connect deployment wires, each 6 meters (20 feet) or longer, to the two leads of special tool MB686560, and cover the connections with insulator tape. The other ends of the deployment wires should be connected to each other (short-circuited), to prevent sudden unexpected deployment of the air bag module.



6. Connect the C-106 passenger's (front) air bag module connector (two-pin, red) to special tool MB686560 and move the deployment wires out of the vehicle.





⚠ ***WARNING***

If the glass is scratched, air bag deployment could cause it to crack and fly out of the vehicle, so always put a cover over the vehicle.

7. To suppress the operation sound as much as possible completely close all door windows, close the doors and put the cover on the vehicle.

⚠ ***WARNING***

- ***Before deploying the air bag in this manner, first check to be sure that there is no one in or near the vehicle. Wear safety glasses.***
- ***The inflator will be quite hot immediately following the deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from the air bag deployment. See Deployed Air Bag Module Disposal (Refer to P.52B-192) for post-deployment handling instructions.***
- ***If the air bag module fails to deploy, do not go near the module.***

8. At a location as far away from the vehicle as possible, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.
9. After deployment, dispose of the air bag module according to the Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-192).

DEPLOYMENT INSIDE THE VEHICLE (WHEN DISPOSING OF A VEHICLE) <SEAT BELT PRE-TENSIONER>

1. Move the vehicle to an isolated spot.

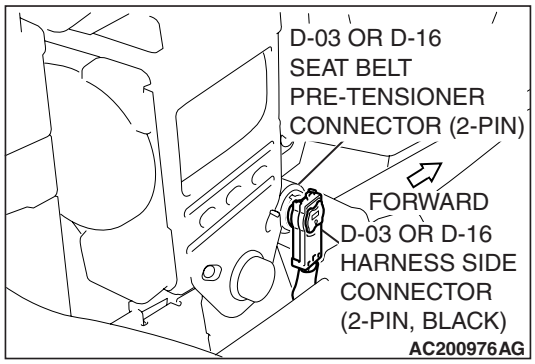
⚠ ***DANGER***

Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-16).

⚠ ***WARNING***

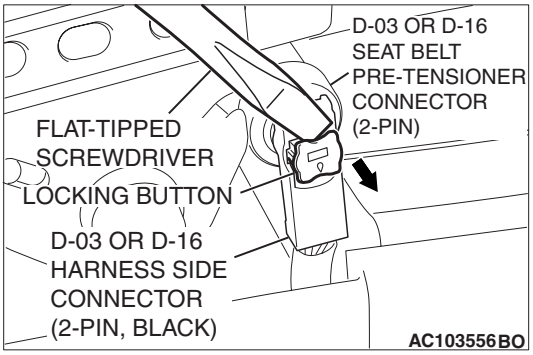
Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

2. Disconnect the negative (–) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.
3. Remove the center pillar lower trim (Refer to GROUP 52A, TRIMS P.52A-11).

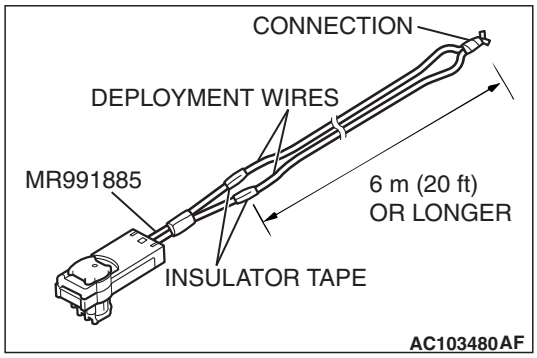


4. Execute the following steps to disconnect the connection between D-03 or D-16 seat belt pre-tensioner connector (two-pin) and harness side connector (two-pin, black).

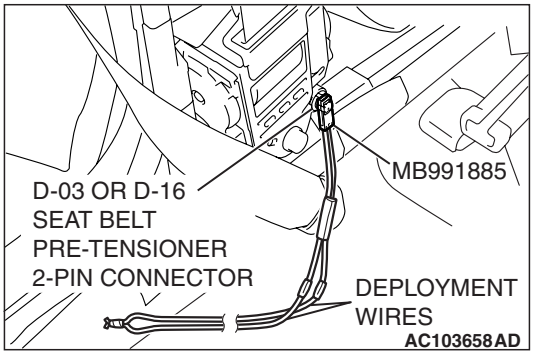
   NOTE: If the seat belt pre-tensioner connector is disconnected from the floor wiring harness, both electrodes of the seat belt pre-tensioner connector will be automatically shorted to prevent unintended operation of the seat belt pre-tensioner due to static electricity, etc.



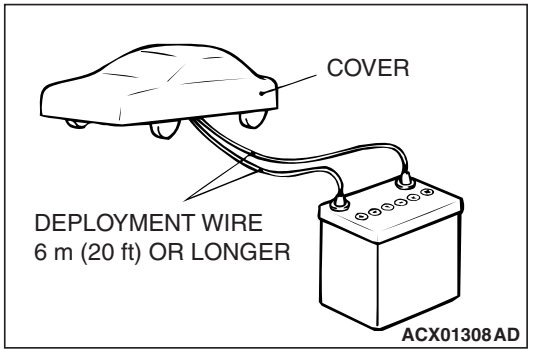
   (1) Use a flat-tipped screwdriver to unlock the locking button at the harness side connector (two-pin, black) by withdrawing it toward you in two stages.
   (2) Disconnect the D-03 or D-16 harness side connector.



5. Connect deployment wires, each 6 meters (20 feet) or longer, to the two leads of special tool MB991885, and cover the connections with insulator tape. The other ends of the deployment wires should be connected to each other (short-circuited), to prevent sudden unexpected operation of the seat belt pre-tensioner.



6. Connect the D-03 or D-16 seat belt pre-tensioner two-pin connector to special tool MB686560 and move the deployment wires out of the vehicle.



⚠ *WARNING*

If the glass is scratched, seat belt pre-tensioner operation could cause it to crack and fly out of the vehicle, so always put a cover over the vehicle.

7. To suppress the operation sound as much as possible completely close all door windows, close the doors and put the cover on the vehicle.

⚠ ***WARNING***

- ***Before operating the seat belt pre-tensioner in this manner, first check to be sure that there is no one in or near the vehicle. Wear safety glasses.***
- ***The inflator will be quite hot immediately following the operation, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from the seat belt pre-tensioner operation. See Deployed Air Bag and Operated Seat Belt pre-tensioner Disposal (Refer to P.52B-192) for post-operation handling instructions.***
- ***If the seat belt pre-tensioner fails to operate, do not go near the seat belt pre-tensioner.***

8. At a location as far away from the vehicle as possible, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to operate the seat belt pre-tensioner.
9. After operation, dispose of the seat belt pre-tensioner according to the Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-192).

DEPLOYMENT OUTSIDE THE VEHICLE <DRIVER'S AIR BAG MODULE>

⚠ ***DANGER***

Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-16).

⚠ ***WARNING***

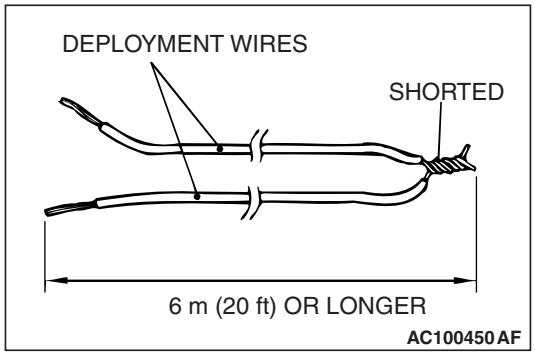
- ***Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.***
- ***Deploy the air bag in a wide, flat area at least 6 meters (20 feet) away from obstacles and other people.***
- ***Do not perform deployment outside if a strong wind is blowing. If there is a slight breeze, place the air bag module downwind from the battery.***

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

⚠ CAUTION

Once disconnected, both electrodes of the steering wheel-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 steering wheel-driver's air bag module on flat place with deployment surface facing up. Also, do not put anything on it.

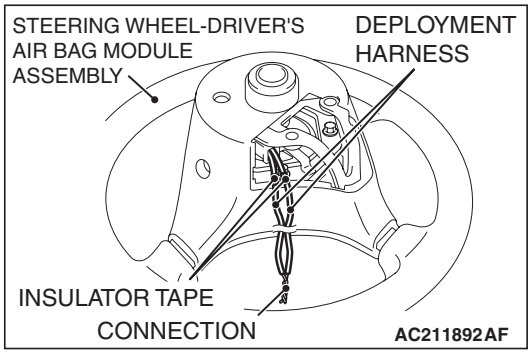
2. Remove the steering wheel-driver's air bag module assembly from the vehicle (Refer to P.52B-168).
3. Prepare two wires longer than 6 meters (20 feet) for deployment and connect the terminals in one end to short-circuit. This is to prevent accidental deployment caused by static etc.



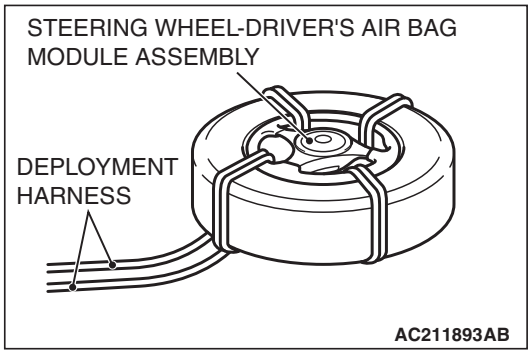
⚠ CAUTION

Never fail to do Step 4 in order to prevent accidental deployment caused by static.

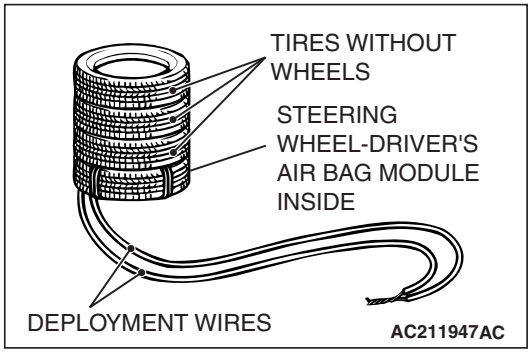
4. Touch the vehicle's body with bare hands to discharge static in you.



5. Release the secured connector of the steering wheel-driver's air bag module assembly to cut off the connector from the harness with a nipper and etc. Connect deployment harnesses to each of two separated harnesses and cover the area with insulator tape.



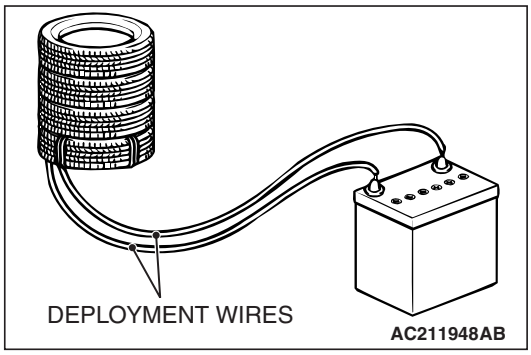
6. Use a rope to tie the steering wheel-driver's air bag module assembly to secure old tyres with wheels.
7. Route the deployment harness connected to steering wheel-driver's air bag module beneath old tyres with wheels. Then, secure the steering wheel-driver's air bag module assembly with the deployment surface facing up.



8. Place three old tires without wheels on the tire secured with the steering wheel-driver's air bag module.

⚠ ***WARNING***

- ***Before deployment, check carefully to be sure that no one is nearby.***
- ***The inflator will be quite hot immediately following the deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from air bag deployment. See Deployed Air Bag Module Disposal and Operated Seat Belt Pre-tensioner (Refer to P.52B-192) for post-deployment handling instructions.***
- ***If the air bag fails to deploy, do not go near the module.***



9. At a location as far away from the air bag module as possible, and from a shielded position, disconnect the two connected wires from each other, and connect them, to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.
10. Discard the deployed air bag module as specified in Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-192).

DEPLOYMENT OUTSIDE THE VEHICLE <PASSENGER'S (FRONT) AIR BAG MODULE>

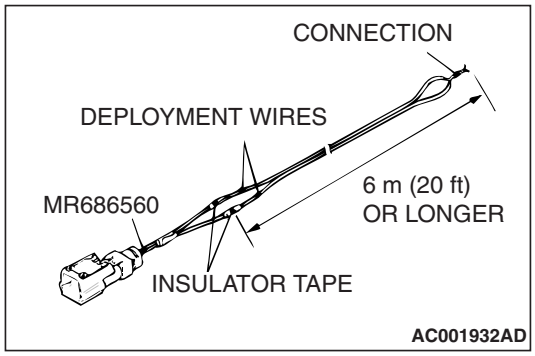
⚠ ***DANGER***

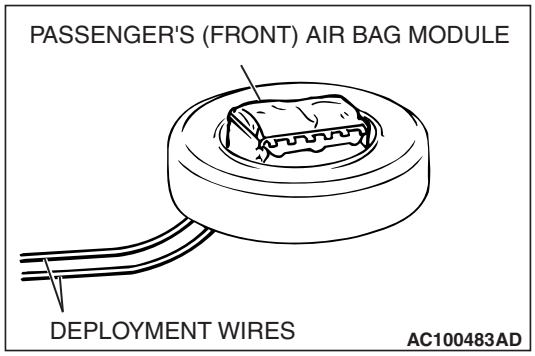
Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-16).

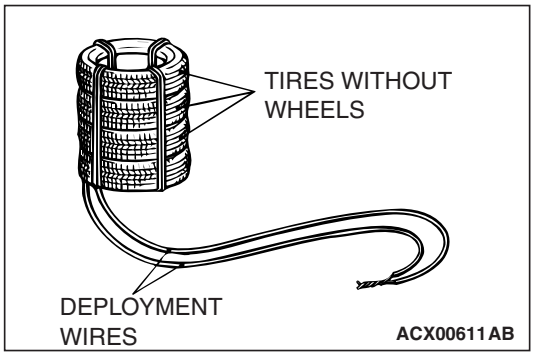
⚠ ***WARNING***

- ***Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.***
- ***Deploy the air bag in a wide, flat area at least 6 meters (20 feet) away from obstacles and other people.***
- ***Do not perform deployment outside if a strong wind is blowing. If there is a slight breeze, place the air bag module downwind from the battery.***

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







⚠ CAUTION

Once disconnected, both electrodes of the front passenger's (front) 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. Remove the passenger's (front) air bag module from the vehicle (Refer to P.52B-168).
3. Connect two wires, each 6 meters (20 feet) or longer, to the two leads of special tool MB686560, and cover the connections with insulator tape. The other ends of the two wires should be connected to each other (short-circuited), to prevent sudden unexpected deployment of the passenger's (front) air bag module.
4. Connect the deployment wires to special tool MB686560, pass it beneath the tire and wheel assembly, and connect it to the passenger's (front) air bag module.

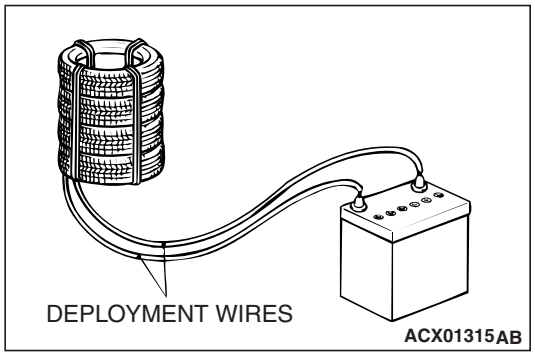
⚠ CAUTION

- **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.**
- **During deployment, the connector of special tool MB686560 must not be between the tires.**

5. Pass the thick wire through the passenger's (front) air bag module mounting hole, and then secure the passenger's (front) air bag module to an old tire with a wheel in it so that the pad on the module is facing upwards.
6. Place three old tires without wheels on top of the tire secured to the passenger's (front) air bag module, and secure all tires together with ropes (four locations).

⚠ ***WARNING***

- ***Before deployment, check carefully to be sure that no one is nearby.***
- ***The inflator will be quite hot immediately following the deployment, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from air bag deployment. See Deployed Air Bag Module Disposal and Operated Seat Belt Pre-tensioner (Refer to P.52B-192) for post-deployment handling instructions.***
- ***If the air bag fails to deploy, do not go near the module.***



7. At a location as far away from the air bag module as possible, and from a shielded position, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to deploy the air bag.
8. Discard the deployed air bag module as specified in Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-192).

DEPLOYMENT OUTSIDE THE VEHICLE <SEAT BELT PRE-TENSIONER>

⚠ ***DANGER***

Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-16).

⚠ ***WARNING***

- ***Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.***
- ***Operate the seat belt pre-tensioner in a wide, flat area at least 6 meters (20 feet) away from obstacles and other people.***
- ***Do not perform operation outside if a strong wind is blowing. If there is a slight breeze, place the seat belt pre-tensioner downwind from the battery.***

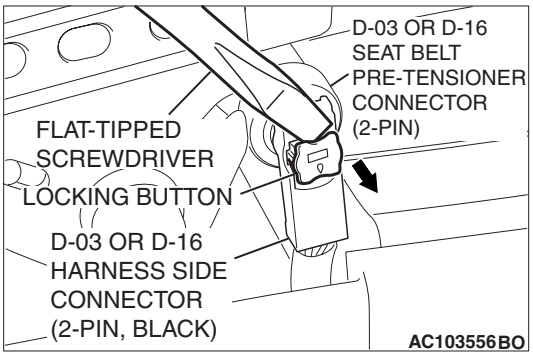
1. Disconnect the negative (–) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.

⚠ ***WARNING***

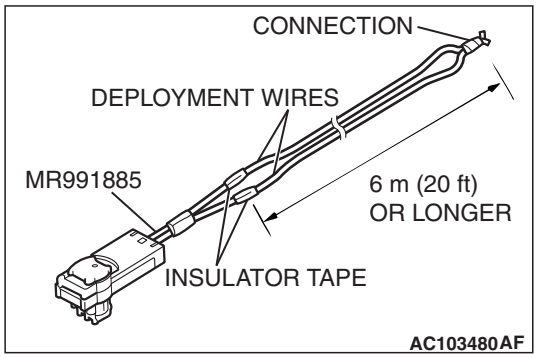
Store the operated seat belt pre-tensioner the correct way up with its operation surface upper most on a flat surface. Do not place anything on top of them.

2. Remove the seat belt with pre-tensioner from the vehicle (Refer to P.52B-176).

TSB Revision



3. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector (two-pin, black) by with drawing it toward you in two stages.
4. Disconnect the D-03 or D-16 harness side connector.

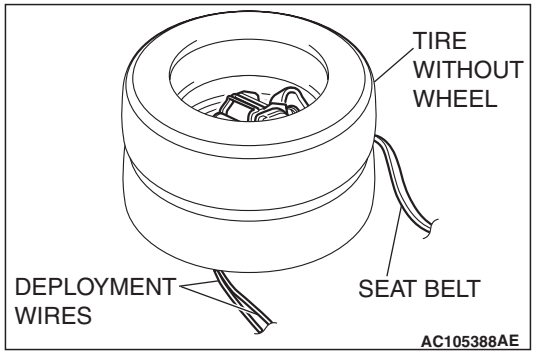


5. Connect two wires, each 6 meters (20 feet) or longer, to the two leads of special tool MB991885, and cover the connections with insulation tape. The other ends of the two wires should be connected to each other (short-circuited), to prevent sudden unexpected operation of the seat belt pre-tensioner.
6. Connect the special tool MB991885, which the deployment wires is attached to, to the seat belt pre-tensioner connector.

⚠ CAUTION

The adapter harness below the wheel should be loose. If it is too tight, the reaction when the seat belt pre-tensioner operates could damage the adapter harness.

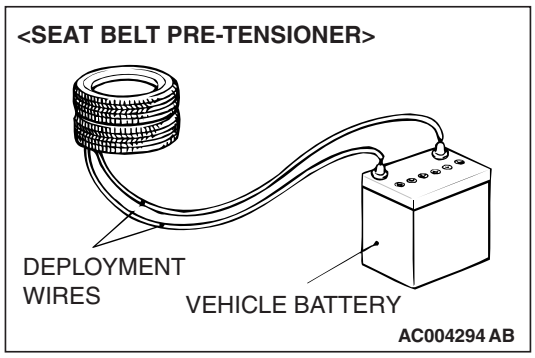
7. Pass the thick wires through the hole on the seat belt pre-tensioner bracket and secure them to the front (raised part) of the wheel on two place.
8. Pull the seat belt out the outside of the tire, and then place one tire without a wheel inside on top of the existing tire.



⚠ *WARNING*

- ***Before operation, check carefully to be sure that no one is nearby.***
- ***The inflator will be quite hot immediately following the operation, so wait at least 30 minutes to allow it to cool before attempting to handle it. Although not poisonous, do not inhale gas from seat belt pre-tensioner operation. See Deployed Air Bag Module and Operated Seat Belt pre-tensioner Disposal (Refer to P.52B-192) for post-operation handling instructions.***
- ***If the seat belt pre-tensioner fails to operate, do not go near the seat belt pre-tensioner.***

9. At a location as far away from the pre-tensioner as possible, and from a shielded position, disconnect the two connected wires from each other, and connect them to the two terminals of the battery (which has been removed from the vehicle) to operated seat belt pre-tensioner.
10. Discard the operated seat belt pre-tensioner as specified in Deployed Air Bag Module and Operated Seat Belt pre-tensioner Disposal (Refer to P.52B-192).



DEPLOYED AIR BAG MODULE AND OPERATED SEAT BELT PRE-TENSIONER DISPOSAL

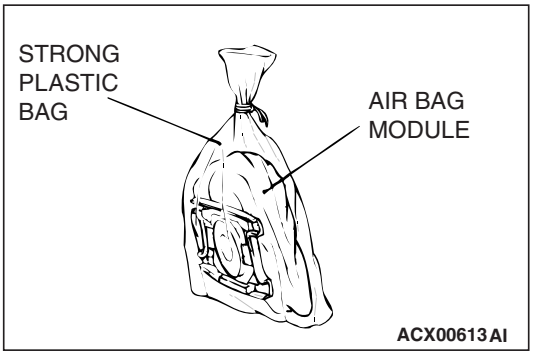
After deployment and operation, the air bag module and seat belt pre-tensioner should be disposed of in the same manner as any other scrap parts, adhering to local laws and/or legislation. Observe the following precautions during air bag or seat belt pre-tensioner disposal:

1. The inflator will be quite hot immediately following deployment, so wait at least 30 minutes to allow it cool before attempting to handle it.
2. Do not put water or oil on the air bag after deployment or on the seat belt pre-tensioner after operation.

⚠ WARNING

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.

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



SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

M1524004900385

ITEM	SPECIFICATION
Air bag module(s) and clock spring	
Clock spring screw	0.69 ±0.15 N· m (6 ±1 in-lb)
Hexagon socket head bolt	50 ±5 N· m (37 ±4 ft-lb)
Front impact sensors	
Front impact sensor mounting bolt	5.0 ±1.0 N· m (44 ±9 in-lb)
Seat belts with pre-tensioner	
Seat belt lower anchor bolt	44 ±10 N· m (33 ±7 ft-lb)
Seat belt shoulder anchor bolt	44 ±10 N· m (33 ±7 ft-lb)
Seat belt with pre-tensioner mounting bolt	44 ±10 N· m (33 ±7 ft-lb)
SRS control unit (SRS-ECU)	
SRS-ECU bracket bolt	5.0 ±1.0 N· m (44 ±9 in-lb)
SRS-ECU mounting nut	5.0 ±1.0 N· m (44 ±9 in-lb)

NOTES