### **GROUP 52B**

# SUPPLEMENTAL RESTRAINT SYSTEM (SRS)

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### A WARNING

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

### A 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. If you have any questions about the SRS, please contact the MMNA Tech Line.

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### **GENERAL DESCRIPTION**

NOTE: In this manual, the part names are changed from the names in owner's manual into the following names.

- Driver's seat position sensor  $\rightarrow$  Seat slide sensor
- Passenger's seat weight sensor → Occupant classification sensor
- Seat belt buckle switch  $\rightarrow$  Seat belt switch
- Passenger air bag off indicator → Passenger air bag OFF indicator light
- Front passenger seat belt warning light → Passenger seat belt warning light

### A WARNING

## *Improper service could result in serious injury of the service personnel or the passenger.*

The SRS is designed to supplement the front seat belts. It reduces injury to the driver(s) and the front passenger(s) by deploying air bag(s) in case of a head-on collision.

The SRS front air bags form an advanced air bag system together with sensors at the vehicle and sensors attached to the front seats.

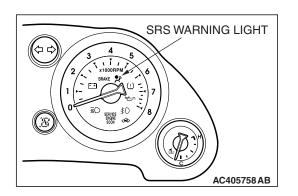
Side-airbag systems in the front seats are activated when side impacts exceed criteria to protect the occupants' upper bodies.

The curtain air bag systems are activated when side impacts applied to the vehicle exceed criteria, to protect the heads of the occupants in the front seats.

The seat belts with pre-tensioner work simultaneously with the SRS. The seat belt incorporating the pre-tensioner automatically winds the seat belt upon front impact to reduce forward shifting of the driver's and passenger's. The seat belt use status controls the activation and deactivation of the pre-tensioner. The SRS consists of six air bag modules, SRS air bag control unit (SRS-ECU), two front impact sensors, two side impact sensors, SRS warning light, passenger air bag OFF indicator light, passenger seat belt warning light, clock spring, seat belt pre-tensioner, seat belt switch, seat slide sensor, occupant classification sensor and occupant classification-ECU. Air bag modules are located in the center of the steering wheel and above the glove box. Side-airbags are located inside the front seatback assemblies. The curtain air bag module consists of an air bag, an inflator, and the fixing gear relating to those parts, and is installed in the roof side sections (from the driver's and the passenger's front pillars to the rear pillars). Each air bag consists of a folded air bag and an inflator unit. The SRS-ECU placed on the forefront of the floor monitors the system and has a front air bag safing G-sensor, front air bag analog G-sensor and a side-airbag safing G-sensor. The front impact sensor is assembled in the radiator support panel to monitor impact in case of front impact. The side impact sensors inside the center pillars monitor the shock incurred by the sides of the vehicle. The SRS warning light on the combination meter 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 seat slide sensor is installed at the seat adjuster section of the driver seat in order to detect the driver seat slide position. The occupant classification sensor is installed underneath a rail of the passenger seat to detect the load on the seat. The passenger air bag OFF indicator light is installed to the lower left of the multi-center display, and illuminates when the passenger seat air bag is inactive. The passenger seat belt warning light is installed to the lower right of the multi-center display, and illuminates when the passenger is not wearing the seat belt. The seat belt switch detects whether the seat belt is used. 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.

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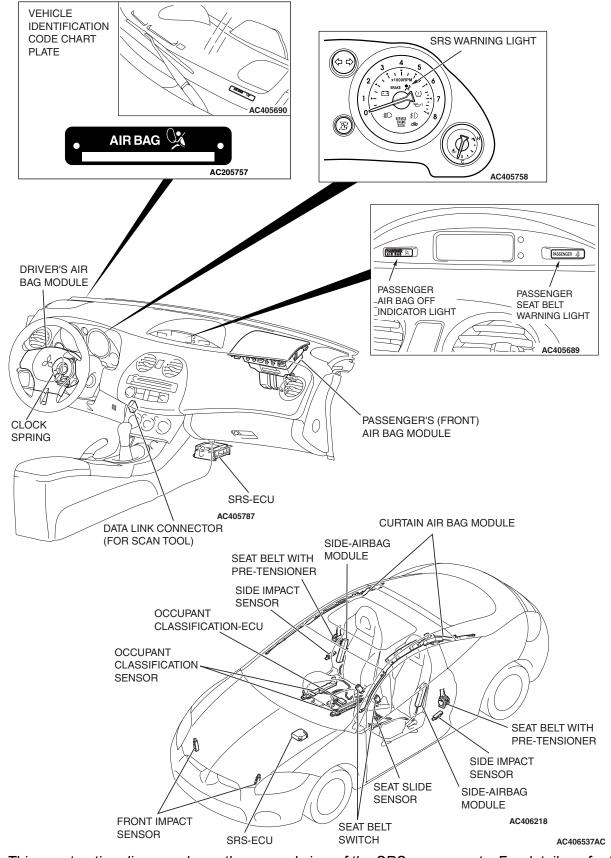
## ON-BOARD DIAGNOSTIC/SRS WARNING LIGHT FUNCTION

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, the SRS system must be inspected, diagnosed and serviced in accordance with this manual.

### **CONSTRUCTION DIAGRAM**

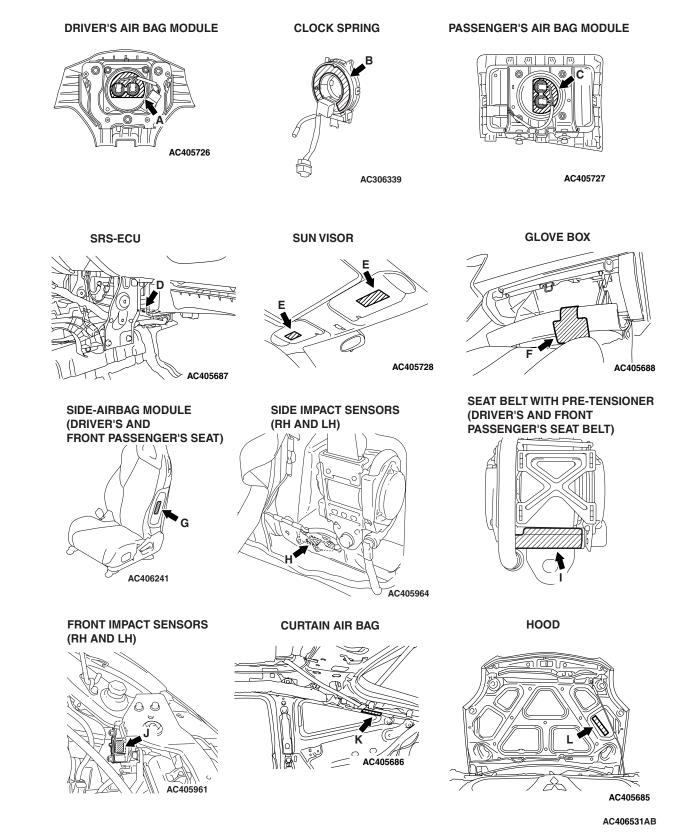


NOTE: This construction diagram shows the general view of the SRS components. For details, refer to "Schematic(P.52B-9), "Configuration Diagrams(P.52B-12), " and "Circuit Diagram(P.52B-14)".

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### WARNING/CAUTION LABELS

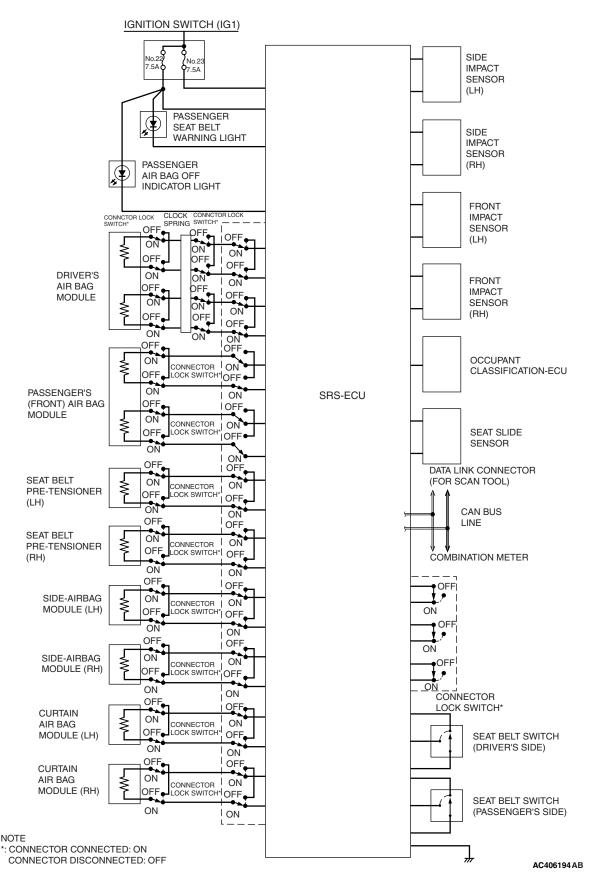
A number of caution labels related to the SRS are found in the vehicle, as shown in the following illustrations. Follow label instructions when servicing SRS. If the labels are dirty or damaged, replace them.



LABEL CONTENTS	
A	DANGER: FLAMMABLE MATERIAL TO PREVENT PERSONAL INJURY, DO NOT DISMANTLE, INCINERATE, OR BRING INTO CONTACT WITH ELECTRICITY. STORE BELOW 200° F(93°C). READ SERVICE MANUAL FOR DETAIL.
В	CAUTION: SRS CLOCKSPRING THIS IS NOT A REPAIRABLE PART. IF DEFECTIVE REPLACE ENTIRE UNIT ACCORDING TO THE SERVICE MANUAL INSTRUCTIONS. TO RE-CENTER: ROTATE CLOCKWISE UNTIL TIGHT. THEN ROTATE IN OPPOSITE DIRECTION ROUGHLY 3 3/4 TURNS AND ALIGN ARROWS.
С	DANGER FLAMMABLE CAUTION THIS ASSEMBLY CONTAINS AN EXPLOSIVE INITIATOR. DANGER INFLAMMABLE CONTENTS ARE EXTRAEMELY FLAMMBLE DO NOT PROBE WITH ELECTRICAL DEVICES OR OTHERWISE TAMPER WITH IN ANY WAY.
D	CAUTION: DO NOT DISASSEMBLE OR DROP. IF DEFECT REFER TO SERVICE MANUAL.
E	<ul> <li>WARNING</li> <li>EVEN WITH ADVANCED AIR BAGS</li> <li>Children can be killed or seriously injured by the air bag</li> <li>The back seat is the safest place for children</li> <li>Never put a rear-facing child seat in the front</li> <li>Always use seat belts and child restraints</li> <li>See owner's manual for more information about air bags</li> </ul>
F	This Vehicle is Equipped with Advanced Air Bags Even with Advanced Air Bags Children can be killed or seriously injured by the air bag. The back seat is the safest place for children. Never put a rear-facing child seat in the front. Always use seat belts and child restraints. See owner's manual for more information about air bags. Not to be removed except by owner.
F <canada></canada>	WARNING MISE EN GARDE 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 seats. Not to be removed except by owner.
G	<ul> <li>DANGER FLAMMABLE MATERIAL</li> <li>SRS AIR BAG MODULE</li> <li>Do not disassemble or impact.</li> <li>Do not heat or incinerate.</li> <li>Do not contact with electricity or tester probes.</li> <li>Do not test or diagnose.</li> <li>Do not store in more than 200° F (93° C).</li> <li>Do not store the air bag with stud bolts pointing upwards.</li> <li>For information on handing, replacement, and disposal methods, refer to the service manual.</li> </ul>

LABEL CONTER	NTS
1	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, J	CAUTION: DO NOT DISASSEMBLE OR DROP.
К	DANGER SRS AIRBAG CONTENTS ARE EXTREMELY FLAMMABLE. TO AVOID PERSONAL INJURY DUE TO ACCIDENTAL INFLATION, DO NOT PROBE WITH ELECTRICAL DEVICE OR OTHER-WISE TAMPER WITH IN ANY WAY. FOLLOW SERVICE MANUAL INSTRUCTION CAREFULLY. "CAUTION-THIS ITEM CONTAINS AN EXPLOSIVE IGNITER."
L	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.

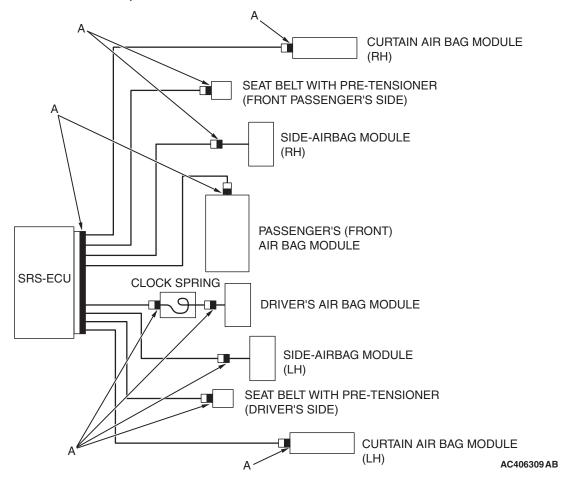
### SCHEMATIC



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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).



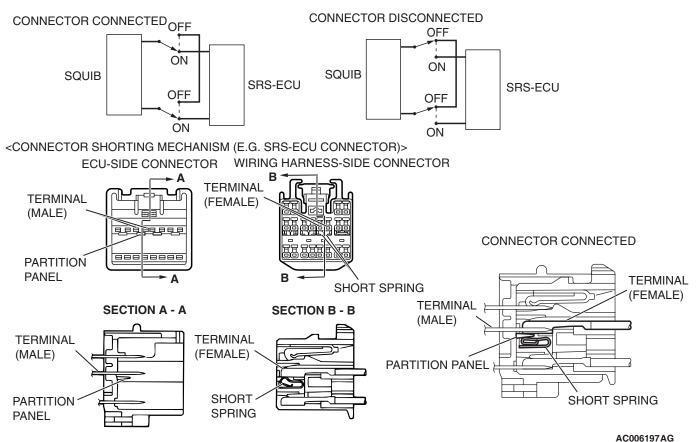
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## SQUIB CIRCUIT CONNECTOR LOCK SWITCH

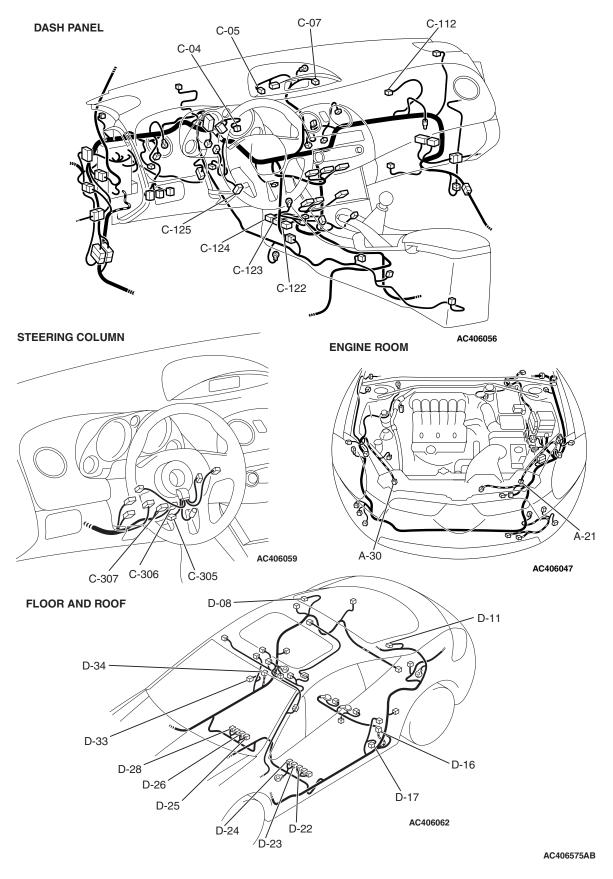
The switch is a mechanism that shorts the power supply terminal to the ground terminal automatically in the air bag squib circuit when the connector is disconnected. A "short" spring is integrated inside the connector. This spring prevents static electricity from flowing to the squib by shorting the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

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



### **CONFIGURATION DIAGRAMS**





A-21 (Y) A-30 (Y) C-04 C-05 C-07 C-112 (Y) C-122 (Y) C-123 (Y) C-124 (Y) C-125 (B) C-305 (Y) C-306 C-307 (Y)	FRONT IMPACT SENSOR (LH) FRONT IMPACT SENSOR (RH) COMBINATION METER (FOR SRS WARNING LIGHT) PASSENGER AIR BAG OFF INDICATOR LIGHT PASSENGER SEAT BELT WARNINNG LIGHT AIR BAG MODULE (PASSENGER'S SIDE) SRS-ECU SRS-ECU DATA LINK CONNECTOR AIR BAG MODULE (SQUIB) (DRIVER'S SIDE) CLOCK SPRING	D-11 (B) D-16(B) D-17 D-22 (B) D-23 (R) D-24 (GR) D-25 D-26 (GR) D-28 (R) D-28 (R)	CURTAIN AIR BAG MODULE (SQUIB) (LH) SEAT BELT PRE-TENSIONER (LH) SIDE IMPACT SENSOR (LH) SEAT BELT SWITCH (DRIVER'S SIDE) SIDE-AIRBAG MODULE (SQUIB) (LH) SEAT SLIDE SENSOR SEAT BELT SWITCH (PASSENGER'S SIDE) OCCUPANT CLASSIFICATION-ECU SIDE-AIRBAG MODULE (SQUIB) (RH) SIDE IMPACT SENSOR (RH) SEAT BELT PRE-TENSIONER
C-306 C-307 (Y) D-08 (B)	· · · · · · · · · · · · · · · · · · ·	D-33 D-34 (B)	

### 52B-14

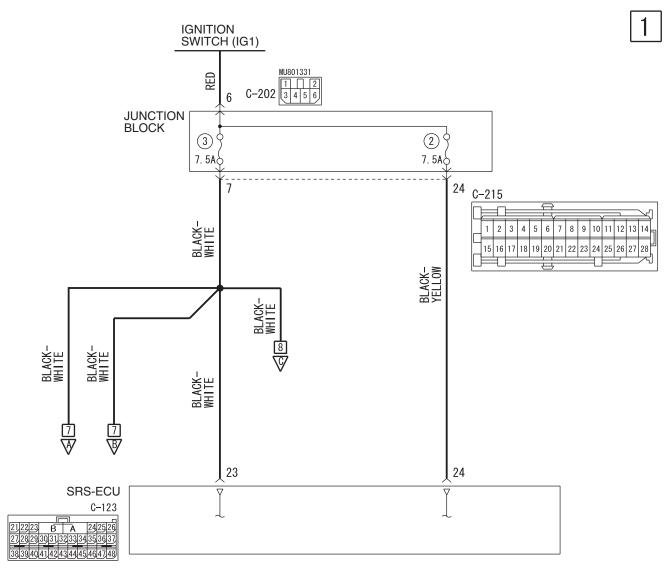
### **CIRCUIT DIAGRAM**

### A 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-26): 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-386) and a digital multi-meter (refer to P.52B-387).

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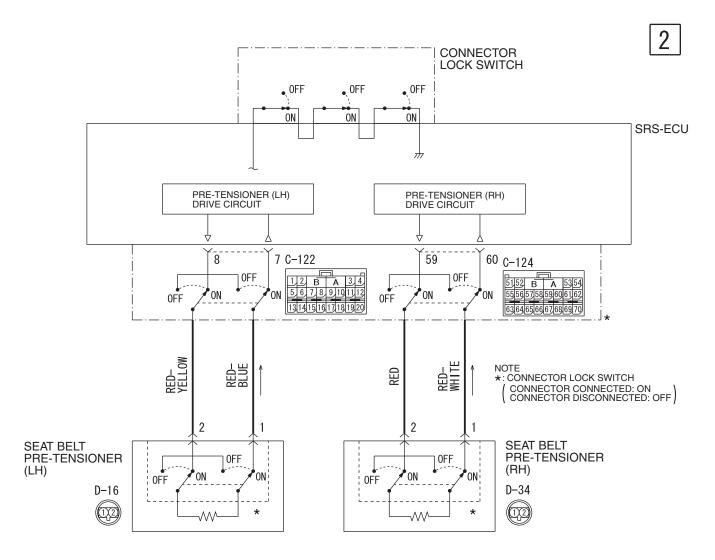
Improper services cause the system to be inoperative. Do not disassemble or tamper with the SRS components to prevent serious injury.



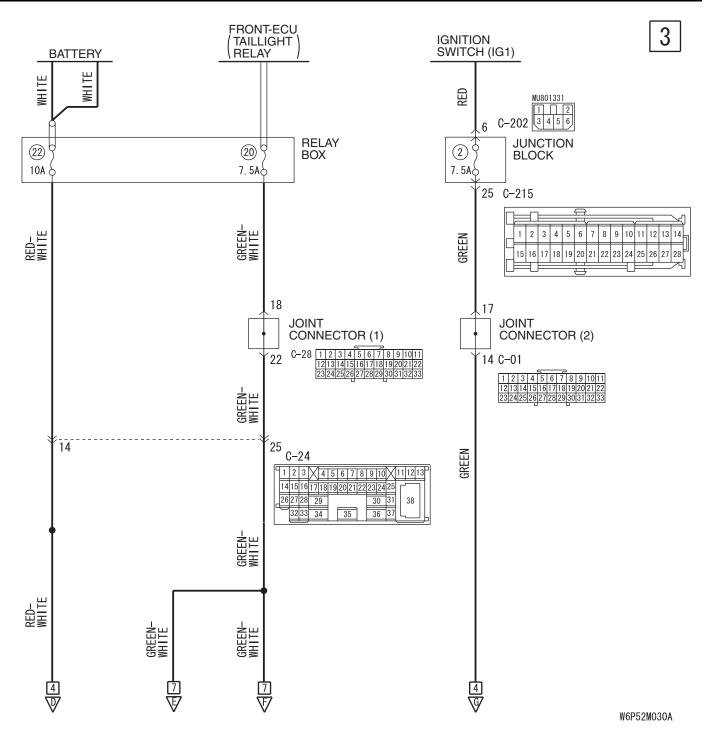
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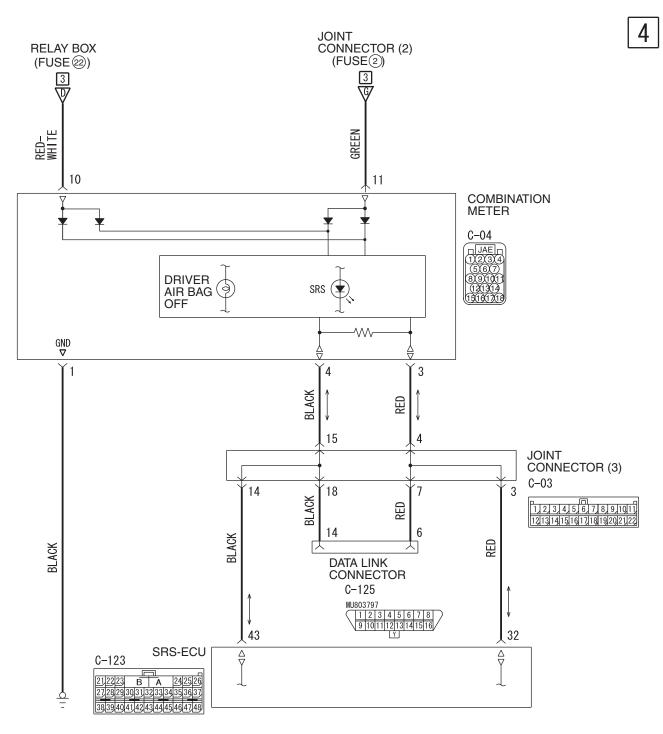
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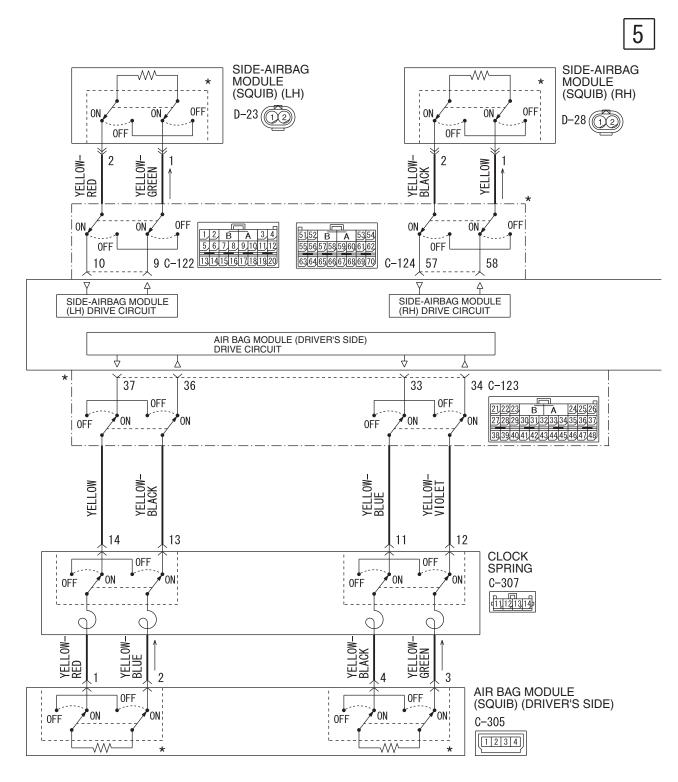
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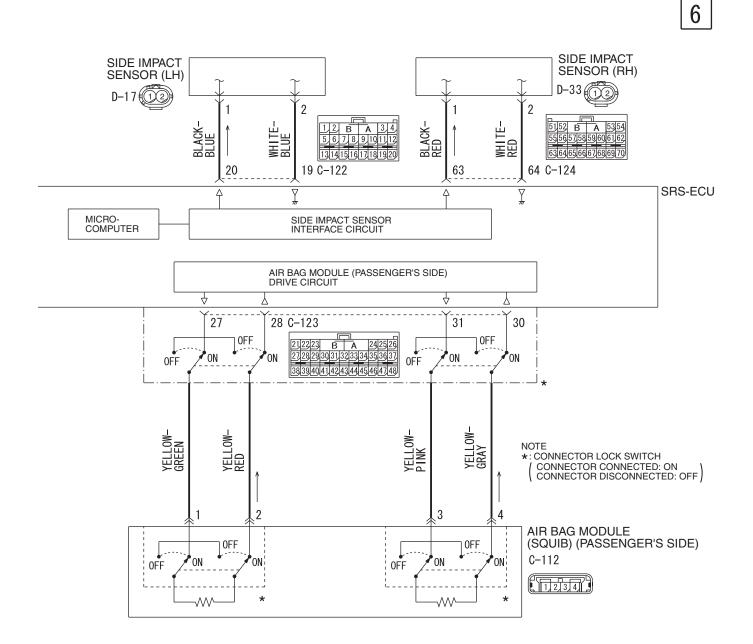


NOTE \*: CONNECTOR LOCK SWITCH

CONNECTOR CONNECTED: ON CONNECTOR DISCONNECTED: OFF

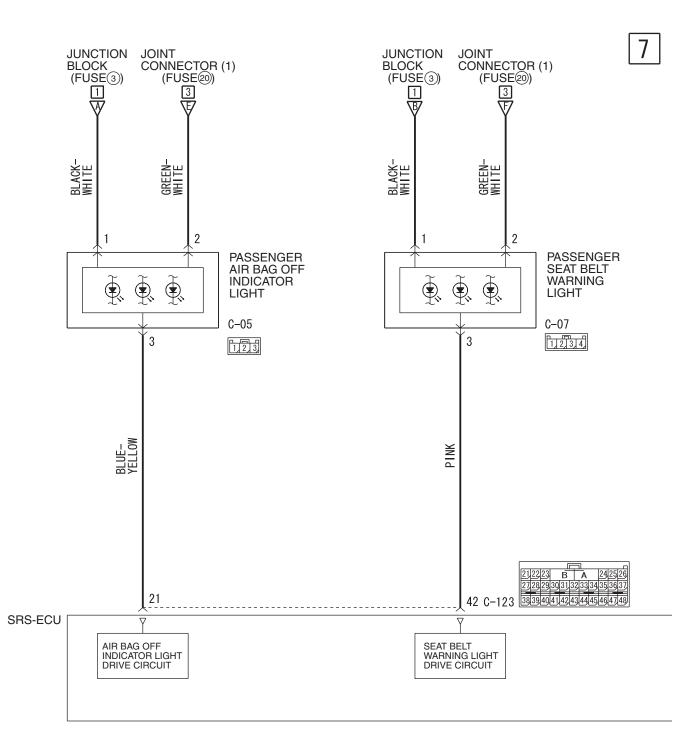
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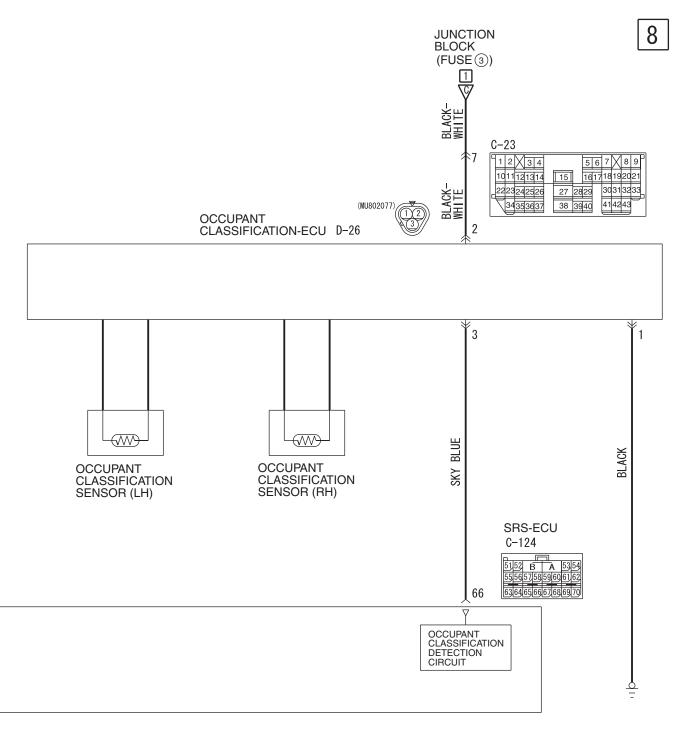
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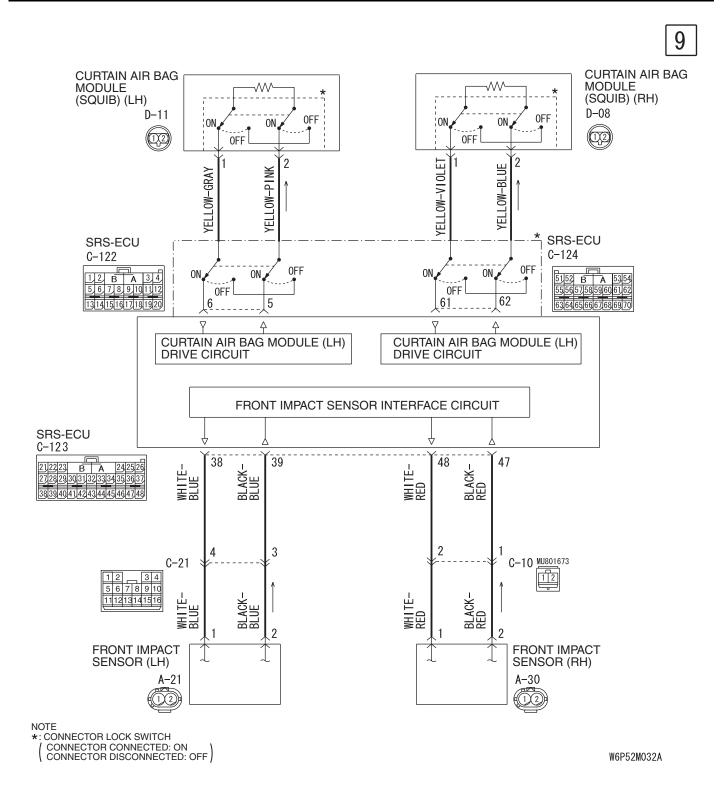


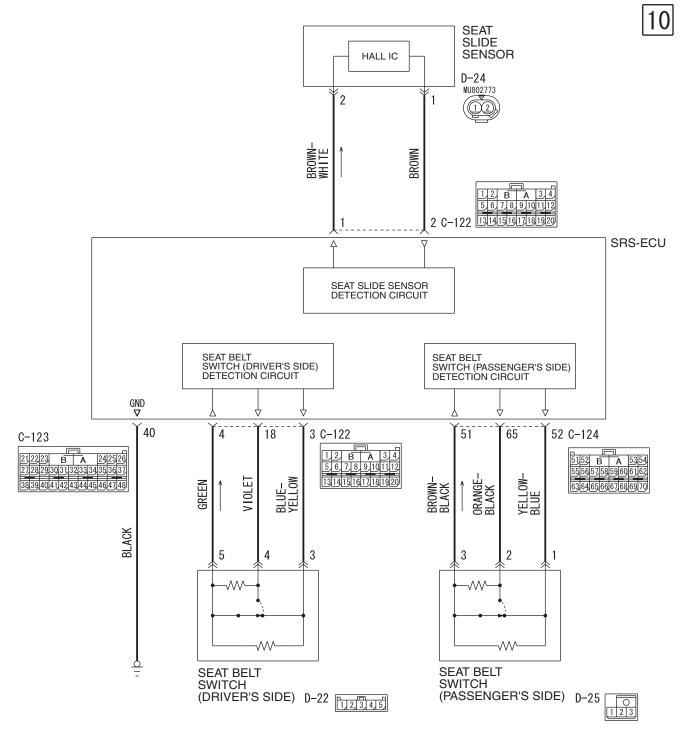
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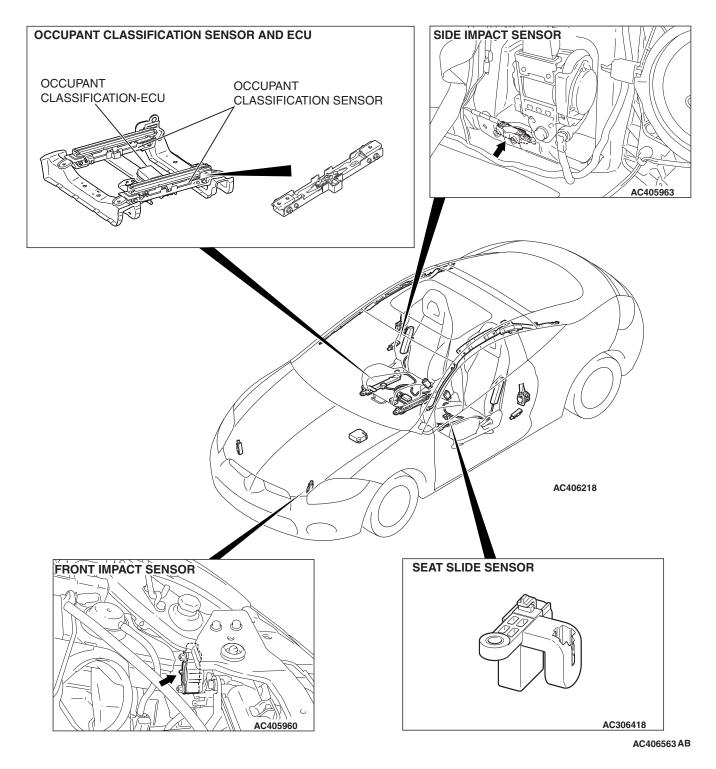


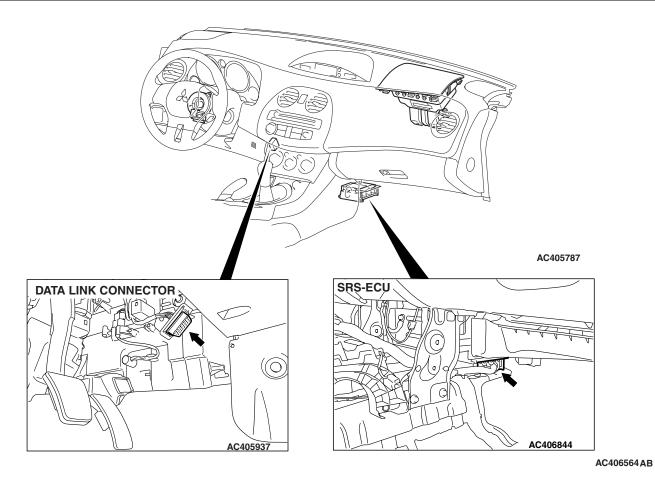


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### **COMPONENT LOCATION**

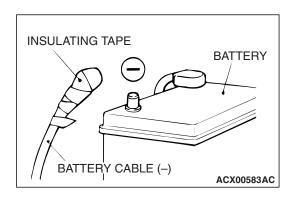




NOTE: The illustration above shows the front impact sensor (LH) and the side impact sensor (RH). The position of the front impact sensor (LH) and the side impact sensor (RH) is symmetrical to this.

### SERVICE PRECAUTIONS

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SRS-ECU CONNECTOR
1.2.6         A         3.4.1         2122223         B         A         2425263         B         A         35.6.7         A         35.7.7         A         A         A         A         A
AC500058AB

### A 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.

### A 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-387.
- Never Attempt to Repair the Following Components: SRS-ECU, Clock Spring, Air Bag Module, Front impact sensor, Side Impact Sensor, Seat Belt with Pre-tensioner, Seat slide sensor, Front seat assembly. 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-394.
- 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.

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### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SERVICE PRECAUTIONS

SRS-ECU TERMINAL NO.	DESTINATION OF HARNESS	CORRECTIVE ACTION
1, 2	Floor wiring harness $\rightarrow$ Seat slide sensor	Correct or replace the floor wiring harness.
3	Floor wiring harness $\rightarrow$ Driver's seat belt switch for Normal/Close terminal	Correct or replace the floor wiring harness.
4	Floor wiring harness $\rightarrow$ Driver's seat belt switch for COM terminal	Correct or replace the floor wiring harness.
5, 6	Floor wiring harness $\rightarrow$ Curtain air bag module (LH)	Correct or replace the floor wiring harness.
7, 8	Floor wiring harness $\rightarrow$ Seat belt pre-tensioner (LH)	Correct or replace the floor wiring harness.
9*, 10*	Floor wiring harness $\rightarrow$ Side-airbag module (LH)	Correct or replace the floor wiring harness.
18	Floor wiring harness $\rightarrow$ Driver's seat belt switch for Normal/Open terminal	Correct or replace the floor wiring harness.
19*, 20*	Floor wiring harness $\rightarrow$ Side impact sensor (LH)	Correct or replace the floor wiring harness.
21	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Air bag OFF indicator light	Correct or replace each wiring harness.
23	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Junction block (fuse No.22)	Correct or replace each wiring harness.
24	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Junction block (fuse No.23)	Correct or replace each wiring harness.
27, 28	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Air bag module (Front passenger's side) <1st squib side>	Correct or replace each wiring harness.
30, 31	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Air bag module (Front passenger's side) <2nd squib side>	Correct or replace each wiring harness.
32	Can line	Correct or replace can line.
33, 34	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Clock spring $\rightarrow$ Air bag module (Driver's side) <2nd squib side>	Correct or replace each wiring harness. Replace the clock spring.
36, 37	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Clock spring $\rightarrow$ Air bag module (Driver's side) <1st squib side>	Correct or replace each wiring harness. Replace the clock spring.
38, 39	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Front wiring harness $\rightarrow$ Front impact sensor (LH)	Correct or replace each wiring harness.

### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SERVICE PRECAUTIONS

SRS-ECU TERMINAL NO.	DESTINATION OF HARNESS	CORRECTIVE ACTION
40	Floor wiring harness $\rightarrow$ Ground	Correct or replace the floor wiring harness.
42	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Seat belt warning light	Correct or replace each wiring harness.
43	Can line	Correct or replace can line.
47, 48	Floor wiring harness $\rightarrow$ Instrument panel wiring harness $\rightarrow$ Front impact sensor (RH)	Correct or replace each wiring harness.
51	Floor wiring harness → Passenger's seat belt switch for common terminal	Correct or replace the floor wiring harness.
52	Floor wiring harness → Passenger's seat belt switch for Normal/Close terminal	Correct or replace the floor wiring harness.
57, 58	Floor wiring harness $\rightarrow$ Side-airbag module (RH)	Correct or replace the floor wiring harness.
59, 60	Floor wiring harness $\rightarrow$ Seat belt pre-tensioner (RH)	Correct or replace the floor wiring harness.
61, 62	Floor wiring harness $\rightarrow$ Curtain air bag module (RH)	Correct or replace the floor wiring harness.
63, 64	Floor wiring harness → Side impact sensor (RH)	Correct or replace the floor wiring harness.
65	Floor wiring harness → Passenger's seat belt switch for Normal/Open terminal	Correct or replace the floor wiring harness.
66	Floor wiring harness $\rightarrow$ Occupant classification sensor	Correct or replace the floor wiring harness.

### **SRS AIR BAG DIAGNOSIS**

### INTRODUCTION TO DIAGNOSIS

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 and side impact sensors, front air bag analog G-sensor and front air bag safing G-sensor and side-airbag safing G-sensor. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the safing G-sensor is on, the SRS air bag will inflate. (The passenger's air bag may not inflate according to the occupant detection data from the occupant classification-ECU.) The

### TROUBLESHOOTING STRATEGY

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 GROUP 00, How to Use

Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14.

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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 to the "ON" position.
- The SRS warning light does not illuminate when the ignition switch is turned to the "ON" position.
   Refer to Post-collision Diagnosis when inspecting and servicing a vehicle that has been in a collision (Refer to P.52B-388).

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- 5. If there is a SRS DTC, record the code number, then erase the code from vehicle memory using scan tool (MUT-III Sub Assembly) 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 the 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.00-14.

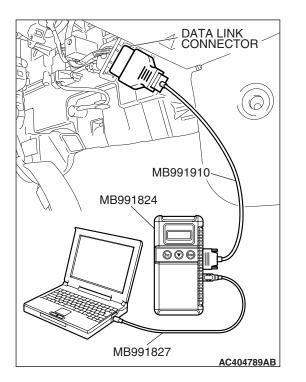
### **DIAGNOSTIC FUNCTION**

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### HOW TO CONNECT THE SCAN TOOL (MUT-III)

### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



### 

## 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 MB991910 to special tool MB991824.
- 5. Connect special tool MB991910 to the data link connector.
- 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 MUT-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:**

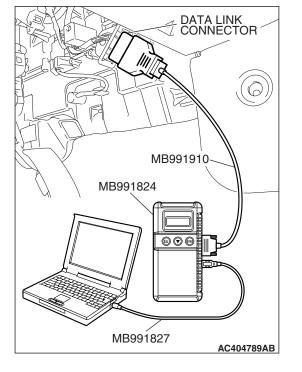
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

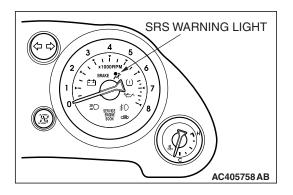
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# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

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

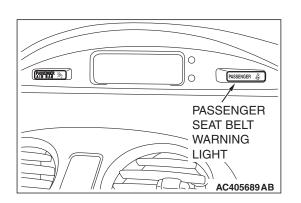
- 1. Connect scan tool MB991958 to the data link connector.
- 2. Turn the ignition switch to the "ON" position.
- 3. Select "Interactive Diagnosis" from the start-up screen.
- 4. Select "System select."
- 5. Select "MITSUBISHI."
- 6. Choose "SRS-AIR BAG" from the "BODY" tab.
- 7. Select "Diagnostic Trouble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





### **SRS WARNING LIGHT CHECK**

- 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.



### PASSENGER SEAT BELT WARNING LIGHT CHECK

- Check that the passenger seat belt 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.



### PASSENGER AIR BAG OFF INDICATOR LIGHT CHECK

- 1. Check that the passenger air bag OFF indicator 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

During diagnosis, a DTC code associated with another system may be set when the ignition switch is turned on with connector(s) disconnected. After completing the repair, confirm all systems for DTC code(s). If DTC code(s) are set, erase them all.

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

B1400*3Driver's air bag module (1st squib) system fault 1 (short circuit between terminals of the squib circuit)B1401*3Driver's air bag module (1st squib) system fault 2 (open in the so circuit)B1402*3Driver's air bag module (1st squib) system fault for ground circui (short-circuited to ground)B1403*3Driver's air bag module (1st squib) system fault for power supply circuit (short-circuited to power supply)B1404*4Driver's air bag module (1st squib) system fault for power supply circuit (short-circuited to power supply)B1405*4Driver's air bag module (1st squib ignition drive circuit) system detected short circuitB1406*4Front impact sensor (RH) system for fault 1 B1408*3B1408*3Front impact sensor (RH) power supply circuit systemB1409*3Front impact sensor (RH) (squib) for communication system circuit between terminals of the squib circuit)B1411*3Passenger's (front) air bag module (1st squib) system fault 1 (sh circuit between terminals of the squib circuit)B1411*3Passenger's (front) air bag module (1st squib) system fault 2 (op in the squib circuit)B1412*3Passenger's (front) air bag module (1st squib) system fault 2 (op in the squib circuit)B1413*3Passenger's (front) air bag module (1st squib) system fault 1 (sh circuit between terminals of the squib circuit)B1413*3Passenger's (front) air bag module (1st squib) system fault 1 or circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system	P.52B-38 quib P.52B-48
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B1407*3Front impact sensor (RH) power supply circuit systemB1408*3Front impact sensor (RH) (squib) for power supply circuitB1409*3Front impact sensor (RH) (squib) for communication systemB1410*3Passenger's (front) air bag module (1st squib) system fault 1 (sh circuit between terminals of the squib circuit)B1411*3Passenger's (front) air bag module (1st squib) system fault 2 (op in the squib circuit)B1412*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)	P.52B-67
B1408*3Front impact sensor (RH) (squib) for power supply circuitB1409*3Front impact sensor (RH) (squib) for communication systemB1410*3Passenger's (front) air bag module (1st squib) system fault 1 (sh circuit between terminals of the squib circuit)B1411*3Passenger's (front) air bag module (1st squib) system fault 2 (op in the squib circuit)B1412*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)	P.52B-70
B1409*3Front impact sensor (RH) (squib) for communication systemB1410*3Passenger's (front) air bag module (1st squib) system fault 1 (sh circuit between terminals of the squib circuit)B1411*3Passenger's (front) air bag module (1st squib) system fault 2 (op in the squib circuit)B1412*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)	P.52B-72
B1410*3Passenger's (front) air bag module (1st squib) system fault 1 (sh circuit between terminals of the squib circuit)B1411*3Passenger's (front) air bag module (1st squib) system fault 2 (op in the squib circuit)B1412*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)	P.52B-77
B1411*3Passenger's (front) air bag module (1st squib) system fault 2 (or in the squib circuit)B1412*3Passenger's (front) air bag module (1st squib) system fault 2 (or ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for power supply circuit (short-circuited to power supply)	P.52B-77
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B1413*3ground circuit (short-circuited to ground)B1413*3Passenger's (front) air bag module (1st squib) system fault for power supply circuit (short-circuited to power supply)	pen P.52B-90
power supply circuit (short-circuited to power supply)	P.52B-96
*4 Deserve we we (free st) ' 1 1 1 1 (4 ( ) 1 ' ' ' ' ' ' ' ' ' ' ' ' ' '	P.52B-102
B1414 <sup>*4</sup> Passenger's (front) air bag module (1st squib ignition drive circu system detected short circuit	lit) P.52B-67
B1415 <sup>*4</sup> Passenger's (front) air bag module (1st squib ignition drive circu system detected open circuit	lit) P.52B-67
B1416 <sup>*4</sup> Front impact sensor (LH) system for fault 1	P.52B-70
B1417 <sup>*3</sup> Front impact sensor (LH) power supply circuit system	P.52B-108
B1418 <sup>*3</sup> Front impact sensor (LH) (squib) for power supply circuit	P.52B-113
B1419 <sup>*3</sup> Front impact sensor (LH) (squib) for communication system	P.52B-113

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DIAGNOSTIC TROUBLE CODE NO.	INSPECTION ITEM	REFERENCE PAGE
B1420 <sup>*3</sup>	Side-airbag module (RH) (squib) system fault 1 (short circuit between terminals of the squib circuit)	P.52B-117
B1421 <sup>*3</sup>	Side-airbag module (RH) (squib) system fault 2 (open in the squib circuit)	P.52B-125
B1422 <sup>*3</sup>	Side-airbag module (RH) (squib) system fault ground circuit (short-circuited to ground)	P.52B-129
B1423 <sup>*3</sup>	Side-airbag module (RH) (squib) system fault power supply circuit (short-circuited to power supply)	P.52B-135
B1424 <sup>*4</sup>	Side-airbag module (RH) (squib) system detected short circuit	P.52B-67
B1425 <sup>*4</sup>	Side-airbag module (RH) (squib) system detected open circuit	P.52B-67
B1426 <sup>*4</sup>	Side impact sensor (RH) system for fault 1	P.52B-140
B1427 <sup>*3</sup>	Side impact sensor (RH) power supply circuit system	P.52B-142
B1428 <sup>*3</sup>	Side impact sensor (RH) (squib) for power supply circuit	P.52B-145
B1429 <sup>*3</sup>	Side impact sensor (RH) (squib) for communication system	P.52B-145
B1430 <sup>*3</sup>	Side-airbag module (LH) (squib) system fault 1 (short circuit between terminals of the squib circuit)	P.52B-150
B1431 <sup>*3</sup>	Side-airbag module (LH) (squib) system fault 2 (open in the squib circuit)	P.52B-157
B1432 <sup>*3</sup>	Side-airbag module (LH) (squib) system fault ground circuit (short-circuited to ground)	P.52B-161
B1433 <sup>*3</sup>	Side-airbag module (LH) (squib) system fault power supply circuit (short-circuited to power supply)	P.52B-167
B1434 <sup>*4</sup>	Side-airbag module (LH) (squib) system fault 3 for ignition drive circuit	P.52B-67
B1435 <sup>*4</sup>	Side-airbag module (LH) (squib) system fault 4 for ignition drive circuit	P.52B-67
B1436 <sup>*4</sup>	Side impact sensor (LH) system for fault 1	P.52B-140
B1437 <sup>*3</sup>	Side impact sensor (LH) power supply circuit system	P.52B-172
B1438 <sup>*3</sup>	Side impact sensor (LH) (squib) for power supply circuit	P.52B-175
B1439 <sup>*3</sup>	Side impact sensor (LH) (squib) for communication system	P.52B-175
B1440 <sup>*3</sup>	Curtain air bag module (RH) (squib) system fault 1 (short circuit between terminals of the squib circuit)	P.52B-180
B1441 <sup>*3</sup>	Curtain air bag module (RH) (squib) system fault 2 (open in the squib circuit)	P.52B-187
B1442 <sup>*3</sup>	Curtain air bag module (RH) (squib) system fault ground circuit (short-circuited to ground)	P.52B-193
B1443 <sup>*3</sup>	Curtain air bag module (RH) (squib) system fault power supply circuit (short-circuited to power supply)	P.52B-199
B1444 <sup>*4</sup>	Curtain air bag module (RH) (squib) system detected short circuit	P.52B-67
B1445 <sup>*4</sup>	Curtain air bag module (RH) (squib) system detected open circuit	P.52B-67

DIAGNOSTIC TROUBLE CODE NO.		REFERENCE PAGE
B1450 <sup>*3</sup>	Curtain air bag module (LH) (squib) system fault 1 (short circuit between terminals of the squib circuit)	P.52B-199
B1451 <sup>*3</sup>	Curtain air bag module (LH) (squib) system fault 2 (open in the squib circuit)	P.52B-212
B1452 <sup>*3</sup>	Curtain air bag module (LH) (squib) system fault ground circuit (short-circuited to ground)	P.52B-218
B1453 <sup>*3</sup>	Curtain air bag module (LH) (squib) system fault power supply circuit (short-circuited to power supply)	P.52B-224
B1454 <sup>*4</sup>	Curtain air bag module (LH) (squib) system detected short circuit	P.52B-67
B1455 <sup>*4</sup>	Curtain air bag module (LH) (squib) system detected open circuit	P.52B-67
B1460 <sup>*3</sup>	Seat belt pre-tensioner (RH) (squib) system fault 1 (short circuit between terminals of the squib circuit)	P.52B-230
B1461 <sup>*3</sup>	Seat belt pre-tensioner (RH) (squib) system fault 2 (open in the squib circuit)	P.52B-237
B1462 <sup>*3</sup>	Seat belt pre-tensioner (RH) (squib) system fault for ground circuit (short-circuit to ground)	P.52B-243
B1463 <sup>*3</sup>	Seat belt pre-tensioner (RH) (squib) system fault for power supply circuit (short-circuited to power supply)	P.52B-249
B1464 <sup>*4</sup>	Seat belt pre-tensioner (RH) (squib ignition drive circuit) system detected short circuit	P.52B-67
B1465 <sup>*4</sup>	Seat belt pre-tensioner (RH) (squib ignition drive circuit) system detected open circuit	P.52B-67
B1466 <sup>*4</sup>	Analog G-sensor system in the SRS-ECU	P.52B-67
B1467 <sup>*4</sup>	Safing G-sensor open circuit	P.52B-67
B1468 <sup>*4</sup>	Safing G-sensor short circuit	P.52B-67
B1469 <sup>*4</sup>	Safing G-sensor for side air bag faults	P.52B-67
B1470 <sup>*3</sup>	Seat belt pre-tensioner (LH) (squib) system fault1 (short circuit between terminals of the squib circuit)	P.52B-255
B1471 <sup>*3</sup>	Seat belt pre-tensioner (LH) (squib) system fault 2 (open in the squib circuit)	P.52B-262
B1472 <sup>*3</sup>	Seat belt pre-tensioner (LH) (squib) system fault for ground circuit (short-circuit to ground)	P.52B-268
B1473 <sup>*3</sup>	Seat belt pre-tensioner (LH) (squib) system fault for power supply circuit (short-circuited to power supply)	P.52B-274
B1474 <sup>*4</sup>	Seat belt pre-tensioner (LH) (squib ignition drive circuit) system detected short circuit	P.52B-67
B1475 <sup>*4</sup>	Seat belt pre-tensioner (LH) (squib ignition drive circuit) system detected open circuit	P.52B-67
B1476 <sup>*2</sup>	IG1 power supply circuit system (fuse No.3 circuit)	P.52B-280
B1477 <sup>*2</sup>	IG1 power supply circuit system (fuse No.2 circuit)	P.52B-280
B1478 <sup>*4</sup>	SRS-ECU capacitor circuit voltage too high	P.52B-67

DIAGNOSTIC TROUBLE CODE NO.	INSPECTION ITEM		REFERENCE PAGE
B1479 <sup>*4</sup>	SRS-ECU capacitor circuit voltage too low		P.52B-67
B1480 <sup>*3</sup>	Driver's air bag module (2nd squib) system fault 1 (short circuit between terminals of the squib circuit)		P.52B-38
B1481 <sup>*3</sup>	Driver's air bag module (2nd squib) system fault 2 (open in the squib circuit)		P.52B-48
B1482 <sup>*3</sup>	Driver's air bag module (2nd squib) system fault for ground circuit (short-circuited to ground)		P.52B-55
B1483 <sup>*3</sup>	Driver's air bag module (2nd squib) system fault for power supply circuit (Short-circuited to power supply)		P.52B-61
B1484 <sup>*4</sup>	Driver's air bag module (2nd squib ignition drive circuit) system detected short circuit		P.52B-67
B1485 <sup>*4</sup>	Driver's air bag module (2nd squib ignition drive circuit) system detected open circuit		P.52B-67
B1486 <sup>*4</sup>	Passenger seat belt warning light drive circuit system fault 2		P.52B-288
B1487 <sup>*3</sup>	Passenger seat belt warning light drive circuit system fault 1	Light does not illuminate <sup>*2</sup>	P.52B-291
		Light does not switch off	P.52B-299
B1488 <sup>*4</sup>	Passenger air bag OFF indicator lig	ght drive circuit system fault 2	P.52B-304
B1489 <sup>*3</sup>	Passenger air bag OFF indicator light drive circuit system fault 1	Light does not illuminate <sup>*2</sup>	P.52B-307
		Light does not switch off	P.52B-315
B1490 <sup>*3</sup>	Passenger's (front) air bag module (2nd squib) system fault 1 (short circuit between terminals of the squib circuit)		P.52B-81
B1491 <sup>*3</sup>	Passenger's (front) air bag module (2nd squib) system fault 2 (open in the squib circuit)		P.52B-90
B1492 <sup>*3</sup>	Passenger's (front) air bag module (2nd squib) system fault for ground circuit (short-circuited to ground)		P.52B-96
B1493 <sup>*3</sup>	Passenger's (front) air bag module (2nd squib) system fault for power supply circuit (short-circuited to power supply)		P.52B-102
B1494 <sup>*4</sup>	Passenger's (front) fir bag module (2nd squib ignition drive circuit) system detected short circuit		P.52B-67
B1495 <sup>*4</sup>	Passenger's (front) air bag module (2nd squib ignition drive circuit) system detected open circuit		P.52B-67
B1496 <sup>*4</sup>	SRS-ECU non-volatile memory (EEPROM <sup>*1</sup> )		P.52B-67
B1497 <sup>*4</sup>	SRS-ECU application specific integrated circuit (for frontal activation)		P.52B-67
B1498 <sup>*4</sup>	SRS-ECU ROM or RAM		P.52B-67
B1499 <sup>*4</sup>	SRS-ECU air bag condition monitor detects deployed air bag		P.52B-320
B1506 <sup>*3</sup>	Seat slide sensor system fault 1 (open in the seat slide sensor circuit)		P.52B-321
B1507 <sup>*3</sup>	Seat slide sensor system fault ground circuit (short-circuited to ground)		P.52B-325

DIAGNOSTIC TROUBLE CODE NO.		REFERENCE PAGE
B1508 <sup>*3</sup>	Seat slide sensor system fault power supply circuit (short-circuited to power supply)	P.52B-330
B1509 <sup>*2</sup>	Improper installation of SRS-ECU	P.52B-335
B1519 <sup>*3</sup>	Connector lock system detects connector unlocked	P.52B-336
B1520 <sup>*3</sup>	Seat belt switch (LH) malfunction	P.52B-341
B1521 <sup>*3</sup>	Seat belt switch (LH) circuit open (for Normal/Close terminal)	P.52B-341
B1522 <sup>*3</sup>	Seat belt switch (LH) circuit (ground side) shorted (for Normal/Close terminal)	P.52B-341
B1523 <sup>*3</sup>	Seat belt switch (LH) circuit (power supply side) shorted (for Normal/Close terminal)	P.52B-341
B1524 <sup>*3</sup>	Seat belt switch (LH) circuit open (for Normal/Open terminal)	P.52B-341
B1525 <sup>*3</sup>	Seat belt switch (LH) circuit (ground side) shorted (for Normal/Open terminal)	P.52B-341
B1526 <sup>*3</sup>	Seat belt switch (LH) circuit (power supply side) shorted (for Normal/Open terminal)	P.52B-341
B1527 <sup>*3</sup>	Seat belt switch (LH) circuit open (for common terminal)	P.52B-341
B1528 <sup>*3</sup>	Seat belt switch (LH) circuit (ground side) shorted (for common terminal )	P.52B-341
B1529 <sup>*3</sup>	Seat belt switch (LH) circuit (power supply side) shorted (for common terminal)	P.52B-341
B1530 <sup>*3</sup>	Seat belt switch (RH) malfunction	P.52B-350
B1531 <sup>*3</sup>	Seat belt switch (RH) circuit open (for Normal/Close terminal)	P.52B-350
B1532 <sup>*3</sup>	Seat belt switch (RH) circuit (ground side) shorted (for Normal/Close terminal)	P.52B-350
B1533 <sup>*3</sup>	Seat belt switch (RH) circuit (power supply side) shorted (for Normal/Close terminal)	P.52B-350
B1534 <sup>*3</sup>	Seat belt switch (RH) circuit open (for Normal/Open terminal)	P.52B-350
B1535 <sup>*3</sup>	Seat belt switch (RH) circuit (ground side) shorted (for Normal/Open terminal)	P.52B-350
B1536 <sup>*3</sup>	Seat belt switch (RH) circuit (power supply side) shorted (for Normal/Open terminal)	P.52B-350
B1537 <sup>*3</sup>	Seat belt switch (RH) circuit open (for common terminal)	P.52B-350
B1538 <sup>*3</sup>	Seat belt switch (RH) circuit (ground side) shorted (for common terminal)	P.52B-350
B1539 <sup>*3</sup>	Seat belt switch (RH) circuit (power supply side) shorted (for common terminal)	P.52B-350
B1540 <sup>*3</sup>	Occupant classification-ECU malfunction	P.52B-359
B1541 <sup>*3</sup>	Occupant classification-ECU calibration malfunction	P.52B-359
B1542 <sup>*3</sup>	Occupant classification sensor (S1) malfunction	P.52B-359

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

DIAGNOSTIC TROUBLE CODE NO.		REFERENCE PAGE
B1543 <sup>*3</sup>	Occupant classification sensor (S2) malfunction	P.52B-359
B1545 <sup>*3</sup>	Occupant classification-ECU for power supply circuit	P.52B-361
B1546 <sup>*3</sup>	Occupant classification-ECU for communication system	P.52B-361
B1548 <sup>*3</sup>	CAN communication impossible	P.52B-368
B1549 <sup>*3</sup>	CAN communication error	P.52B-368
B1552 <sup>*4</sup>	Changing circuit shorted	P.52B-67
B1553 <sup>*4</sup>	Changing circuit open	P.52B-67
B1554 <sup>*4</sup>	SG BY-PASS circuit malfunction	P.52B-67
B1555 <sup>*4</sup>	SG BY-PASS circuit (field effect transistor) open	P.52B-67
B1556 <sup>*3</sup>	Seat slide sensor system for fault 2 (malfunction of seat slide sensor)	P.52B-369
B1557 <sup>*4</sup>	SRS-ECU application specific integrated circuit	P.52B-67
B1558 <sup>*3</sup>	Occupant classification-ECU ID-cord malfunction	P.52B-359
U1073 <sup>*2</sup>	Bus-off	P.52B-371

NOTE: \*1: Electrically Erasable Programmable ROM

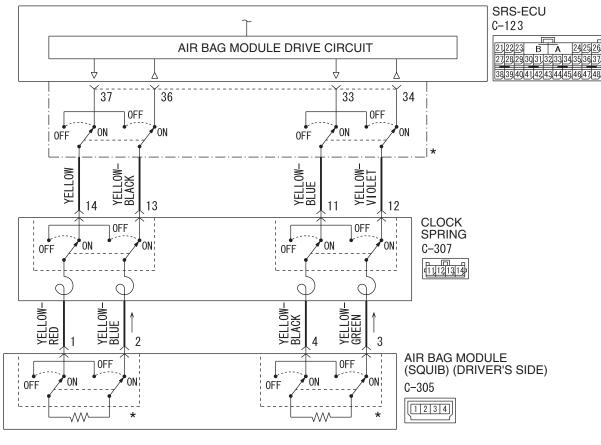
<sup>\*2</sup>: This DTC will remain in memory and the SRS warning light will be switched off when the system returns to normal condition.

<sup>\*3</sup>: This DTC will remain in memory and the SRS warning light will be switched on even if the system returns to normal condition.

<sup>\*4</sup>: This DTC cannot be erased by "Erase DTCs" function.

#### DIAGNOSTIC TROUBLE CODE PROCEDURES

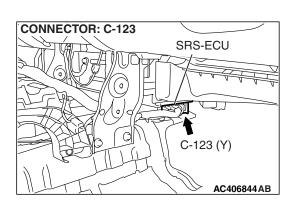
DTC B1400: Driver's Air Bag Module (1st Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit) DTC B1480: Driver's Air Bag Module (2nd Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)

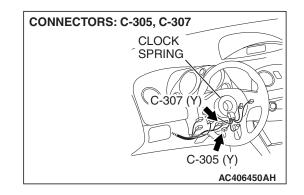


Driver's Air Bag Module (1st and 2nd Squib) Circuit

NOTE \*: CONNECTOR LOCK SWITCH ( CONNECTOR CONNECTED: ON CONNECTOR DISCONNECTED: OFF)

W6P52M002A





#### 

If DTC B1400 <1st squib> or B1480 <2nd squib> is set in the combination meter, always diagnose the CAN bus lines.

#### **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 sends 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 side air bag module (squib). The most likely causes for this code to be set are the followings:
  - 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 turned off (DTC will OK).

#### **TROUBLESHOOTING HINTS**

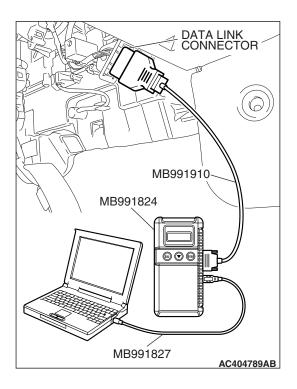
- Improper engaged connector or defective short spring\*
- Short circuit in the clock spring
- Short circuit between the driver's air bag module (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

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-123, C-305 or C-307 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness



### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO**: Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

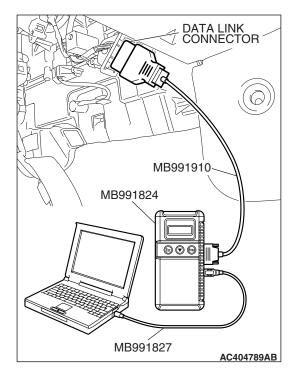
#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

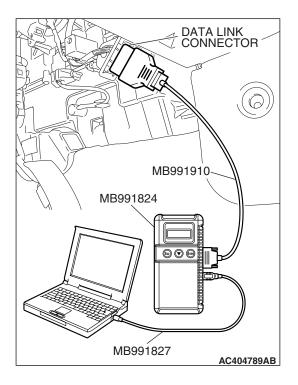
- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the DTC set?

- YES : Go to Step 3.
- **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

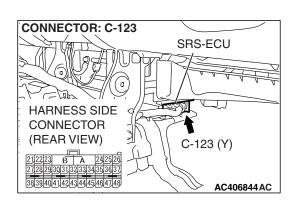


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### STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

- (1) Turn the ignition switch to the "ON" position.
- (2) Check if the DTC is set.
- (3) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is DTC B1519 set?
  - **YES :** Go to Step 4. **NO :** Go to Step 5.

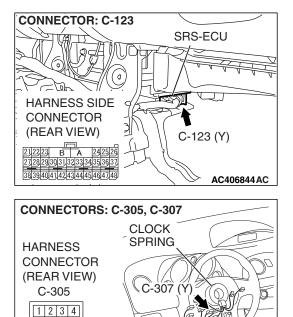


### STEP 4. Check SRS-ECU connector C-123. Q: Is the connector correctly engaged?

- YES : Go to Step 5.
- **NO:** Engage the connector correctly. Then go to Step 10.

C-307

11121314



C-305 (Y)

AC406450AI

#### STEP 5. Check SRS-ECU connector C-123, clock spring connector C-307 and driver's air bag module connector C-305. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-123, C-307 and C-305, 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 B1400 <1st squib> or B1480 <2nd squib> set?

- YES : Go to Step 6.
- NO: The procedure is complete. It is assumed that DTC B1400 <1st squib> or B1480 <2nd squib> set because connector C-123, C-307 or C-305 was engaged improperly.

### STEP 6. Check the driver's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Slide the outer housing of the clock spring side of driver's air bag module connector C-305 in the arrow direction shown, and disconnect the connector.

AC306561 AC MB991865 (DUMMY RESISTOR : 3Ω) (RESISTOR HARNESS) C-305 AIR BAG MODULE CONNECTOR AC306758AG

OUTER HOUSING OF THE DRIVER'S

AIR BAG MODULE CONNECTOR C-305

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

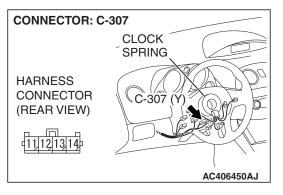
#### 

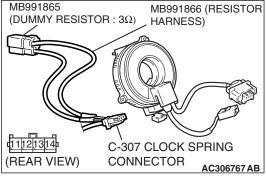
Do not insert a test probe into the terminal from its front side directly as the connector contact pressure may be weakened.

- (4) Insert special tool MB991866 into clock spring side of driver's air bag module connector C-305 (terminal No.1 and 2 <1st squib> or No.3 and 4 <2nd squib>) by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1400 <1st squib> or B1480 <2nd squib> set?
  - YES : Go to Step 7.
  - **NO**: Replace the driver's air bag module (Refer to P.52B-408). Then go to Step 10.

### STEP 7. 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-307.

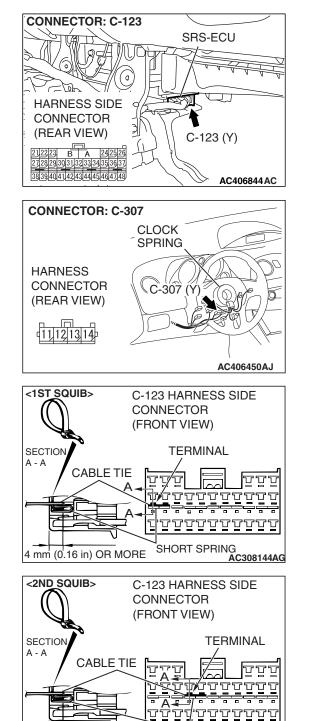




(3) Connect special tool MB991865 to special tool MB991866.

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-307 (terminal No.36 and 37 <1st squib> or No.34 and 35 <2nd squib>) by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1400 <1st squib> or B1480 <2nd squib> set?
  - YES : Go to Step 8.
  - **NO :** Replace the clock spring (Refer to P.52B-408). Then go to Step 10.



### STEP 8. Check the driver's air bag module circuit. Measure the resistance at SRS-ECU connector C-123.

(1) Disconnect SRS-ECU connector C-123.

#### A DANGER

# To prevent the air bag from deploying unintentionally, disconnect clock spring connector C-307 to short the squib circuit.

(2) Disconnect clock spring connector C-307.

#### 

## 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 36, 37 <1st squib> or 33, 34 <2nd squib> and the short spring to release the short spring.

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SHORT SPRING

AC308141AF

4 mm (0.16 in) OR MORE

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

#### <1ST SQUIB> C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 27282930313233344353637 3833404142434444546 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133334353637 3833404142434444546 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 2728293031333334353637 38334041424344445 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 2728293031333334353637 3833404142434445 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133334353637 383340414243445 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133334353637 272829303133334455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133334455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133333455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133333455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133333455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133333455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133333455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303133333455 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 27282930313333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 27282930313333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 27282930313333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 2728293031333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 2728293031333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 2728293031333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 272829303313333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 27282930331333345 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 212223

AC308145 AE

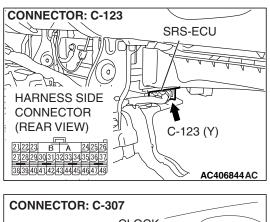
#### 

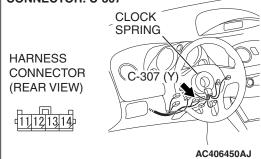
Do not insert a test probe into the terminal from its front side directly as the connector contact pressure may be weakened.

- (4) Check for continuity between C-123 harness side connector terminals 36 and 37 <1st squib> or 33 and 34 <2nd squib>. It should be open circuit.
- **Q: Does continuity exist?** 
  - **YES** : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1400 <1st squib> or B1480 <2nd squib> set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 10.
  - NO: Go to Step 9.

STEP 9. Check the harness for short circuit between SRS-ECU connector C-123 (terminal No.36 and 37 <1st squib> or No.33 and 34 <2nd squib>) and clock spring connector C-307 (terminal No.13 and 14 <1st squib> or No.11 and 12 <2nd squib>).

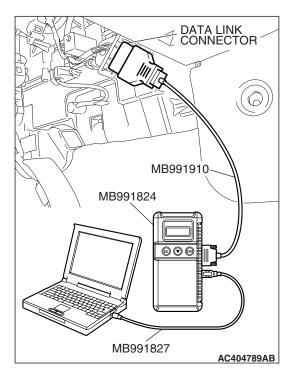
- Q: Are harness wires between SRS-ECU connector C-123 (terminal No.36 and 37 <1st squib> or No.33 and 34 <2nd squib>) and clock spring connector C-307 (terminal No.13 and 14 <1st squib> or No.11 and 12 <2nd squib>) in good condition?
  - YES : Go to Step 10.
  - **NO :** Replace the harness wires between SRS-ECU connector C-123 and clock spring connector C-307. Then go to Step 10.





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#### STEP 10. Recheck for diagnostic trouble code.

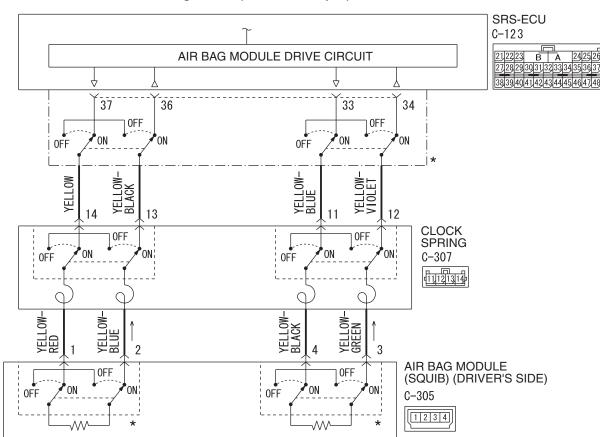
Check again if the DTC is set.

- (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 B1400 <1st squib> or B1480 <2nd squib> set?

- YES : Return to Step 1.
- **NO**: The procedure is complete.

#### DTC B1401: Driver's Air Bag Module (1st Squib) System Fault 2 (Open in the Squib Circuit) DTC B1481: Driver's Air Bag Module (2nd Squib) System Fault 2 (Open in the Squib Circuit)

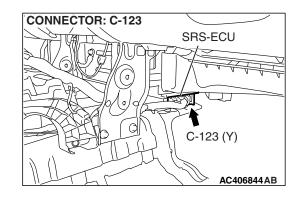


Driver's Air Bag Module (1st and 2nd Squib) Circuit

NOTE

\*: CONNECTOR LOCK SWITCH ( CONNECTOR CONNECTED: ON

(CONNECTOR DISCONNECTED: OFF)



#### 

If DTC B1401 <1st squib> or B1481 <2nd squib> is set in the SRS-ECU, always diagnose the CAN main bus line.

CONNECTORS: C-305, C-307 CLOCK SPRING C-307 (Y) C-305 (Y) AC406450AH

W6P52M002A

#### **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 sends 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 side air bag module (squib). The most likely causes for this code to be set are the followings:

- 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).

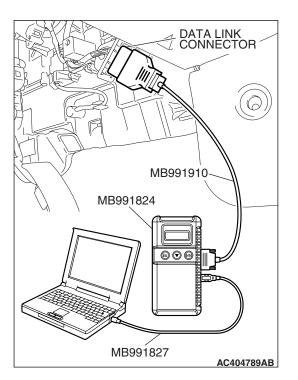
#### **TROUBLESHOOTING HINTS**

- 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 (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

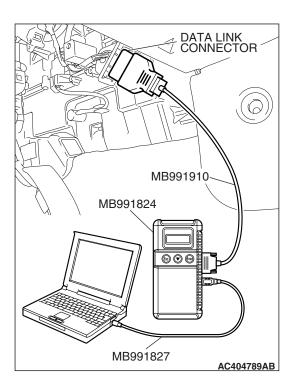
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### 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 the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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### STEP 3. Check the driver's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Slide the outer housing of the driver's air bag module connector C-305 in the arrow direction shown, and disconnect the connector.

AC306561 AC MB991865 (DUMMY RESISTOR : 3Ω) (RESISTOR HARNESS) (RESISTOR HARNESS)

OUTER HOUSING OF THE DRIVER'S

AIR BAG MODULE CONNECTOR C-305

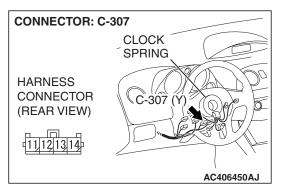
(3) Connect special tool MB991865 to special tool MB991866.

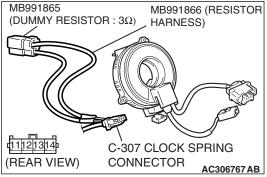
#### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (4) Insert special tool MB991866 into clock spring side of driver's air bag module connector C-305 (terminal No.1 and 2 <1st squib> or terminal No.3 and 4 <2nd squib>) by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1401 <1st squib> or B1481 <2nd squib> set?
  - YES : Go to Step 4.
  - **NO :** Replace the driver's air bag module (Refer to P.52B-408). Then go to Step 6.

### STEP 4. 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-307.





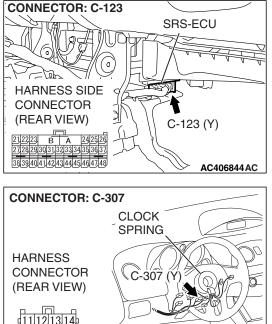
(3) Connect special tool MB991865 to special tool MB991866.

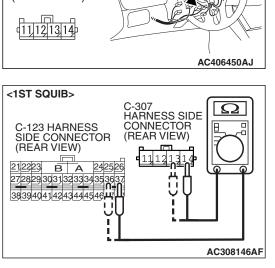
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

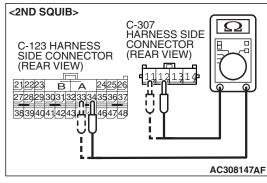
- (4) Insert special tool MB991866 into harness side of clock spring connector C-307 (terminal No.14 and 13 <1st squib> or terminal No.11 and 12 <2nd squib>) by backprobing.
   (5) Connect the pagetive better terminal
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1401 <1st squib> or B1481 <2nd squib> set?
  - YES : Go to Step 5.
  - **NO :** Replace the clock spring (Refer to P.52B-408). Then go to Step 6.

# STEP 5. Check the harness between the SRS-ECU connector C-123 (terminal No.11 and 12) and the clock spring connector C-307 (terminal No.3 and 4) for open circuit.

(1) Disconnect SRS-ECU connector C-123 and clock spring connector C-307.







#### 

#### 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.

#### <1st squib>

- SRS-ECU connector C-123 (terminal No.36) and the clock spring connector C-307 (terminal No.13)
- SRS-ECU connector C-123 (terminal No.37) and the clock spring connector C-307 (terminal No.14)

#### <2nd squib>

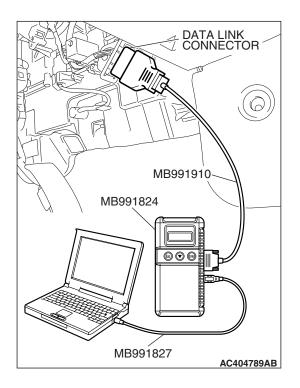
- SRS-ECU connector C-123 (terminal No.33) and the clock spring connector C-307 (terminal No.11)
- SRS-ECU connector C-123 (terminal No.34) and the clock spring connector C-307 (terminal No.12)

#### **Q: Does continuity exist?**

- **YES** : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1401 <1st squib> or B1481 <2nd squib> set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
- **NO :** Replace the harness wires between SRS-ECU connector C-123 and clock spring connector C-307. Then go to Step 6.

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



#### STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

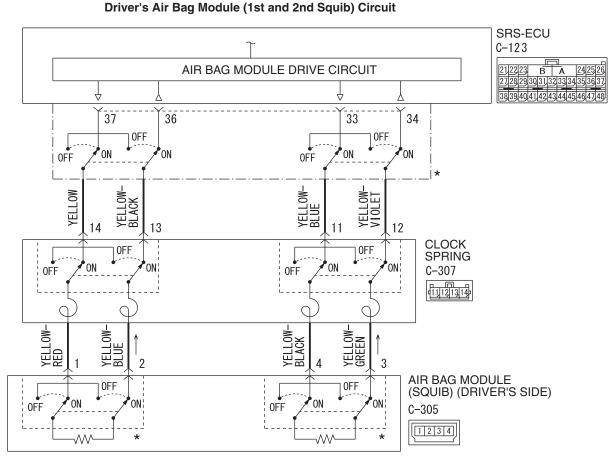
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1401 <1st squib> or B1481 <2nd squib> set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

DTC 1402: Driver's Air Bag Module (1st Squib) System Fault for Ground Circuit (Short-Circuited to Ground) DTC 1482: Driver's Air Bag Module (2nd Squib) System Fault for Ground Circuit (Short-Circuited to

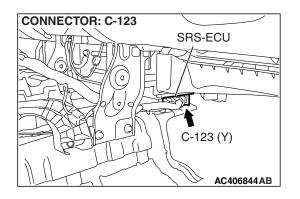
Ground)



NOTE

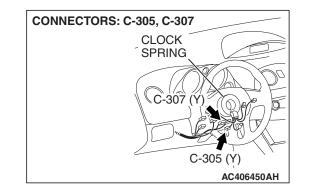
\*: CONNECTOR LOCK SWITCH (CONNECTOR CONNECTED: ON CONNECTOR DISCONNECTED: OFF)

W6P52M002A



#### 

If DTC B1402 <1st squib> or B1482 <2nd squib> is set in the SRS-ECU, always diagnose the CAN main bus line.



#### **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 sends 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 sent 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). However, if no DTC resets, the SRS warning light will be switched off (DTC will be retained).

#### **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:**

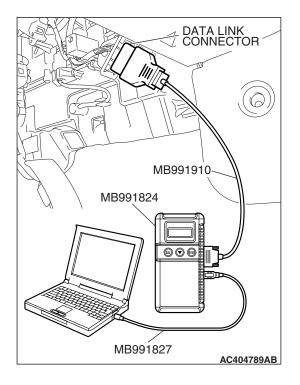
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

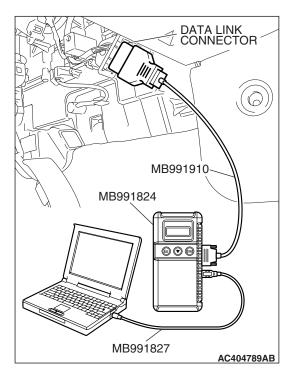
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



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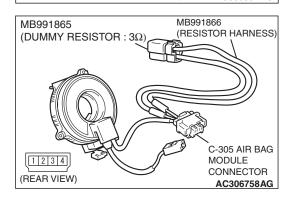


#### STEP 2. Recheck for diagnostic trouble code.

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 the DTC set?
  - YES : Go to Step 3.
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# OUTER HOUSING OF THE DRIVER'S AIR BAG MODULE CONNECTOR C-305



### STEP 3. Check the driver's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

(1) Disconnect the negative battery terminal.

(2) Slide the outer housing of the driver's air bag module connector C-305 in the arrow direction shown, and disconnect the connector.

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

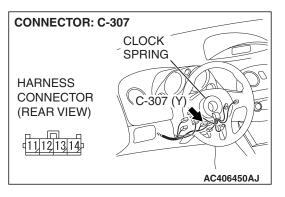
#### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

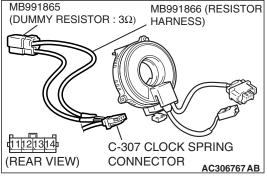
- (4) Insert special tool MB991866 into clock spring side air bag module connector C-305 (terminal No.1 and 2 <1st squib> or terminal No.3 and 4 <2nd squib>) by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1402 <1st squib> or B1482 <2nd squib> set? YES : Go to Step 4.
  - **NO :** Replace the driver's air bag module (Refer to P.52B-408). Then go to Step 7.

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### STEP 4. 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-307.

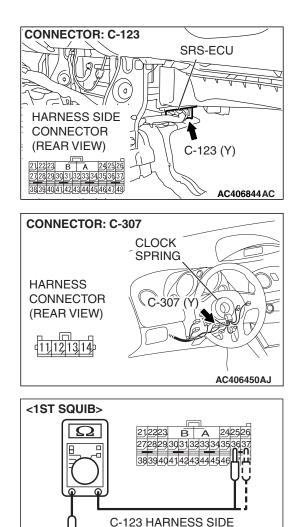




(3) Connect special tool MB991865 to special tool MB991866.

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-307 (terminal No.13 and 14 <1st squib> or terminal No. 11 and 12 <2nd squib>) by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1402 <1st squib> or B1482 <2nd squib> set?
  - YES : Go to Step 5.
  - **NO :** Replace the clock spring (Refer to P.52B-408). Then go to Step 7.



CONNECTOR (REAR VIEW)

B A 2728293031323334353637 383940414243

212223

C-123 HARNESS SIDE CONNECTOR (REAR VIEW)

<2ND SQUIB>

Ω

AC301591 AI

AC308149 AF

242526

464748

#### STEP 5. Check the driver's air bag module circuit. Measure the resistance at the SRS-ECU connector C-123.

(1) Disconnect SRS-ECU connector C-123.

#### A DANGER

#### To prevent the air bag from deploying unintentionally, disconnect the clock spring connector C-307 to short the squib circuit.

(2) Disconnect the clock spring connector C-307.

#### 

#### 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-123 harness side connector terminals 36 and 37 <1st squib> or 33 and 34 <2nd squib> and body ground.

It should be open circuit.

- **Q: Does continuity exist?** 
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1402 <1st squib> or B1482<2nd squib> sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Go to Step 7.

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STEP 6. Check the harness for short circuit to ground between SRS-ECU connector C-123 (terminal No.36 and 37 <1st squib> or terminal No.33 and 34 <2nd squib>) and clock spring connector C-307 (terminal No.13 and 14 or terminal No. 11 and 12 <2nd squib>).

- Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.36 and 37 <1st squib> or terminal No.33 and 34 <2nd squib>) and clock spring connector C-307 (terminal No.13 and 14 or terminal No. 11 and 12 <2nd squib>) in good condition?
  - YES : Go to Step 7.
  - **NO :** Replace the harness wires between SRS-ECU connector C-123 and clock spring connector C-307. Then go to Step 7.

## 

#### STEP 7. Recheck for diagnostic trouble code.

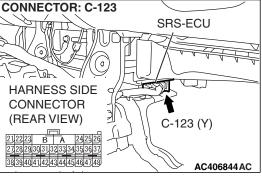
Check again if the DTC is set.

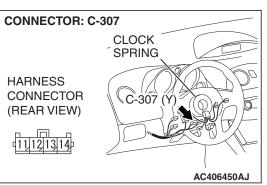
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1402 <1st squib> or B1482 <2nd squib> set?

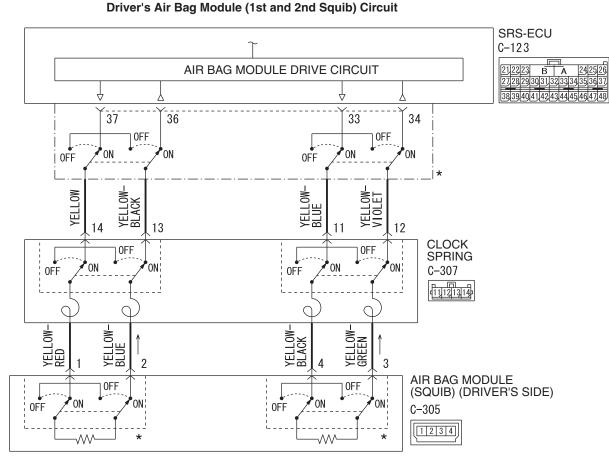
- YES : Return to Step 1.
- **NO**: The procedure is complete.

TSB F	Revision





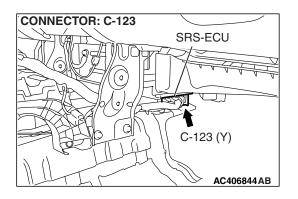
DTC B1403: Driver's Air Bag Module (1st Squib) System Fault for Power Supply Circuit (Short-Circuited to Power Supply) DTC B1483: Driver's Air Bag Module (2nd Squib) System Fault for Power Supply Circuit (Short-Circuited to Power Supply)



NOTE

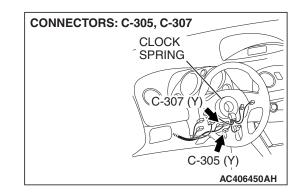
\*: CONNECTOR LOCK SWITCH (CONNECTOR CONNECTED: ON (CONNECTOR DISCONNECTED: OFF)

W6P52M002A



#### 

If DTC B1403<1st squib> or B1483 <2nd squib> is set in the SRS-ECU, always diagnose the CAN main bus line.



#### **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 sends 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). However, if no DTC resets, the SRS warning light will be switched off (DTC will be retained).

#### **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:**

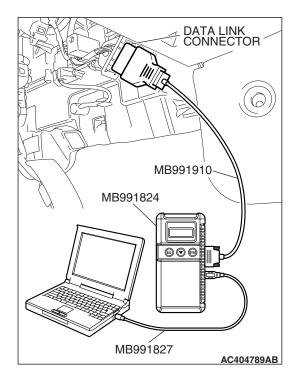
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

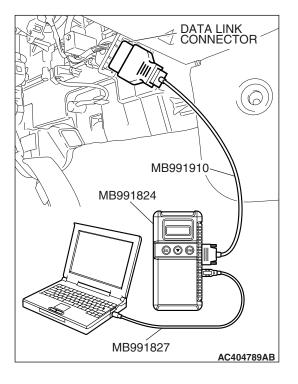
### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



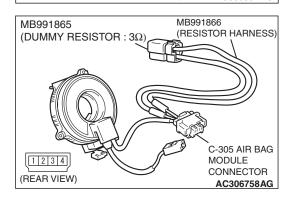


#### STEP 2. Recheck for diagnostic trouble code.

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 the DTC set?
  - YES : Go to Step 3.
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# OUTER HOUSING OF THE DRIVER'S AIR BAG MODULE CONNECTOR C-305



### STEP 3. Check the driver's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

(1) Disconnect the negative battery terminal.

(2) Slide the outer housing of the driver's air bag module connector C-305 in the arrow direction shown, and disconnect the connector.

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

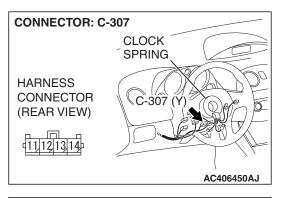
#### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

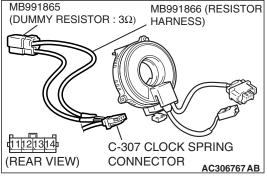
- (4) Insert special tool MB991866 into clock spring side air bag module connector C-305 (terminal No.1 and 2 <1st squib> or terminal No.3 and 4 <2nd squib>) by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1403 <1st squib> or B1483 <2nd squib> set? YES : Go to Step 4.
  - **NO :** Replace the driver's air bag module (Refer to P.52B-408). Then go to Step 7.

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### STEP 4. 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-307.

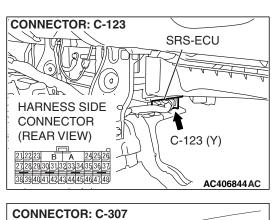


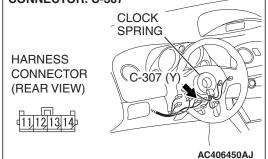


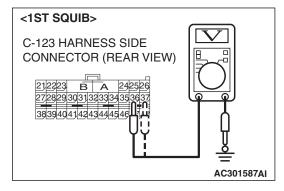
(3) Connect special tool MB991865 to special tool MB991866.

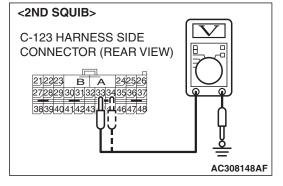
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (4) Insert special tool MB991866 into clock spring harness side connector C-307 (terminal No.13 and 14 <1st squib> or terminal No. 11 and 12 <2nd squib>) by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1403 <1st squib> or B1483 <2nd squib> set?
  - YES : Go to Step 5.
  - **NO :** Replace the clock spring (Refer to P.52B-408). Then go to Step 7.









### STEP 5. Check the driver's air bag module circuit. Measure the voltage at the SRS-ECU connector C-123.

(1) Disconnect SRS-ECU connector C-123.

#### A DANGER

#### To prevent the air bag from deploying unintentionally, disconnect the clock spring connector C-307 to short the squib circuit.

- (2) Disconnect the clock spring connector C-307.
- (3) Turn the ignition switch to the "ON" position.

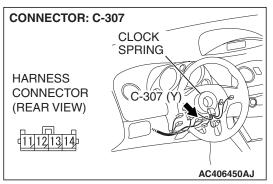
#### 

#### 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-123 harness side connector terminals 36 and 37 <1st squib> or 33 and 34
   <2nd squib> 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 B1403 <1st squib> or B1483 <2nd squib> sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 7.
  - NO: Go to Step 6.

	TSB	Revision	
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CONNECTOR: C-123 SRS-ECU WARNESS SIDE CONNECTOR (REAR VIEW) C-123 (Y) 212223 B A 242525 27292930312233343536877 383940414224344445464748 AC406844AC



STEP 6. Check the harness for short circuit to power supply between SRS-ECU connector C-123 (terminal No.36 and 37 <1st squib> or terminal No.33 and 34 <2nd squib>) and clock spring connector C-307 (terminal No.13 and 14 or terminal No. 11 and 12 <2nd squib>).

- Q: Are harness wires between the SRS-ECU connector C-123 (terminal No.36 and 37 <1st squib> or terminal No.33 and 34 <2nd squib>) and clock spring connector C-307 (terminal No.13 and 14 or terminal No. 11 and 12 <2nd squib>) in good condition?
  - YES : Go to Step 7.
  - **NO**: Replace the harness wires between SRS-ECU connector C-123 and clock spring connector C-307. Then go to Step 7.

# MB991910 MB991910 MB991920 MB991827 AC404789AB

#### 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 B1403 <1st squib> or B1483 <2nd squib> set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

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DTC B1404: Driver's Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Short Circuit DTC B1405: Driver's Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Open Circuit DTC B1414: Passenger's (Front) Air Bag Module (1st Squib Ignition Drive Circuit) System Detected Short Circuit DTC B1415: Passenger's (Front) Air Bag Module (1st Squib Ignition Drive Circuit) System Detected **Open Circuit** DTC B1424: Side-Airbag Module (RH) (Squib) System Detected Short Circuit DTC B1425: Side-Airbag Module (RH) (Squib) System Detected Open Circuit DTC B1434: Side-Airbag Module (LH) (Squib) System Fault 3 for Ignition Drive Circuit DTC B1435: Side-Airbag Module (LH) (Squib) System Fault 4 for Ignition Drive Circuit DTC B1444: Curtain air bag module (RH) (squib) system detected short circuit DTC B1445: Curtain air bag module (RH) (squib) system detected open circuit DTC B1454: Curtain air bag module (LH) (squib) system detected short circuit DTC B1455: Curtain air bag module (LH) (squib) system detected open circuit DTC B1464: Seat Belt Pre-tensioner (RH) (Squib Ignition Drive Circuit) System Detected Short Circuit DTC B1465: Seat Belt Pre-tensioner (RH) (Squib Ignition Drive Circuit) System Detected Open Circuit DTC B1466: Analog G-Sensor System in the SRS-ECU DTC B1467: Safing G-Sensor Open Circuit DTC B1468: Safing G-Sensor Short Circuit DTC B1469: Safing G-Sensor for Side Air Bag Faults DTC B1474: Seat Belt Pre-tensioner (LH) (Squib Ignition Drive Circuit) System Detected Short Circuit DTC B1475: Seat Belt Pre-tensioner (LH) (Squib Ignition Drive Circuit) System Detected Open Circuit DTC B1478: SRS-ECU Capacitor Circuit Voltage too High DTC B1479: SRS-ECU Capacitor Circuit Voltage too Low DTC B1484: Driver's Air Bag Module (2nd Squib Ignition Drive Circuit) System Detected Short Circuit DTC B1485: Driver's Air Bag Module (2nd Squib Ignition Drive Circuit) System Detected Open Circuit DTC B1494: Passenger's (Front) Air Bag Module (2nd Squib Ignition Drive Circuit) System Detected **Short Circuit** DTC B1495: Passenger's (Front) Air Bag Module (2nd Squib Ignition Drive Circuit) System Detected **Open Circuit** DTC B1496: SRS-ECU Non-Volatile Memory (EEPROM) DTC B1497: SRS-ECU Application Specific Integrated Circuit (for frontal activation) DTC B1498: SRS-ECU ROM or RAM DTC B1552: Changing Circuit Shorted DTC B1553: Changing Circuit Open DTC B1554: SG BY-PASS Circuit Malfunction DTC B1555: SG BY-PASS Circuit (Field Effect Transistor) Open DTC B1557: SRS-ECU Application Specific Integrated Circuit

If DTCs is set in the SRS-ECU, always diagnose the CAN main bus line.

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

#### 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.	PART/CIRCUIT INTEGRAL TO SRS-ECU	SYMPTOM
B1404	Driver's air bag module (1st squib	Short circuit in the squib ignition drive circuit
B1405	ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1414	Front passenger's air bag module	Short circuit in the squib ignition drive circuit
B1415	(1st squib ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1424	Side-airbag module (RH) (squib	Short circuit in the squib ignition drive circuit
B1425	ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1434	Side-airbag module (LH) (squib	Short circuit in the squib ignition drive circuit
B1435	ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1444	Curtain air bag module (RH)	Short circuit in the squib ignition drive circuit
B1445	(squib ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1454	Curtain air bag module (LH)	Short circuit in the squib ignition drive circuit
B1455	(squib ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1464	Seat belt pre-tensioner (RH)	Short circuit in the squib ignition drive circuit
B1465	(squib ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1466	Analog G-sensor	<ul> <li>When the analog G-sensor is not operating</li> <li>When the characteristics of the analog G-sensor are abnormal</li> <li>When the output from the analog G-sensor is abnormal</li> </ul>
B1467	Safing G-sensor (front air bag)	Open circuit in the safing G-sensor
B1468		Short circuit in the safing G-sensor
B1469	Safing G-sensor (side-airbag)	<ul> <li>When the safing G-sensor is not operating</li> <li>When the characteristics of the safing G-sensor are abnormal</li> <li>When the output from the safing G-sensor is abnormal</li> </ul>
B1474	Seat belt pre-tensioner (LH)	Short circuit in the squib ignition drive circuit
B1475	(squib ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1478	Capacitor	Voltage at the capacitor terminal is higher than the specified value for five seconds or more
B1479		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 set).
B1484	Driver's air bag module (2nd	Short circuit in the squib ignition drive circuit
B1485	squib ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1494	Front passenger's air bag module	Short circuit in the squib ignition drive circuit
B1495	(2nd squib ignition drive circuit)	Open circuit in the squib ignition drive circuit
B1496	Non-volatile memory (EEPROM)	When the non-volatile memory (EEPROM) are abnormal

CODE NO.	PART/CIRCUIT INTEGRAL TO SRS-ECU	SYMPTOM
B1497	Application specific integrated circuit (for frontal activation)	When the application specific integrated circuit (frontal activation) are abnormal
B1498	ROM or RAM	When the ROM or RAM are abnormal
B1552	Changing of Power Supply	Short circuit in the changing circuit
B1553		Open circuit in the changing circuit
B1554	SG-BYPASS	When the application specific integrated circuit (frontal activation) are abnormal
B1555		When the ROM or RAM are abnormal
B1557	Application specific integrated circuit	When the application specific integrated circuit are abnormal

#### DIAGNOSIS

#### **Required Special Tools:**

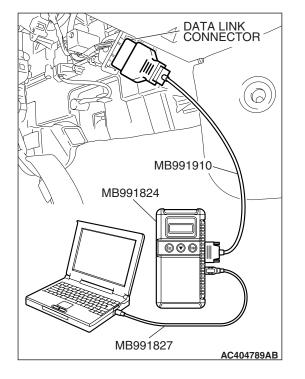
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A

### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

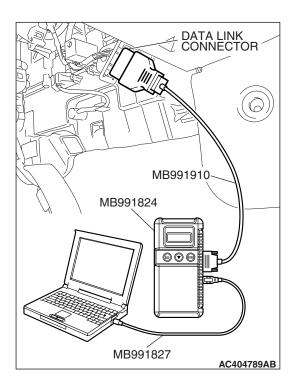
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



TSB Revision	
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#### 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 the DTCs set?
  - YES : Replace the SRS-ECU (Refer to P.52B-405).
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

#### DTC B1406: Front Impact Sensor (RH) System for Fault 1 DTC B1416: Front Impact Sensor (LH) System for Fault 1

#### 

If DTC B1406 or B1416 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### DTC SET CONDITIONS

These DTCs are set if the following conditions are detected from the analog G-sensor inside the front impact sensor output:

• Analog G-sensor is not operating.

- Analog G-sensor characteristics are abnormal.
- Analog G-sensor output is abnormal.

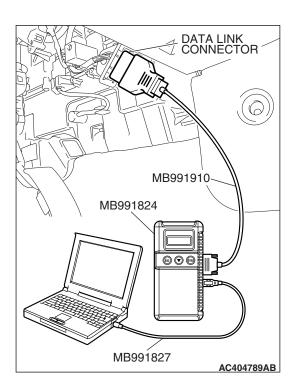
#### **TROUBLESHOOTING HINTS**

Malfunction of front impact sensor (RH) (for DTC B1406) and front impact sensor (LH) (for DTC B1416)

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

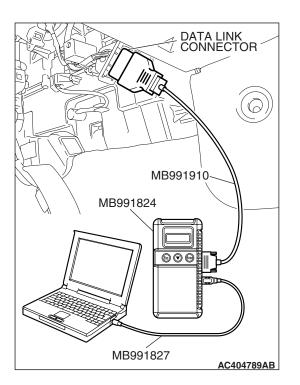
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### 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 the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB Revision	

### STEP 3. Check the front impact sensor. (Using scan tool MB991958, read the diagnostic trouble code.)

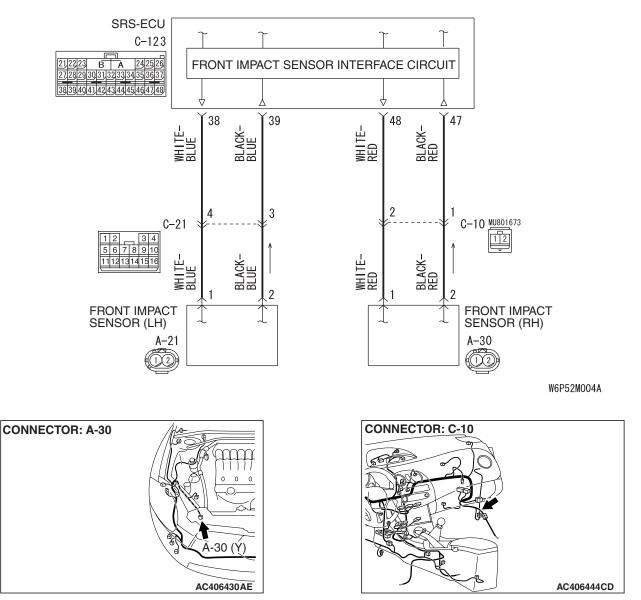
Replace front impact sensor (RH) and front impact sensor (LH) (for DTC B1416) (Refer to P.52B-402). Check the diagnostic trouble code.

#### Q: Is either DTC B1406 or B1416 set?

YES : Replace the SRS-ECU (Refer to P.52B-405).

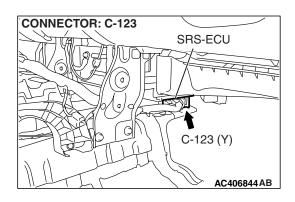
**NO**: The procedure is complete.

#### DTC B1407: Front Impact Sensor (RH) Power Supply Circuit System



Front Impact Sensor Circuit

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TSB Revision
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#### 

If DTC B1407 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

The front impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

#### **DTC SET CONDITIONS**

This DTC will set when the power supply voltage to the front impact sensor (RH) remains less than a predetermined value for five seconds. However, if the system returns to normal condition, code number B1407 will be erased automatically and the SRS warning light will go out.

#### **TROUBLESHOOTING HINTS**

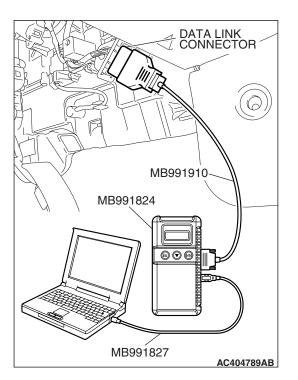
- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

TSB	Revision	
130	Revision	



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

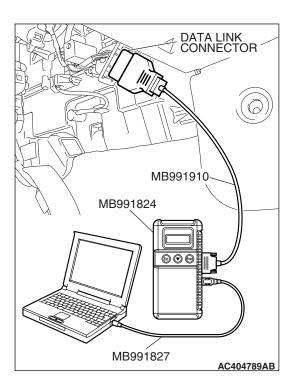
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### 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 the DTC set?

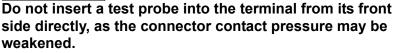
- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB Revision	

# STEP 3. Check the front impact sensor (RH) power supply circuit. Measure the voltage at the front impact sensor (RH) connector A-30.

- (1) Disconnect the negative battery terminal.
- (2) Disconnect front impact sensor (RH) connector A-30, and measure at the wiring harness side.
- (3) Connect the negative battery terminal.
- (4) Turn the ignition switch to the "ON" position.

#### 



(5) Measure the voltage between A-30 harness side connector terminal 1 and ground.

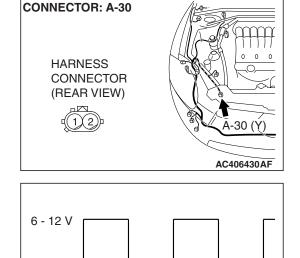
A wave pattern of oscilloscope iterates an amplitude of  $6-12 \mbox{ volts}.$ 

#### Q: Is the check result normal?

YES : Replace the front impact sensor (RH) (Refer to P.52B-402). Then go to Step 5.

NO: Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-123 (terminal No.47 and 48) and front impact sensor (RH) connector A-30 (terminal No.1 and 2).



1 S

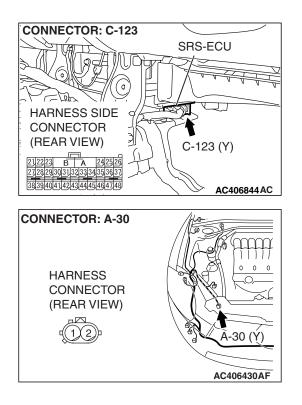
1 S

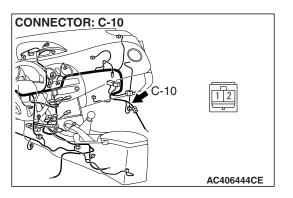
1 S

AC500074AB

1 V OR LESS

1 S





#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

NOTE: After inspecting intermediate connector C-10 inspect the wiring harness. If the intermediate connector C-10 is damaged, repair or replace it.

- Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.47 and 48) and front impact sensor (RH) connector A-30 (terminal No.1 and 2) in good condition?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1407 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO :** Replace the harness wires between SRS-ECU connector C-123 and front impact sensor (RH) connector A-30. Then go to Step 5.

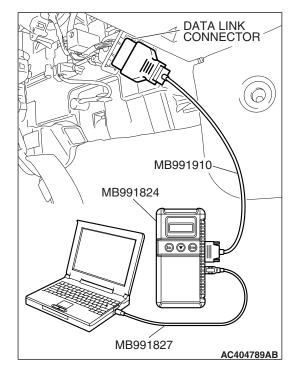
#### STEP 5. Recheck for diagnostic trouble code.

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.

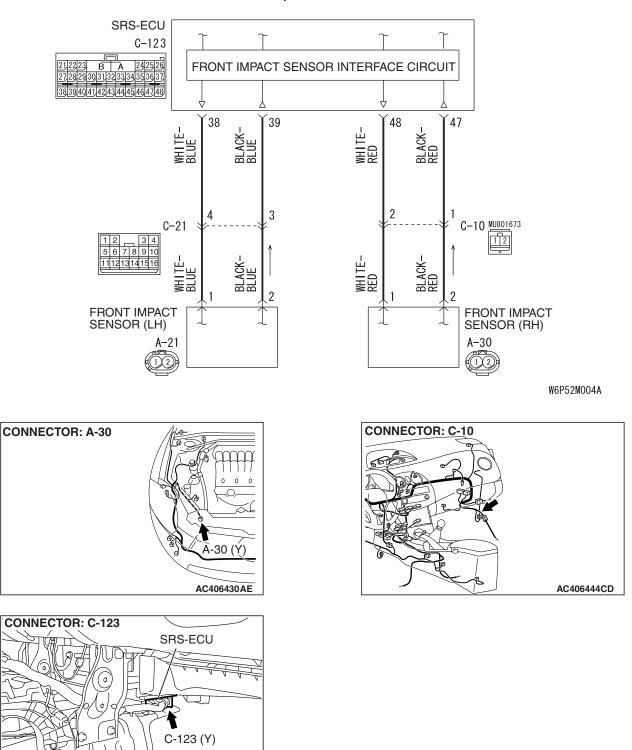
#### Q: Is DTC B1407 set?

- YES : Return to Step 1.
- NO: The procedure is complete.



<b>TSB</b> Revision	

## DTC B1408: Front Impact Sensor (RH) (Squib) for Power Supply Circuit DTC B1409: Front Impact Sensor (RH) (Squib) for Communication System



Front Impact Sensor Circuit

TSB	Revision	

AC406844AB

#### 

If DTC B1408 or B1409 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

The front impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

#### DTC SET CONDITIONS

These DTCs are set if communication between the front impact sensor (RH) and the SRS-ECU is not possible or faulty.

#### **TROUBLESHOOTING HINTS**

- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (RH)
- Malfunction of the SRS-ECU

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

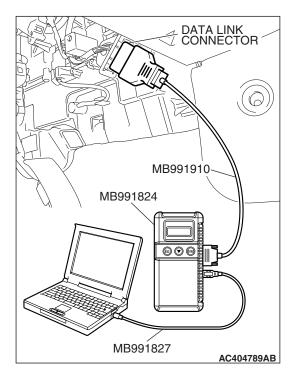
#### 

# 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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

DATA LINK CONNECTOR
МВ991910
МВ991824
MB991827 AC404789AB

<b>TSB Revis</b>	ion



#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

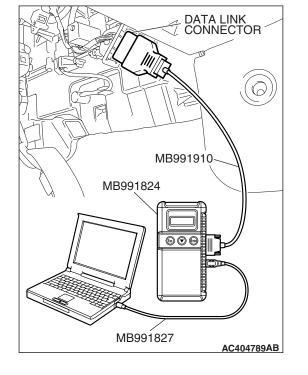
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check for any diagnostic trouble code. (Using scan tool MB991958, read the diagnostic trouble code.) Check the front impact sensor (RH).

- (1) Disconnect the negative battery terminal.
- (2) Temporarily replace the front impact sensor (RH) with the front impact sensor (LH).
- (3) Connect the negative battery terminal.
- (4) Erase diagnostic trouble code from memory, and check the diagnostic trouble code.

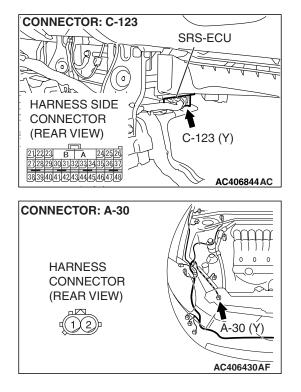
#### Q: Is DTC B1418 or B1419 set?

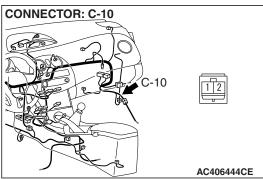
- **YES :** Replace the front impact sensor (RH) with a new one (Refer to P.52B-417). Then go to Step 5.
- NO: Go to Step 4.



TSB Revision
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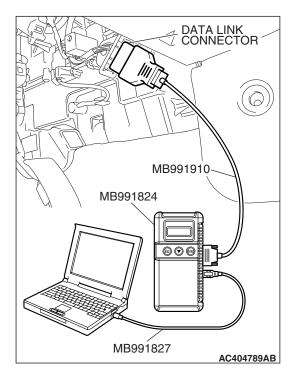
STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-123 (terminal No.47 and 48) and front impact sensor (RH) connector A-30 (terminal No.1 and 2).





NOTE: After inspecting intermediate connector C-10 inspect the wiring harness. If the intermediate connector C-10 is damaged, repair or replace it.

- Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.47 and 48) and front impact sensor (RH) connector A-30 (terminal No.1 and 2) in good condition?
  - YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1408 or B1409 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO**: Replace the harness wires between SRS-ECU connector C-123 and front impact sensor (RH) connector A-30. Then go to Step 5.



#### STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

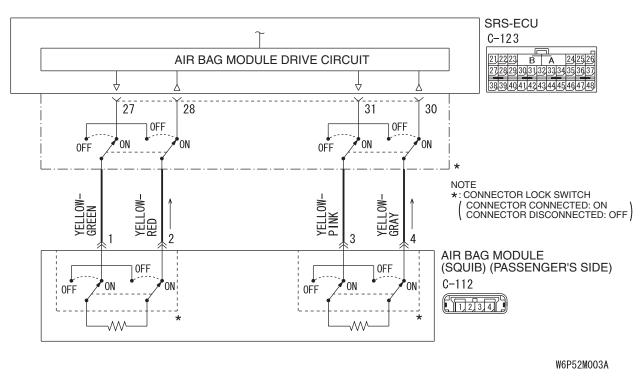
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1408 or B1409 set?

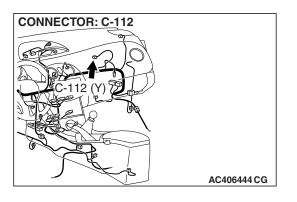
- YES : Return to Step 1.
- **NO :** The procedure is complete.

DTC B1410: Passenger's (Front) Air Bag Module (1st Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)

DTC B1490: Passenger's (Front) Air Bag Module (2nd Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)



#### Passenger's (Front) Air Bag Module (1st Squid and 2nd Squib) Circuit



#### 

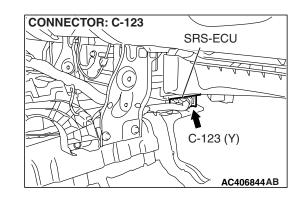
If DTC B1410 <1st squib> or B1490 <2nd squib> is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **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 sends 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 passenger's side air bag module (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).



#### TROUBLESHOOTING HINTS

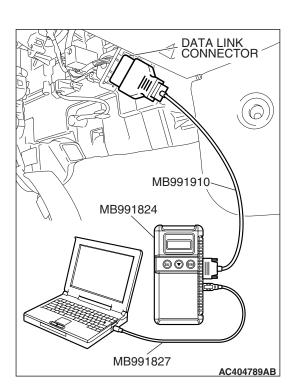
- Improper engaged connector or defective short spring\*
- Short circuit between the passenger's air bag module (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

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-112, C-123 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resister
- MB991866: Resister harness



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

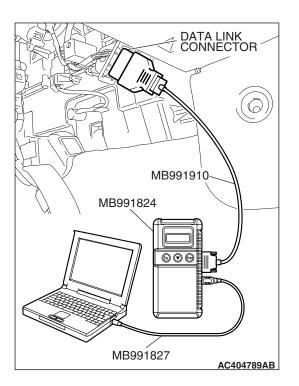
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

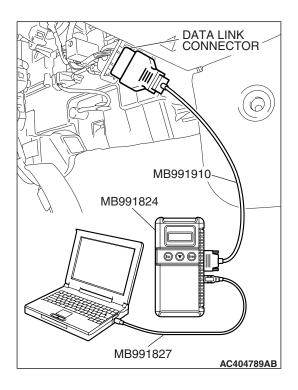
Check again if the DTC is set.

- (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 the DTC set?

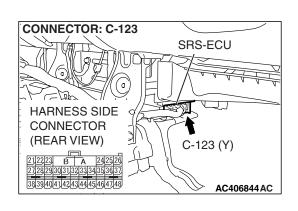
- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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### STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

- (1) Turn the ignition switch to the "ON" position.
- (2) Check if the DTC is set.
- (3) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is DTC B1519 set?
  - YES : Go to Step 4.
  - NO: Go to Step 5.

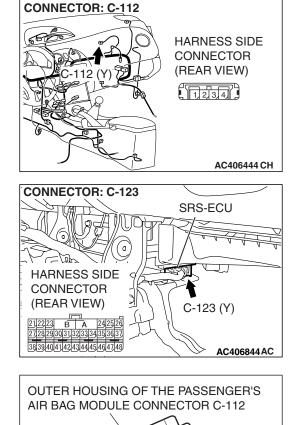


## STEP 4. Check SRS-ECU connector C-123. Q: Is the connector correctly engaged?

- YES : Go to Step 5.
- **NO :** Engage the connector correctly. Then go to Step 9.

# STEP 5. Check SRS-ECU connector C-123 and passenger's air bag module connector C-112. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-123 and C-112, and then reconnect them.

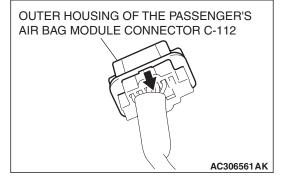


- (3) Slide the outer housing of passenger's air bag module connector C-112 in the arrow direction shown, and disconnect the connector.
- (4) Connect the negative battery terminal.
- (5) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1410 <1st squib> or B1490 <2nd squib> set?
  - YES : Go to Step 6.
  - **NO :** The procedure is complete. It is assumed that DTC B1410 <1st squib> or B1490 <2nd squib> set as connector C-123 or C-112 was engaged improperly.

AC306561AK

# STEP 6. Check the passenger's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the passenger's air bag module connector C-112.
- CONNECTOR: C-112 HARNESS SIDE CONNECTOR (REAR VIEW)



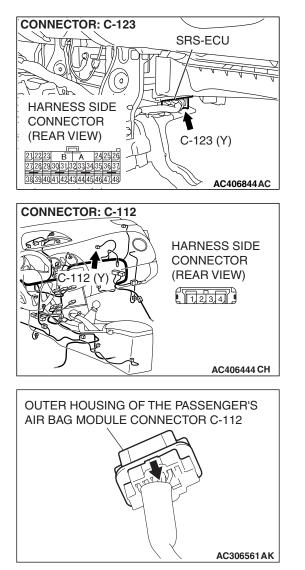
MB991865 (DUMMY RESISTOR : 3Ω)	
C-112 HARNESS CONNECTOR	
	/ MB991866 (RESISTOR HARNESS)
C-112 PASSENGER'S	(
AIR BAG MODULE	AC406876 AB

(3) Slide the outer housing of passenger's air bag module connector C-112 in the arrow direction shown, and disconnect the connector.

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

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

- (5) Insert special tool MB991866 into the harness side connector C-112 (terminal No.1 and 2 <1st squib> or terminal No.3 and 4 <2nd squib>) by backprobing.
- (6) Connect the negative battery terminal.
- (7) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1410 <1st squib> or B1490 <2nd squib> set? YES : Go to Step 7.
  - **NO :** Replace the passenger's air bag module (Refer to P.52B-408). Then go to Step 9.

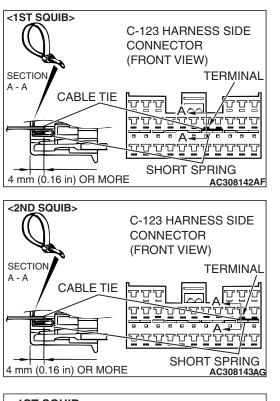


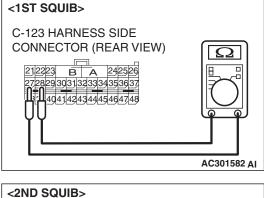
#### STEP 7. Check the passenger's air bag module circuit at SRS-ECU connector C-123.

(1) Disconnect SRS-ECU connector C-123.

#### **<u>A</u>** DANGER To prevent the air bag from deploying unintentionally, disconnect the passenger's air bag module connector C-112 to short the squib circuit.

- (2) Disconnect the passenger's air bag module connector C-112.
- (3) Slide the outer housing of driver's air bag module connector C-112 in the arrow direction shown, and disconnect the connector.





# C-123 HARNESS SIDE CONNECTOR (REAR VIEW)

#### 

# 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.

(4) Insert a cable tie [3 mm (0.12 inch) wide, 0.5 mm (0.02 inch) thick] between terminals 27 and 28 <1st squib> or 30 and 31 <2nd squib>, and the short spring to release the short spring.

#### 

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

 (5) Check for continuity between C-123 harness side connector terminals 27 and 28 <1st squib> or 30 and 31 <2nd squib>.
 It should be open circuit.

#### **Q: Does continuity exist?**

- YES : Go to Step 8.
- NO: Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1410 <1st squib> or B1490 <2nd squib> set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 9.

TSB Revision	
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STEP 8. Check the harness for short circuit between SRS-ECU connector C-123 (terminal No.27 and 28 <1st squib> or terminal No.30 and 31 <2nd squib>) and passenger's air bag module connector C-112 (terminal No.1 and 2 <1st squib> terminal No.4 and 3 <2nd squib>).

- Q: Are harness wires between SRS-ECU connector C-123 (terminal No.27 and 28 <1st squib> or terminal No.30 and 31 <2nd squib>) and passenger's air bag module connector C-112 (terminal No.1 and 2 <1st squib> terminal No.4 and 3 <2nd squib>) in good condition?
  - YES : Go to Step 9.
  - **NO**: Replace the harness wires between SRS-ECU connector C-123 and passenger's air bag module connector C-112. Then go to Step 9.

# MB991827 MB991827

CONNECTOR: C-112

CONNECTOR: C-123

HARNESS SIDE CONNECTOR (REAR VIEW)

212223 B A 242526 2728293031323334353637 3839404142434445464748 HARNESS SIDE

AC406444 CH

AC406844AC

CONNECTOR (REAR VIEW)

1234

SRS-ECU

C-123 (Y)

#### STEP 9. Check for diagnostic trouble code.

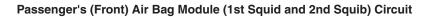
Check again if the DTC is set.

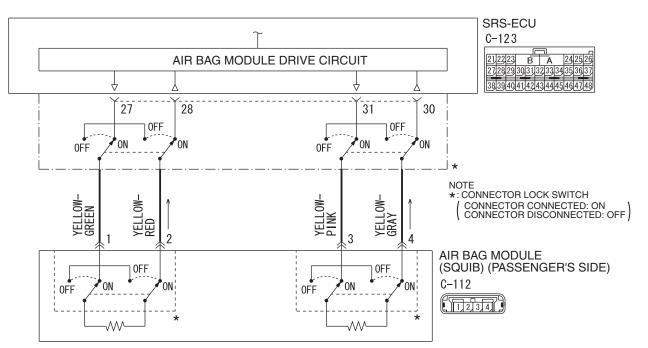
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1410 <1st squib> or B1490 <2nd squib> set?

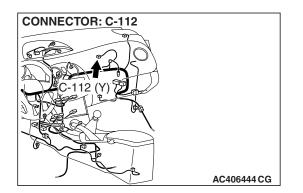
- YES : Return to Step 1.
- **NO :** The procedure is complete.

DTC B1411: Passenger's (Front) Air Bag Module (1st Squib) System Fault 2 (Open in the Squib Circuit) DTC B1491: Passenger's (Front) Air Bag Module (2nd Squib) System Fault 2 (Open in the Squib Circuit)





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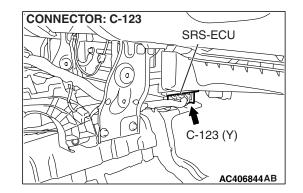


#### 

If DTC B1411 <1st squib> or B1491 <2nd squib> is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **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 sends 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 passenger's air bag module (squib). However, if no DTC reset, the SRS warning light will be switched off (DTC will be retained).

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#### **TROUBLESHOOTING HINTS**

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

#### DIAGNOSIS

#### **Required Special Tools:**

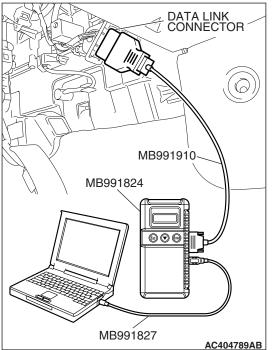
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resister
- MB991866: Resister harness

#### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

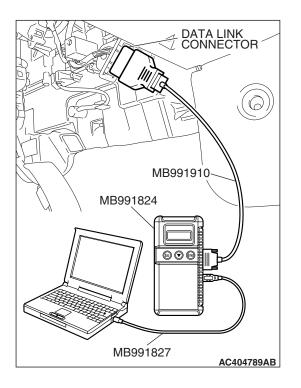
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES: Go to Step 2.
  - NO: Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



MB991910 MB991824



#### 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 the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check the passenger's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

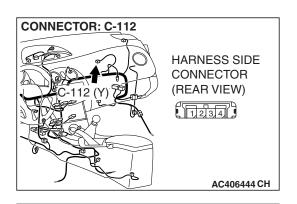
- (1) Disconnect the negative battery terminal.
- (2) Disconnect the passenger's air bag module connector C-112.

(3) Slide the outer housing of passenger's air bag module connector C-112 in the arrow direction shown, and disconnect the connector.

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

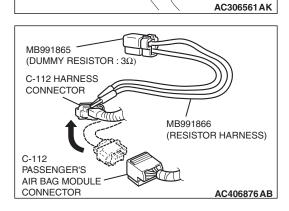
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (5) Insert special tool MB991866 into the harness side connector C-112 (terminal No.1 and 2 <1st squib> or terminal No.3 and 4 <2nd squib>) by backprobing.
- (6) Connect the negative battery terminal.
- (7) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1411 <1st squib> or B1491 <2nd squib> set? YES : Go to Step 4.
  - **NO :** Replace the passenger's air bag module (Refer to P.52B-408). Then go to Step 5.



OUTER HOUSING OF THE PASSENGER'S

AIR BAG MODULE CONNECTOR C-112



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CONNECTOR: C-112

STEP 4. Check the harness for open circuit between SRS-ECU connector C-123 (terminal No.27 and 28 <1st squib> or terminal No.30 and 31 <2nd squib>) and the passenger's air bag module connector C-112 (terminal No.1 and 2 <1st squib> or terminal No.4 and 3 <2nd squib>).

(1) Unclip passenger's air bag module connector C-112.

(2) Disconnect SRS-ECU connector C-123and passenger's air bag module connector C-112.

#### 

#### 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.

#### <1st squib>

- SRS-ECU connector C-123 (terminal No.27) and the passenger's air bag module connector C-112 (terminal No.1)
- SRS-ECU connector C-123 (terminal No.28) and the passenger's air bag module connector C-112 (terminal No.2)

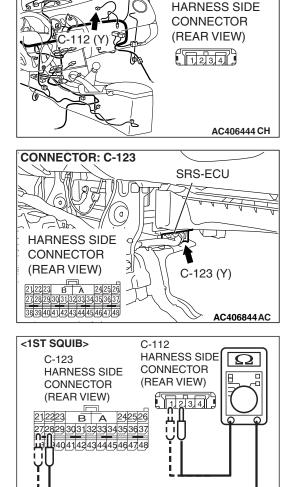
#### <2nd squib>

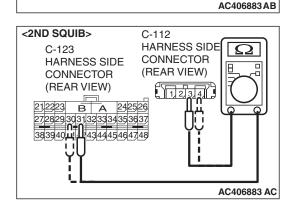
- SRS-ECU connector C-123 (terminal No.30) and the passenger's air bag module connector C-112 (terminal No.4)
- SRS-ECU connector C-123 (terminal No.31) and the passenger's air bag module connector C-112 (terminal No.3)

#### Q: Does continuity exist?

YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1411 <1st squib> or B1491 <2nd squib> set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.

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**NO :** Replace the harness wires between SRS-ECU connector C-123 and passenger's air bag module connector C-112. Then go to Step 5.

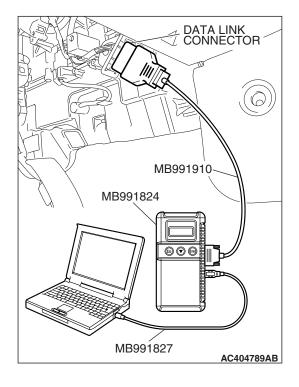
#### STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

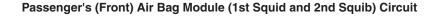
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

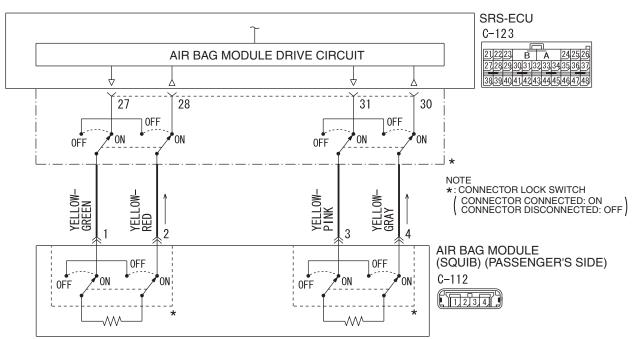
#### Q: Is DTC B1411 <1st squib> or B1491 <2nd squib> set?

- YES: Return to Step 1.
- **NO :** The procedure is complete.

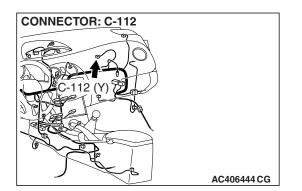


DTC B1412: Passenger's (Front) Air Bag Module (1st Squib) System Fault for Ground Circuit (Short-Circuited to Ground) DTC B1492: Passenger's (Front) Air Bag Module (2nd Squib) System Fault for Ground Circuit (Short-Circuited to Ground)





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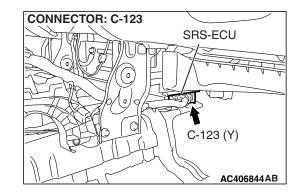


#### 

If DTC B1412 <1st squib> or B1492 <2nd squib> is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **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 sends 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 passenger's air bag module (squib). However, if no DTC resets, the SRS warning light will be switched off (DTC will be retained).

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**TSB** Revision

SUPPLEMENTAL RESTRAINT SYSTEM (SRS)
SRS AIR BAG DIAGNOSIS

#### TROUBLESHOOTING HINTS

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

#### DIAGNOSIS

#### **Required Special Tools:**

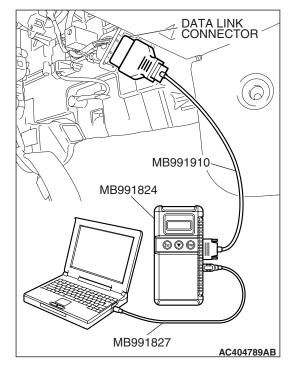
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

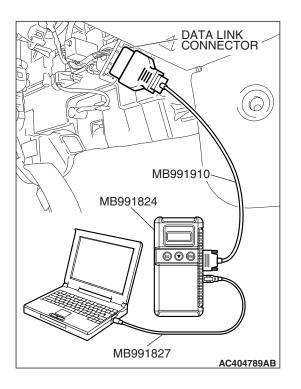
## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).





#### 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 the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check the passenger's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

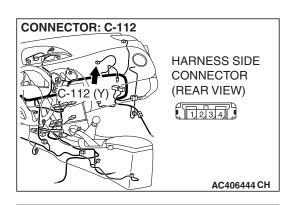
- (1) Disconnect the negative battery terminal.
- (2) Disconnect the passenger's air bag module connector C-112.

(3) Slide the outer housing of passenger's air bag module connector C-112 in the arrow direction shown, and disconnect the connector.

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

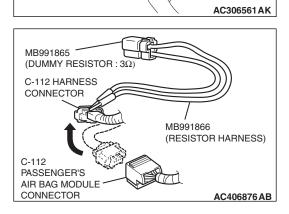
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (5) Insert special tool MB991866 into the harness side connector C-112 (terminal No.1 and 2 <1st squib> or terminal No.3 and 4 <2nd squib>) by backprobing.
- (6) Connect the negative battery terminal.
- (7) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1412 <1st squib> B1492 <2nd squib> set? YES : Go to Step 4.
  - **NO :** Replace the passenger's air bag module (Refer to P.52B-408). Then go to Step 6.



OUTER HOUSING OF THE PASSENGER'S

AIR BAG MODULE CONNECTOR C-112



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#### CONNECTOR: C-123 SRS-ECU D HARNESS SIDE CONNECTOR (REAR VIEW) C-123 (Y) B A 242526 3839404142434445464748 AC406844AC CONNECTOR: C-112 HARNESS SIDE CONNECTOR (REAR VIEW) 1234 AC406444 CH <1ST SQUIB> BA $\Omega$ 212223 242526 3293031323334353637 0414243444546474 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) AC301592 AI <2ND SQUIB> $\Omega$ 242526 212223 BA 31323334353637 383940 **H**434445464748 C-123 HARNESS SIDE CONNECTOR (REAR VIEW) AC308154AF

STEP 4. Check the passenger's air bag module circuit. Measure the resistance at the SRS-ECU connector C-123. (1) Disconnect SRS-ECU connector C-123.

#### A DANGER

#### To prevent the air bag from deploying unintentionally, disconnect the passenger's air bag module connector C-112 to short the squib circuit.

- (2) Unclip passenger's air bag module connector C-112.
- (3) Disconnect the passenger's air bag module connector C-112.

#### 

#### 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-123 harness side connector terminals 27 and 28 <1st squib> or 30 and 31 <2nd squib>, 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 B1412 <1st squib> B1492<2nd squib> sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.

TSB Revision	
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<2nd squib>). CONNECTOR: C-112 HARNESS SIDE CONNECTOR (REAR VIEW) condition? 1234 AC406444 CH CONNECTOR: C-123 SRS-ECU

דכ

AC406844 AC

AC404789AB

C-123 (Y)

ground between SRS-ECU connector C-123 (terminal No.27 and 28 <1st squib> or terminal No.30 and 31 <2nd squib>) and passenger's air bag module connector C-112 (terminal No.1 and 2 <1st squib> or terminal No.4 and 3 Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.27 and 28 <1st squib> or terminal

STEP 5. Check the harness wires for short circuit to

- No.30 and 31 <2nd squib>) and passenger's air bag module connector C-112 (terminal No.1 and 2 <1st squib> or terminal No.4 and 3 <2nd squib>) in good
- YES: Go to Step 6.
- NO: Replace the harness wires between SRS-ECU connector C-123 and passenger's air bag module connector C-112. Then go to Step 6.

# DATA LINK CONNECTOR MB991910-MB991824 $\odot \odot \odot$ - T

MB991827

- Dh

HARNESS SIDE CONNECTOR (REAR VIEW)

B A

3839404142434445464748

24252

#### STEP 6. Recheck for diagnostic trouble code.

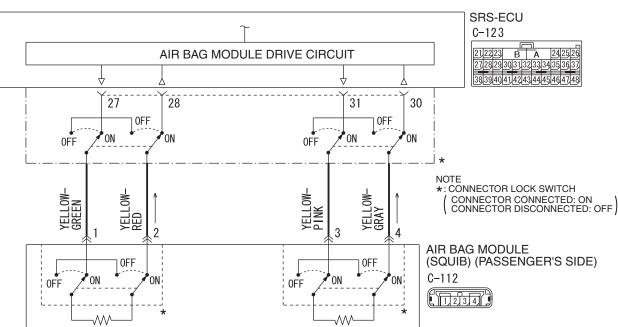
- Check again if the DTC is set.
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1412 <1st squib> B1492 <2nd squib> set?

- YES: Return to Step 1.
- **NO**: The procedure is complete.

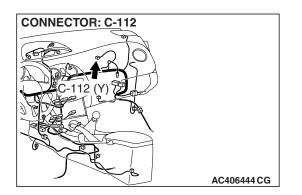
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DTC B1413: Passenger's (Front) Air Bag Module (1st Squib) System Fault for Power Supply Circuit (Short-Circuited to Power Supply) DTC B1493: Passenger's (Front) Air Bag Module (2nd Squib) System Fault for Power Supply Circuit (Short-Circuited to Power Supply)



Passenger's (Front) Air Bag Module (1st Squid and 2nd Squib) Circuit

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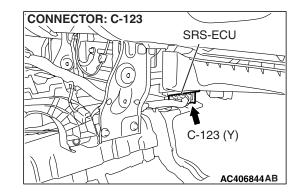


#### 

If DTC B1413 <1st squib> or B1493 <2nd squib> is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **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 sends 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 passenger's air bag module (squib). However, if no DTC resets, the SRS warning light will be switched off (DTC will be retained).

TSB Revision	

SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

#### **TROUBLESHOOTING HINTS**

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

52B-103

• Malfunction of the SRS-ECU

#### DIAGNOSIS

#### **Required Special Tools:**

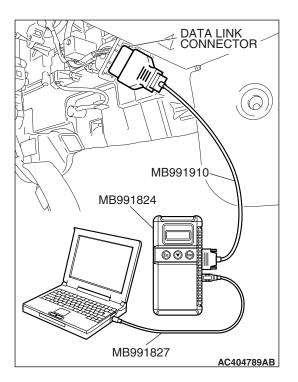
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

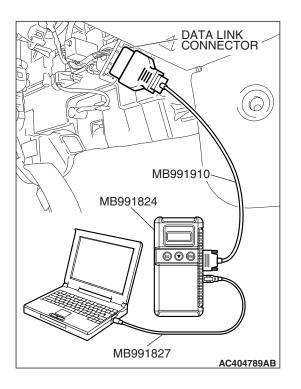
## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).





#### 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 the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check the passenger's air bag module. (Using scan tool MB991958, read the diagnostic trouble code.)

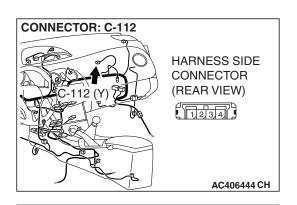
- (1) Disconnect the negative battery terminal.
- (2) Disconnect the passenger's air bag module connector C-112.

(3) Slide the outer housing of passenger's air bag module connector C-112 in the arrow direction shown, and disconnect the connector.

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

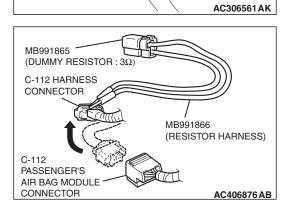
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (5) Insert special tool MB991866 into the harness side connector C-112 (terminal No.1 and 2 <1st squib> or terminal No.3 and 4 <2nd squib>) by backprobing.
- (6) Connect the negative battery terminal.
- (7) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1413 <1st squib> B1493 <2nd squib> set? YES : Go to Step 4.
  - **NO :** Replace the passenger's air bag module (Refer to P.52B-408). Then go to Step 6.

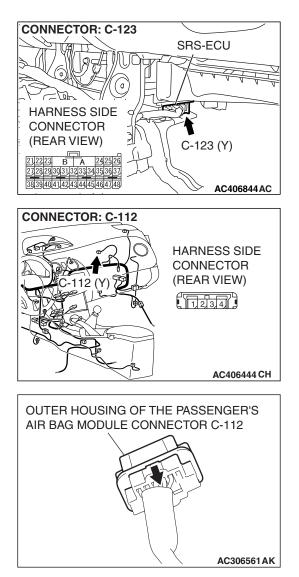


OUTER HOUSING OF THE PASSENGER'S

AIR BAG MODULE CONNECTOR C-112



<b>TSB</b>	Revision

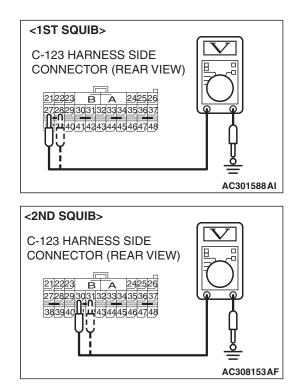


#### STEP 4. Check the passenger's air bag module circuit. Measure the voltage at the SRS-ECU connector C-123. (1) Disconnect SRS-ECU connector C-123.

#### A DANGER

# To prevent the air bag from deploying unintentionally, disconnect the passenger's air bag module connector C-112 to short the squib circuit.

- (2) Disconnect the passenger's air bag module connector C-112.
- (3) Slide the outer housing of passenger's air bag module connector C-112 in the arrow direction shown, and disconnect the connector.
- (4) Turn the ignition switch to the "ON" position.



#### 

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

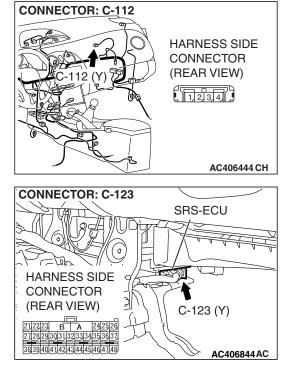
- (5) Measure the voltage between C-123 harness side connector terminals 27 and 28 <1st squib> or 30 and 31
   <2nd squib> and body ground. Voltage should measure 0 volt.
- Q: Is the measured voltage 0 volt?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1413 <1st squib> B1493 <2nd squib> sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Go to Step 5.

STEP 5. Check the harness wires for short circuit to power supply between SRS-ECU connector C-123 (terminal No.27 and 28 <1st squib> or terminal No.30 and 31 <2nd squib>) and passenger's air bag module connector C-112 (terminal No.1 and 2 <1st squib> terminal No.4 and 3 <2nd squib>).

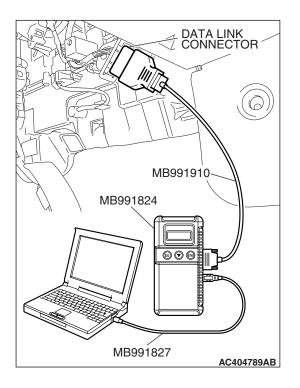
Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.27 and 28 <1st squib> or terminal No.30 and 31 <2nd squib>) and passenger's air bag module connector C-112 (terminal No.1 and 2 <1st squib> terminal No.4 and 3 <2nd squib>) in good condition?

YES : Go to Step 6.

**NO**: Replace the harness wires between SRS-ECU connector C-123 and passenger's air bag module connector C-112. Then go to Step 6.



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#### STEP 6. Recheck for diagnostic trouble code.

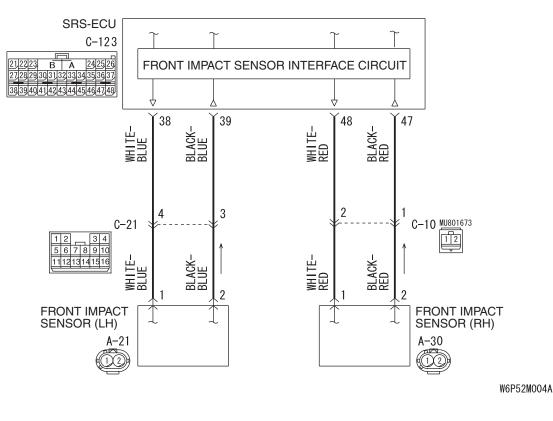
Check again if the DTC is set.

- (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.

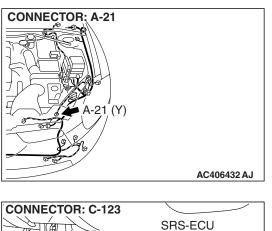
#### Q: Is DTC B1413 <1st squib> B1493 <2nd squib> set?

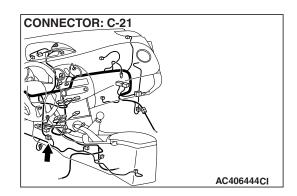
- YES : Return to Step 1.
- **NO**: The procedure is complete.

#### DTC B1417: Front Impact Sensor (LH) Power Supply Circuit System



#### Front Impact Sensor Circuit





# CONNECTOR: C-123 SRS-ECU

# 

If DTC B1417 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

The front impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

# DTC SET CONDITIONS

This DTC will set when the power supply voltage to the front impact sensor (LH) remains less than a predetermined value for five seconds. However, if the system returns to normal condition, code number B1417 will be erased automatically and the SRS warning light will go out.

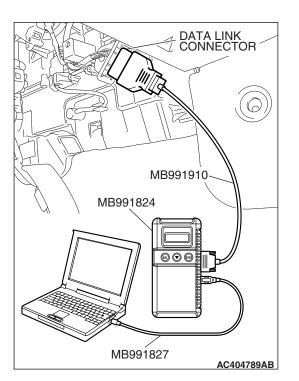
# **TROUBLESHOOTING HINTS**

- Damaged wiring harness or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

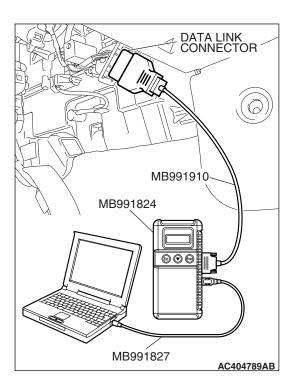
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# 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 the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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# STEP 3. Check the front impact sensor (LH) power supply circuit. Measure the voltage at the front impact sensor (LH) connector A-21.

- (1) Disconnect the negative battery terminal.
- (2) Disconnect front impact sensor (LH) connector A-21, and measure at the wiring harness side.
- (3) Connect the negative battery terminal.
- (4) Turn the ignition switch to the "ON" position.

# 

# 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 A-21 harness side connector terminal 1 and ground.

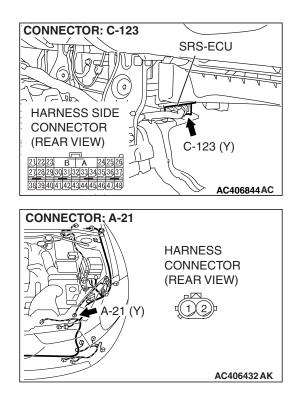
A wave pattern of oscilloscope iterates an amplitude of  $6-12 \mbox{ volts}.$ 

# Q: Is the check result normal?

YES : Replace the front impact sensor (LH) (Refer to P.52B-402). Then go to Step 5.

NO: Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-123 (terminal No.38 and 39) and front impact sensor (LH) connector A-21 (terminal No.1 and 2).



# 6 - 12 V

1 S

1 S

AC500074AB

1 S

HARNESS CONNECTOR

(REAR VIEW)

**CONNECTOR: A-21** 

OR LESS

1 S

-21 (Y)

# CONNECTOR: C-21

### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

NOTE: After inspecting intermediate connectors C-21 inspect the wiring harness. If the intermediate connectors C-21 is damaged, repair or replace it.

- Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.38 and 39) and front impact sensor (LH) connector A-21 (terminal No.1 and 2) in good condition?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1417 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO**: Replace the harness wires between SRS-ECU connector C-123 and front impact sensor (LH) connector A-21. Then go to Step 5.

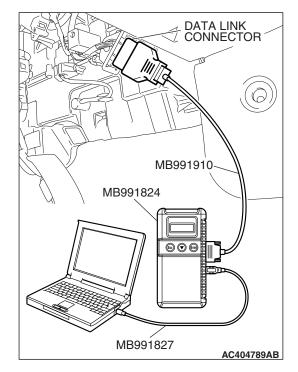
# STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

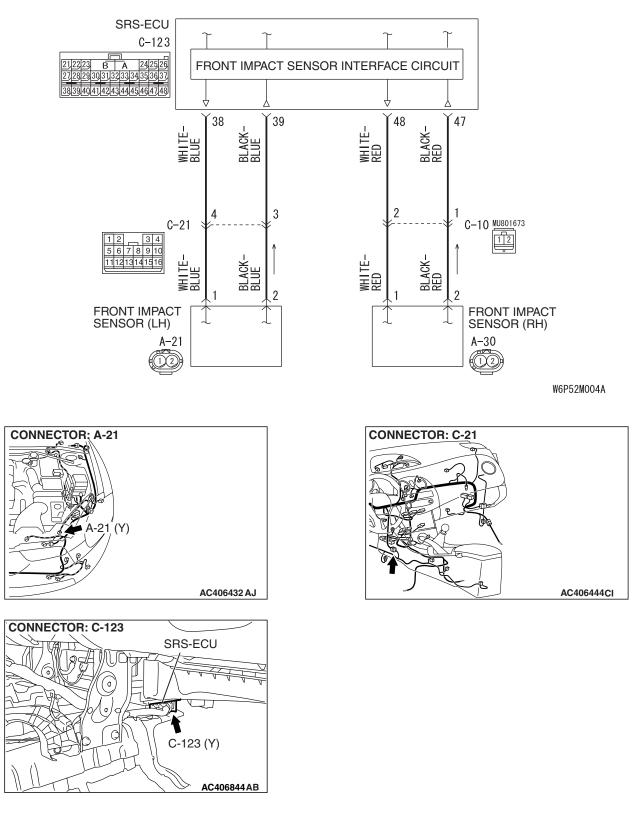
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1417 set?

- YES : Return to Step 1.
- NO: The procedure is complete.



# DTC B1418: Front Impact Sensor (LH) (Squib) for Power Supply Circuit DTC B1419: Front Impact Sensor (LH) (Squib) for Communication System



Front Impact Sensor Circuit

# 

If DTC B1418 or B1419 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

The front impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the front air bags should be deployed, it sends a fire signal to the SRS-ECU to deploy the front air bags. In addition, the CPU diagnoses the internal components of the front impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.

# DTC SET CONDITIONS

These DTCs are set if communication between the front impact sensor (LH) and the SRS-ECU is not possible or faulty.

# **TROUBLESHOOTING HINTS**

- Damaged wiring harnesses or connectors
- Malfunction of the front impact sensor (LH)
- Malfunction of the SRS-ECU

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

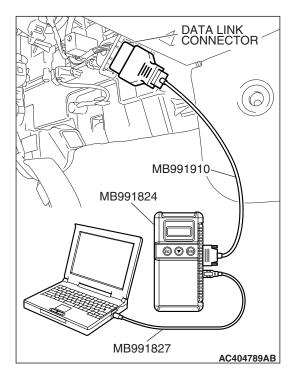
# 

# 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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

DATA LINK CONNECTOR
МВ991910
МВ991824
MB991827 AC404789AB

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# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

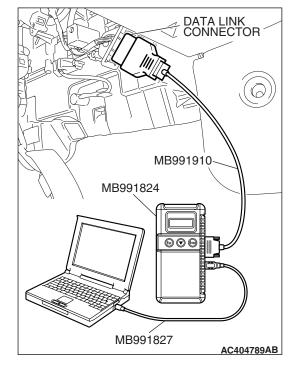
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check for any diagnostic trouble code. (Using scan tool MB991958, read the diagnostic trouble code.) Check the front impact sensor (LH).

- (1) Disconnect the negative battery terminal.
- (2) Temporarily replace the front impact sensor (LH) with the front impact sensor (RH).
- (3) Connect the negative battery terminal.
- (4) Erase diagnostic trouble code from memory, and check the diagnostic trouble code.

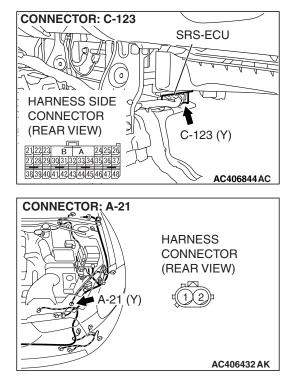
# Q: Is DTC B1408 or B1409 set?

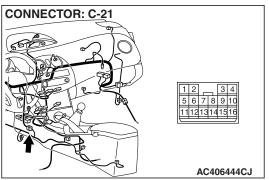
- **YES :** Replace the front impact sensor (LH) with a new one (Refer to P.52B-417). Then go to Step 5.
- NO: Go to Step 4.



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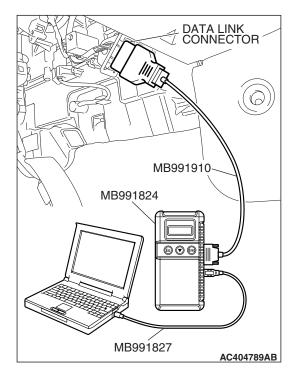
STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-123 (terminal No.38 and 39) and front impact sensor (LH) connector A-21 (terminal No.1 and 2).





NOTE: After inspecting intermediate connectors C-21 inspect the wiring harness. If the intermediate connectors C-21 is damaged, repair or replace it.

- Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.38 and 39) and front impact sensor (LH) connector A-21 (terminal No.1 and 2) in good condition?
  - YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1418 or B1419 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO**: Replace the harness wires between SRS-ECU connector C-123 and front impact sensor (LH) connector A-21. Then go to Step 5.



# STEP 5. Recheck for diagnostic trouble code.

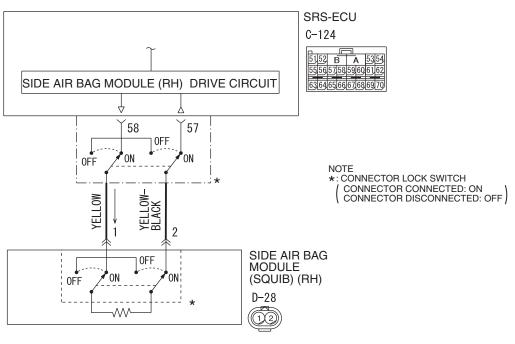
Check again if the DTC is set.

- (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 B1418 or B1419 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

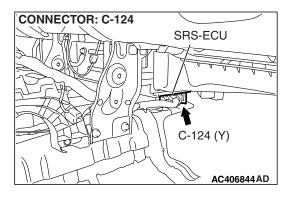
# DTC B1420: Side-Airbag Module (RH) (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)



### Side-Airbag Module (RH) (Squib) Circuit

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# 

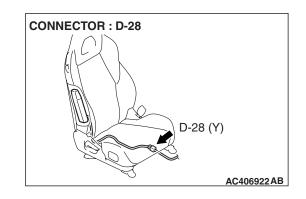
If DTC B1420 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.

# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (RH) (squib).



# **TROUBLESHOOTING HINTS**

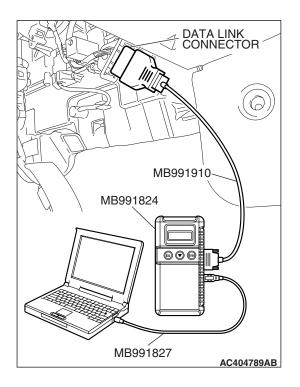
- Improper engaged connector or defective short spring\*
- Short between the side-airbag module (RH) (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

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-124 or D-28 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resister
- MB991866: Resister harness



# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO :** Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis P.54C-14).

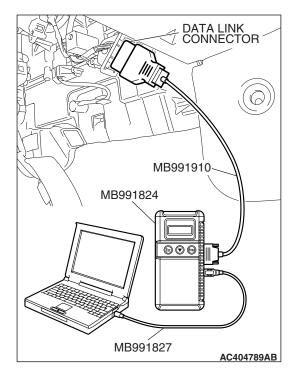
# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

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

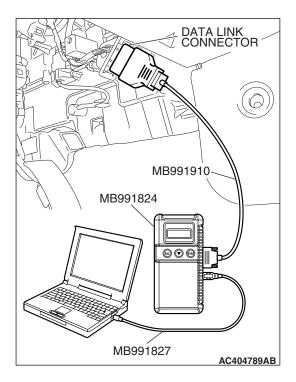
# Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



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### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

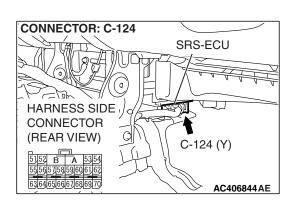
# 

# 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 "LOCK" (OFF) position.

# Q: Is DTC B1519 set?

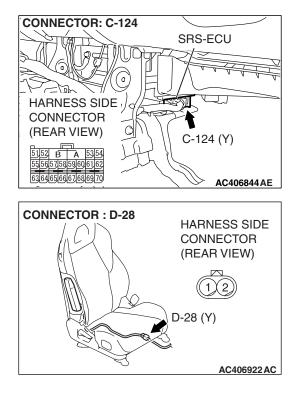
- YES : Go to Step 4.
- NO: Go to Step 5.



# STEP 4. Check SRS-ECU connector C-124. Q: Is the connector correctly engaged?

- YES : Go to Step 5.
- **NO :** Engage the connector correctly. Then go to Step 9.

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# STEP 5. Check SRS-ECU connector C-124 and side-airbag module (RH) connector D-28. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-124 and D-28, and then reconnect them.
- (3) Connect the negative battery terminal.
- (4) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

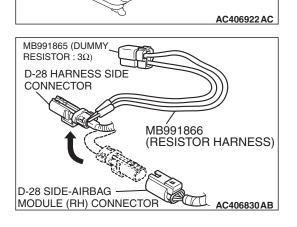
# Q: Is DTC B1420 out put?

- YES : Go to Step 6.
- **NO :** The procedure is complete. It is assumed that DTC B1420 set because connector C-124 or D-28 was engaged improperly.

**CONNECTOR : D-28** 

# STEP 6. Check the side-airbag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (RH) connector D-28.



HARNESS SIDE CONNECTOR (REAR VIEW)

D-28 (Y)

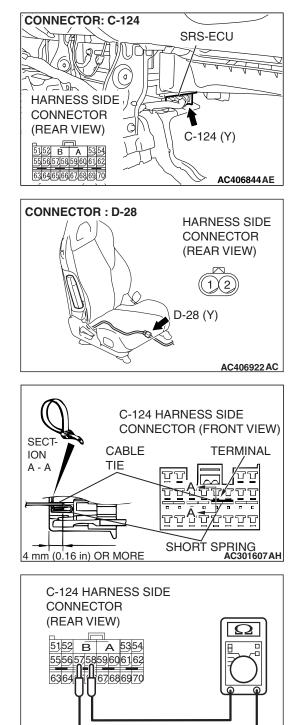
(3) Connect special tool MB991865 to special tool MB991866.

# 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 the D-28 harness side 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 B1420 set?

- YES : Go to Step 7.
- NO: Replace the seatback frame of the front seat (RH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 9.



# STEP 7. Check the side-airbag module (RH) circuit. Measure the resistance at the SRS-ECU connector C-124.

(1) Disconnect SRS-ECU connector C-124.

# A DANGER

# To prevent the air bag from deploying unintentionally, disconnect the side-airbag module (RH) connector D-28 to short the squib circuit.

(2) Disconnect side-airbag module connector D-28.

# 

# 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 57, 58 and the short spring to release the short spring.
- (4) Measure at the wiring harness side.

# 

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

(5) Check for continuity between C-124 harness side connector terminals 57 and 58.
It should be appendiced.

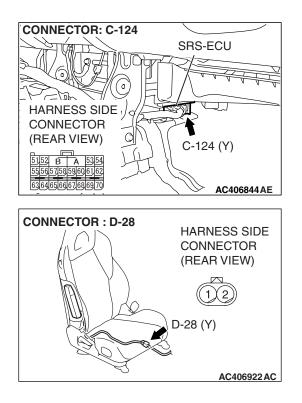
It should be open circuit.

# **Q: Does continuity exist?**

- YES : Go to Step 8.
- **NO :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1420 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 7.

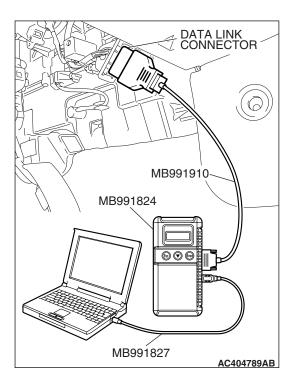
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STEP 8. Check the harness wires for short circuit between SRS-ECU connector C-124 (terminal No.57 and 58) and side-airbag module (RH) connector D-28 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.57 and 58) and side-airbag module (RH) connector D-28 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 9.
  - **NO :** Repair the harness wires between SRS-ECU connector C-124 and side-airbag module (RH) connector D-28. Then go to Step 9.



# STEP 9. Recheck for diagnostic trouble code.

Check again if the DTC is set.

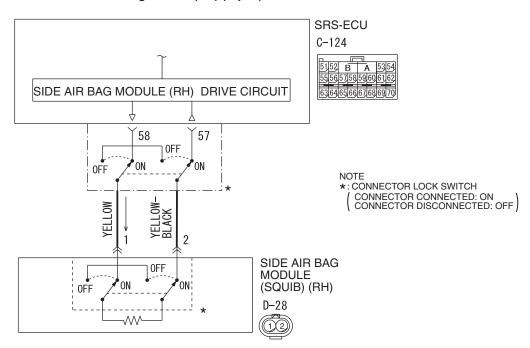
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1420 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

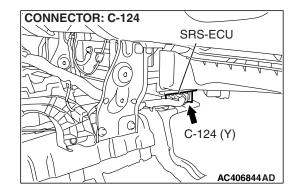
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# DTC B1421: Side-Airbag Module (RH) (Squib) System Fault 2 (Open in the Squib Circuit)



Side-Airbag Module (RH) (Squib) Circuit

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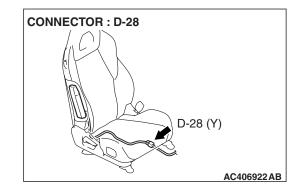


### 

If DTC B1421 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.



# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (RH) (squib).

# **TROUBLESHOOTING HINTS**

- Open circuit in the side-airbag module (RH) (squib) circuit
- Improper connector contact
- Malfunction of the SRS-ECU

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### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

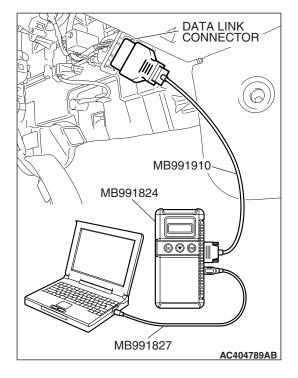
# 

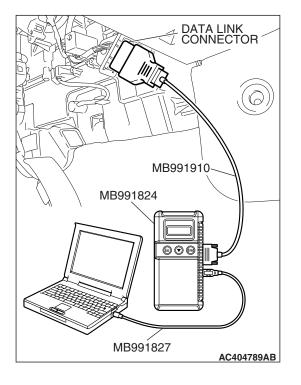
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO :** Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis P.54C-14).





# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# (1) Dis CONNECTOR : D-28 HARNESS SIDE CONNECTOR (REAR VIEW) (1) Dis (2) Dis D-28 (Y)

# AC406922 AC

- STEP 3. Check the side-airbag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)
- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (RH) connector D-28.

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

### 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 the D-28 harness side 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 B1421 set?

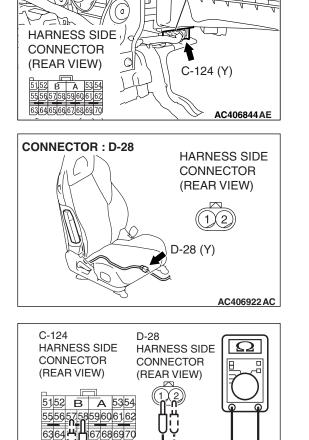
- YES : Go to Step 4.
- NO: Replace the seatback frame of the front seat (RH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 5.

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CONNECTOR: C-124

### STEP 4. Check the harness for open circuit between SRS-ECU connector C-124 (terminal No.57 and 58) and the side-airbag module (RH) connector D-28 (terminal No.1 and 2).

(1) Disconnect SRS-ECU connector C-124 and side-airbag module (RH) connector D-28.



SRS-ECU

# 

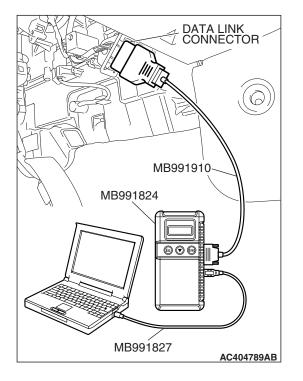
### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (2) Check for continuity between the following terminals. It should be less than 2 ohms.
  - SRS-ECU connector C-124 (terminal No.57) and the side-airbag module (RH) connector D-28 (terminal No.2)
  - SRS-ECU connector C-124 (terminal No.58) and the side-airbag module (RH) connector D-28 (terminal No.1)

# Q: Does continuity exist?

- YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1421 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
- **NO**: Replace the harness wires between SRS-ECU connector C-124 and side-airbag module (RH) connector D-28 Then go to Step 5.

AC406901AB

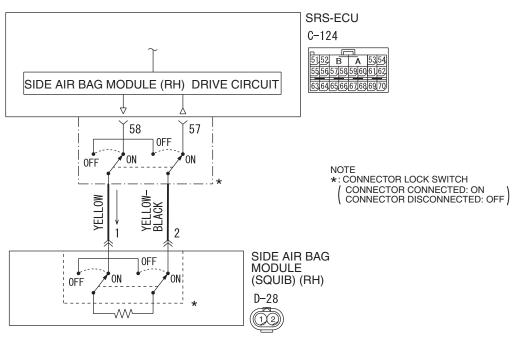


# STEP 5. Recheck for diagnostic trouble code.

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 B1421 set?
  - **YES :** Return to Step 1.
  - **NO :** The procedure is complete.

# DTC B1422: Side-Airbag Module (RH) (Squib) System Fault Ground Circuit (Short-Circuited to Ground)

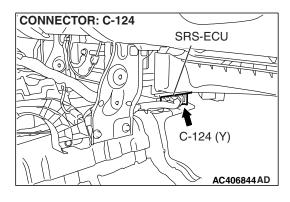


### Side-Airbag Module (RH) (Squib) Circuit

W6P52M005A

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### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

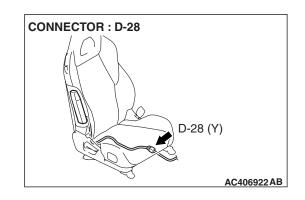


# 

If DTC B1422 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.



# **DTC SET CONDITIONS**

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (RH) (squib).

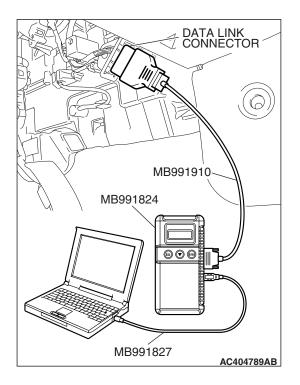
# **TROUBLESHOOTING HINTS**

- Damaged wiring harnesses or connectors
- Short to ground in the side-airbag module (RH) (squib) harness
- Malfunction of the SRS-ECU

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness



# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

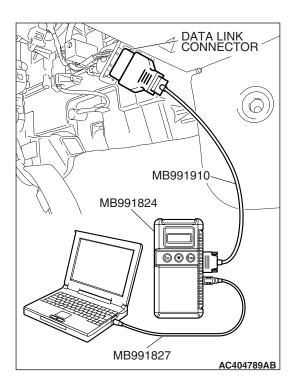
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14).



# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

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

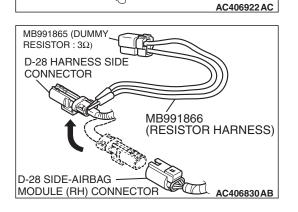
# Q: Is the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# CONNECTOR : D-28 HARNESS SIDE CONNECTOR (REAR VIEW) (1) Discon (2) Discon



# STEP 3. Check the side-airbag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (RH) connector D-28.

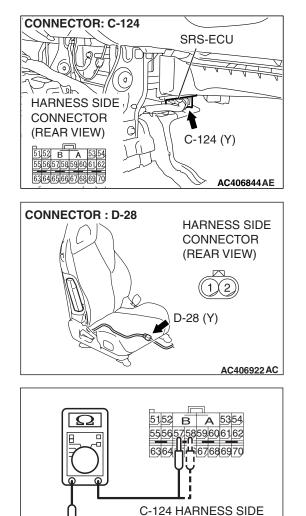
(3) Connect special tool MB991865 to special tool MB991866.

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 the D-28 harness side 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 B1422 set?

- YES : Go to Step 4.
- NO: Replace the seatback frame of the front seat (RH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 6.



CONNECTOR

(REAR VIEW)

AC301576AH

# STEP 4. Check the side-airbag module (RH) circuit. Measure the resistance at the SRS-ECU connector C-124.

(1) Disconnect SRS-ECU connector C-124.

# A DANGER

# To prevent the air bag from deploying unintentionally, disconnect the side-airbag module (RH) connector D-28 to short the squib circuit.

(2) Disconnect side-airbag module (RH) connector D-28.

# 

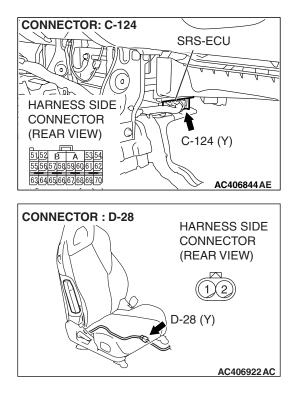
# Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

(3) Check for continuity between C-124 harness side connector terminals 57, 58 and body ground. It should be open circuit.

# Q: Does continuity exist?

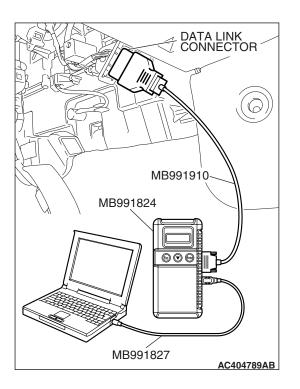
- YES : Go to Step 5.
- NO: Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1422 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.

on
on



STEP 5. Check the harness wires for short circuit to ground between SRS-ECU connector C-124 (terminal No.57 and 58) and side-airbag module (RH) connector D-28 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.57 and 58) and side-airbag module (RH) connector D-28 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and side-airbag module (RH) connector D-28. Then go to Step 6.



# STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

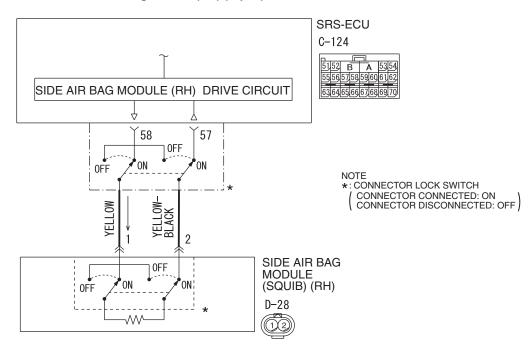
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1422 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

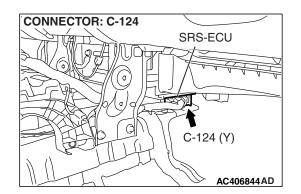
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# DTC B1423: Side-Airbag Module (RH) (Squib) System Fault Power Supply Circuit (Short-Circuited to Power Supply)



Side-Airbag Module (RH) (Squib) Circuit

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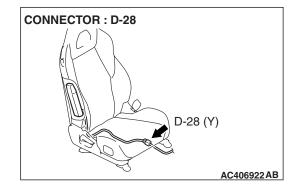


# 

# If DTC B1423 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.



# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (RH) (squib).

# **TROUBLESHOOTING HINTS**

- Damaged wiring harnesses or connectors
- Short to the power supply in the side-airbag module (RH) (squib) harness
- Malfunction of the SRS-ECU

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### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

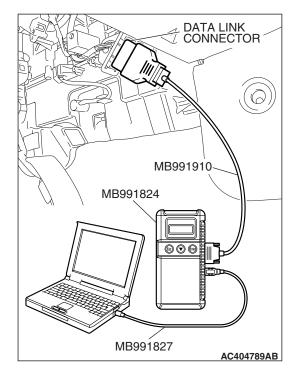
# 

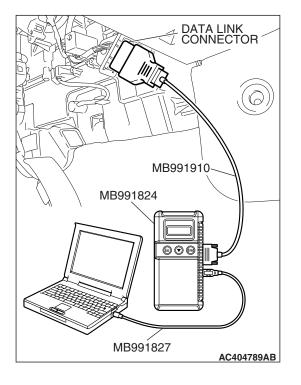
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14).



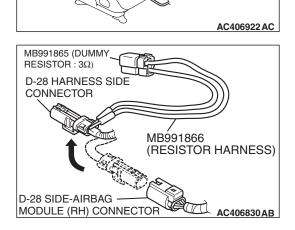


# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# (1) Discon (2) Discon (2) Discon (2) Discon (2) Discon (2) Discon (2) Discon



# STEP 3. Check the side-airbag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (RH) connector D-28.

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

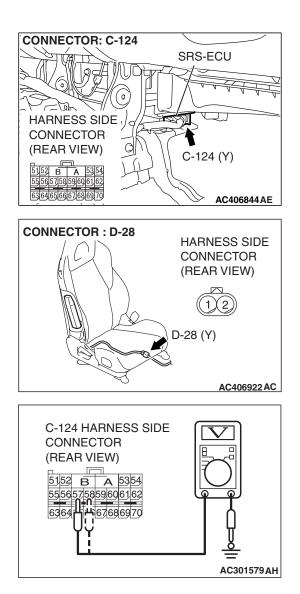
### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (4) Insert special tool MB991866 into the D-28 harness side 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 B1423 set?

- YES : Go to Step 4.
- NO: Replace the seatback frame of the front seat (RH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 5.

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STEP 4. Check the side-airbag module (RH) circuit. Measure the voltage at the SRS-ECU connector C-124. (1) Disconnect SRS-ECU connector C-124.

# A DANGER

# To prevent the air bag from deploying unintentionally, disconnect the side-airbag module (RH) connector D-28 to short the squib circuit.

(2) Disconnect side-airbag module (RH) connector D-28.

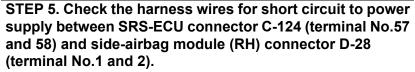
(3) Turn the ignition switch to the "ON" position.

# 

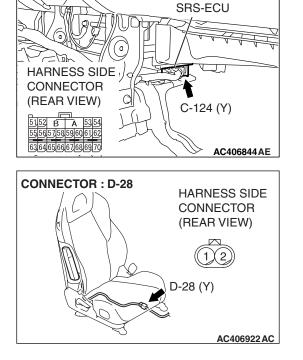
# Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (4) Measure the voltage between C-124 harness side connector terminals 57 and 58 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 B1423 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Go to Step 5.

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- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.57 and 58) and side-airbag module (RH) connector D-28 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO**: Replace the harness wires between SRS-ECU connector C-124 and side-airbag module (RH) connector D-28. Then go to Step 6.



**CONNECTOR: C-124** 

# DATA LINK CONNECTOR MB991910 MB991824 OCOUPTION MB991827 MB991827 AC404789AB

# 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 B1423 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

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DTC B1426: Side Impact Sensor (RH) System for Fault 1 DTC B1436: Side Impact Sensor (LH) System for Fault 1

# 

If DTC B1426 or B1436 is set in the SRS-ECU, always diagnose the CAN main bus line.

# DTC SET CONDITIONS

These DTCs are set if the following conditions are detected from the analog G-sensor inside the side impact sensor output:

• Analog G-sensor is not operating.

- Analog G-sensor characteristics are abnormal.
- Analog G-sensor output is abnormal.

# **TROUBLESHOOTING HINTS**

Malfunction of side impact sensor (RH) (for DTC B1426) and side impact sensor (LH) (for DTC B1436)

# DIAGNOSIS

**Required Special Tools:** 

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

# 

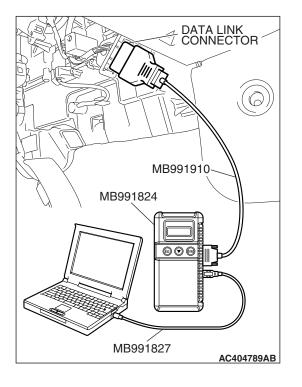
To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

DATA LINK CONNECTOR
MB991910
MB991824
MB991827 AC404789AB



# 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 the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

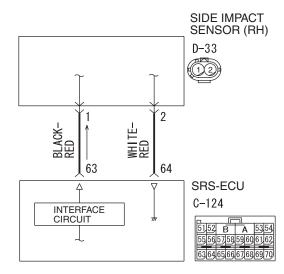
# STEP 3. Check the side impact sensor. (Using scan tool MB991958, read the diagnostic trouble code.) Replace side impact sensor (RH) (for DTC B1426) and side

impact sensor (LH) (for DTC B1436) (Refer to P.52B-417). Check the diagnostic trouble code.

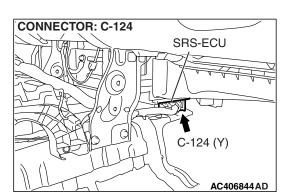
# Q: Is either DTC B1426 or B1436 set?

- YES : Replace the SRS-ECU (Refer to P.52B-405).
- **NO :** The procedure is complete.

# DTC B1427: Side Impact Sensor (RH) Power Supply Circuit System



### Side Impact Sensor (RH) Circuit

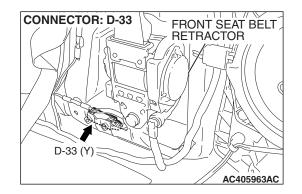


# 

If DTC B1427 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

The side impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the side-airbags should be deployed, it sends a fire signal to the SRS-ECU to deploy the side-airbags. In addition, the CPU diagnoses the internal components of the side impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code. W6P52M007A



# DTC SET CONDITIONS

This DTC will set when the power supply voltage to the side impact sensor (RH) remains less than a predetermined value for five seconds. However, if the system returns to normal condition, code number B1427 will be erased automatically and the SRS warning light will go out.

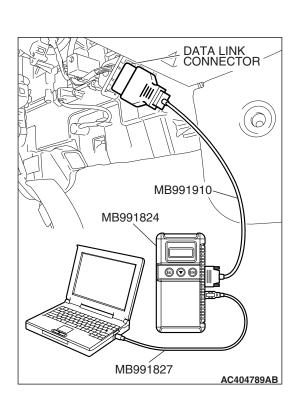
# TROUBLESHOOTING HINTS

- Damaged wiring harness or connectors
- Malfunction of the side impact sensor (RH)
- Malfunction of the SRS-ECU

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

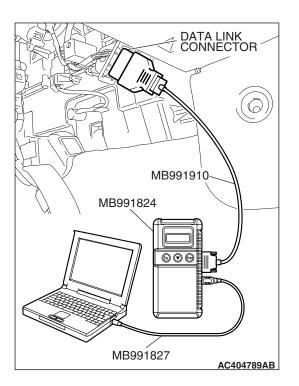
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# STEP 2. Recheck for diagnostic trouble code.

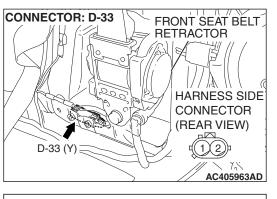
Check again if the DTC is set.

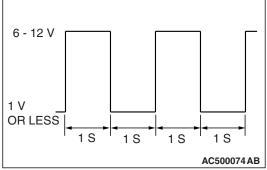
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

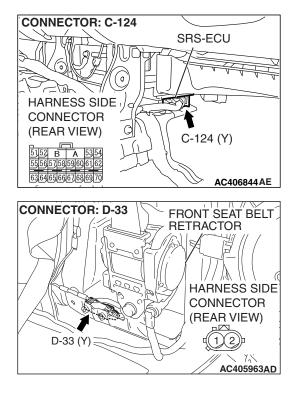
# Q: Is the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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# STEP 3. Check the side impact sensor (RH) power supply circuit. Measure the voltage at the side impact sensor (RH) connector D-33.

- (1) Disconnect the negative battery terminal.
- (2) Disconnect side impact sensor (RH) connector D-33, and measure at the wiring harness side.
- (3) Connect the negative battery terminal.
- (4) Turn the ignition switch to the "ON" position.

# 

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

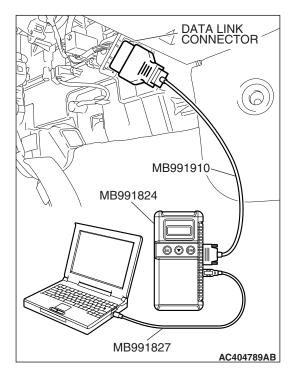
(5) Measure the voltage between D-33 harness side connector terminal 1 and ground.

A wave pattern of oscilloscope iterates an amplitude of 6 – 12 volts.

- Q: Is the check result normal?
  - YES : Replace the side impact sensor (RH) (Refer to P.52B-417). Then go to Step 5.
  - NO: Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-124 (terminal No.63 and 64) and side impact sensor (RH) connector D-33 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.63 and 64) and side impact sensor (RH) connector D-33 (terminal No.1 and 2) in good condition?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1427 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO**: Replace the harness wires between SRS-ECU connector C-124 and side impact sensor (RH) connector D-33. Then go to Step 5.

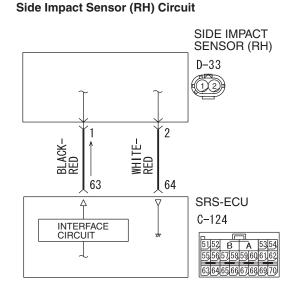


### STEP 5. Recheck for diagnostic trouble code.

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 B1427 set?
  - **YES :** Return to Step 1.
  - **NO :** The procedure is complete.

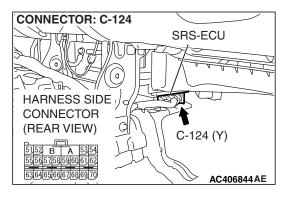
# DTC B1428: Side Impact sensor (RH) (Squib) for Power Supply Circuit DTC B1429: Side Impact sensor (RH) (Squib) for Communication System



W6P52M007A

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

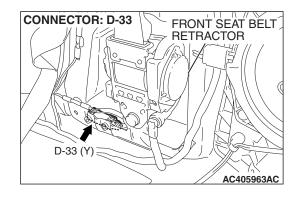


# 

If DTC B1428 or B1429 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

The side impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the side-airbags should be deployed, it sends a fire signal to the SRS-ECU to deploy the side-airbags. In addition, the CPU diagnoses the internal components of the side impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.



# **DTC SET CONDITIONS**

These DTCs are set if communication between the side impact sensor (RH) and the SRS-ECU is not possible or communication is faulty.

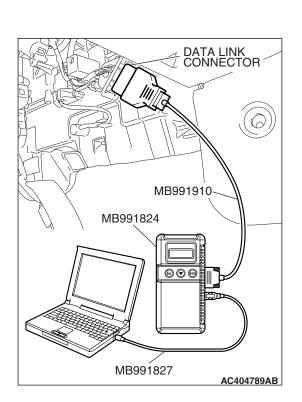
# **TROUBLESHOOTING HINTS**

- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor (RH)
- Malfunction of the SRS-ECU

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

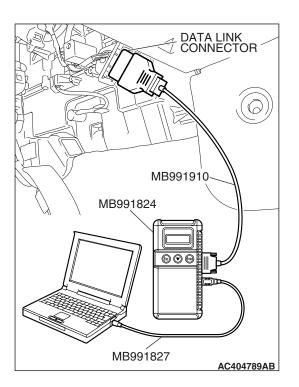
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# 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 the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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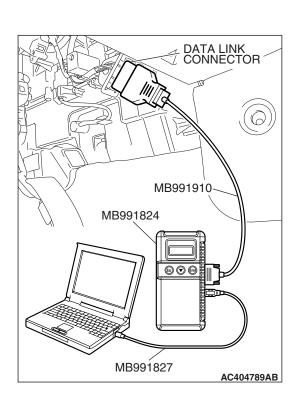
# STEP 3. Check any diagnostic trouble code. (Using scan tool MB991958, read the diagnostic trouble code.)

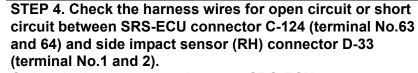
Check the side impact sensor (RH).

- (1) Disconnect the negative battery terminal.
- (2) Temporarily replace the side impact sensor (RH) with the side impact sensor (LH).
- (3) Connect the negative battery terminal.
- (4) Erase diagnostic trouble code memory, and check the diagnostic trouble code.

### Q: Is DTC B1438 or B1439 set?

- **YES :** Replace the side impact sensor (RH) with a new one (Refer to P.52B-417). Then go to Step 5.
- NO: Go to Step 4.





- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.63 and 64) and side impact sensor (RH) connector D-33 (terminal No.1 and 2) in good condition?
  - **YES** : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1428 or B1429 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO**: Replace the harness wires between SRS-ECU connector C-124 and side impact sensor (RH) connector D-33. Then go to Step 5.

# 

**CONNECTOR: C-124** 

: Tom

CONNECTOR

(REAR VIEW)

6364656667686970

2 B A 5354

CONNECTOR: D-33

D-33 (Y)

HARNESS SIDE

SRS-ECU

V

C-124 (Y)

FRONT SEAT BELT

HARNESS SIDE CONNECTOR (REAR VIEW)

مC405963AD

AC406844AE

# STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

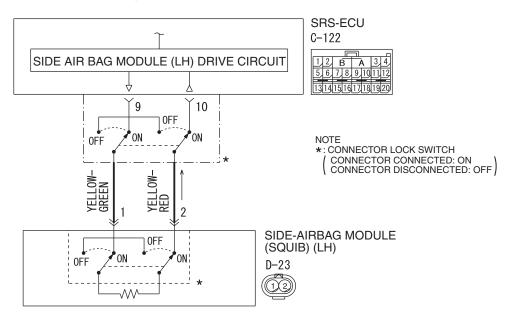
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1428 or B1429 set?

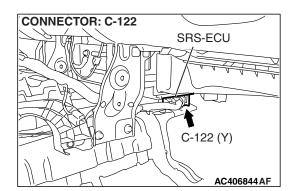
- YES : Return to Step 1.
- **NO :** The procedure is complete.

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# DTC B1430: Side-Airbag Module (LH) (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)



Side-Airbag Module (LH) (Squid) Circuit

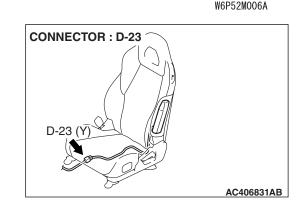


# 

If DTC B1430 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.



# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (LH) (squib).

# **TROUBLESHOOTING HINTS**

- Improper engaged connector or defective short spring\*
- Short circuit between the side-airbag module (LH) (squib) circuit terminals
- Damaged connector(s)
- Malfunction of the SRS-ECU

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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-122 or D-23 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

# 

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

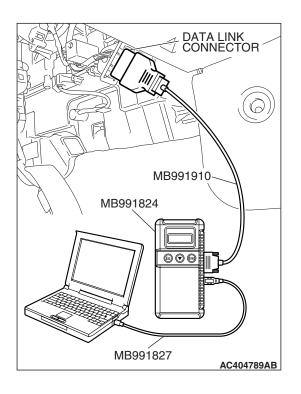
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Connect scan tool MB991958 to the data link connector.
- (3) Turn the ignition switch to "ON" position.
- (4) Diagnose the CAN bus line.

#### Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14).

DATA CONN	LINK
MB991824	
MB991827	
MD331027	AC404789AB

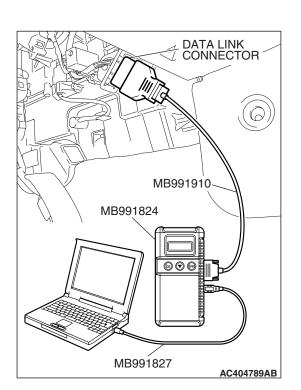
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### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

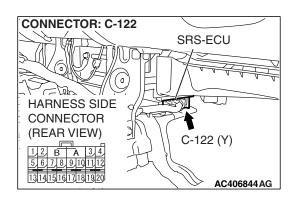


# STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

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

# Q: Is DTC B1519 set?

- YES : Go to Step 4.
- NO: Go to Step 5.



# STEP 4. Check SRS-ECU connector C-122.

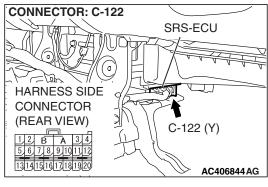
- Q: Is the connector correctly engaged?
  - YES : Go to Step 5.
  - **NO :** Engage the connector correctly. Then go to Step 9.

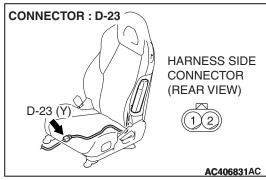
# STEP 5. Check SRS-ECU connector C-122 and side-airbag module (LH) connector D-24. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-122 and D-23, 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 B1430 out put?

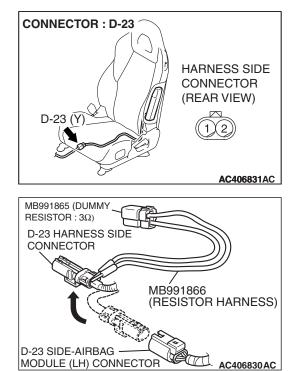
- YES : Go to Step 6.
- **NO :** The procedure is complete. It is assumed that DTC B1430 set because connector C-122 or D-23 was engaged improperly.





# STEP 6. Check the side-airbag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (LH) connector D-23.



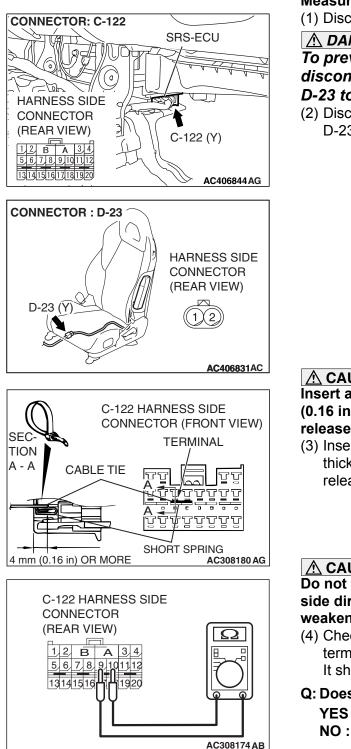
(3) Connect special tool MB991865 to special tool MB991866.

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 the D-23 harness side connector by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and check the diagnostic trouble code.

### Q: Is DTC B1430 set?

- YES : Go to Step 7.
- NO: Replace the seatback frame of the front seat (LH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 9.



#### STEP 7. Check the side-airbag module (LH) circuit. Measure the resistance at the SRS-ECU connector C-122.

(1) Disconnect SRS-ECU connector C-122.

# A DANGER

# To prevent the air bag from deploying unintentionally, disconnect the side-airbag module (LH) connector D-23 to short the squib circuit.

(2) Disconnect left hand side-airbag module (LH) connector D-23.

# 

#### 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.

# 

### 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-122 harness side connector terminals 9 and 10.

It should be open circuit.

# Q: Does continuity exist?

- YES : Go to Step 8.
- **NO**: Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1430 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 9.

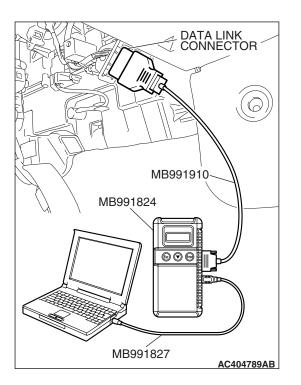
TSB	Revision	

**CONNECTOR: C-122** SRS-ECU Do HARNESS SIDE CONNECTOR (REAR VIEW) C-122 (Y) Ŕ 9 10 11 1 7 8 131415161718192 AC406844 AG **CONNECTOR : D-23** HARNESS SIDE CONNECTOR (REAR VIEW) D-23 (Y) 1 2

AC406831AC

STEP 8. Check the harness wires for short circuit between SRS-ECU connector C-122 (terminal No.9 and 10) and side-airbag module (LH) connector D-23 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.9 and 10) and side-airbag module (LH) connector D-23 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 9.
  - **NO :** Replace the harness wires between SRS-ECU connector C-122 and side-airbag module (LH) connector D-23. Then go to Step 9.



# STEP 9. Recheck for diagnostic trouble code.

Check again if the DTC is set.

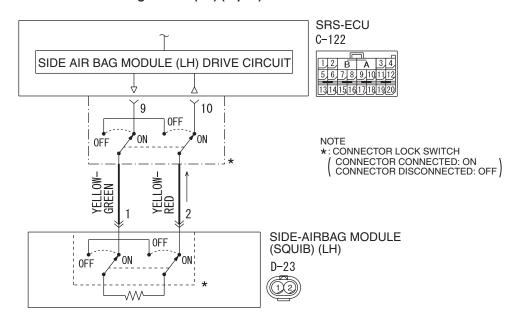
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1430 set?

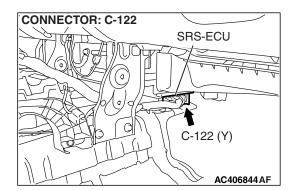
- YES : Return to Step 1.
- **NO :** The procedure is complete.

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### DTC B1431: Side-Airbag Module (LH) (Squib) System Fault 2 (Open in the Squib Circuit)



Side-Airbag Module (LH) (Squid) Circuit



#### 

If DTC B1431 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.



W6P52M006A



# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (LH) (squib).

# **TROUBLESHOOTING HINTS**

- Open circuit in the side-airbag module (squib) (LH) circuit
- Improper connector contact
- Malfunction of the SRS-ECU

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

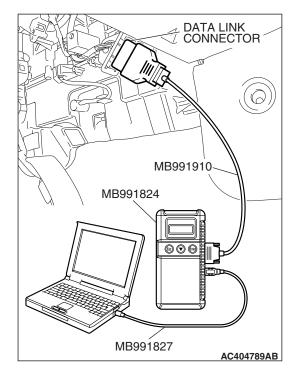
# 

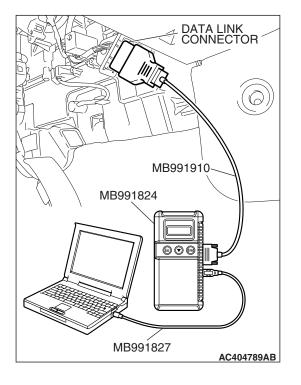
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14).





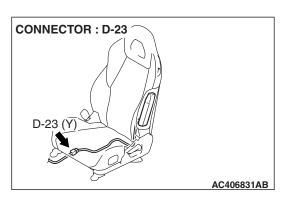
### STEP 2. Recheck for diagnostic trouble code.

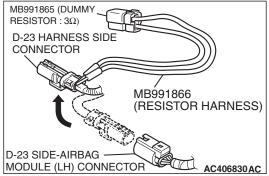
Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check the side-airbag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (LH) connector D-23.





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

#### 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 the D-23 harness side connector by backprobing.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.

# Q: Is DTC B1431 set?

- YES : Go to Step 4.
- NO: Replace the seatback frame of the front seat (LH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 5.

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**CONNECTOR: C-122** 

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# STEP 4. Check the harness for open circuit between the SRS-ECU connector C-122 (terminal No.9 and 10) and the side-airbag module (LH) connector D-23 (terminal No.1 and 2).

(1) Disconnect SRS-ECU connector C-122.

(2) Disconnect side-airbag module (LH) connector D-23.

# 

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

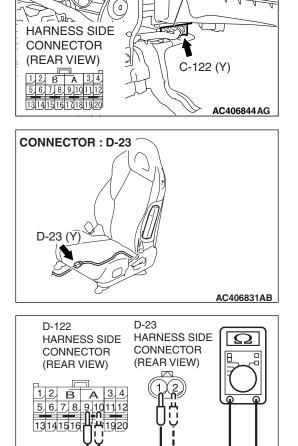
- (3) Check for continuity between the following terminals. It should be less than 2 ohms.
  - SRS-ECU connector C-122 (terminal No.9) and the side-airbag module (LH) connector D-23 (terminal No.1)
  - SRS-ECU connector C-122 (terminal No.10) and the side-airbag module (LH) connector D-23 (terminal No.2)

# **Q: Does continuity exist?**

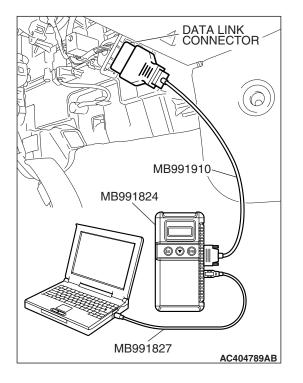
- YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1431 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
- **NO**: Replace the harness wires between SRS-ECU connector C-122 and side-airbag module (LH) connector D-23. Then go to Step 5.

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SRS-ECU

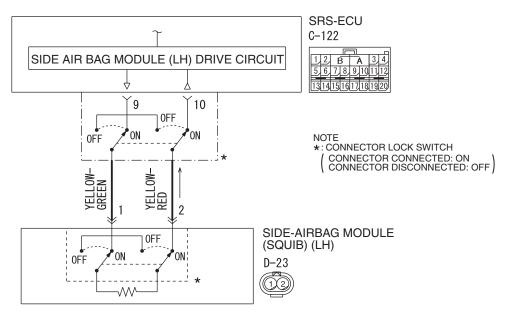


### STEP 5.Recheck for diagnostic trouble code.

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 B1431 set?
  - **YES :** Return to Step 1.
  - **NO :** The procedure is complete.

# DTC B1432: Side-Airbag Module (LH) (Squib) System Fault Ground Circuit (Short-Circuited to Ground)

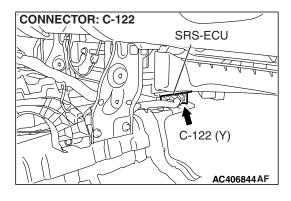


Side-Airbag Module (LH) (Squid) Circuit

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

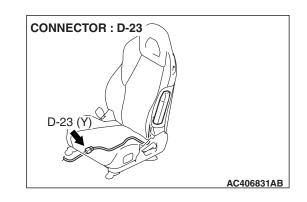


# 

If DTC B1432 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.



# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (LH) (squib).

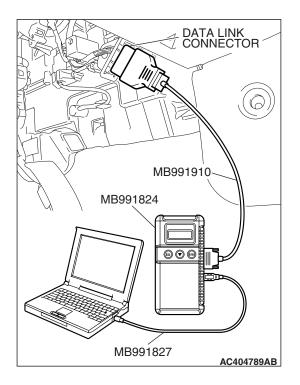
#### **TROUBLESHOOTING HINTS**

- · Damaged wiring harnesses or connectors
- Short to ground in the left hand side-airbag module (squib) harness
- Malfunction of the SRS-ECU

# DIAGNOSIS

# **Required Special Tools:**

- MB991958 : Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness



# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14).

# DATA LINK CONNECTOR MB991910 MB991824 OCOUPTION MB991827 MB991827 AC404789AB

# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

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

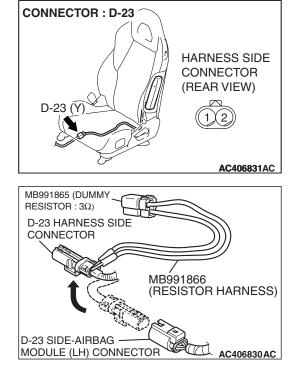
# Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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# STEP 3. Check the side-airbag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (LH) connector D-23.



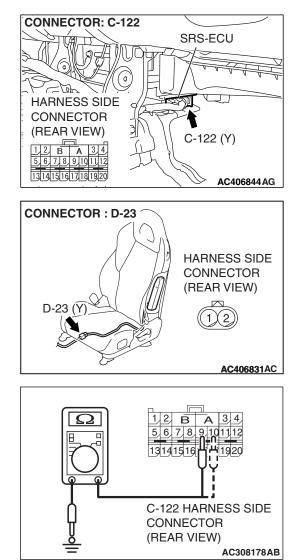
(3) Connect special tool MB991865 to special tool MB991866.

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 the D-23 harness side 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 B1432 set?

- YES : Go to Step 4.
- NO: Replace the seatback frame of the front seat (LH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 6.



# STEP 4. Check the side-airbag module (LH) circuit. Measure the resistance at the SRS-ECU connector C-122.

(1) Disconnect SRS-ECU connector C-122.

(2) Disconnect side-airbag module (LH) connector D-23.

# 

### 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-122 harness side connector terminals 9, 10 and body ground. It should be open circuit.

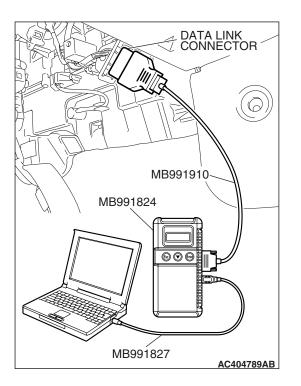
# Q: Does continuity exist?

- YES : Go to Step 5.
- **NO :** Erase the diagnostic trouble code from memory, and check the diagnostic trouble code. If DTC B1432 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.

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**CONNECTOR: C-122** SRS-ECU Do HARNESS SIDE CONNECTOR (REAR VIEW) C-122 (Y) Ŕ 7 8 9 10 11 1 131415161718192 AC406844 AG **CONNECTOR : D-23** HARNESS SIDE CONNECTOR (REAR VIEW) D-23 (Y) 1 2 AC406831AC STEP 5. Check the harness wires for short circuit to ground between SRS-ECU connector C-122 (terminal No.9 and 10) and side-airbag module (LH) connector D-23 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.9 and 10) and side-airbag module (LH) connector D-23 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO**: Replace the harness wires between SRS-ECU connector C-122 and side-airbag module (LH) connector D-23. Then go to Step 6.



# STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

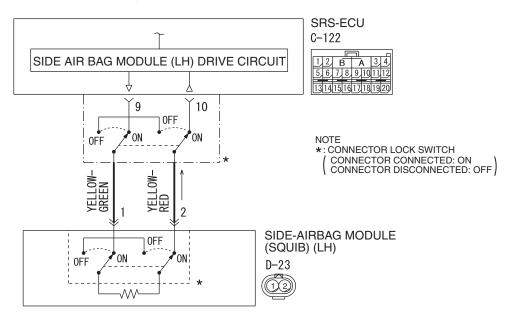
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1432 set?

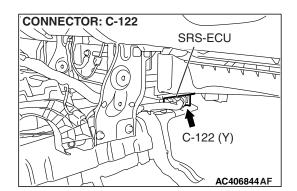
- YES : Return to Step 1.
- **NO :** The procedure is complete.

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# DTC B1433: Side-Airbag Module (LH) (Squib) System Fault Power Supply Circuit (Short-Circuited to Power Supply)



Side-Airbag Module (LH) (Squid) Circuit

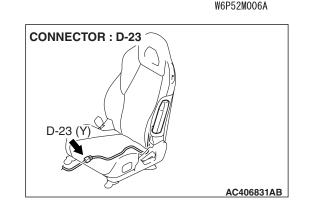


# 

If DTC B1433 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the side-airbag module to inflate the side-airbag.



# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the side-airbag module (LH) (squib).

# **TROUBLESHOOTING HINTS**

- · Damaged wiring harnesses or connectors
- Short to the power supply in the side-airbag module (LH) (squib) harness
- Malfunction of the SRS-ECU

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

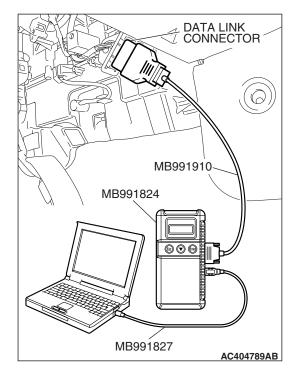
# 

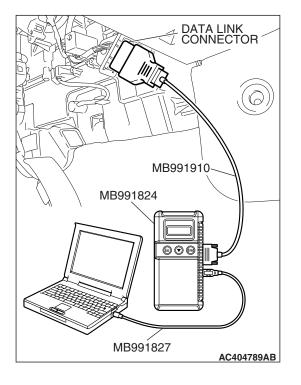
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the check result satisfactory?

- YES : Go to Step 2
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14).





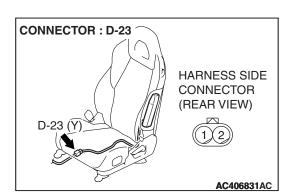
### STEP 2. Recheck for diagnostic trouble code.

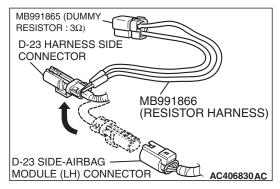
Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check the side-airbag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect the side-airbag module (LH) connector D-23.





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

#### 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 the D-23 harness side 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 B1433 set?

- YES : Go to Step 4.
- NO: Replace the seatback frame of the front seat (LH) (Refer to GROUP 52A, Front Seat P.52A-45). Then go to Step 6.

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# **CONNECTOR: C-122** SRS-ECU Joh HARNESS SIDE CONNECTOR (REAR VIEW) C-122 (Y) <u>B</u> A 3 4 7,8, 9 10 11 1: 1314151617181920 AC406844 AG **CONNECTOR : D-23** HARNESS SIDE CONNECTOR (REAR VIEW) D-23 (Y AC406831AC C-122 HARNESS SIDE CONNECTOR (REAR VIEW) 13141516 **H** 1920

STEP 4. Check the side-airbag module (RH) circuit. Measure the voltage at the SRS-ECU connector C-122. (1) Disconnect SRS-ECU connector C-122.

# A DANGER

# To prevent the air bag from deploying unintentionally, disconnect the side-airbag module (LH) connector D-23 to short the squib circuit.

- (2) Disconnect left hand side-airbag module (LH) connector D-23.
- (3) Turn the ignition switch to the "ON" position.

# 

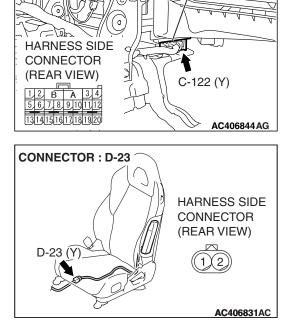
### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (4) Measure the voltage between C-122 harness side 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 B1433 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Go to Step 5.

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STEP 5. Check the harness wires for short circuit to power supply between SRS-ECU connector C-122 (terminal No.9 and 10) and side-airbag module (LH) connector D-23 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.9 and 10) and side-airbag module (LH) connector D-23 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO**: Replace the harness wires between SRS-ECU connector C-122 and side-airbag module (LH) connector D-23. Then go to Step 6.



SRS-ECU

**CONNECTOR: C-122** 

# 

# STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

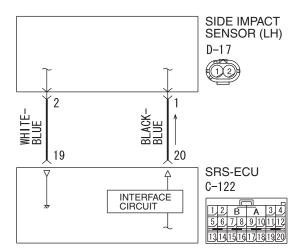
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1433 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

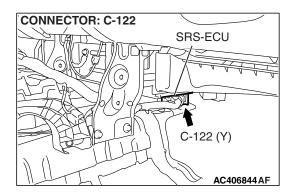
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### DTC B1437: Side Impact Sensor (LH) Power Supply Circuit System



#### Side Impact Sensor (LH) Circuit

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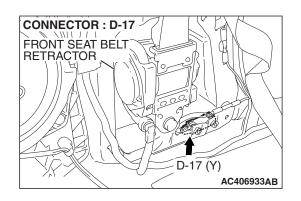


# 

If DTC B1437 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

The side impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the side-airbags should be deployed, it sends a fire signal to the SRS-ECU to deploy the side-airbags. In addition, the CPU diagnoses the internal components of the side impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.



# DTC SET CONDITIONS

This DTC is set if the power supply voltage of the side impact sensor (LH) drops below the rated value for a continuous period of 5 seconds or more. However, DTC B1437 will be automatically cleared and the SRS warning light will switch off if the condition returns to normal.

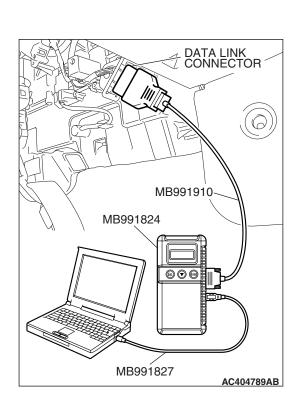
# **TROUBLESHOOTING HINTS**

- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

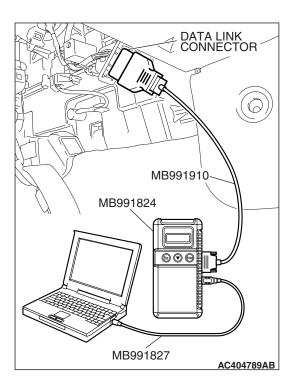
### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# STEP 2. Recheck for diagnostic trouble code.

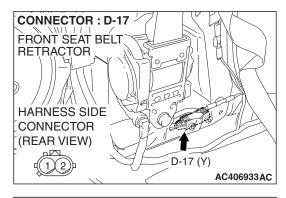
Check again if the DTC is set.

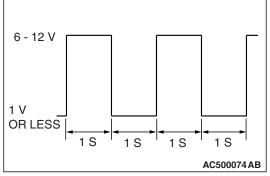
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

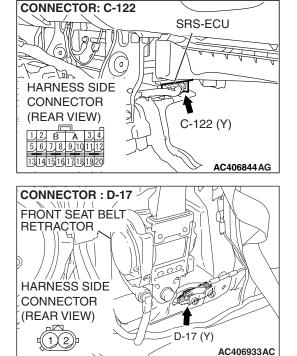
#### Q: Is the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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# STEP 3. Check the side impact sensor (LH) power supply circuit. Measure the voltage at the side impact sensor (LH) connector D-17.

- (1) Disconnect the negative battery terminal.
- (2) Disconnect side impact sensor (LH) connector D-17, and measure at the wiring harness side.
- (3) Connect the negative battery terminal.
- (4) Turn the ignition switch to the "ON" position.

# 

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 the D-17 harness side connector terminal 2 and body ground.
- (6) A wave pattern of oscilloscope iterates an amplitude of 6 12 volts.

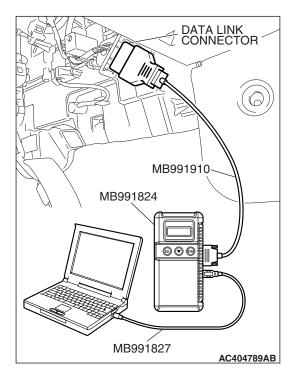
# Q: Is the check result normal?

YES : Replace the side impact sensor (LH) (Refer to P.52B-417). Then go to Step 5.

NO: Go to Step 4.

STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-122 (terminal No.19 and 20) and side impact sensor (LH) connector D-17(terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.19 and 20) and side impact sensor (LH) connector D-17 (terminal No.1 and 2) in good condition?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1437 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO**: Replace the harness wires between SRS-ECU connector C-122 and side impact sensor (LH) connector D-17. Then go to Step 5.



### STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

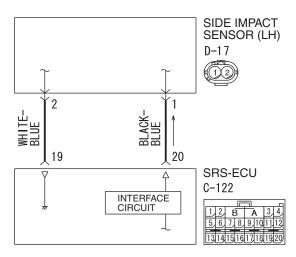
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

### Q: Is DTC B1437 set?

- **YES :** Return to Step 1.
- **NO :** The procedure is complete.

# DTC B1438: Side Impact Sensor (LH) (Squib) for Power Supply Circuit DTC B1439: Side Impact Sensor (LH) (Squib) for Communication System

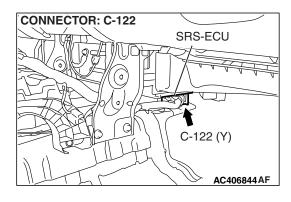




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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

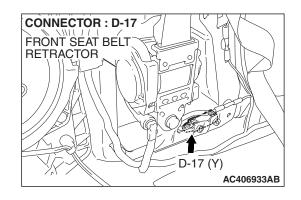


# 

If DTC B1438 or B1439 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

The side impact sensor includes an analog G-sensor and CPU, etc. The CPU monitors the analog G-sensor output signal. If the CPU judges that the side-airbags should be deployed, it sends a fire signal to the SRS-ECU to deploy the side-airbags. In addition, the CPU diagnoses the internal components of the side impact sensor. If a malfunction occurs, it requests the SRS-ECU to set a diagnostic trouble code.



# DTC SET CONDITIONS

These DTCs are set if communication between the side impact sensor (LH) and the SRS-ECU is not possible or faulty.

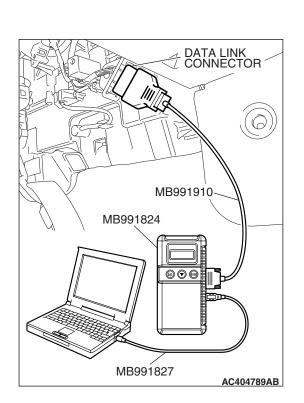
# **TROUBLESHOOTING HINTS**

- Damaged wiring harnesses or connectors
- Malfunction of the side impact sensor (LH)
- Malfunction of the SRS-ECU

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

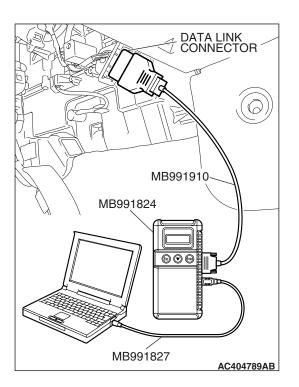
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# 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 the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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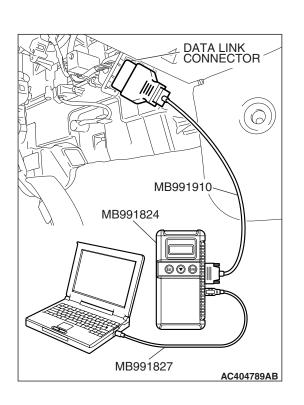
# STEP 3. Check for any diagnostic trouble code. (Using scan tool MB991958, read the diagnostic trouble code.) Check the side impact sensor (LH).

(1) Disconnect the negative battery terminal.

- (2) Temporarily replace the side impact sensor (LH) with the side impact sensor (RH).
- (3) Connect the negative battery terminal.
- (4) Erase diagnostic trouble code from memory, and check the diagnostic trouble code.

# Q: Is DTC B1428 or B1429 set?

- **YES :** Replace the side impact sensor (LH) with a new one (Refer to P.52B-417). Then go to Step 5.
- NO: Go to Step 4.



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STEP 4. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-122 (terminal No.19 and 20) and side impact sensor (LH) connector D-17 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.19 and 20) and side impact sensor (LH) connector D-17 (terminal No.1 and 2) in good condition?
  - **YES** : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1438 or B1439 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO**: Replace the harness wires between SRS-ECU connector C-122 and side impact sensor (LH) connector D-17. Then go to Step 5.

# DATA LINK CONNECTOR MB991910 MB991824 MB991827 AC404789AB

# STEP 5. Recheck for diagnostic trouble code.

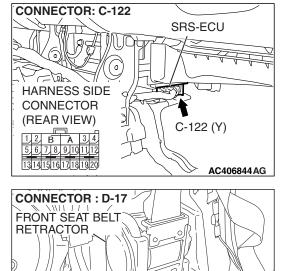
Check again if the DTC is set.

- (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 B1438 or B1439 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

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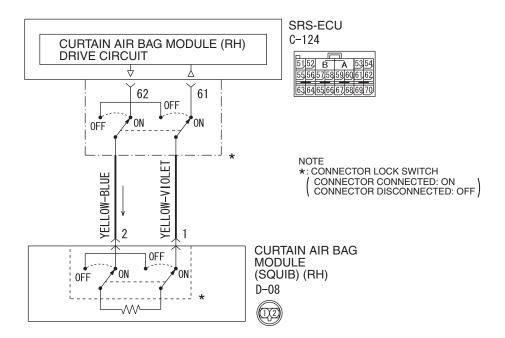
D-17 (Y)

AC406933AC

HARNESS SIDE CONNECTOR (REAR VIEW)

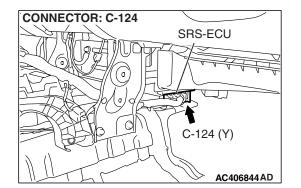
1)(2))

# DTC B1440: Curtain Air Bag Module (RH) (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)



#### Curtain Air Bag Module (RH) (Squib) Circuit

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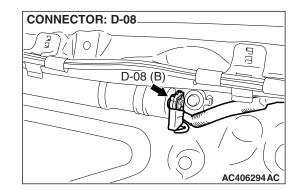


#### 

If DTC B1440 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module (RH) to inflate the curtain air bag.



# DTC SET CONDITIONS

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

# **TROUBLESHOOTING HITS**

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

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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-420). Therefore, if connector C-124 or D-08 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

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

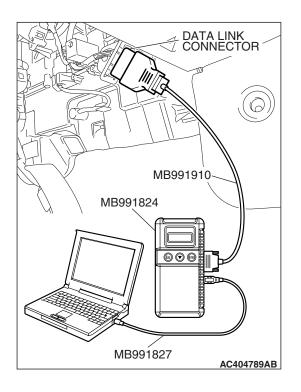
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

DATA LINK CONNECTOR
МВ991910
MB991824
MB991827 AC404789AB

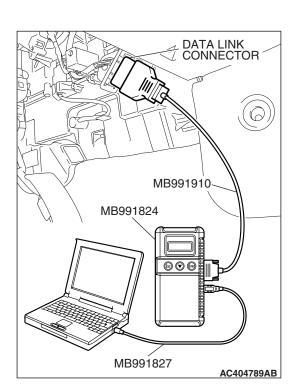
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#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



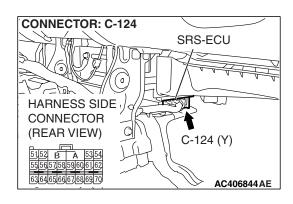
### STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

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

#### Q: Is DTC B1519 set?

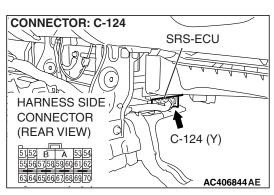
- YES : Go to Step 4.
- NO: Go to Step 5.

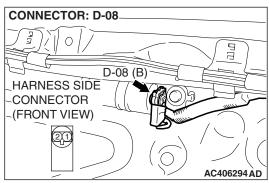
TSB Revision

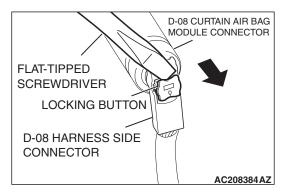


#### STEP 4. Check the SRS-ECU connector C-124.

- Q: Is connector correctly engaged?
  - YES : Go to Step 5.
  - **NO :** Engage the connector correctly. Then go to Step 9.







#### STEP 5. Check SRS-ECU connector C-124 and curtain air bag module (RH) connector D-08. (Using scan tool MB991958, read the diagnostic trouble code.)

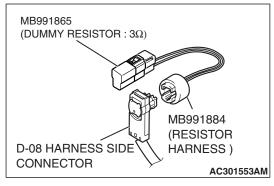
- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-124 and D-08, and then reconnect them. For connector D-08, use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.
- (3) Connector the negative battery terminal.
- (4) Erase the diagnostic trouble code memory, and check the diagnostic trouble code.

#### Q: Is DTC B1440 set?

- YES : Go to Step 6.
- **NO :** The procedure is complete. It is assumed that DTC B1440 set because connector C-124 or D-08 was engaged improperly.

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#### **CONNECTOR: D-08** 9 ā D-08 (B) HARNESS SIDE -CONNECTOR (FRONT VIEW) 20 AC406294 AD D-08 CURTAIN AIR BAG MODULE CONNECTOR FLAT-TIPPED SCREWDRIVER LOCKING BUTTON D-08 HARNESS SIDE CONNECTOR AC208384AZ

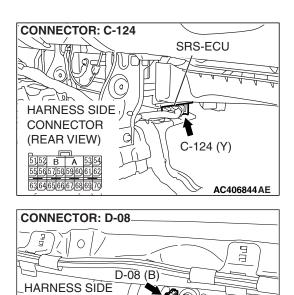


# STEP 6. Check the curtain air bag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (RH) connector D-08. 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-08 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1440 set?
  - YES : Go to Step 7.
  - **NO :** Replace the curtain air bag module (RH) (Refer to P.52B-420). Then go to Step 9.

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CONNECTOR

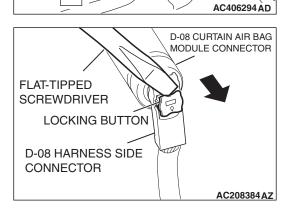
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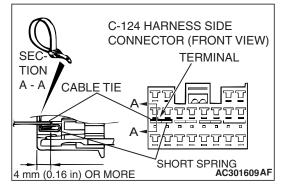
STEP 7. Check the curtain air bag module (RH) circuit. Measure the resistance at the SRS-ECU connector C-124. (1) Disconnect SRS-ECU connector C-124.

#### A DANGER

# *To prevent the air bag from deploying unintentionally, disconnect the curtain air bag module connector D-08 to short the squib circuit.*

(2) Disconnect curtain air bag module (RH) connector D-08. 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.





#### 

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 61, 62 and the short spring to release the short spring.

### C-124 HARNESS SIDE CONNECTOR (REAR VIEW) 5152 B A 5354 5556 575859606162 6364 65 666 6768

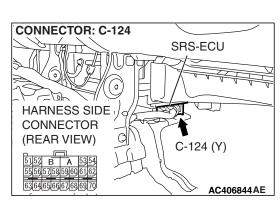
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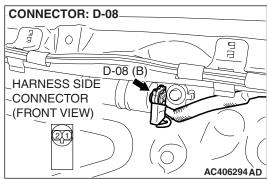
Do not insert a test probe into the terminal from its front side directly as the connector contact pressure may be weakened.

- (4) Check for continuity between C-124 harness side connector terminals 61 and 62. It should be open circuit.
- Q: Does continuity exist?
  - YES : Go to Step 8.
  - **NO :** Erase the diagnostic trouble code memory, and check diagnostic trouble code. If DTC B1440 set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 9.

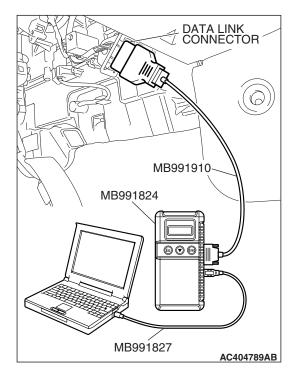
STEP 8. Check the harness for short circuit between SRS-ECU connector C-124 (terminal No.61 and 62) and curtain air bag module (RH) connector D-08 (terminal No.1 and 2).

- Q: Are harness wires between SRS-ECU connector C-124 (terminal No.61 and 62) connector and curtain air bag module (RH) connector (terminal No.1 and 2) in good condition?
  - YES : Go to Step 9.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and curtain air bag module (RH) connector D-08. Then go to Step 9.





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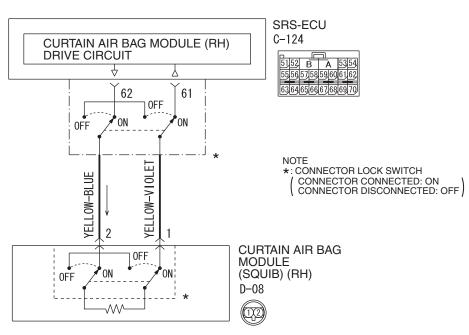


#### STEP 9. Recheck for diagnostic trouble code.

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 B1440 set?
  - **YES :** Return to Step 1.
  - **NO :** The procedure is complete.

#### DTC B1441: Curtain Air Bag Module (RH) (Squib) System Fault 2 (Open in the Squib Circuit)

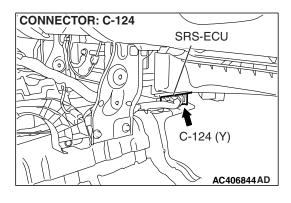


#### Curtain Air Bag Module (RH) (Squib) Circuit

W6P52M001A

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

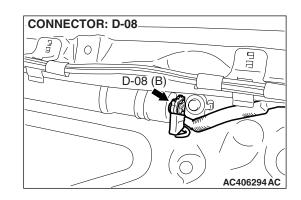


#### 

If DTC B1441 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module to inflate the curtain air bag.



#### DTC SET CONDITIONS

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

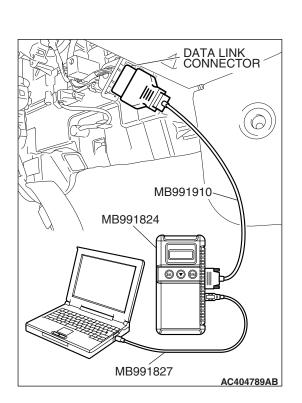
#### **TROUBLESHOOTING HITS**

- Open circuit in the curtain air bag module (RH) (squib) circuit
- Improper connector contact
- Malfunction of the SRS-ECU

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

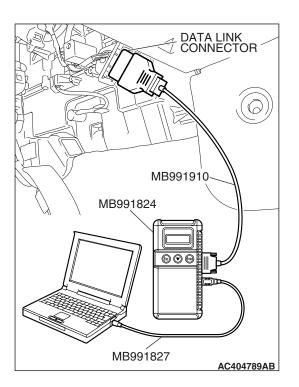
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

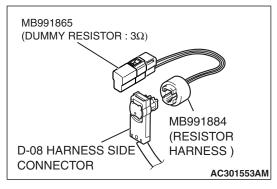
- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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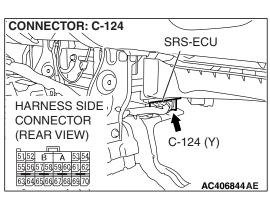
#### **CONNECTOR: D-08** 9 ā D-08 (B) HARNESS SIDE -CONNECTOR (FRONT VIEW) 20 AC406294 AD D-08 CURTAIN AIR BAG MODULE CONNECTOR FLAT-TIPPED SCREWDRIVER LOCKING BUTTON D-08 HARNESS SIDE CONNECTOR AC208384AZ



# STEP 3. Check the curtain air bag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)

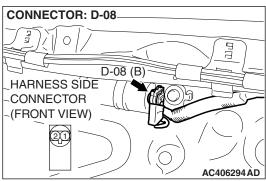
- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (RH) connector D-08. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.

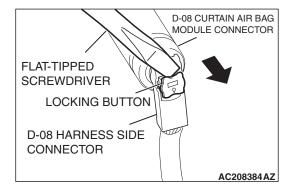
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-08 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1441 set?
  - YES : Go to Step 4.
  - **NO :** Replace the curtain air bag module (RH) (Refer to P.52B-420). Then go to Step 5.

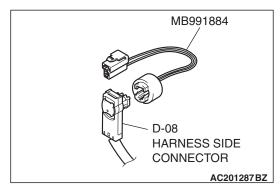


#### STEP 4. Check the harness for open circuit between SRS-ECU connector C-124 (terminal No61 and 62) and the curtain air bag module (RH) connector D-08 (terminal No.1 and 2).

(1) Disconnect SRS-ECU connector C-124 and curtain air bag module (RH) connector D-08. For connector D-08, 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.

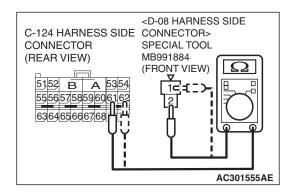






(2) Connect D-08 harness side connector to special tool MB991884.

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#### 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-124 (terminal No.61) and the special tool (terminal No.2)
  - SRS-ECU connector C-124 (terminal No.62) 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 B1441 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
- **NO**: Replace the harness wires between SRS-ECU connector C-124 curtain air bag module (RH) D-08. Then go to Step 5.

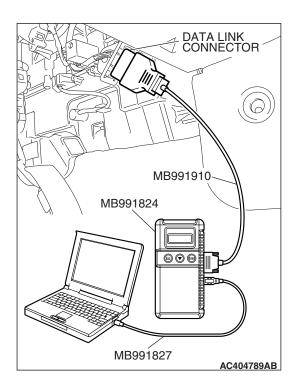
#### STEP 5. Recheck for diagnostic trouble code.

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.

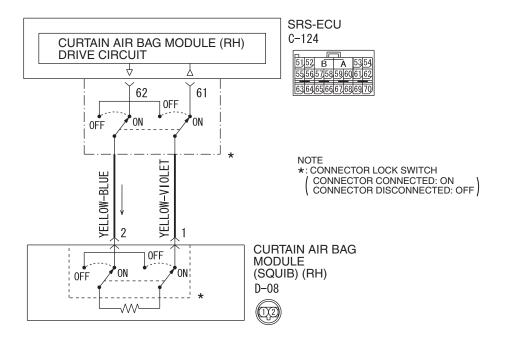
#### Q: Is DTC B1441 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

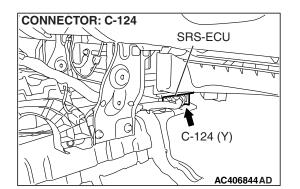


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## DTC B1442: Curtain Air Bag Module (RH) (Squib) System Fault Ground Circuit (Short-Circuited to Ground)



#### Curtain Air Bag Module (RH) (Squib) Circuit

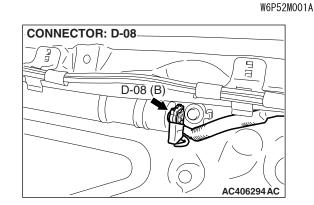


#### 

If DTC B1442 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module (RH) to inflate the curtain air bag.



#### DTC SET CONDITIONS

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

#### **TROUBLESHOOTING HITS**

- Damaged wiring harnesses or connectors
- Short to the ground in the curtain air bag module (RH) (squib) harness
- Malfunction of the SRS-ECU



#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

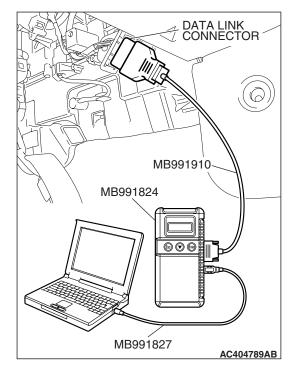
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# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

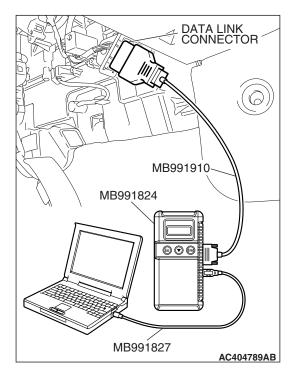
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



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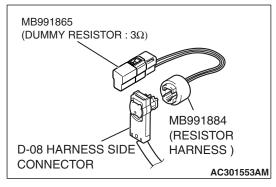
#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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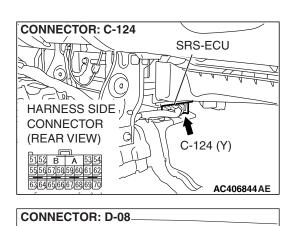
#### **CONNECTOR: D-08** 9 ā D-08 (B) HARNESS SIDE -CONNECTOR (FRONT VIEW) 20 AC406294 AD D-08 CURTAIN AIR BAG MODULE CONNECTOR FLAT-TIPPED SCREWDRIVER LOCKING BUTTON D-08 HARNESS SIDE CONNECTOR AC208384AZ



# STEP 3. Check the curtain air bag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (RH) connector D-08. 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-08 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1442 set?
  - YES : Go to Step 4.
  - **NO :** Replace the curtain air bag module (RH) (Refer to P.52B-420). Then go to Step 6.



D-08 (B)

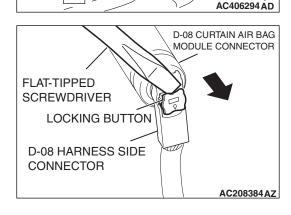
HARNESS SIDE

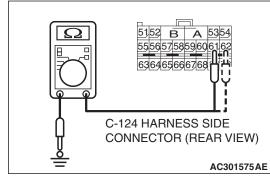
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STEP 4. Check the curtain air bag module (RH) circuit. Measure the resistance at the SRS-ECU connector C-124. (1) Disconnect SRS-ECU connector C-124.

(2) Disconnect curtain air bag module (RH) D-08. 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.





#### 

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

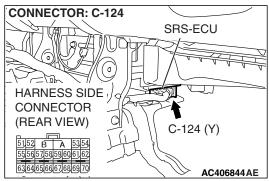
(3) Check for continuity between C-124 harness side connector terminals 61, 62 and body ground. It should be open circuit.

#### Q: Does continuity exist?

YES : Go to Step 5.

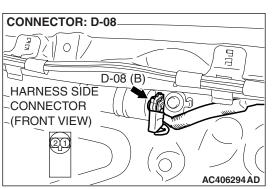
NO: Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1442 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.

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STEP 5. Check harness wires for short circuit to ground between SRS-ECU connector C-124 (terminal No.61 and 62) and curtain air bag module (RH) connector D-08 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.61 and 62) and curtain air bag module (RH) connector D-08 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and curtain air bag module (RH) connector D-08. Then go to Step 6.



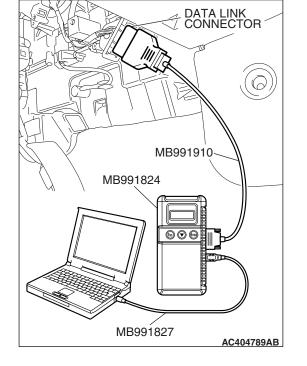
#### STEP 6. Recheck for diagnostic trouble code.

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.

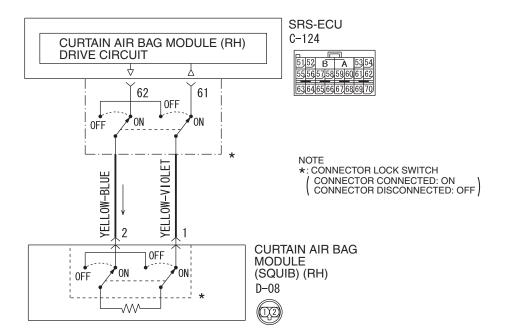
#### Q: Is DTC B1442 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

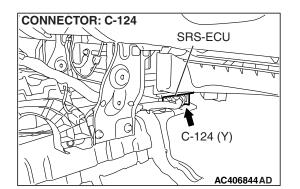


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## DTC B1443: Curtain Air Bag Module (RH) (Squib) System Fault Power Supply Circuit (Short-Circuited to Power Supply)



#### Curtain Air Bag Module (RH) (Squib) Circuit

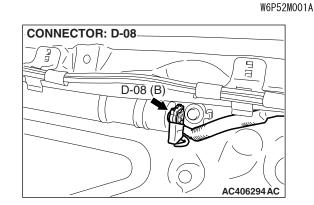


#### 

If DTC B1443 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module to inflate the curtain air bag.



#### DTC SET CONDITIONS

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

#### **TROUBLESHOOTING HITS**

- Damaged wiring harnesses or connectors
- Short to the power supply in the curtain air bag module (RH) (squib) harness
- Malfunction of the SRS-ECU

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

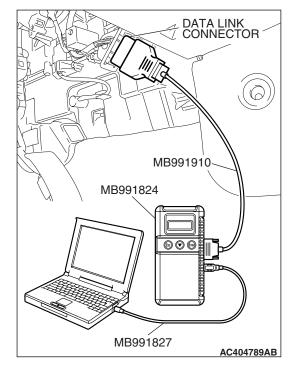
#### 

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

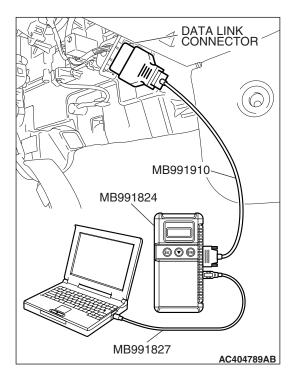
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



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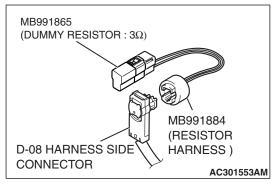
#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

**TSB Revision** 

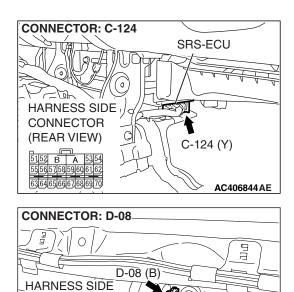
#### **CONNECTOR: D-08** 9 ā D-08 (B) HARNESS SIDE -CONNECTOR (FRONT VIEW) 20 AC406294 AD D-08 CURTAIN AIR BAG MODULE CONNECTOR FLAT-TIPPED SCREWDRIVER LOCKING BUTTON D-08 HARNESS SIDE CONNECTOR AC208384AZ



# STEP 3. Check the curtain air bag module (RH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (RH) connector D-08. 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-08 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1443 set?
  - YES : Go to Step 4.
  - **NO :** Replace the curtain air bag module (RH) (Refer to P.52B-420). Then go to Step 6.

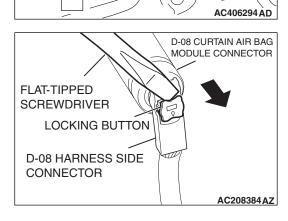


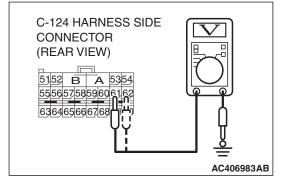
CONNECTOR

20

#### STEP 4. Check the curtain air bag module (RH) circuit. Measure the voltage at the SRS-ECU connector C-124. (1) Disconnect SRS-ECU connector C-124.

- (2) Disconnect curtain air bag module (RH) connector D-08. 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,



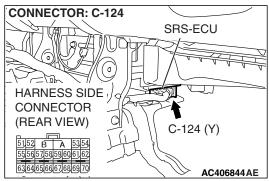


#### 

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

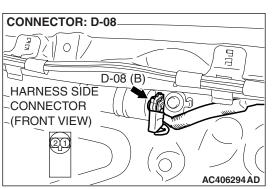
- (4) Measure the voltage between C-124 harness side connector terminals 61, 62 and body ground. Voltage should measure 0 volt.
- Q: Is the measured voltage 0 volt ?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1443 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Go to Step 5.

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STEP 5. Check the harness wires for short circuit to power supply between SRS-ECU connector C-124 (terminal No.61 and 62) and curtain air bag module (RH) connector D-08 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.61 and 62) and curtain air bag module (RH) connector D-08 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and curtain air bag module (RH) connector D-08. Then go to Step 6.



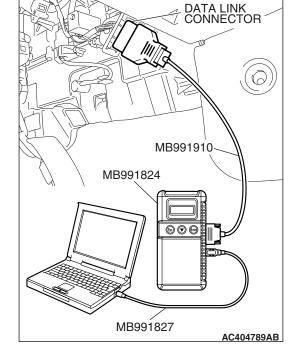
#### STEP 6. Recheck for diagnostic trouble code.

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.

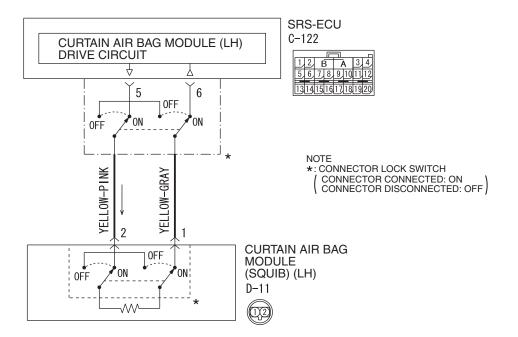
#### Q: Is DTC B1443 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

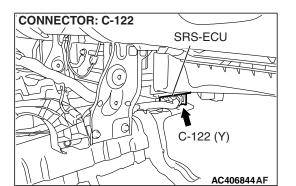


TSB Revision	
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## DTC B1450: Curtain Air Bag Module (LH) (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)



#### Curtain Air Bag Module (LH) (Squib) Circuit

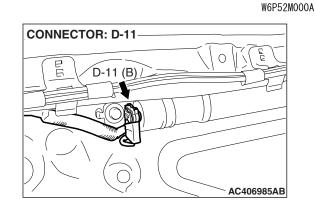


#### 

If DTC B1450 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module (LH) to inflate the curtain air bag.



#### DTC SET CONDITIONS

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

#### **TROUBLESHOOTING HITS**

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

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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-122 or D-11 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resister
- MB991884: Resister harness

### STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

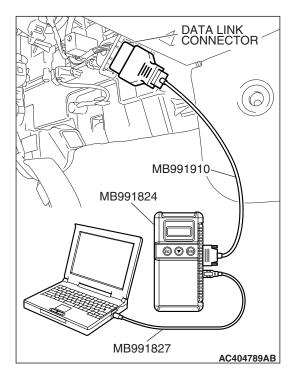
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

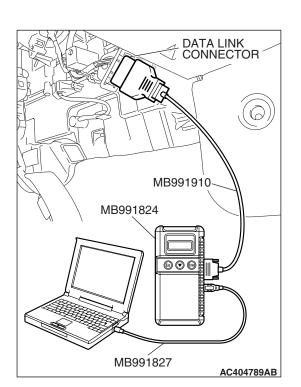
DATA LINK CONNECTOR
МВ991910
МВ991824
MB991827 AC404789AB



#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



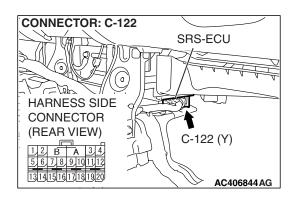
### STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

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

#### Q: Is DTC B1519 set?

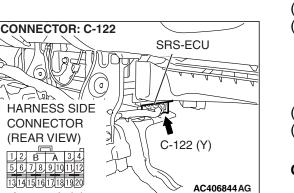
- YES : Go to Step 4.
- NO: Go to Step 5.

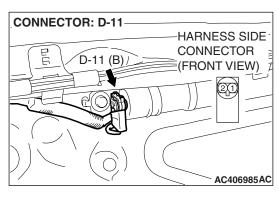
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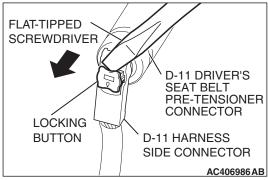




- Q: Is the connector correctly engaged?
  - YES : Go to Step 5.
  - **NO :** Engage the connector correctly. Then go to Step 9.







#### STEP 5. Check SRS-ECU connector C-122 and curtain air bag module (LH) connector D-11. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-122 and D-11, and then reconnect them. For connector D-11, 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.

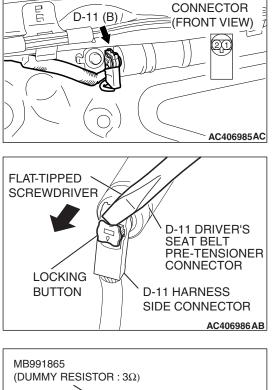
#### Q: Is DTC B1450 set?

- YES : Go to Step 6.
- **NO :** The procedure is complete. It is assumed that DTC B1450 set because connector C-122 or D-11 was engaged improperly.

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# STEP 6. Check the curtain air bag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (LH) connector D-11. 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.



HARNESS SIDE

**CONNECTOR: D-11** 

- MB991865 (DUMMY RESISTOR : 3Ω) MB991884 (RESISTOR HARNESS ) CONNECTOR AC301553AL
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-11 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1450 set?
  - YES : Go to Step 7.
  - **NO :** Replace the curtain air bag module (LH) (Refer to P.52B-420). Then go to Step 9.

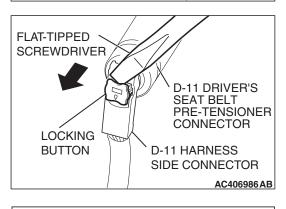
#### **CONNECTOR: C-122** SRS-ECU 0 Do HARNESS SIDE CONNECTOR (REAR VIEW) C-122 (Y) <u>B</u> A 3 4 7,8 9 10 11 12 1314151617181920 AC406844 AG CONNECTOR: D-11 HARNESS SIDE CONNECTOR D-11 (B) Ē (FRONT VIEW) AC406985AC

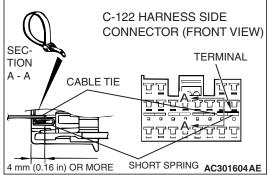
STEP 7. Check the curtain air bag module (LH) circuit. Measure the resistance at the SRS-ECU connector C-122. (1) Disconnect SRS-ECU connector C-122.

#### A DANGER

#### To prevent the air bag from deploying unintentionally, disconnect the curtain air bag module (LH) connector D-11 to short the squib circuit.

(2) Disconnect curtain air bag module (LH) connector D-11. 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.



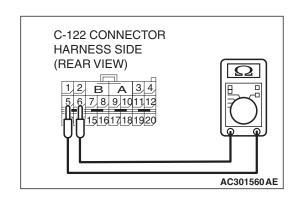


#### 

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 5, 6 and the short spring to release the short spring.

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#### 

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

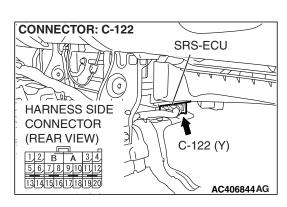
 (4) Check for continuity between C-122 harness side connector terminals 5 and 6.
 It should be open circuit

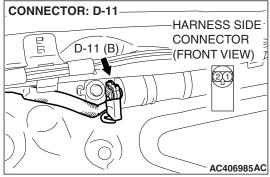
It should be open circuit.

- Q: Does continuity exist?
  - YES : Go to Step 8.
  - **NO :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1450 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 9.

STEP 8. Check the harness for short circuit between SRS-ECU connector C-122 (terminal No.5 and 6) and curtain air bag module (LH) connector D-11 (terminal No.1 and 2).

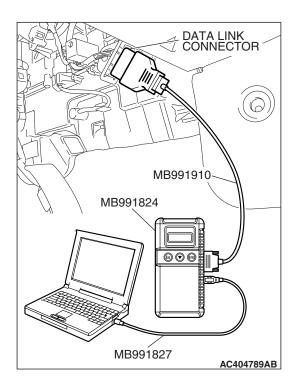
- Q: Are harness wires between SRS-ECU connector C-122 (terminal No.5 and 6) and curtain air bag module (LH) connector D-11 (terminal No.1 and 2) in good condition? YES : Go to Step 9.
  - **NO :** Replace the harness wires between SRS-ECU connector C-122 and curtain air bag module (LH) connector D-11. Then go to Step 9.





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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



#### STEP 9. Recheck for diagnostic trouble code.

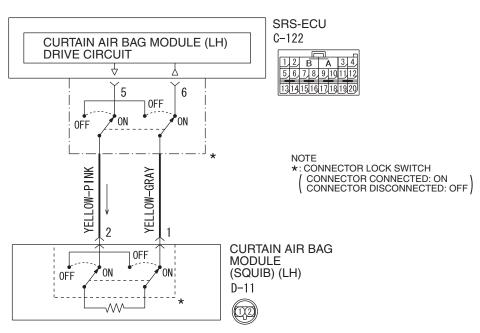
Check again if the DTC is set.

- (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 B1450 set?

- **YES :** Return to Step 1.
- **NO :** The procedure is complete.

#### DTC B1451: Curtain Air Bag Module (LH) (Squib) System Fault 2 (Open in the Squib Circuit)

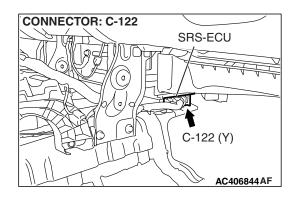


#### Curtain Air Bag Module (LH) (Squib) Circuit

W6P52M000A

<b>TSB</b> Revision	

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

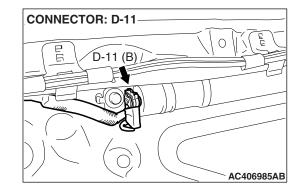


#### 

If DTC B1451 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module (LH) to inflate the curtain air bag.



#### **DTC SET CONDITIONS**

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

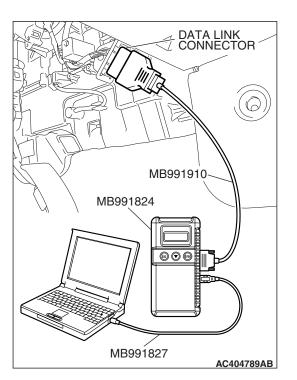
#### **TROUBLESHOOTING HITS**

- Improper connector contact
- Open circuit in the curtain air bag module (LH) (squib) circuit
- Malfunction of the SRS-ECU

#### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

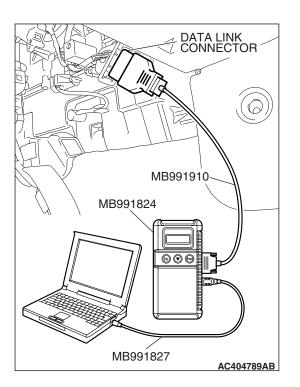
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### 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.

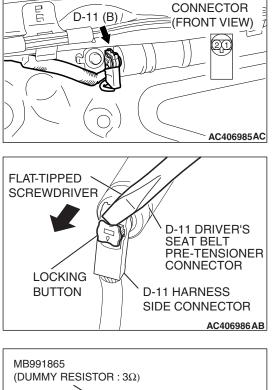
#### Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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# STEP 3. Check the curtain air bag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

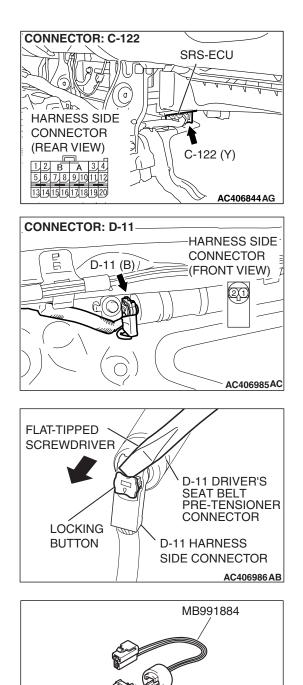
- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (LH) connector D-11. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.



HARNESS SIDE

**CONNECTOR: D-11** 

- MB991865 (DUMMY RESISTOR : 3Ω) MB991884 (RESISTOR HARNESS ) CONNECTOR AC301553AL
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-11 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1451 set?
  - YES : Go to Step 4.
  - **NO :** Replace the curtain air bag module (LH) (Refer to P.52B-420). Then go to Step 5.



D-11

HARNESS SIDE CONNECTOR

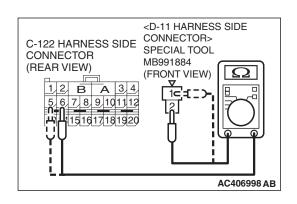
AC201287CA

#### STEP 4. Check the harness for open circuit between SRS-ECU connector C-122 (terminal No.5 and 6) and the curtain air bag module (LH) D-11 (terminal No.1 and 2).

(1) Disconnect SRS-ECU connector C-122 and curtain air bag module (LH) connector D-11, and measure at the wiring harness side. For connector D-11, 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-11 harness side connector to special tool MB991884.

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## 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-122 (terminal No.5) and the special tool (terminal No.1)
  - SRS-ECU connector C-122 (terminal No.6) and the special tool (terminal No.2)

# Q: Does continuity exist?

- **YES :** Erase the diagnostic trouble code memory, and recheck if any DTC set. If DTC B1451 set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
- NO: Replace harness wires between SRS-ECU connector C-122 and curtain air bag module (LH) connector D-11. Then go to Step 5.

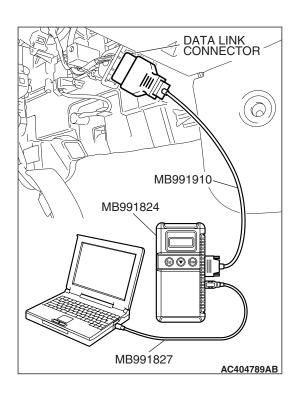
# STEP 5. Check for diagnostic trouble code.

Check again if the DTC is set.

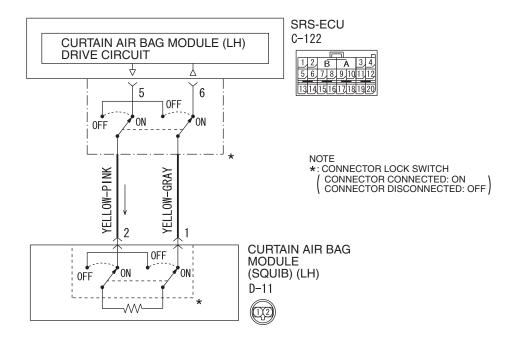
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1451 set?

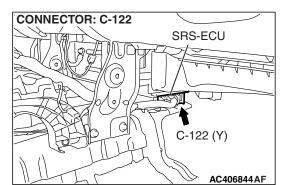
- YES : Return to Step 1.
- **NO :** The procedure is complete.



# DTC B1452: Curtain Air Bag Module (LH) (Squib) System Fault Ground Circuit (Short-Circuited to Ground)



### Curtain Air Bag Module (LH) (Squib) Circuit

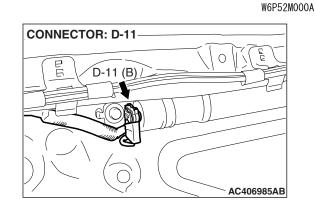


# 

If DTC B1452 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module (LH) to inflate the curtain air bag.



# DTC SET CONDITIONS

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

# **TROUBLESHOOTING HITS**

- Damaged wiring harnesses or connectors
- Short to the ground in the curtain air bag module (LH) (squib) harness
- Malfunction of the SRS-ECU



# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

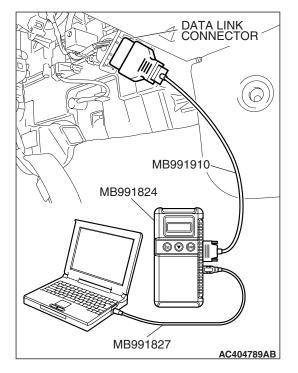
# 

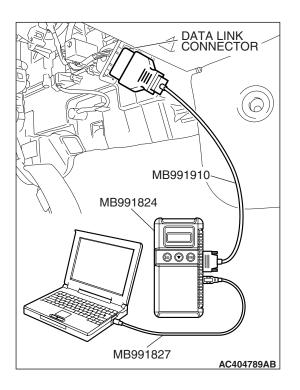
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

## Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).





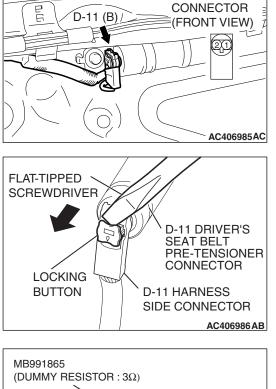
# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check the curtain air bag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

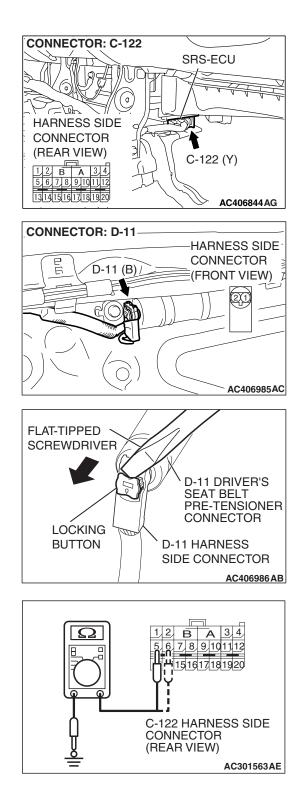
- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (LH) connector D-11. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.



HARNESS SIDE

**CONNECTOR: D-11** 

- MB991865 (DUMMY RESISTOR : 3Ω) MB991884 (RESISTOR HARNESS ) CONNECTOR AC301553AL
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-11 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1452 set?
  - YES : Go to Step 4.
  - **NO :** Replace the curtain air bag module (LH) (Refer to P.52B-420). Then go to Step 6.



STEP 4. Check the curtain air bag module (LH) circuit. Measure the voltage at the SRS-ECU connector C-122. (1) Disconnect SRS-ECU connector C-122.

- (2) Disconnect curtain air bag module (LH) connector D-11. 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.

# 

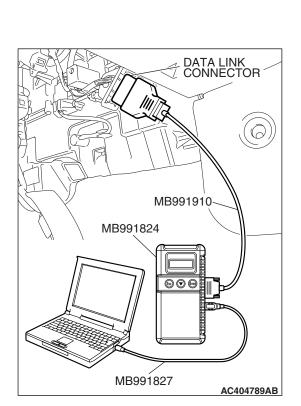
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (4) Check for continuity C-122 harness side connector terminals 5, 6 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 B1452 sets, replace the SRS-ECU (Refer to P.52B-102). Then go to Step 6.

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STEP 5. Check the harness wires for short circuit to ground between SRS-ECU connector C-122 (terminal No.5 and 6) and curtain air bag module (LH) connector D-11 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.5 and 6). and curtain air bag module (LH) connector D-11 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO**: Replace the harness wires between SRS-ECU connector C-122 and curtain air bag module (LH) connector D-11. Then go to Step 6.



CONNECTOR: C-122

-Db

CONNECTOR

(REAR VIEW)

1 2 B A 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

66

HARNESS SIDE

CONNECTOR: D-11

D-11 (B)

SRS-ECU

V

C-122 (Y)

2

AC406844 AG

AC406985AC

HARNESS SIDE

FRONT VIEW)

## STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

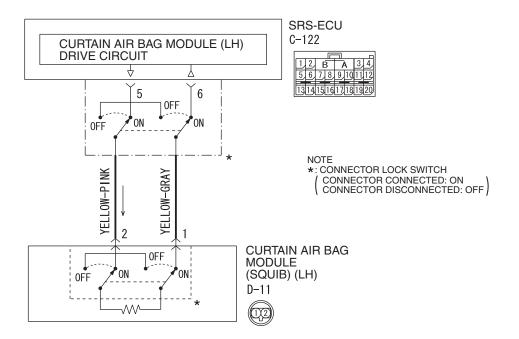
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1452 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

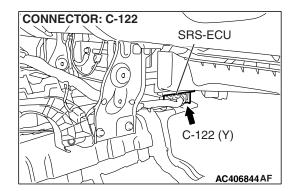
TSB	Revision	

# DTC: B1453 Curtain Air Bag Module (LH) (squib) System Fault Power Supply Circuit (short-circuited to Power Supply)



Curtain Air Bag Module (LH) (Squib) Circuit

W6P52M000A

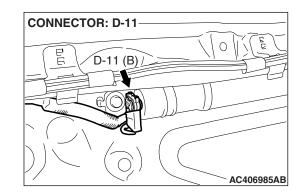


# 

If DTC B1453 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

- The SRS-ECU judges how severe a collision is by detecting signals from the left and right side impact sensors. If the impact is over a predetermined level, the SRS-ECU sends an ignition signal. At this time, if the side-airbag safing G-sensor is on, the SRS side-airbag will inflate.
- The ignition signal is input to the curtain air bag module (LH) to inflate the curtain air bag.



# DTC SET CONDITIONS

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

# **TROUBLESHOOTING HITS**

- Damaged wiring harnesses or connectors
- Short to the ground in the curtain air bag module (LH) (squib) harness
- Malfunction of the SRS-ECU



# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

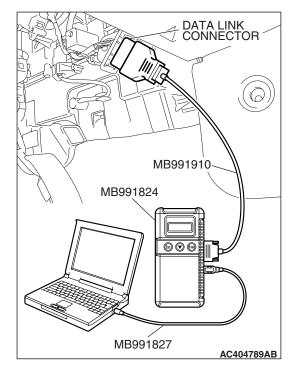
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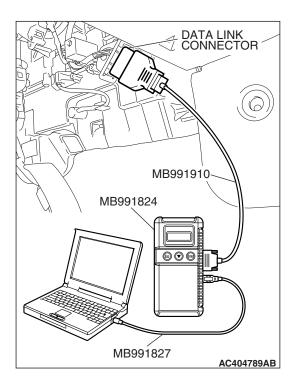
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

## Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).





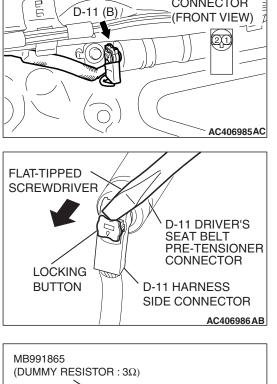
# STEP 2. Recheck for diagnostic trouble code.

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 the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check the curtain air bag module (LH). (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect curtain air bag module (LH) connector D-11. 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.

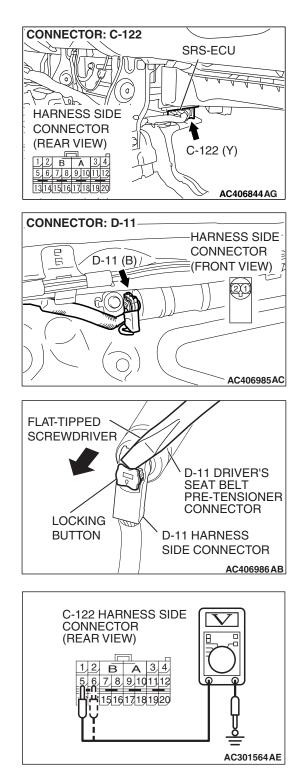


HARNESS SIDE

CONNECTOR

**CONNECTOR: D-11** 

- MB991884 (RESISTOR **D-11 HARNESS SIDE** HARNESS) CONNECTOR AC301553AL
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-11 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1453 set?
  - YES: Go to Step 4.
  - **NO**: Replace the curtain air bag module (LH). Refer to P.52B-420. Then go to Step 6.



STEP 4. Check the curtain air bag module (LH) circuit. Measure the resistance at the SRS-ECU connector C-122. (1) Disconnect SRS-ECU connector C-122.

(2) Disconnect curtain air bag module (LH) connector D-11. 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.

# 

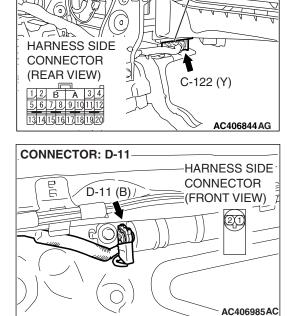
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (3) Measure the voltage C-122 harness side connector terminals 5, 6 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 B1453 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Go to Step 5.

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STEP 5. Check harness wires for short circuit to power supply between SRS-ECU connector C-122 (terminal No.5 and 6) and curtain air bag module (LH) connector D-11 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.5 and 6) and curtain air bag module (LH) connector D-11 (terminal No.1 and 2) in good condition?
  - YES: Go to Step 6.
  - **NO**: Replace the harness wires between SRS-ECU connector C-122 and curtain air bag module (LH) connector D-11. Then go to Step 6.



SRS-ECU

CONNECTOR: C-122

# 

# STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

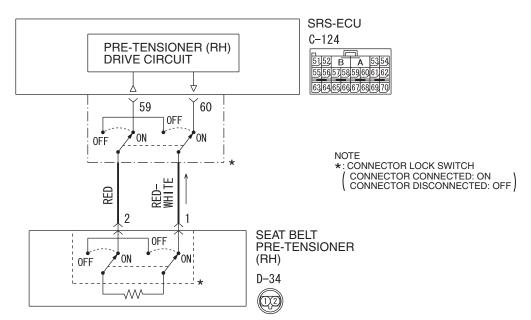
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1453 set?

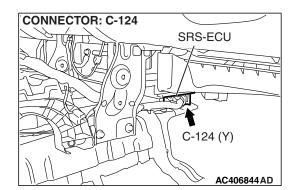
- YES : Return to Step 1.
- **NO :** The procedure is complete.

|--|

# DTC B1460: Seat Belt Pre-Tensioner (RH) (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)



Passenger's (Front) Seat Belt Pre-Tensioner (Squib) Circuit



# 

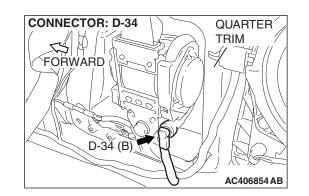
If DTC B1460 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the pre-tensioner will deploy.

# DTC SET CONDITIONS

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



W6P52M009A

# TROUBLESHOOTING HITS

- Improper engaged connector or defective short spring\*
- Short circuit between the passenger'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-124 or D-34 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

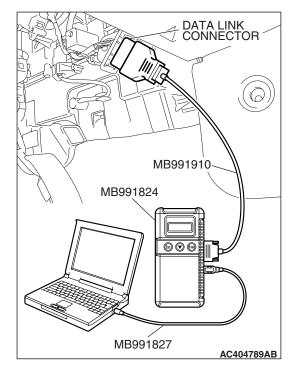
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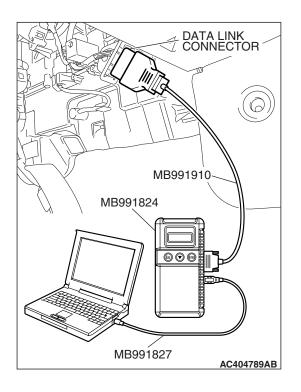
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

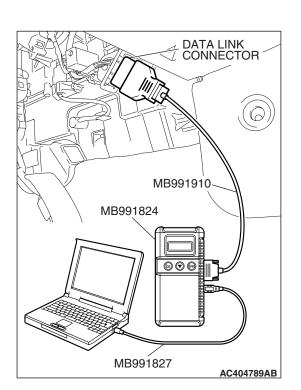




# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



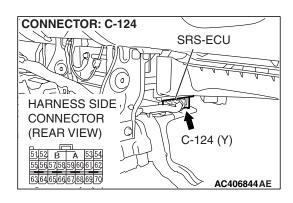
# STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

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

## Q: Is DTC B1519 set?

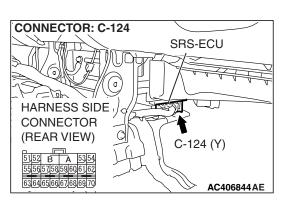
- YES : Go to Step 4.
- NO: Go to Step 5.

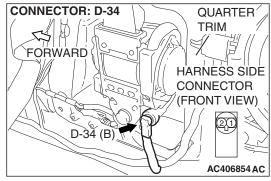
TSB Revision	

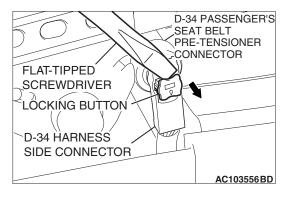


# STEP 4. Check the SRS-ECU connector C-124.

- Q: Is connector correctly engaged?
  - YES : Go to Step 5.
  - **NO :** Engage the connector correctly. Then go to Step 9.







# STEP 5. Check SRS-ECU connector C-124 and passenger's seat belt pre-tensioner connector D-34. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-124 and D-34, and then reconnect them. For connector D-34, 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 B1460 set?

- YES : Go to Step 6.
- **NO :** The procedure is complete. It is assumed that DTC B1460 set because connector C-124 or D-34 was engaged improperly.

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# **CONNECTOR: D-34** QUARTER TRIM FORWARD HARNESS SIDE CONNECTOR (FRONT VIEW) D-34 (B) AC406854 AC D-34 PASSENGER'S SEAT BELT PRE-TENSIONER CONNECTOR FLAT-TIPPED SCREWDRIVER 0 LOCKING BUTTON D-34 HARNESS SIDE CONNECTOR AC103556BD

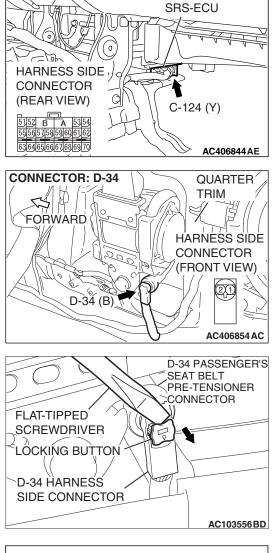
### STEP 6. Check the passenger's seat belt pre-tensioner. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect passenger's seat belt pre-tensioner connector D-34. 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-34 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1460 set?
  - YES : Go to Step 7.
  - **NO :** Replace the passenger's seat belt pre-tensioner (Refer to P.52B-424). Then go to Step 9.

D-34 HARNESS SIDE	SISTOR : 3 Ω)
CONNECTOR	AC406937AB

ГSВ	Revision	
	1101131011	



**CONNECTOR: C-124** 

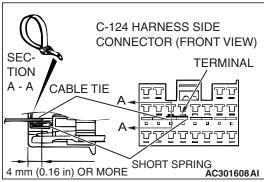
# STEP 7. Check the passenger's seat belt pre-tensioner circuit. Measure the resistance at the SRS-ECU connector C-124.

(1) Disconnect SRS-ECU connector C-124.

# A DANGER

# To prevent the seat belt pre-tensioner from deploying unintentionally, disconnect the passenger's seat belt pre-tensioner connector D-34 to short the squib circuit.

(2) Disconnect passenger's seat belt pre-tensioner connector D-34. 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.



# 

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 59, 60 and the short spring to release the short spring.

TSB Revision	
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# C-124 HARNESS SIDE CONNECTOR (REAR VIEW) 5152 B A 5354 5556575869606162 63646566

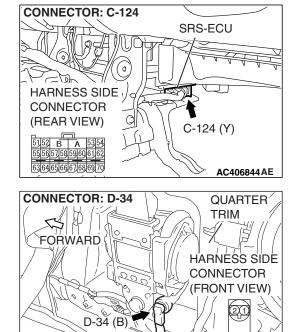
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Do not insert a test probe into the terminal from its front side directly as the connector contact pressure may be weakened.

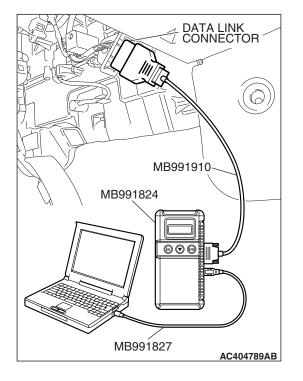
- (4) Check for continuity between C-124 harness side connector terminals 59 and 60. It should be open circuit.
- Q: Does continuity exist?
  - YES : Go to Step 8.
  - **NO :** Erase the diagnostic trouble code memory, and check diagnostic trouble code. If DTC B1460 set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 9

STEP 8. Check the harness for short circuit between SRS-ECU connector C-124 (terminal No.59 and 60) and passenger's seat belt pre-tensioner connector D-34 (terminal No.1 and 2).

- Q: Are harness wires between SRS-ECU connector C-124 (terminal No.59 and 60) connector and passenger's seat belt pre-tensioner connector D-34 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 9.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and passenger's seat belt pre-tensioner connector D-34. Then go to Step 9.



AC406854 AC

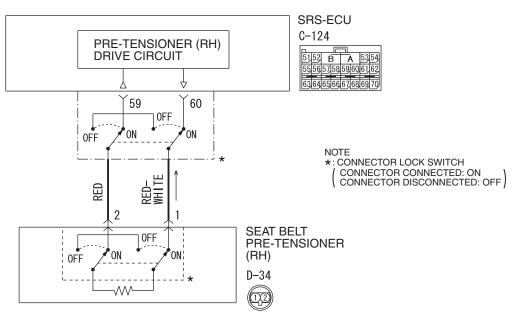


# STEP 9. Recheck for diagnostic trouble code.

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 B1460 set?
  - **YES :** Return to Step 1.
  - **NO :** The procedure is complete.

### DTC B1461: Seat Belt Pre-Tensioner (RH) (Squib) System Fault 2 (Open in the Squib Circuit)

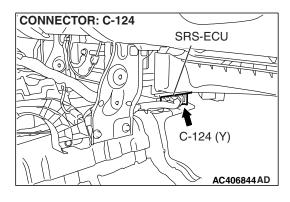


### Passenger's (Front) Seat Belt Pre-Tensioner (Squib) Circuit

W6P52M009A

<b>TSB</b> Revision	

### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

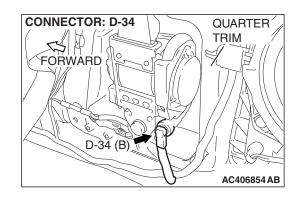


# 

If DTC B1461 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the pre-tensioner will deploy.



# DTC SET CONDITIONS

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

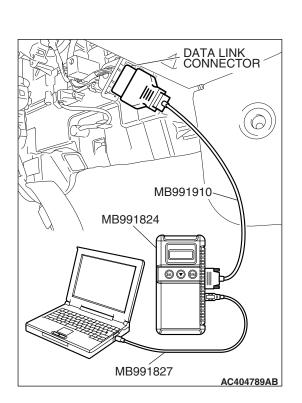
# **TROUBLESHOOTING HITS**

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

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

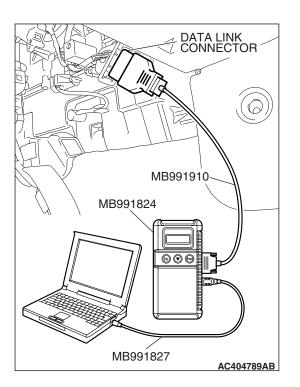
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

## Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

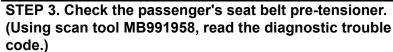
- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB Revision	

# **CONNECTOR: D-34** QUARTER TRIM FORWARD HARNESS SIDE CONNECTOR (FRONT VIEW) D-34 (B) AC406854 AC D-34 PASSENGER'S SEAT BELT PRE-TENSIONER CONNECTOR FLAT-TIPPED SCREWDRIVER 0 LOCKING BUTTON D-34 HARNESS SIDE CONNECTOR AC103556BD

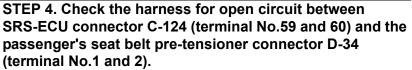


- (1) Disconnect the negative battery terminal.
- (2) Disconnect passenger's seat belt pre-tensioner connector D-34. Use a flat-tipped screwdriver to unlock the locking button at the harness side connector by withdrawing it toward you in two stages, and then disconnect the connector.

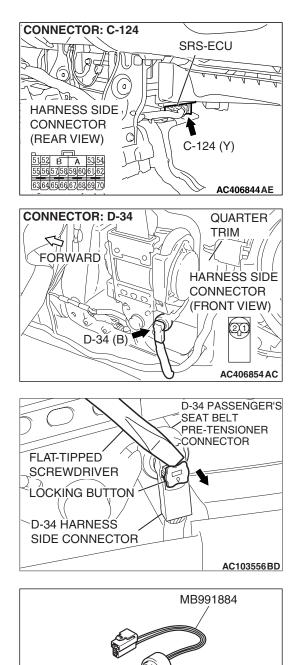
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-34 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1461 set?
  - YES: Go to Step 4.
  - **NO :** Replace the passenger's seat belt pre-tensioner (Refer to P.52B-424). Then go to Step 5.

MB991865 (DUMMY RE	SISTOR : 3Ω)
	(RESISTOR
D-34 HARNESS SIDE	HARNESS)
	AC406937AB

TSB	Revision



(1) Disconnect SRS-ECU connector C-124 and passenger's seat belt pre-tensioner connector D-34. For connector D-34, 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.



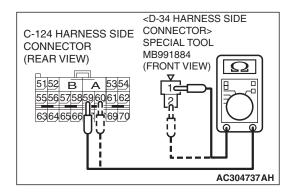
D-34

HARNESS SIDE CONNECTOR

AC201287BX

(2) Connect D-34 harness side connector to special tool MB991884.

	TSB I	Revision	
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# 

## 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-124 (terminal No.59) and the special tool (terminal No.1)
  - SRS-ECU connector C-124 (terminal No.60) 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 B1461 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
- **NO**: Replace the harness wires between SRS-ECU connector C-124 passenger's seat belt pre-tensioner connector D-34. Then go to Step 5.

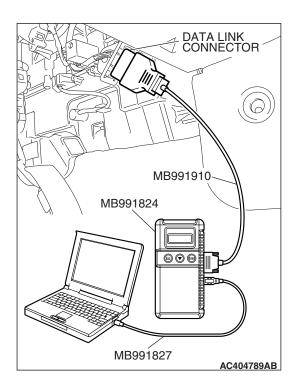
# STEP 5. Recheck for diagnostic trouble code.

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.

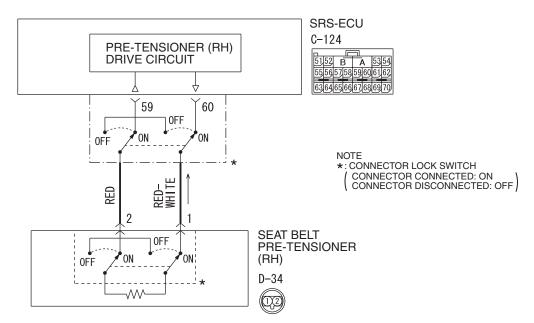
# Q: Is DTC B1461 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

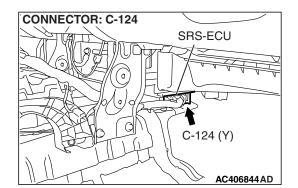


W6P52M009A

# DTC B1462: Seat Belt Pre-Tensioner (RH) (Squib) System Fault for Ground Circuit (Short-Circuit to Ground)



### Passenger's (Front) Seat Belt Pre-Tensioner (Squib) Circuit

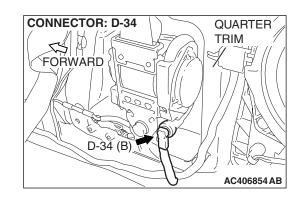


# 

If DTC B1462 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the pre-tensioner will deploy.



# DTC SET CONDITIONS

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

# **TROUBLESHOOTING HITS**

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

TSB Revision	

### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

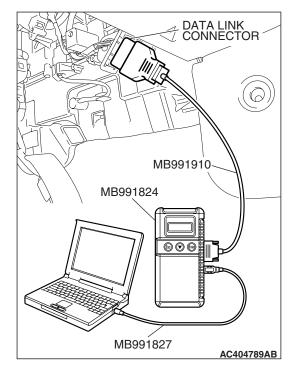
# 

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

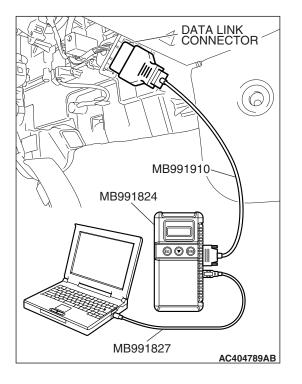
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



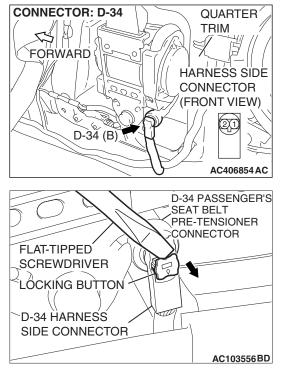
ГSВ	Revision



# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



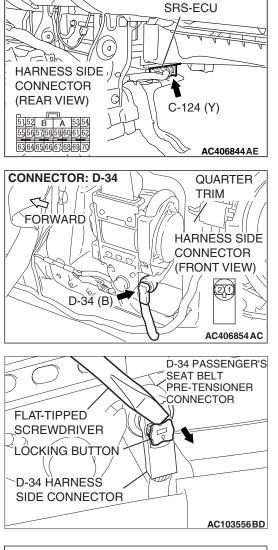
## STEP 3. Check the passenger's seat belt pre-tensioner. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect passenger's seat belt pre-tensioner connector D-34. 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-34 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1462 set?
  - YES: Go to Step 4.
  - **NO :** Replace the passenger's seat belt pre-tensioner (Refer to P.52B-424). Then go to Step 6.

MB991865 (DUMMY RE	SISTOR : 3Ω) MB991884 (RESISTOR
D-34 HARNESS SIDE	HARNESS )
CONNECTOR	AC406937AB

TSB	Revision

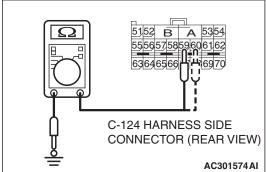


**CONNECTOR: C-124** 

# STEP 4. Check the passenger's seat belt pre-tensioner circuit. Measure the resistance at the SRS-ECU connector C-124.

(1) Disconnect SRS-ECU connector C-124.

(2) Disconnect passenger's seat belt pre-tensioner connector D-34. 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.



# 

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-124 harness side connector terminals 59, 60 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 B1462 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.

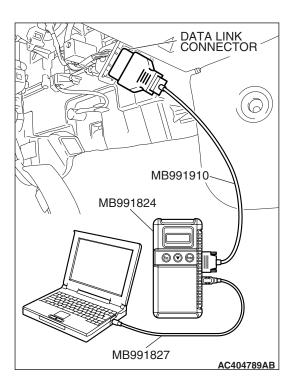
TSB	Revision	

**CONNECTOR: C-124** SRS-ECU Ton 2 HARNESS SIDE V CONNECTOR (REAR VIEW) C-124 (Y) 152 B A 5354 6364656667686970 AC406844AE **CONNECTOR: D-34** QUARTER TRIM Ø FORWARD HARNESS SIDE CONNECTOR (FRONT VIEW) 21 D-34 (B)

AC406854 AC

STEP 5. Check harness wires for short circuit to ground between SRS-ECU connector C-124 (terminal No.59 and 60) and passenger's seat belt pre-tensioner connector D-34 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.59 and 60) and passenger's seat belt pre-tensioner connector D-34 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and passenger's seat belt pre-tensioner connector D-34. 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.

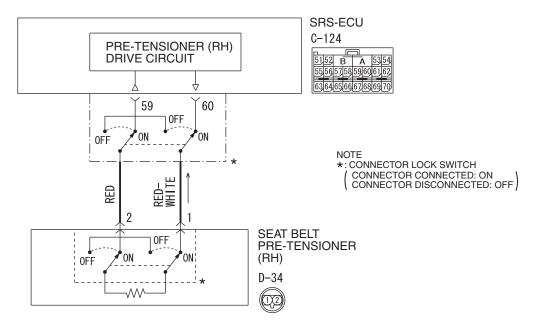
# Q: Is DTC B1462 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

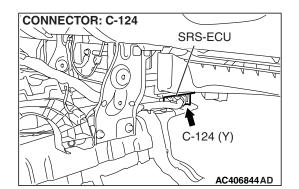
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W6P52M009A

# DTC B1463: Seat Belt Pre-Tensioner (RH) (Squib) System Fault for Power Supply Circuit (Short-Circuited to Power Supply)



### Passenger's (Front) Seat Belt Pre-Tensioner (Squib) Circuit

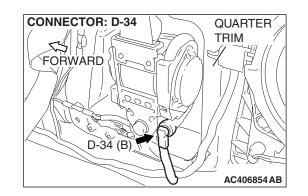


# 

If DTC B1463 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the pre-tensioner will deploy.



# DTC SET CONDITIONS

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

# **TROUBLESHOOTING HITS**

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

<b>TSB</b> Revision	

### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

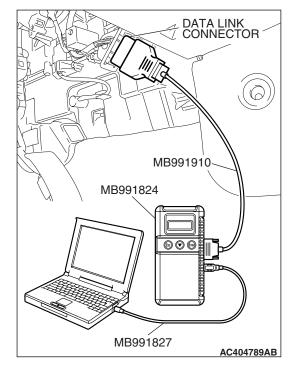
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# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

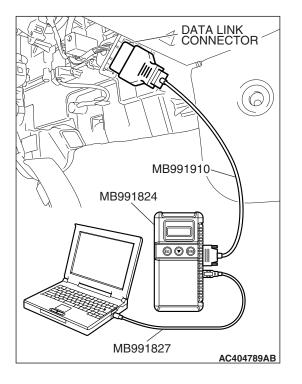
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



TSB	Revision



# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

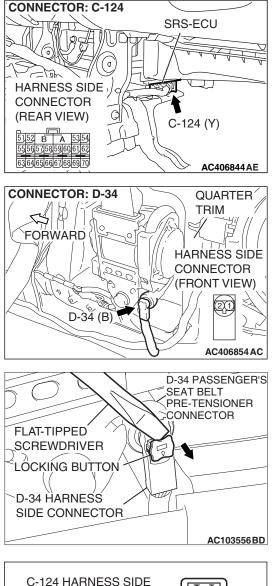
# **CONNECTOR: D-34** QUARTER TRIM FORWARD HARNESS SIDE CONNECTOR (FRONT VIEW) D-34 (B) AC406854 AC D-34 PASSENGER'S SEAT BELT PRE-TENSIONER CONNECTOR FLAT-TIPPED SCREWDRIVER LOCKING BUTTON D-34 HARNESS SIDE CONNECTOR AC103556BD

### MB991865 (DUMMY RESISTOR : 3Ω) (DUMMY RESISTOR : 3Ω) (DUMMY RESISTOR (DUMMY RESISTOR) (DUM

## STEP 3. Check the passenger's seat belt pre-tensioner. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect passenger's seat belt pre-tensioner connector D-34. 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.

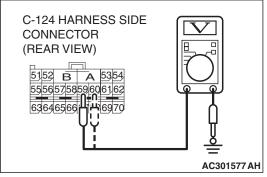
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-34 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1463 set?
  - YES : Go to Step 4.
  - **NO :** Replace the passenger's seat belt pre-tensioner (Refer to P.52B-424). Then go to Step 6.



# STEP 4. Check the passenger's seat belt pre-tensioner circuit. Measure the voltage at the SRS-ECU connector C-124.

(1) Disconnect SRS-ECU connector C-124.

- (2) Disconnect passenger's seat belt pre-tensioner connector D-34. 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,



# 

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-124 harness side connector terminals 59, 60 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 B1463 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Go to Step 5.

TSB Revision	

**CONNECTOR: C-124** SRS-ECU Ton 2 HARNESS SIDE V CONNECTOR (REAR VIEW) C-124 (Y) 1152 B A 53154 6364656667686970 AC406844AE **CONNECTOR: D-34** QUARTER TRIM Ø FORWARD HARNESS SIDE CONNECTOR (FRONT VIEW) 21 D-34 (B)

AC406854 AC

STEP 5. Check the harness wires for short circuit to power supply between SRS-ECU connector C-124 (terminal No.59 and 60) and passenger's seat belt pre-tensioner connector D-34 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.59 and 60) and passenger's seat belt pre-tensioner connector D-34 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and passenger's seat belt pre-tensioner connector D-34. Then go to Step 6.

# DATA LINK CONNECTOR MB991910 MB991824 OCCUPATE MB991827 AC404789AB

### 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.

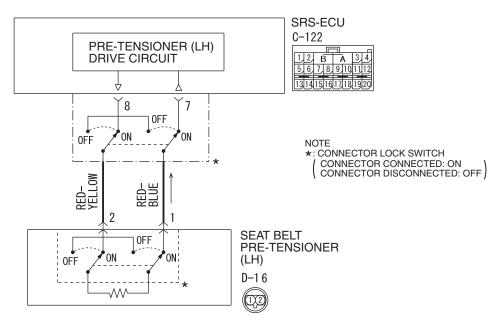
#### Q: Is DTC B1463 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

TSB Revision
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W6P52M010A

# DTC B1470: Seat Belt Pre-Tensioner (LH) (Squib) System Fault 1 (Short Circuit between Terminals of the Squib Circuit)



Driver's Seat Belt Pre-Tensioner (Squib) Circuit

CONNECTOR: C-122 SRS-ECU C-122 (Y) AC406844 AF

### 

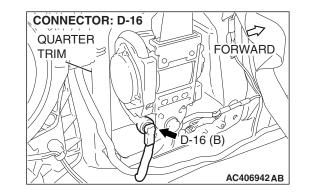
If DTC B1470 is set in the SRS-ECU, always diagnose the CAN main bus line.

## **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the pre-tensioner will deploy.

## DTC SET CONDITIONS

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



# 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-122 or D-16 is damaged or improperly engaged, the short spring may not be released when the connector is connected.

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resister
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

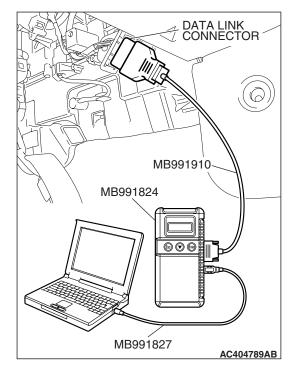
#### 

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

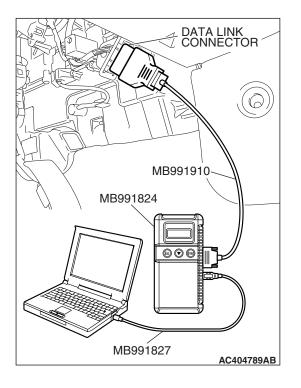
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



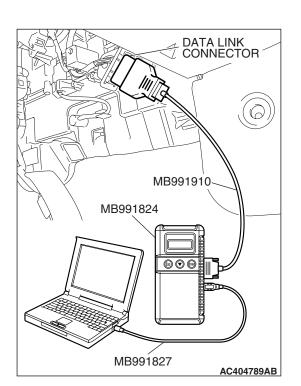
ГSВ	Revision



#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



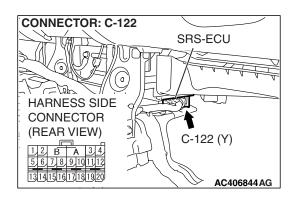
# STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

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

#### Q: Is DTC B1519 set?

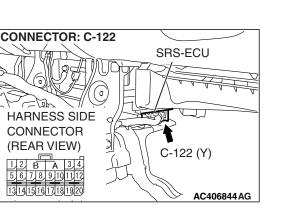
- YES : Go to Step 4.
- NO: Go to Step 5.

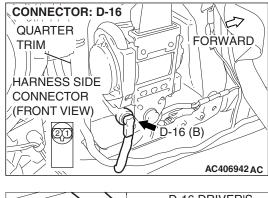
TSB Revisio	'n

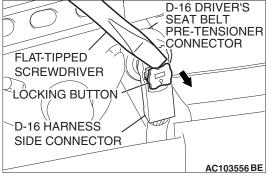




- Q: Is the connector correctly engaged?
  - YES : Go to Step 5.
  - **NO :** Engage the connector correctly. Then go to Step 9.







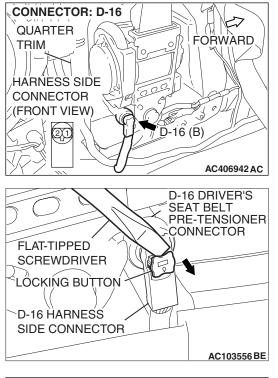
# STEP 5. Check SRS-ECU connector C-122 and driver's seat belt pre-tensioner connector D-16. (Using scan tool MB991958, read the diagnostic trouble code.)

- (1) Disconnect the negative battery terminal.
- (2) Disconnect connectors C-122 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 B1470 set?

- YES : Go to Step 6.
- **NO :** The procedure is complete. It is assumed that DTC B1470 set because connector C-122 or D-16 was engaged improperly.

TSB	Revision	



#### MB991865 (DUMMY RESISTOR : 3Ω) (DUMMY RESIS

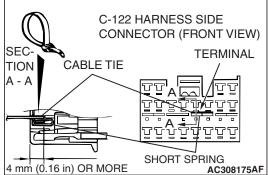
# STEP 6. Check the driver's seat belt pre-tensioner. (Using scan tool MB991958, read the diagnostic trouble code.)

- (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 side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1470 set?
  - YES : Go to Step 7.
  - **NO**: Replace the driver's seat belt pre-tensioner (Refer to P.52B-424). Then go to Step 9.

TSB Revision	
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#### **CONNECTOR: C-122** SRS-ECU 8 ία ' с. : Non HARNESS SIDE CONNECTOR (REAR VIEW) C-122 (Y) <u>B</u> A 34 9 10 11 12 78 1314151617181920 AC406844 AG **CONNECTOR: D-16** E QUARTER FORWARD TRIM HARNESS SIDE CONNECTOR (FRONT VIEW) D-16 (B) 21 AC406942AC D-16 DRIVER'S SEAT BELT PRE-TENSIONER CONNECTOR FLAT-TIPPED SCREWDRIVER LOCKING BUTTON D-16 HARNESS SIDE CONNECTOR AC103556 BE



STEP 7. Check the driver's seat belt pre-tensioner circuit. Measure the resistance at the SRS-ECU connector C-122. (1) Disconnect SRS-ECU connector C-122.

## A DANGER

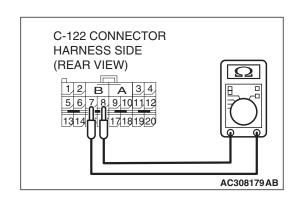
#### To prevent the seat belt pre-tensioner from deploying unintentionally, disconnect the driver's seat belt pre-tensioner connector D-16 to short the squib circuit.

(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.

### 

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 7, 8 and the short spring to release the short spring.



#### 

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

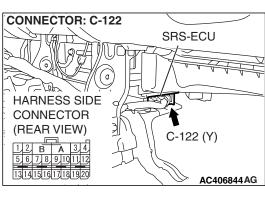
 (4) Check for continuity between C-122 harness side connector terminals 7 and 8.
 It should be open circuit

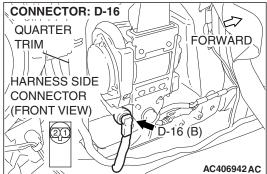
It should be open circuit.

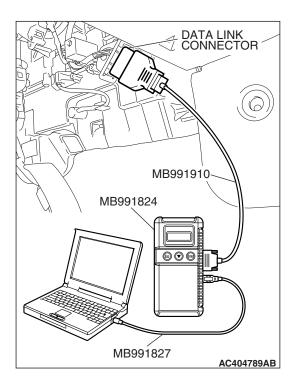
- **Q: Does continuity exist?** 
  - YES : Go to Step 8.
  - **NO :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1470 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 9.

STEP 8. Check the harness for short circuit between SRS-ECU connector C-122 (terminal No.7 and 8) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2).

- Q: Are harness wires between SRS-ECU connector C-122 (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 9.
  - **NO :** Replace the harness wires between SRS-ECU connector C-122 and driver's seat belt pre-tensioner connector D-16. Then go to Step 9.







#### STEP 9. Recheck for diagnostic trouble code.

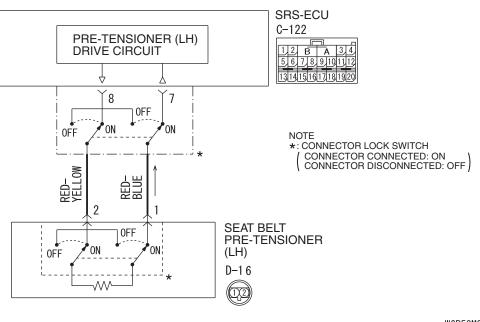
Check again if the DTC is set.

- (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 B1470 set?

- YES: Return to Step 1.
- **NO :** The procedure is complete.

#### DTC B1471: Seat Belt Pre-Tensioner (LH) (Squib) System Fault 2 (Open in the Squib Circuit)

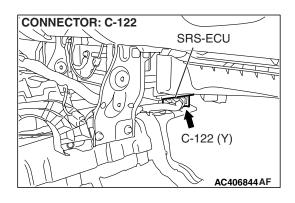


#### Driver's Seat Belt Pre-Tensioner (Squib) Circuit

W6P52M010A

<b>TSB</b> Revision	

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

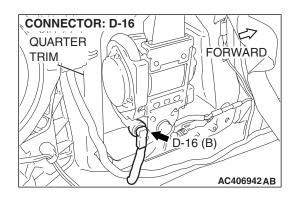


### 

If DTC B1471 is set in the SRS-ECU, always diagnose the CAN main bus line.

### **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the 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).

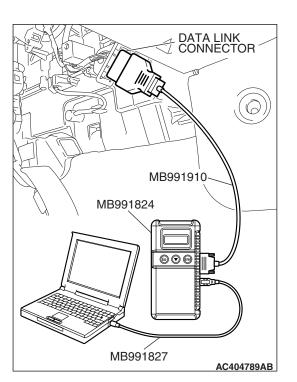
### **TROUBLESHOOTING HITS**

- 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 (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

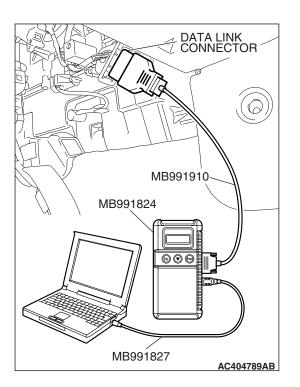
### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



### STEP 2. Recheck for diagnostic trouble code.

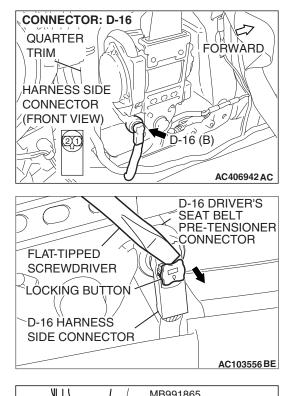
Check again if the DTC is set.

- (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 the DTC set?

- YES : Go to Step 3.
- **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB	Revision	

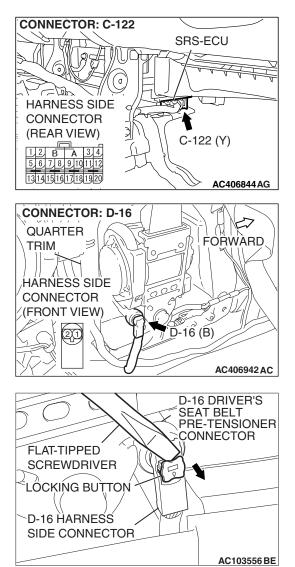


# STEP 3. Check the driver's seat belt pre-tensioner. (Using scan tool MB991958, read the diagnostic trouble code.)

- (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 side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and then check the diagnostic trouble code.
- Q: Is DTC B1471 set?
  - YES : Go to Step 4.
  - **NO**: Replace the driver's seat belt pre-tensioner (Refer to P.52B-424). Then go to Step 5.

	ESISTOR : 3Ω)
X D SCH XX	
	6 T
	۲. (B)
	MB991884
	(RESISTOR
	HARNESS )
D-16 HARNESS SIDE	
CONNECTOR	AC406937AC



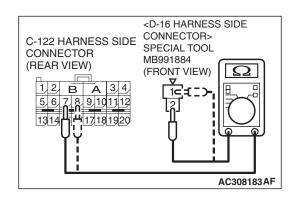
# MB991884 D-16 HARNESS SIDE CONNECTOR AC201287BY

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

# STEP 4. Check the harness for open circuit between SRS-ECU connector C-122 (terminal No.7 and 8) and the driver's seat belt pre-tensioner D-16 (terminal No.1 and 2).

(1) Disconnect SRS-ECU connector C-122 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.

<b>FSB</b> Revision	
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#### 

#### 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-122 (terminal No.7) and the special tool (terminal No.2)
  - SRS-ECU connector C-122 (terminal No.8) and the special tool (terminal No.1)

#### Q: Does continuity exist?

- **YES :** Erase the diagnostic trouble code memory, and recheck if any DTC set. If DTC B1471 set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
- NO: Replace harness wires between SRS-ECU connector C-122 and driver's seat belt pre-tensioner connector D-16. Then go to Step 5.

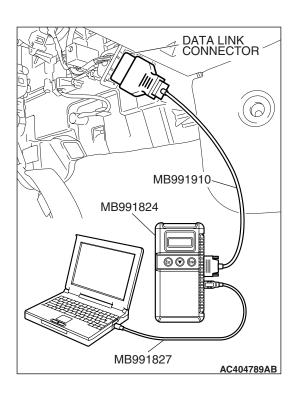
#### STEP 5. Check for diagnostic trouble code.

Check again if the DTC is set.

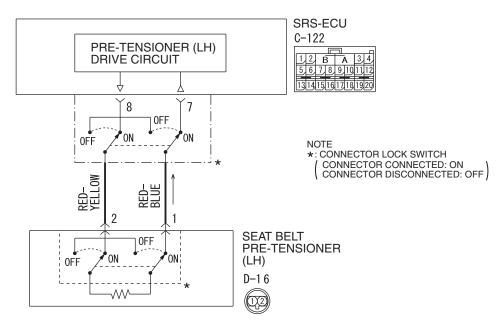
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1471 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

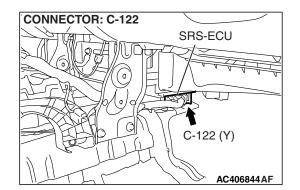


# DTC B1472: Seat Belt Pre-Tensioner (LH) (Squib) System Fault for Ground Circuit (Short-Circuited to Ground)



Driver's Seat Belt Pre-Tensioner (Squib) Circuit

W6P52M010A

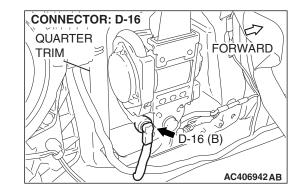


### 

If DTC B1472 is set in the SRS-ECU, always diagnose the CAN main bus line.

## **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the 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

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### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

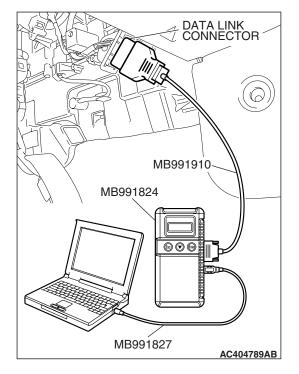
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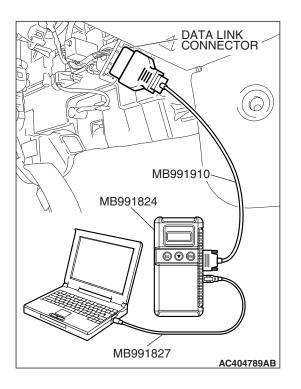
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

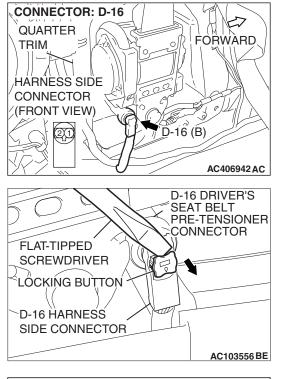




#### STEP 2. Recheck for diagnostic trouble code.

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 the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



# STEP 3. 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.

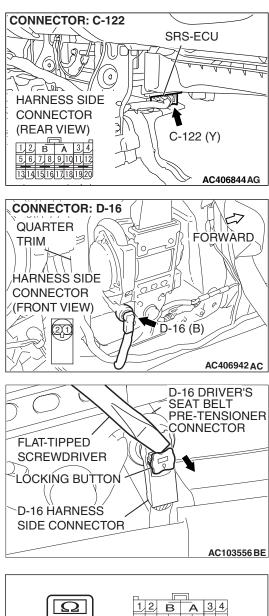
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-16 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and check the diagnostic trouble code.

#### Q: Is DTC B1472 set?

- YES : Go to Step 4.
- **NO :** Replace the driver's seat belt pre-tensioner. Refer to P.52B-424. Then go to Step 6.

MB991865 (DUMMY RE	
	MB991884
	(RESISTOR
	HARNESS )
D-16 HARNESS SIDE	,
CONNECTOR	AC406937AC

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	1101011	



STEP 4. Check the driver's seat belt pre-tensioner circuit. Measure the resistance at the SRS-ECU connector C-122. (1) Disconnect SRS-ECU connector C-122.

(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.

# C-122 HARNESS SIDE CONNECTOR (REAR VIEW)

### 

#### 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-122 harness side connector terminals 7, 8 and body ground. It should be open circuit.

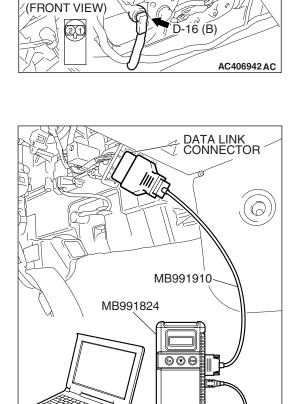
### Q: Does continuity exist?

- YES : Go to Step 5.
- NO: Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1472 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.

<b>TSB</b> Revision	

STEP 5. Check harness wires for short circuit to ground between SRS-ECU connector C-122 (terminal No.7 and 8) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.7 and 8) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2) in good condition?
  - YES: Go to Step 6.
  - NO: Replace the harness wires between SRS-ECU connector C-122 and driver's seat belt pre-tensioner connector D-16. Then go to Step 6.



MB991827

**CONNECTOR: C-122** 

FDD

HARNESS SIDE

**CONNECTOR: D-16** 

2

CONNECTOR

(REAR VIEW)

В A 3 4

7 8 1314151617181920

QUARTER

HARNESS SIDE CONNECTOR

TRIM

a

SRS-ECU

Δ 2

C-122 (Y)

0

AC406844AG

D

FORWARD

#### 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.

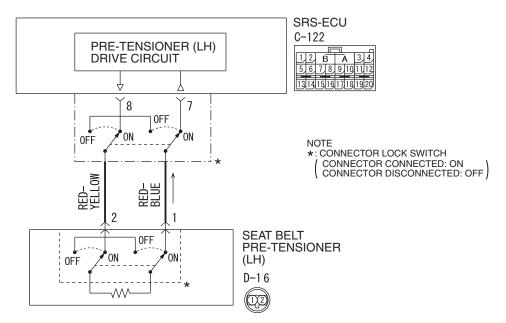
#### Q: Is DTC B1472 set?

- YES: Return to Step 1.
- NO: The procedure is complete.

TSB Revision	
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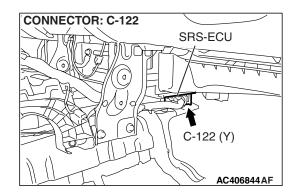
AC404789AB

# DTC B1473: Seat Belt Pre-Tensioner (LH) (Squib) System Fault for Power Supply Circuit (Short-Circuit to Power Supply)



Driver's Seat Belt Pre-Tensioner (Squib) Circuit

W6P52M010A

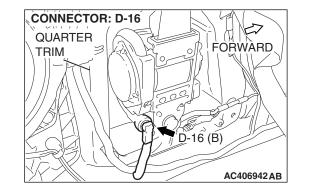


### 

If DTC B1473 is set in the SRS-ECU, always diagnose the CAN main bus line.

## **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 sends an ignition signal. At this time, if the front air bag safing G-sensor is on, the 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

TSB Revision	

### DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991884: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

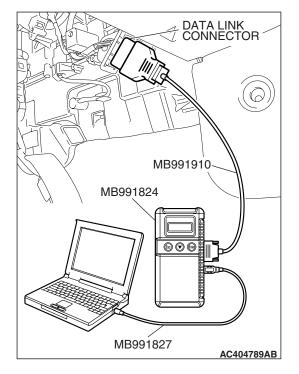
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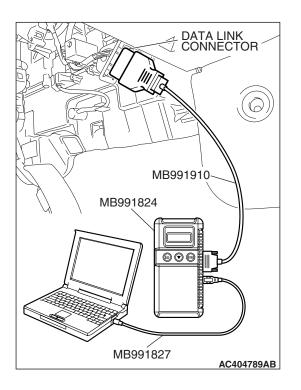
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

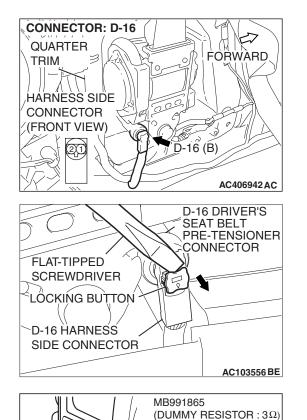




#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



D-16 HARNESS SIDE

CONNECTOR

# STEP 3. 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.

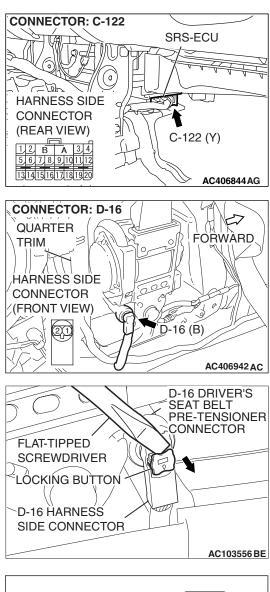
- (3) Connect special tool MB991865 to special tool MB991884.
- (4) Connect special tool MB991884 to the D-16 harness side connector.
- (5) Connect the negative battery terminal.
- (6) Erase diagnostic trouble code memory, and check the diagnostic trouble code.
- Q: Is DTC B1473 set?
  - YES : Go to Step 4.
  - **NO**: Replace the driver's seat belt pre-tensioner (Refer to P.52B-424). Then go to Step 6.

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MB991884 (RESISTOR

HARNESS)

AC406937AC



C-122 HARNESS SIDE CONNECTOR (REAR VIEW) 1 2 B A 3 4 5 6 7 8 9 101112 1314 17181920 1 17181920 1 AC308181AB

#### STEP 4. Check the driver's seat belt pre-tensioner circuit. Measure the voltage at the SRS-ECU connector C-122. (1) Disconnect SRS-ECU connector C-122.

- (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.

### 

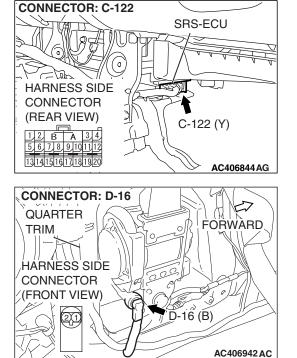
Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (4) Measure the voltage between C-122 harness side connector terminals 7, 8 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 B1473 sets, replace the SRS-ECU (Refer to P.52B-102). Then go to Step 6.
  - NO: Go to Step 5.

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STEP 5. Check the harness wires for short circuit to power supply between SRS-ECU connector C-122 (terminal No.7 and 8) and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.7 and 8). and driver's seat belt pre-tensioner connector D-16 (terminal No.1 and 2) in good condition?
  - YES : Go to Step 6.
  - **NO**: Replace the harness wires between SRS-ECU connector C-122 and driver's seat belt pre-tensioner connector D-16. Then go to Step 6.



# 

#### STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

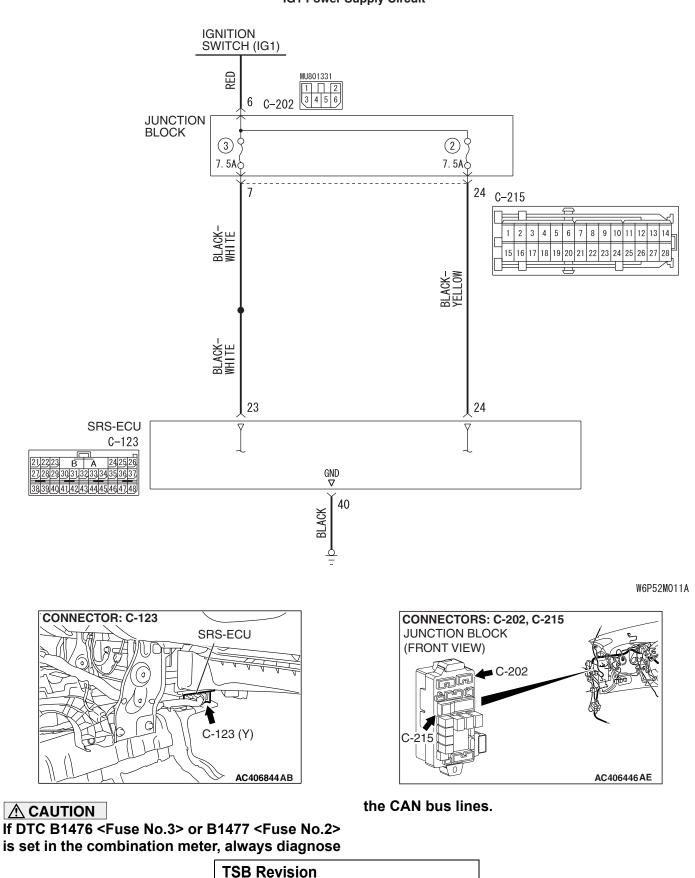
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1473 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

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#### DTC B1476: IG1 Power Supply Circuit System (Fuse No.3 Circuit) DTC B1477: IG1 Power Supply Circuit System (Fuse No.2 Circuit)



IG1 Power Supply Circuit

- 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.3 circuit or 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 B1476 <Fuse No.3> or B1477 <Fuse No.2> 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 (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

### 

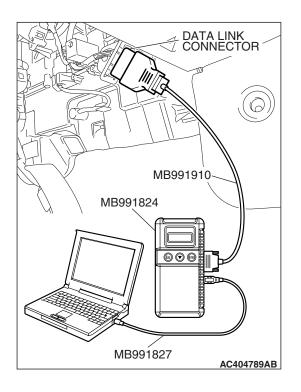
To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the CAN bus line found to be normal?
  - YES : Go to Step 2.
  - **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

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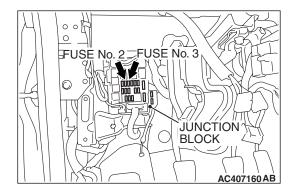
#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is the DTC set?
  - YES : Go to Step 3.
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# STEP 3. Check junction block fuse number 3 <DTC B1476> or 2 <DTC B1477>.

- Q: Is the fuse burned out?
  - **YES**: Go to Step 6. **NO**: Go to Step 4.



#### STEP 4. Check the power supply circuit for open circuit. Measure the voltage at SRS-ECU connector C-123.

- (1) Disconnect the negative battery terminal.
- (2) Disconnect SRS-ECU connector C-123.
- (3) Connect the negative battery terminal.
- (4) Turn the ignition switch to the "ON" position.

#### 

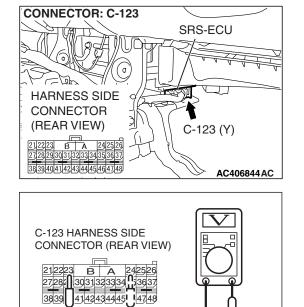
#### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

 (5) Measure the voltage between C-123 harness side connector terminal 23 <DTC B1476> or 24 <DTC B1477> and body ground.

Voltage should measure 9 volts or more.

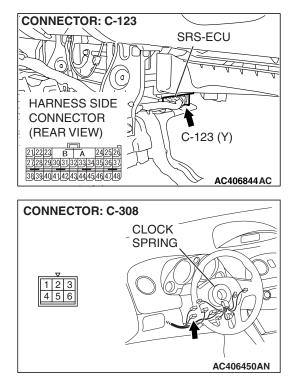
#### Q: Is the measured voltage 9 volts or more?

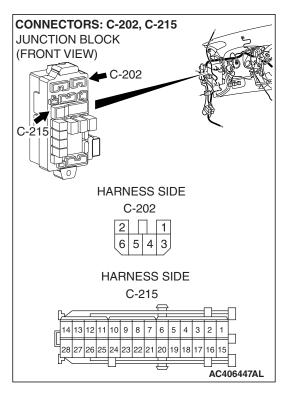
- **YES** : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1476 or B1477 set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 10.
- NO: Go to Step 5.



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STEP 5. Check the harness for open circuit between SRS-ECU connector C-123 (terminal No.23 <DTC B1476> or terminal No.24 <DTC B1477>) and the ignition switch connector C-308 (terminal No.2).





NOTE: After inspecting intermediate connectors C-202 and C-215, inspect the wiring harness. If intermediate connectors are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 10.

- Q: Is the harness wire between SRS-ECU connector C-123 (terminal No.23 <DTC B1476> or terminal No.24 <DTC B1477>) and the ignition switch connector C-308 (terminal No.2) in good condition?
  - YES : Go to Step 10.
  - **NO :** Replace the harness wire between SRS-ECU connector C-123 and the ignition switch connector C-308. Then go to Step 10.

TSB Revision	
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#### STEP 6. Check 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: It is possible that the circuit using fuse No.3 <DTC B1476> or No.2 <DTC B1477> is shorted, go to Step 7.

# STEP 7. Check the SRS-ECU power supply circuit for short circuit to ground. Measure the resistance at the junction block connector C-215.

(1) Disconnect junction block connector C-215, and measure at the wiring harness side.

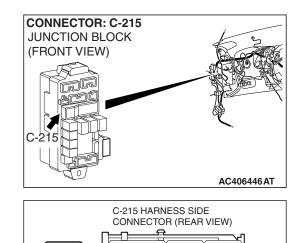
### 

#### 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 <DTC B1476> or 24 <DTC B1477> and body ground. It should be open circuit.

#### **Q: Does continuity exist?**

- YES : Check the other circuit, which flows through fuse No.3 <DTC B1476> or fuse No.2 <DTC B1477>.Then go to Step 10.
- NO: Go to Step 8.



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#### **CONNECTOR: C-123** SRS-ECU Dr <u>in the second</u> HARNESS SIDE CONNECTOR (REAR VIEW) C-123 (Y) BA 24 25 2 3839404142434445464748 AC406844AC C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 23 B A 24 133031323334 1 $\mathbf{\Omega}$ 2122 242526 2728 3637 3839 4142434445 AC308195 AF

# STEP 8. Check the power supply circuit for short circuit to ground. Measure the resistance at the SRS-ECU connector C-123.

(1) Disconnect SRS-ECU connector C-123, and measure at the wiring harness side.

# 

#### 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 23 <DTC B1476> or 24 <DTC B1477> and body ground. It should be open circuit.

### Q: Does continuity exist?

- YES : Go to Step 9.
- **NO :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1476 or B1477 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 10.

STEP 9. Check the harness for short circuit to ground between SRS-ECU connector C-123 (terminal No.23 <DTC B1476> or terminal No.24 <DTC B1477>) and junction block connector C-215 (terminal No.7 <DTC B1476> or terminal No.24 <DTC B1477>).

- Q: Is the harness wire between SRS-ECU connector C-123 (terminal No.23 <DTC B1476> or terminal No.24 <DTC B1477>) and junction block connector C-215 (terminal No.7 <DTC B1476> or 24 <DTC B1477>) in good condition?
  - YES : Go to Step 10.
  - **NO :** Replace the harness wire between SRS-ECU connector C-123 and junction block connector C-215. Then go to Step 10.

### STEP 10. Recheck for diagnostic trouble code.

Check again if the DTC is set.

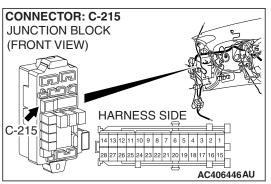
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1476 or DTC B1477 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

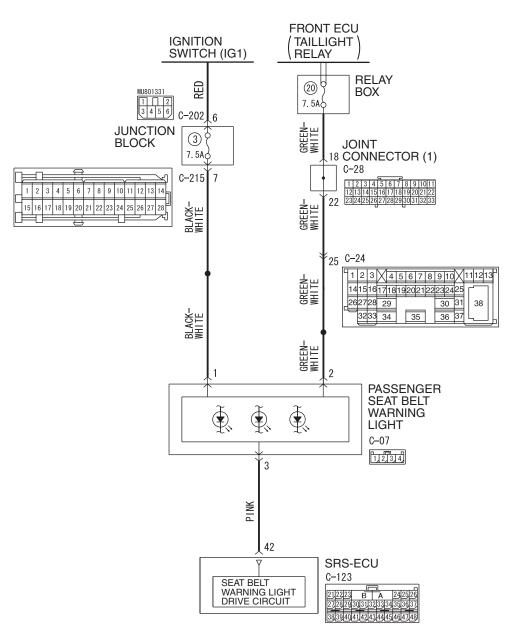
DATA LINK CONNECTOR	
MB991910	
МВ991824	
MB991827	

CONNECTOR: C-123 SRS-ECU HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 (REAR VIEW) C-123 (Y) 212223 B A 242526 CONSECTOR (REAR VIEW) C-123 (Y) C-123 (Y)



TSB Revision
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#### DTC B1486: Passenger Seat Belt Warning Light Drive Circuit System Fault 2.



#### Seat Belt Warning Light Drive Circuit

W6P52M012A

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If DTC B1486 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

- Power for the passenger seat belt warning light is supplied from the ignition switch (IG1).
- The passenger seat belt 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.

<b>TSB</b> Revision	

## **DTC SET CONDITIONS**

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

However, if the vehicle condition returns to normal, DTC B1486 will be automatically erased, and the passenger seat belt warning light will go out.

## TROUBLESHOOTING HINTS

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

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

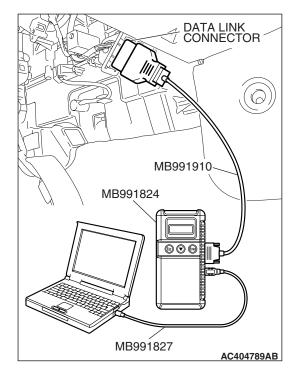
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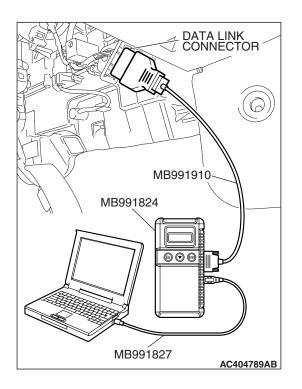
To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- NO: Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).





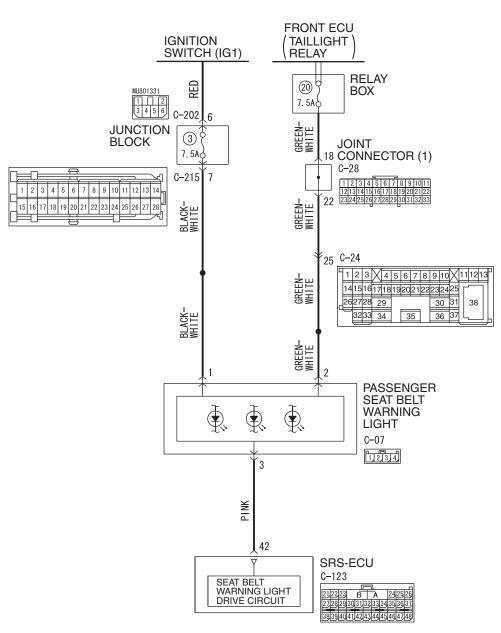
#### STEP 2. Recheck for diagnostic trouble code.

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 the DTC set?
  - **YES :** Check the passenger's seat belt warning light drive circuit system (Refer to P.52B-291).
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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#### DTC B1487: Passenger Seat Belt Warning Light Drive Circuit System Fault 1 (Light does not Illuminate).

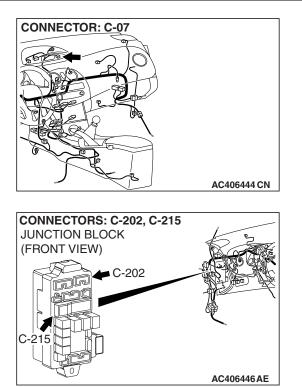


Seat Belt Warning Light Drive Circuit

W6P52M012A

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

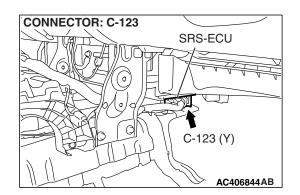


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If DTC B1487 is set in the SRS-ECU, always diagnose the CAN main bus line.

## **CIRCUIT OPERATION**

- Power for the passenger seat belt warning light is supplied from the ignition switch (IG1).
- The passenger seat belt 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.
- If a failure occurs in the system, the SRS-ECU will stop sending that SRS warning light "OFF" signal, thus causing the combination meter to illuminate the SRS warning light.
- The SRS warning light "OFF" signal is not sent to the combination meter in the cases below, either. Therefore, the combination meter will illuminate the SRS warning light.



- The SRS-ECU connector is disconnected.
- The SRS-ECU is not working normally due to a failure in its power supply lines.
- The wiring harness between the passenger seat belt warning light and the SRS-ECU is broken.

## DTC SET CONDITIONS

This DTC will be set if the passenger seat belt warning light driving circuit is short to ground. If the vehicle condition returns to normal, DTC B1487 will be automatically erased, and the passenger seat belt warning light will go out.

## **TROUBLESHOOTING HINTS**

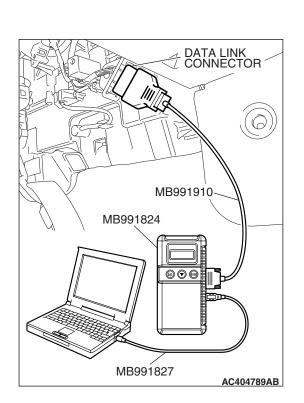
- · Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU
- Malfunction of the passenger seat belt warning light

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

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STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

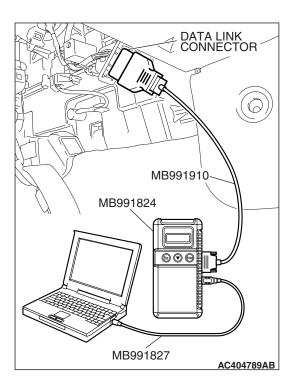
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

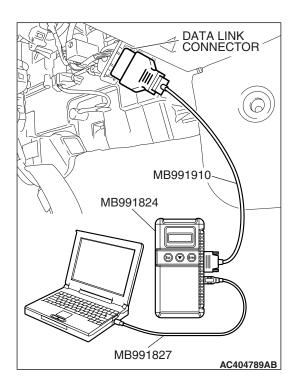
Check again if the DTC is set.

- (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 the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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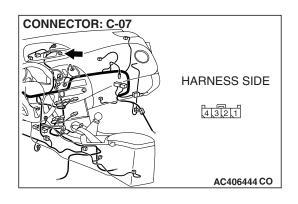
## STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

- (1) Turn the ignition switch to the "ON" position.
- (2) Check if the DTC is set.
- (3) Turn the ignition switch to the "LOCK (OFF)" position.
- Q: Is DTC B1530, B1531, B1532, B1533, B1534, B1535, B1536, B1537, B1538, B1539, B1540, B1541, B1542, B1543, B1545 or B1546 set?
  - YES : Carry out the troubleshooting of the passenger seat belt switch system, the occupant classification-ECU or the occupant classification sensor system (Refer to P.52B-350 <B1530,B1531, B1532, B1533, B1534, B1535, B1536, B1537, B1538 or B1539>, P.52B-359 <B1540,B1541, B1542 or B1543> or P.52B-361 <B1545 or B1546>).
  - NO: Go to Step 4.

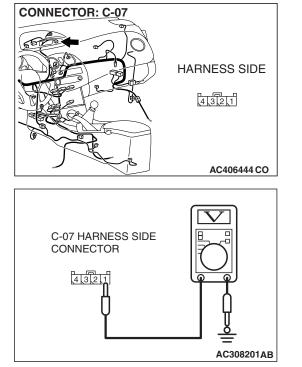
## STEP 4. Check the passenger seat belt warning light connector C-07.

#### Q: Is the connector correctly engaged?

- YES : Go to Step 5.
- **NO**: Engage the connector correctly. Then go to Step 10.



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## STEP 5. Measure the voltage at passenger seat belt warning light connector C-07.

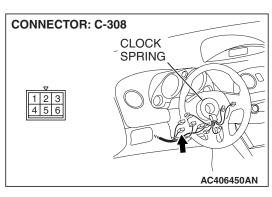
(1) Disconnect passenger seat belt warning light connector C-07.

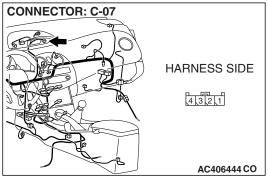
 (2) Measure the voltage between C-07 harness side connector terminal 1 and body ground.
 Voltage should measure approximately 12 volt.

#### Q: Is the check result satisfactory?

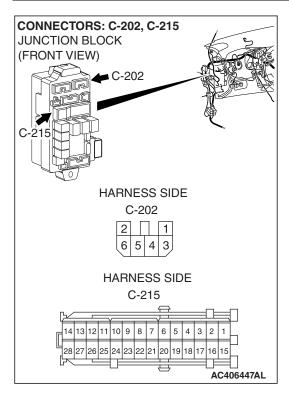
- YES : Go to Step 7.
- **NO :** Go to Step 6.

STEP 6. Check the harness for short circuit between ignition switch connector C-308 (terminal No.2) and passenger seat belt warning light C-07 (terminal No.1).





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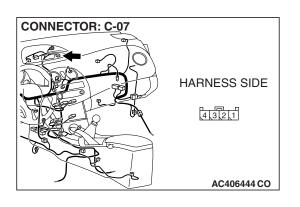
#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

NOTE: After inspecting intermediate connectors C-202 and C-215 inspect the wiring harness. If intermediate connectors C-202 and C-215 are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 10.

Q: Are the harness wires between passenger seat belt warning light connector C-07 (terminal No.1) and the ignition switch connector C-308 (terminal No.2) in good condition?

YES : Go to Step 7.

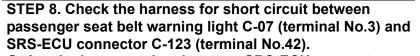
**NO :** Repair the harness wires. Then go to Step 10.



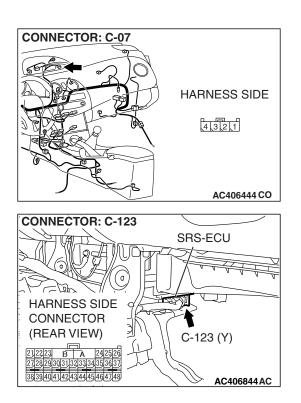
## STEP 7. Check SRS-ECU connector C-123. Q: Is the connector correctly engaged?

- YES: Go to Step 8.
- **NO:** Engage the connector correctly. Then go to Step 10.

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- Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.42) and the passenger seat belt warning light C-07 (terminal No.3) in good condition? YES : Go to Step 9.
  - **NO**: Repair the harness wires. Then go to Step 10.



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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

#### CONNECTOR: C-123 SRS-ECU HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 212293 90313233343536137 3339404142434446464749 C-123 (Y) AC406B44AC C-123 HARNESS SIDE CONNECTOR (REAR VIEW) 212223 B A 242526 2728/2930(313233343539633

3839404142434445464748

AC308203AE



- (1) Disconnect the negative battery terminal.
- (2) Disconnected the SRS-ECU connector C-123, and measure at the wiring harness side.

- (3) Connect the negative battery terminal.
- (4) Turn the ignition switch to the "ON" position.

#### 

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

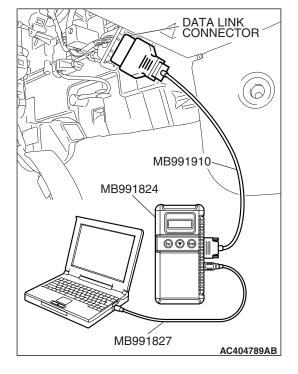
- (5) Connect terminal No.42 to ground.
- Q: Does the warning light illuminate?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1487 set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 10.
  - NO: Replace the passenger seat belt warning light (Refer to GROUP 52A, Instrument Panel Assembly
     P.52A-21). 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.

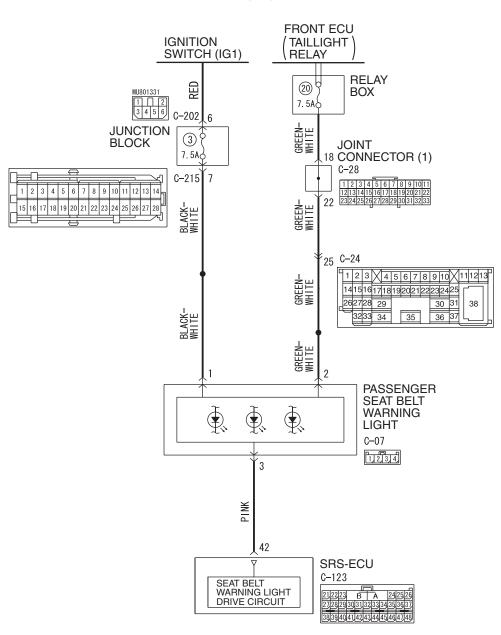
#### Q: Is DTC B1487 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.



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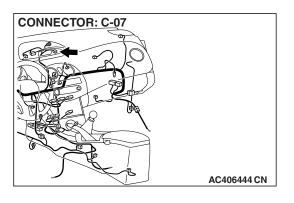
#### DTC B1487: Passenger Seat Belt Warning Light Drive Circuit System Fault 1 (Light does not Switch Off).



Seat Belt Warning Light Drive Circuit

W6P52M012A

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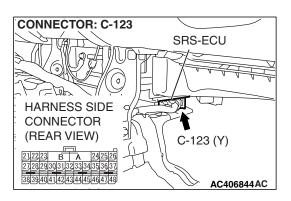


## 

If DTC B1487 is set in the SRS-ECU, always diagnose the CAN main bus line.

## **CIRCUIT OPERATION**

- Power for the passenger seat belt warning light is supplied from the ignition switch (IG1).
- The passenger seat belt 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.
- If a failure occurs in the system, the SRS-ECU will stop sending that SRS warning light "OFF" signal, thus causing the combination meter to illuminate the SRS warning light.
- The SRS warning light "OFF" signal is not sent to the combination meter in the cases below, either. Therefore, the combination meter will illuminate the SRS warning light.
  - The SRS-ECU connector is disconnected.



- The SRS-ECU is not working normally due to a failure in its power supply lines.
- The wiring harness between the passenger seat belt warning light and the SRS-ECU is broken.

## DTC SET CONDITIONS

This DTC will be set if an open circuit has occurred in the wiring harness between the passenger seat belt warning light and the SRS-ECU. If the vehicle condition returns to normal, DTC B1487 will be automatically erased, and the passenger seat belt warning light will go out.

## **TROUBLESHOOTING HINTS**

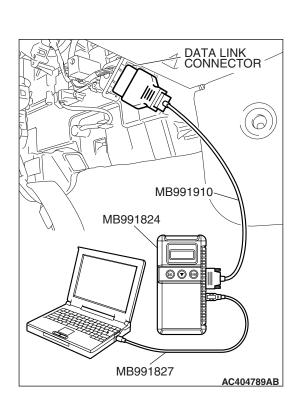
- Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU
- Malfunction of the passenger seat belt warning light

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

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STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

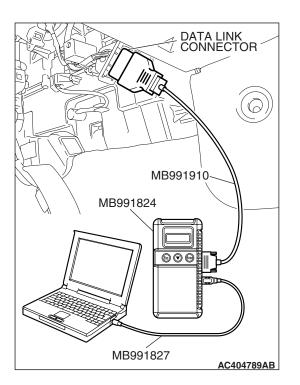
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

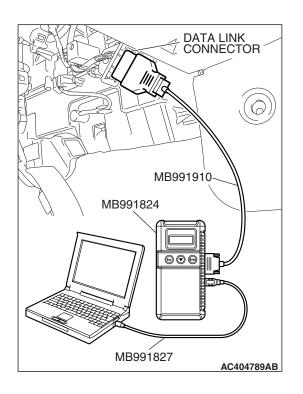
Check again if the DTC is set.

- (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 the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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## STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

- (1) Turn the ignition switch to the "ON" position.
- (2) Check if the DTC is set.
- (3) Turn the ignition switch to the "LOCK (OFF)" position.
- Q: Is DTC B1530, B1531, B1532, B1533, B1534, B1535, B1536, B1537, B1538, B1539, B1540, B1541, B1542, B1543, B1545 or B1546 set?
  - YES : Carry out the troubleshooting of the passenger seat belt switch system, the occupant classification-ECU or the occupant classification sensor system (Refer to P.52B-350 <B1530,B1531, B1532, B1533, B1534, B1535, B1536, B1537, B1538 or B1539>, P.52B-359 <B1540,B1541, B1542 or B1543> or P.52B-361 <B1545 or B1546>).
  - NO: Go to Step 4.

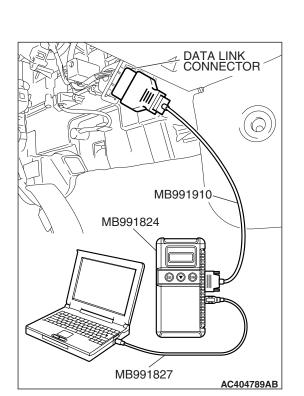
#### STEP 4 Using scan tool MB991958, check actuator test.

- Item No.2: Passenger seat belt warning light illumination
- Q: Does the passenger seat belt warning light illuminate or go out normally?
  - YES : Go to Step 5.
  - NO: Replace the passenger seat belt warning light (Refer to GROUP 52A, Instrument Panel Assembly
     P.52A-21). Then go to Step 6.

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# STEP 5. Check the harness between SRS-ECU connector C-123 (terminal No.42) and passenger seat belt warning light C-07 (terminal No.3).

- Check the passenger seat belt warning light output lines for open circuit.
- Q: Is the check result satisfactory?
  - **YES** : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1487 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - NO: Repair the harness wires. Then go to Step 6.



**CONNECTOR: C-123** 

HARNESS SIDE

BA

38 39 40 41 42 43 44 45 46 47 48

CONNECTOR: C-07

24 25 26

CONNECTOR (REAR VIEW) SRS-ECU

C-123 (Y)

AC406844AC

HARNESS SIDE

4321

AC406444 CO

#### STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

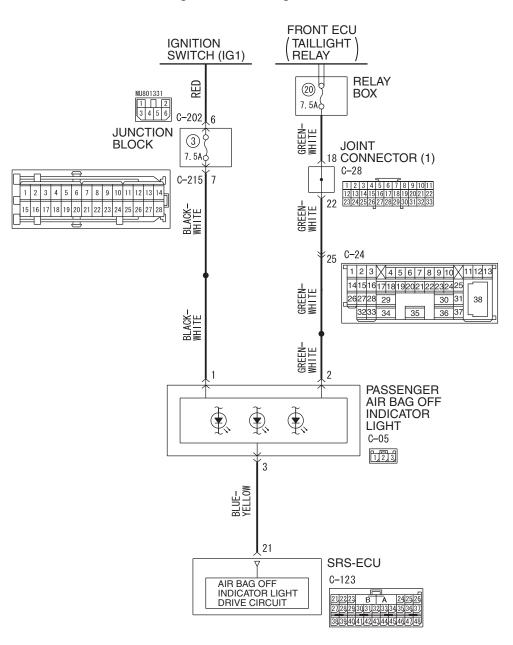
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1487 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

TSB Revision	
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#### DTC B1488: Passenger Air Bag OFF Indicator Light Drive Circuit System Fault 2.



#### Air Bag OFF Indicator Light Drive Circuit

W6P52M013A

#### 

## If DTC B1488 is set in the SRS-ECU, always diagnose the CAN main bus line.

#### **CIRCUIT OPERATION**

- Power for the passenger air bag OFF indicator light is supplied from the ignition switch (IG1).
- The passenger air bag OFF indicator 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 passenger air bag OFF indicator light drive circuit:

- When a short circuit occurs in the passenger air bag OFF indicator light drive circuit.
- When a malfunction is detected in the output transistor inside the SRS-ECU.

However, if the vehicle condition returns to normal, DTC B1488 will be automatically erased, and the passenger air bag OFF indicator light will go out.

## **TROUBLESHOOTING HINTS**

Damaged wiring harnesses or connectors

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

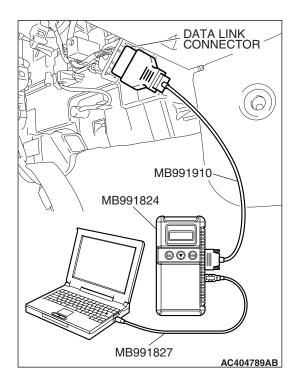
#### 

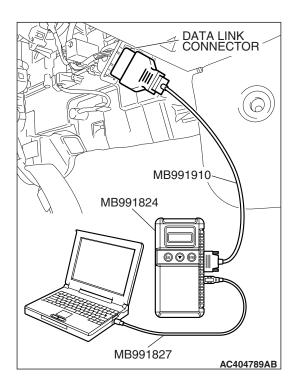
To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).





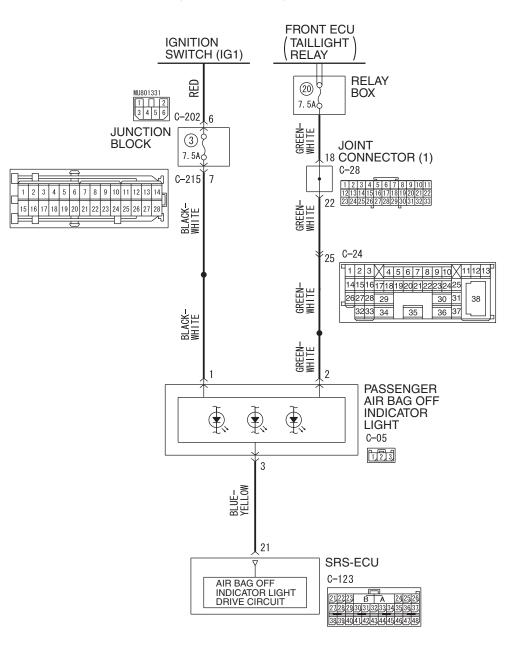
#### STEP 2. Recheck for diagnostic trouble code.

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 the DTC set?
  - **YES :** Check the passenger air bag OFF indicator light drive circuit system (Refer to P.52B-307).
  - **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

**TSB Revision** 

## DTC B1489: Passenger Air Bag OFF Indicator Light Drive Circuit System Fault 1 (Light does not Illuminate).

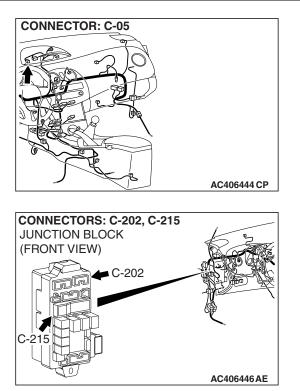


#### Air Bag OFF Indicator Light Drive Circuit

W6P52M013A

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

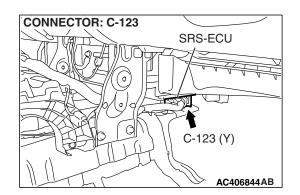


### 

If DTC B1489 is set in the SRS-ECU, always diagnose the CAN main bus line.

## **CIRCUIT OPERATION**

- Power for the passenger air bag OFF indicator light is supplied from the ignition switch (IG1).
- The passenger air bag OFF indicator 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.
- If a failure occurs in the system, the SRS-ECU will stop sending that SRS warning light "OFF" signal, thus causing the combination meter to illuminate the SRS warning light.
- The SRS warning light "OFF" signal is not sent to the combination meter in the cases below, either. Therefore, the combination meter will illuminate the SRS warning light.



- The SRS-ECU connector is disconnected.
- The SRS-ECU is not working normally due to a failure in its power supply lines.
- The wiring harness between the passenger air bag OFF indicator light and the SRS-ECU is broken.

## DTC SET CONDITIONS

This DTC will be set if the passenger air bag OFF indicator light driving circuit is short to ground. If the vehicle condition returns to normal, DTC B1489 will be automatically erased, and the warning light will go out.

## **TROUBLESHOOTING HINTS**

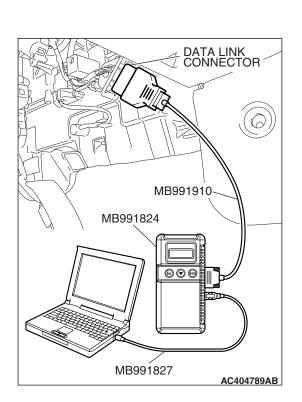
- Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU
- Malfunction of the passenger air bag OFF indicator light

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

TSB	Revision		



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

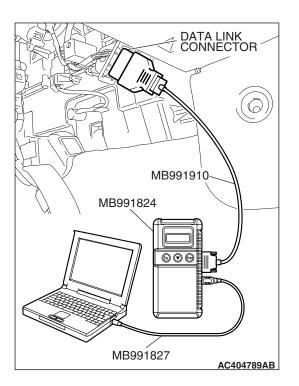
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

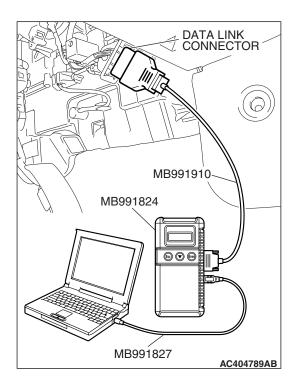
Check again if the DTC is set.

- (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 the DTC set?

- YES : Go to Step 3.
- **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB Revision	



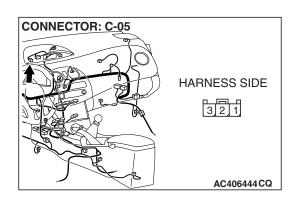
## STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

- (1) Turn the ignition switch to the "ON" position.
- (2) Check if the DTC is set.
- (3) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is DTC B1540, B1541, B1542, B1543, B1545 or B1546 set?
  - YES : Carry out the troubleshooting of the occupant classification-ECU or the occupant classification sensor system (Refer to P.52B-359 <B1540, B1541, B1542, B1543>, P.52B-361 <B1545, B1546>).
  - NO: Go to Step 4.

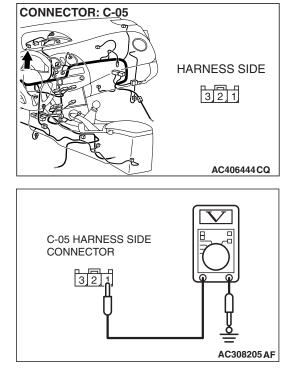
## STEP 4. Check the passenger air bag OFF indicator light connector C-05.

#### Q: Is the connector correctly engaged?

- YES : Go to Step 5.
- **NO**: Engage the connector correctly. Then go to Step 10.



TSB Revision
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## STEP 5. Measure the voltage at passenger air bag OFF indicator light connector C-05.

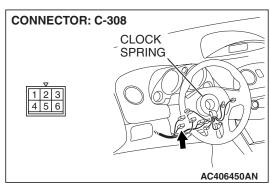
(1) Disconnect passenger air bag OFF indicator light connector C-05.

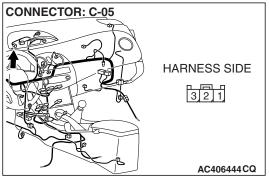
 (2) Measure the voltage between C-05 harness side connector terminal 1 and body ground.
 Voltage should measure approximately 12 volt.

Q: Is the check result satisfactory?

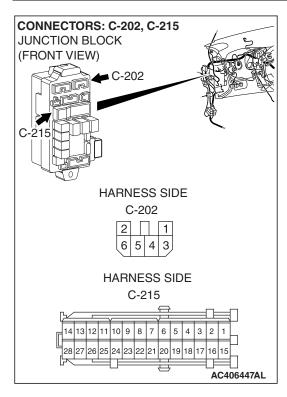
- YES : Go to Step 7.
- NO: Go to Step 6.

STEP 6. Check the harness for short circuit between ignition switch connector C-308 (terminal No.2) and passenger air bag OFF indicator light C-05 (terminal No.1).





TSB	Revision		

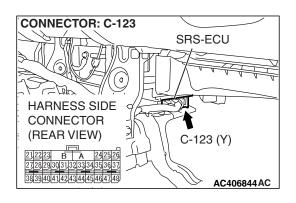


NOTE: After inspecting intermediate connectors C-202 and C-215 inspect the wiring harness. If intermediate connectors C-202 and C-215 are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 10.

Q: Are the harness wires between passenger air bag OFF indicator light connector C-05 (terminal No.1) and the ignition switch connector C-308 (terminal No.2) in good condition?

YES : Go to Step 7.

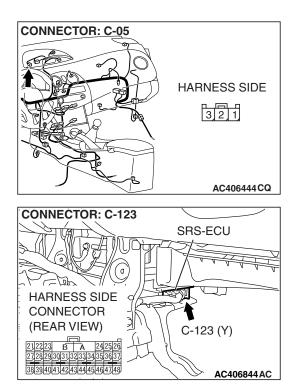
**NO :** Repair the harness wires. Then go to Step 10.



## STEP 7. Check SRS-ECU connector C-123. Q: Is the connector correctly engaged?

- YES : Go to Step 8.
- **NO:** Engage the connector correctly. Then go to Step 10.

TSB	Revision



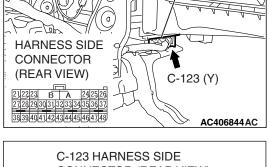
#### STEP 8. Check the harness for short circuit between passenger air bag OFF indicator light C-05 (terminal No.3) and SRS-ECU connector C-123 (terminal No.21).

Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.21) and the passenger air bag OFF indicator light C-05 (terminal No.3) in good condition? YES : Go to Step 9.

**NO :** Repair the harness wires. Then go to Step 10.

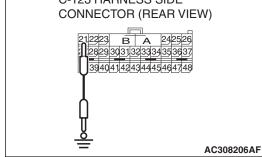
#### STEP 9. Check the passenger air bag OFF indicator light.

- (1) Disconnect the negative battery terminal.
- (2) Disconnected the SRS-ECU connector C-123, and measure at the wiring harness side.
- (3) Connect the negative battery terminal.
- (4) Turn the ignition switch to the "ON" position.



SRS-ECU

**CONNECTOR: C-123** 



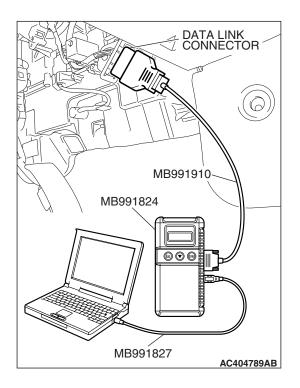
## 

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

- (5) Connect terminal No.21 to ground.
- Q: Does the indicator light illuminate?
  - YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1489 set, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 10.
  - NO: Replace the passenger air bag OFF indicator light (Refer to GROUP 52A, Instrument Panel Assembly P.52A-21). Then go to Step 10.

TSB Revision	

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



#### STEP 10. Recheck for diagnostic trouble code.

Check again if the DTC is set.

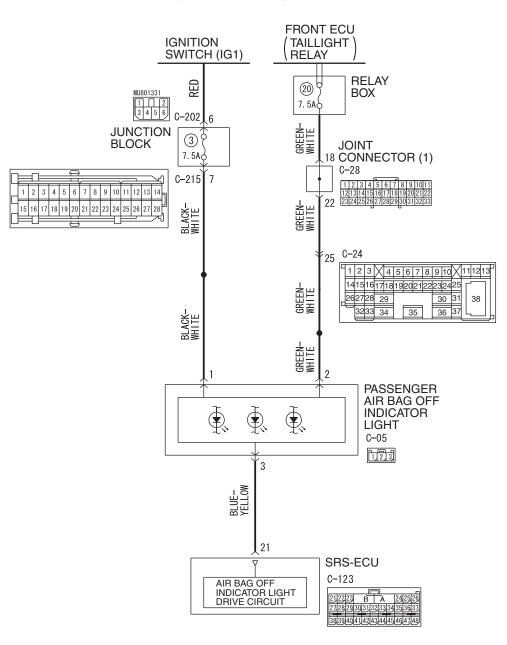
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is DTC B1489 set?

- **YES :** Return to Step 1.
- **NO**: The procedure is complete.

**TSB Revision** 

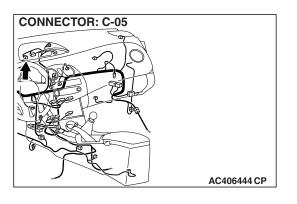
## DTC B1489: Passenger Air Bag OFF Indicator Light Drive Circuit System Fault 1 (Light does not Switch Off).



#### Air Bag OFF Indicator Light Drive Circuit

W6P52M013A

TSB Revision	
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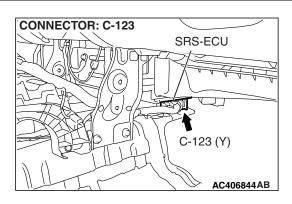


## 

If DTC B1489 is set in the SRS-ECU, always diagnose the CAN main bus line.

## **CIRCUIT OPERATION**

- Power for the passenger air bag OFF indicator light is supplied from the ignition switch (IG1).
- The passenger air bag OFF indicator 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.
- If a failure occurs in the system, the SRS-ECU will stop sending that SRS warning light "OFF" signal, thus causing the combination meter to illuminate the SRS warning light.
- The SRS warning light "OFF" signal is not sent to the combination meter in the cases below, either. Therefore, the combination meter will illuminate the SRS warning light.
  - The SRS-ECU connector is disconnected.



- The SRS-ECU is not working normally due to a failure in its power supply lines.
- The wiring harness between the passenger air bag OFF indicator light and the SRS-ECU is broken.

## DTC SET CONDITIONS

This DTC will be set if an open circuit has occurred in the wiring harness between the passenger air bag OFF indicator light and the SRS-ECU. If the vehicle condition returns to normal, DTC B1489 will be automatically erased, and the passenger air bag OFF indicator light will go out.

## **TROUBLESHOOTING HINTS**

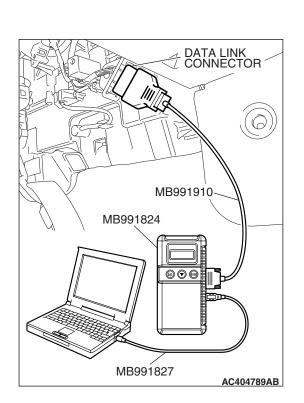
- · Damaged wiring harnesses or connectors
- Malfunction of the SRS-ECU
- Malfunction of the passenger air bag OFF indicator light

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

**TSB** Revision



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

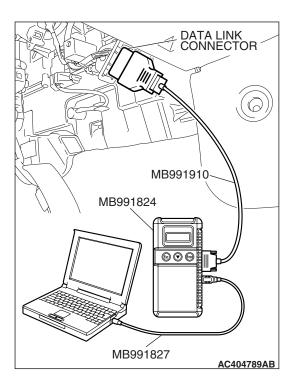
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

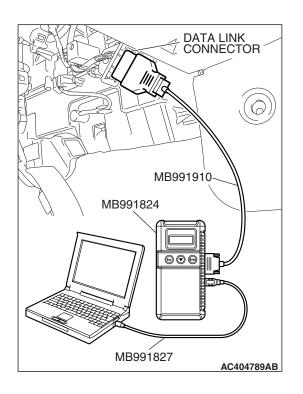
Check again if the DTC is set.

- (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 the DTC set?

- YES : Go to Step 3.
- **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB Revision	



## STEP 3. Using scan tool MB991958, read the diagnostic trouble code.

- (1) Turn the ignition switch to the "ON" position.
- (2) Check if the DTC is set.
- (3) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is DTC B1540, B1541, B1542, B1543, B1545 or B1546 set?
  - YES : Carry out the troubleshooting of the occupant classification-ECU or the occupant classification sensor system (Refer to P.52B-359 <B1540, B1541, B1542 or B1543>, P.52B-361 <B1545 or B1546>).
  - NO: Go to Step 4.

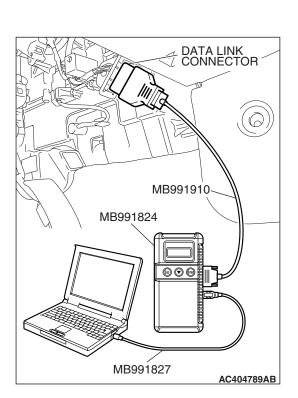
#### STEP 4 Using scan tool MB991958, check actuator test.

- Item No.3: Passenger air bag OFF indicator light illumination
- Q: Does the passenger air bag indicator light illuminate or go out normally?
  - YES : Go to Step 5.
  - NO: Replace the passenger air bag OFF indicator light (Refer to GROUP 52A, Instrument Panel Assembly P.52A-21). Then go to Step 6.

**TSB Revision** 

#### STEP 5. Check the harness between SRS-ECU connector C-123 (terminal No.21) and passenger air bag OFF indicator light C-05 (terminal No.3).

- Check the passenger air bag OFF indicator light output lines for open circuit.
- Q: Is the check result satisfactory?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1489 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.
  - **NO :** Repair the harness wires. Then go to Step 6.



#### STEP 6. Recheck for diagnostic trouble code.

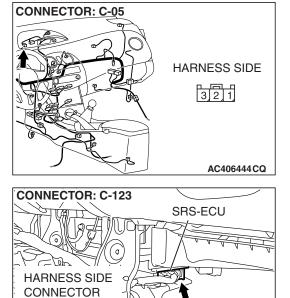
Check again if the DTC is set.

- (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 B1489 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

TSB Revision	



C-123 (Y)

AC406844 AC

(REAR VIEW)

B A

3839404142434445464748

24 25 2

#### DTC B1499: SRS-ECU Air Bag Condition Monitor Detects Deployed Air Bag

#### 

If DTC B1499 is set in the SRS-ECU, always diagnose the CAN main bus line.

### 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

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

## STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

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

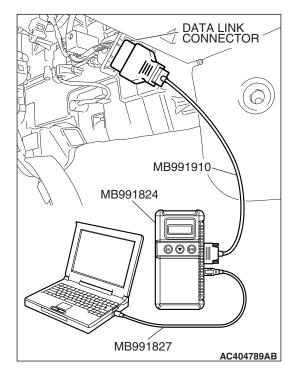
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO**: Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

DATA LINK CONNECTOR
МВ991910
MB991824
MB991827

TSB Revision	
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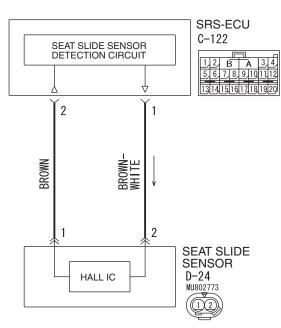


#### STEP 2. Recheck for diagnostic trouble code.

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 the DTC B1499 set?
  - **YES :** Replace the SRS-ECU (Refer to P.52B-405).
  - **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

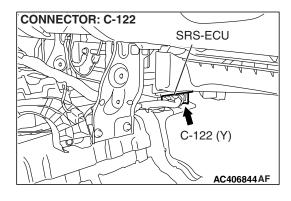
#### DTC B1506: Seat Slide Sensor System Fault 1 (Open in the Seat Slide Sensor Circuit)



#### Seat Slide Sensor Circuit

W6P52M014A

TSB R	evision		



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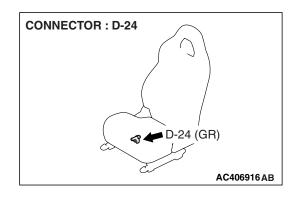
If DTC B1506 is set in the SRS-ECU, always diagnose the CAN main bus line.

### **CIRCUIT OPERATION**

- The seat slide sensor sets the current value Hi or Low determined by the seat position.
- The SRS-ECU determines the seat position according to the current value from the seat slide sensor.

## DTC SET CONDITIONS

• This DTC is set if there is abnormal resistance between the input terminals of the seat slide sensor. The most likely causes for this code to be set are the followings:



- Open circuit in the seat slide sensor or harness
- Malfunction of connector contact

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

## **TROUBLESHOOTING HINTS**

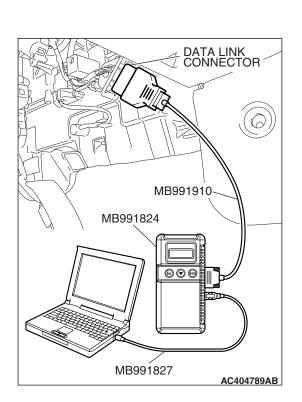
- Open circuit in the seat slide sensor circuit
- Disengaged seat slide sensor connector
- Improper connector contact
- Malfunction of the SRS-ECU

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

**TSB Revision** 



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

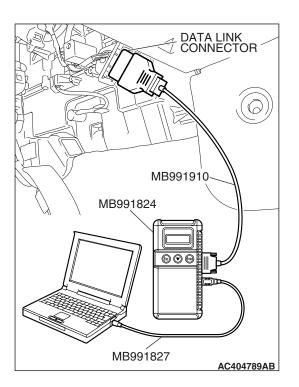
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

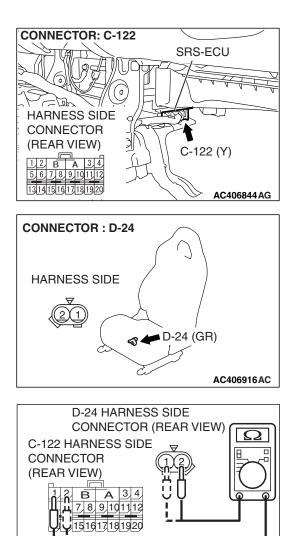
Check again if the DTC is set.

- (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 the DTC set?

- YES : Go to Step 3.
- **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB Revision	



### STEP 3. Check the harness for open circuit between SRS-ECU connector C-122 (terminal No.1 and 2) and the seat slide sensor connector D-24 (terminal No.1 and 2).

(1) Disconnect SRS-ECU connector C-122 and seat slide sensor connector D-24.

## 

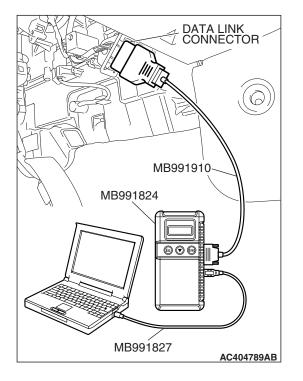
#### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

- (2) Check for continuity between the following terminals. It should be less than 2 ohms.
  - SRS-ECU connector C-122 (terminal No.2) and the seat slide sensor connector D-24 (terminal No.1)
  - SRS-ECU connector C-122 (terminal No.1) and the seat slide sensor connector D-24 (terminal No.2)

## Q: Does continuity exist?

- **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1506 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 4.
- **NO**: Replace the harness wires between SRS-ECU connector C-122 and seat slide sensor connector D-24. Then go to Step 4.

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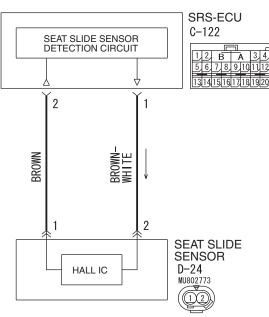
#### STEP 4. Recheck for diagnostic trouble code.

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 B1506 set?
  - **YES :** Return to Step 1.
  - **NO :** The procedure is complete.

#### DTC B1507: Seat Slide Sensor System Fault Ground Circuit (Short-Circuited to Ground)

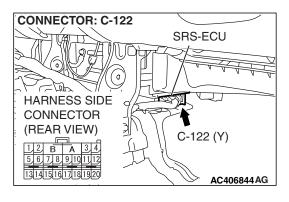




W6P52M014A

TSB Revision	_

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

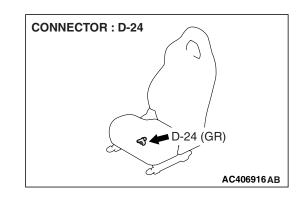


# 

If DTC B1507 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The seat slide sensor sets the current value Hi or Low determined by the seat position.
- The SRS-ECU determines the seat position according to the current value from the seat slide sensor.



# DTC SET CONDITIONS

This DTC is set if there is abnormal resistance between the input terminals of the seat slide sensor.

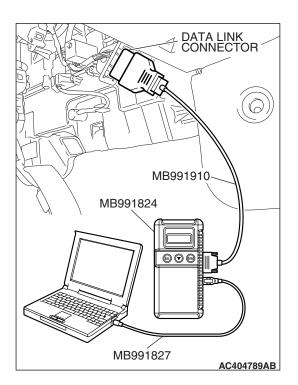
# **TROUBLESHOOTING HINTS**

- · Damaged wiring harnesses or connectors
- Short to ground in the seat slide sensor harness
- Malfunction of the SRS-ECU

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

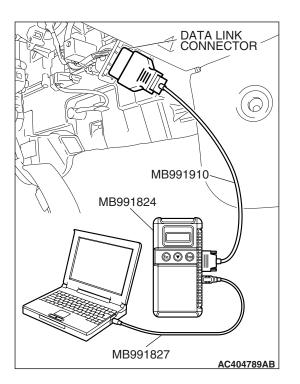
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

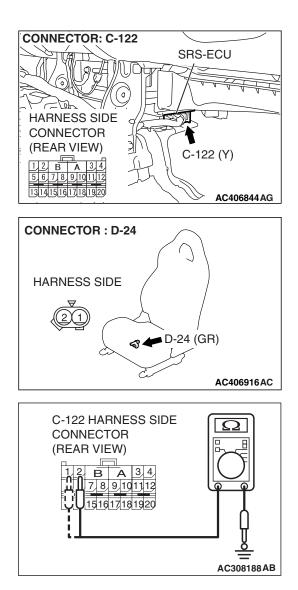
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

TSB Revision	

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



# STEP 3. Check the seat slide sensor circuit. Measure the resistance at the SRS-ECU connector C-122.

(1) Disconnect SRS-ECU connector C-122.

(2) Disconnect seat slide sensor connector D-24.

# 

#### 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-122 harness side connector terminals 1, 2 and body ground. It should be open circuit.

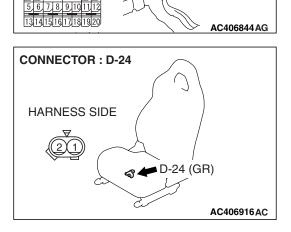
# Q: Does continuity exist?

- YES : Go to Step 4.
- NO: Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1507 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.

TSB Revision	

STEP 4. Check the harness wires for short circuit to ground between SRS-ECU connector C-122 (terminal No.2 and 1) and seat slide sensor connector D-24 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.2 and 1) and seat slide sensor connector D-24 (terminal No.1 and 2) in good condition? YES : Go to Step 5.
  - **NO :** Replace the harness wires between SRS-ECU connector C-122 and seat slide sensor connector D-24. Then go to Step 5.



SRS-ECU

C-122 (Y)

**CONNECTOR: C-122** 

Do

CONNECTOR

(REAR VIEW)

R

HARNESS SIDE

# 

#### STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

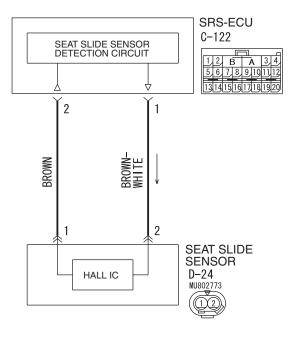
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1507 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

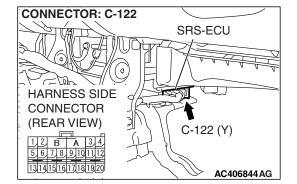
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#### DTC B1508: Seat Slide Sensor System Fault Power Supply Circuit (Short-Circuited to Power Supply)



#### Seat Slide Sensor Circuit

W6P52M014A

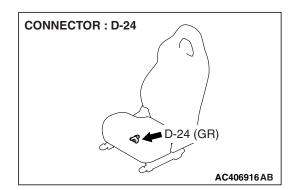


# 

If DTC B1508 is set in the combination meter, always diagnose the CAN bus lines.

# **CIRCUIT OPERATION**

- The seat slide sensor sets the current value Hi or Low determined by the seat position.
- The SRS-ECU determines the seat position according to the current value from the seat slide sensor.



# **DTC SET CONDITIONS**

This DTC is set if there is abnormal resistance between the input terminals of the seat slide sensor.

# **TROUBLESHOOTING HINTS**

- · Damaged wiring harnesses or connectors
- Short to the power supply in the seat slide sensor harness
- Malfunction of the SRS-ECU

TSB Revision	

# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
    - MB991827: MUT-III USB Cable
    - MB991910: MUT-III Main Harness A
- MB991865: Dummy resistor
- MB991866: Resister harness

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

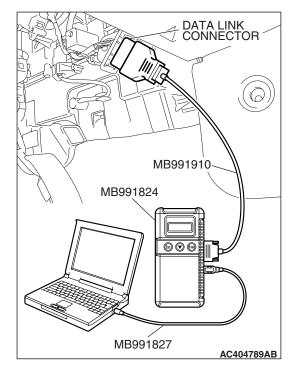
# 

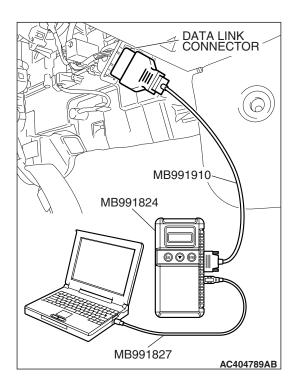
# To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

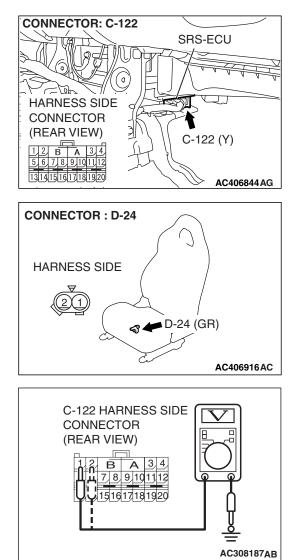




# STEP 2. Recheck for diagnostic trouble code.

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 the DTC set?
  - YES : Go to Step 3.
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).



# STEP 3. Check the seat slide sensor circuit. Measure the voltage at the SRS-ECU connector C-122.

(1) Disconnect SRS-ECU connector C-122.

- (2) Disconnect seat slide sensor connector D-24.
- (3) Turn the ignition switch to the "ON" position.

# 

#### 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-122 harness side connector terminals 1, 2 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 B1508 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - NO: Go to Step 4.

CONNECTOR: C-122 SRS-ECU HARNESS SIDE CONNECTOR (REAR VIEW) C-122 (Y) (REAR VIEW) C-122 (Y) AC406844 AG CONNECTOR : D-24 HARNESS SIDE

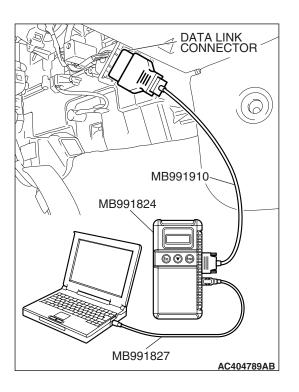
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D-24 (GR)

AC406916AC

STEP 4. Check the harness wires for short circuit to power supply between SRS-ECU connector C-122 (terminal No.2 and 1) and seat slide sensor connector D-24 (terminal No.1 and 2).

- Q: Are the harness wires between SRS-ECU connector C-122 (terminal No.2 and 1) and seat slide sensor connector D-24 (terminal No.1 and 2) in good condition? YES : Go to Step 5.
  - **NO :** Replace the harness wires between SRS-ECU connector C-122 and seat slide sensor connector D-24. 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 B1508 set?

- YES : Return to Step 1.
- **NO :** The procedure is complete.

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#### DTC B1509: Improper Installation of SRS-ECU

#### 

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If DTC B1509 is set in the SRS-ECU, always diagnose the CAN main bus line.

# TROUBLE JUDGMENT

This DTC is set when an SRS-ECU, designed only for the driver's air bag, is installed on the vehicle, which has both driver's and passenger's air bags.

# **TROUBLESHOOTING HINTS**

• Malfunction of the SRS-ECU

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

#### 

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

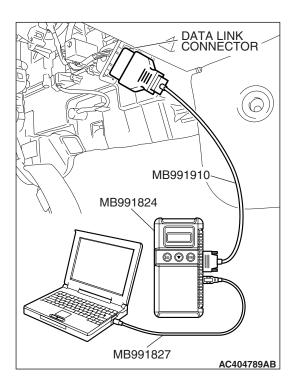
- (1) Connect scan tool MB991958. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).

DATA LINK CONNECTOR
MB991910
МВ991824
MB991827

TSB Revision
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#### 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 the DTC B1509 set?
  - YES : Replace the SRS-ECU (Refer to P.52B-405).
  - NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

# DTC B1519: Connector Lock System Detects Connector Unlocked

#### 

If DTC B1519 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **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 B1519 will be automatically erased, and the SRS warning light will go out.

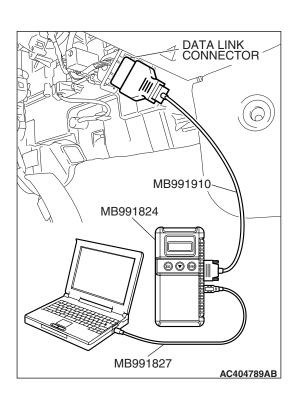
# DIAGNOSIS

# **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# **TROUBLESHOOTING HINTS**

- Damaged connectors
- Malfunction of the SRS-ECU



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

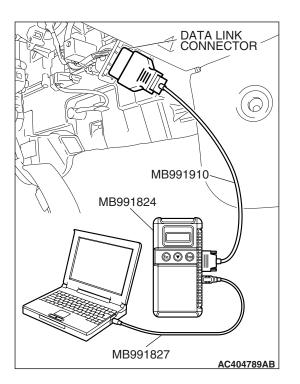
# 

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. Refer to "How to connect the scan tool P.52B-29.."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

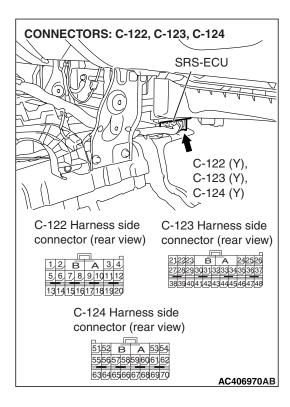
- (1) Erase the DTC.
- (2) Turn the ignition switch to "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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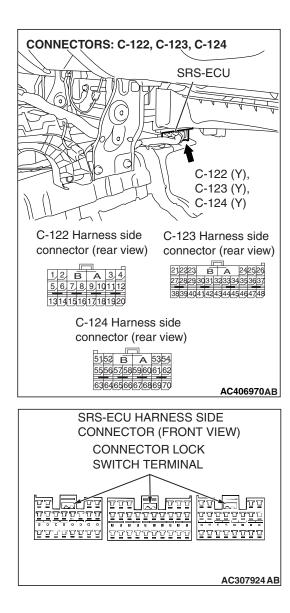
#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



# STEP 3. Check the SRS-ECU connector C-122, C-123 and C-124.

# **Q: Are connectors correctly engaged?**

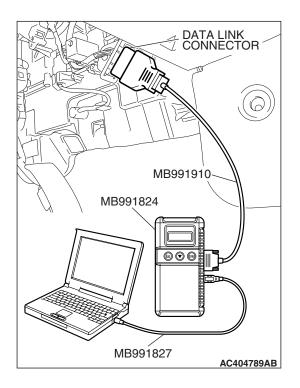
- YES : Go to Step 4.
- **NO :** Engage the connectors correctly. Then go to Step 5.



# STEP 4. Check SRS-ECU connector C-122, C-123 and C-124 for damage.

- (1) Disconnect SRS-ECU connectors C-122, C-123 and C-124.
- (2) Check the connector lock switch terminal inside the harness side connector for improper contact or deformation.
- Q: Are the SRS-ECU connector C-122, C-123 and C-124 in good condition?
  - **YES :** Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1519 sets, replace the SRS-ECU (Refer to P.52B-405). Then go to Step 5.
  - **NO :** Replace the SRS-ECU connector C-122, C-123 and C-124. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 5.

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



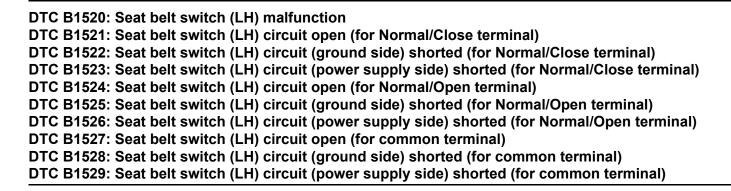
# STEP 5. Recheck for diagnostic trouble code.

Check again if the DTC is set.

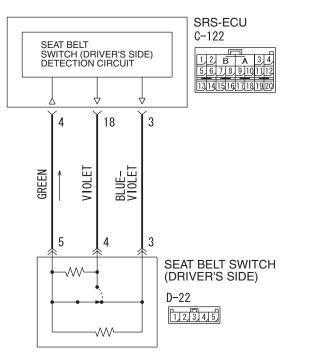
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

# Q: Is DTC B1519 set?

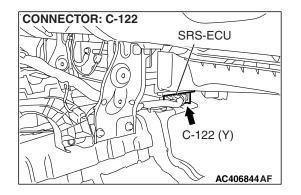
- **YES :** Return to Step 1.
- **NO**: The procedure is complete.



**Driver's Seat Belt Switch Circuit** 

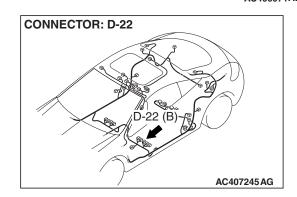


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#### 

If DTC B1520, B1521, B1522, B1523, B1524, B1525, B1526, B1527, B1528 or B1529 are set in the combination meter, always diagnose the CAN bus lines.



W6P52M015A

# **CIRCUIT OPERATION**

The SRS-ECU determines whether the seat belt is fastened or not according to the connection location of the seat belt switch in the seat buckle.

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# **DTC SET CONDITIONS**

DTC is set when the resistance between input terminals of the seat belt switch in the SRS-ECU is without the standard value.

DTC	SYMPTOM
B1520	Malfunction of seat belt switch
B1521	Malfunction of the Normal/Close terminal or short circuit in its harness
B1522	Short to body ground in the Normal/Close terminal harness
B1523	Short to the power supply in the Normal/Close terminal harness
B1524	Malfunction of the Normal/Open terminal or short circuit in its harness
B1525	Short to body ground in the Normal/Open terminal harness
B1526	Short to the power supply in the Normal/Open terminal harness
B1527	Malfunction of the common terminal or short circuit in its harness
B1528	Short to body ground in the common terminal harness
B1529	Short to the power supply in the common terminal harness

# TROUBLESHOOTING HINTS

• Damaged wiring harnesses or connectors

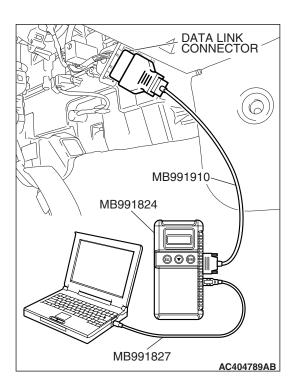
Cause of trouble in each DTC is as follows.

• Malfunction of the SRS-ECU

- Malfunction of the seat belt switch
- DIAGNOSIS

# **Required Special Tools:**

- MB991222: Probe
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

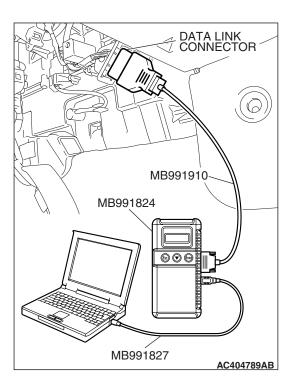
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Connect scan tool MB991958 to the data link connector.
- (3) Turn the ignition switch to the "ON" position.
- (4) Diagnose the CAN bus line.
- (5) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 3.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14). Then go to Step 2.



# STEP 2. Recheck for diagnostic trouble code.

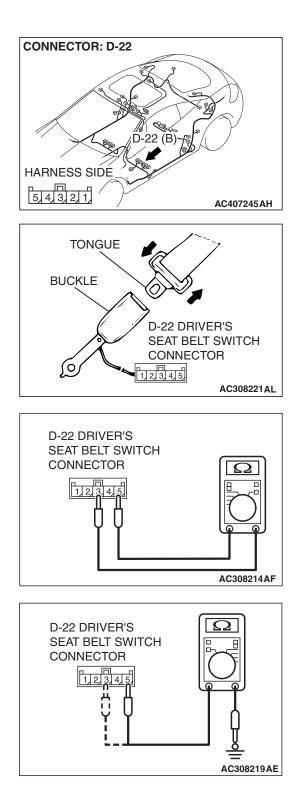
Check again if the DTC is set.

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

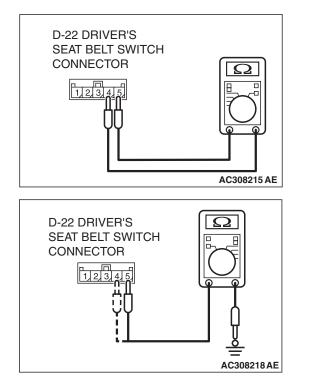
#### Q: Is the DTC set?

- YES : Go to Step 3.
- NO: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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STEP 3. Check the driver's seat belt switch.



Disconnect driver's seat belt switch connector D-22. Then check continuity between the switch terminals.

ITEM	TESTER CONNECTION	STANDARD VALUE	SPECIFIED CONDITION
Fastened seat	3 –5	$820\pm20~\Omega$	-
belt	3 –Ground	_	No continuity
	5 –Ground	-	No continuity
	4 –5	-	Less than 2 ohms
Unfastened	4 –5	$820 \pm 20 \ \Omega$	-
seat belt	4 –Ground	_	No continuity
	5 –Ground	_	No continuity
	3 –5	-	Less than 2 ohms

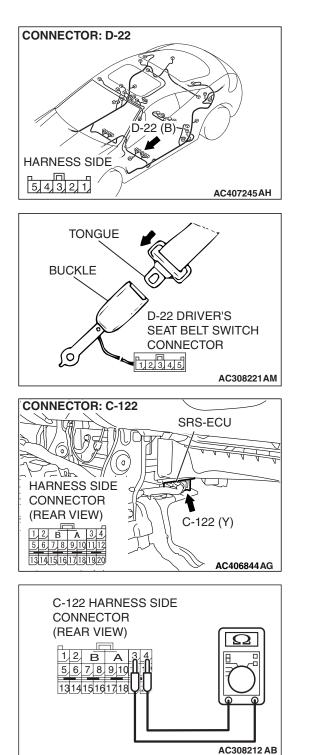
# Q: Is driver's seat belt switch in good condition?

YES : Go to Step 4.

NO: Replace inner seat belt. (Refer to GROUP 52A, Front Seat Belt P.52A-51.)

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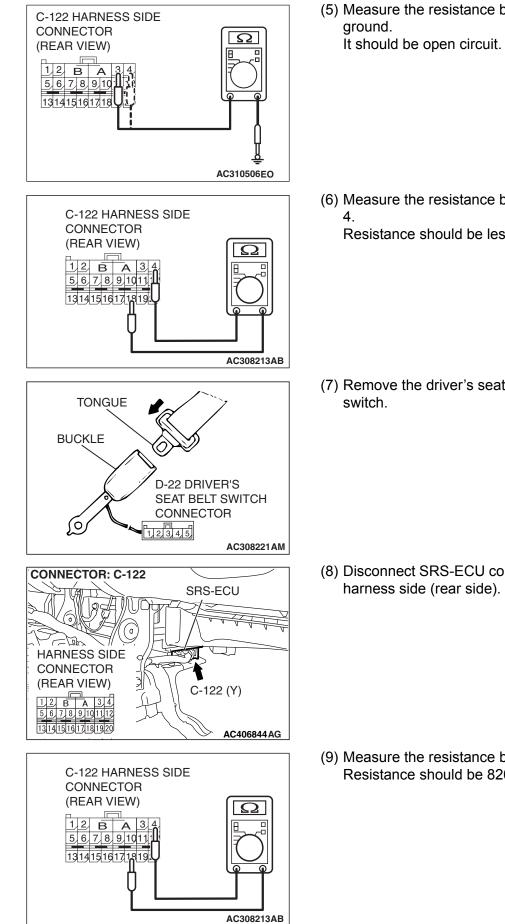
#### STEP 4. Check the driver's seat belt switch circuit D-22. Measure the resistance at SRS-ECU connector C-122. (1) Disconnect driver's seat belt switch connector D-22.

(2) Install the driver's seat belt to the driver's seat belt switch.

(3) Disconnect SRS-ECU connector C-122 and measure at the harness side (rear side).

(4) Measure the resistance between terminal 3 and terminal 4. Resistance should be 820  $\pm 82~\Omega$ 

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(5) Measure the resistance between terminal 3, 4 and body

(6) Measure the resistance between terminal 18 and terminal Resistance should be less than 2 ohms.

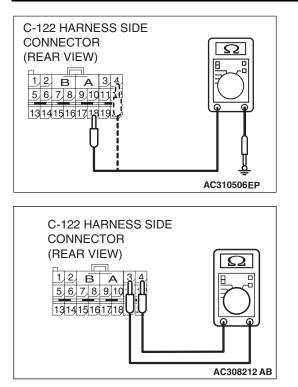
(7) Remove the driver's seat belt from the driver's seat belt

(8) Disconnect SRS-ECU connector C-122 and measure at the

(9) Measure the resistance between terminal 18 and 4. Resistance should be 820  $\pm$  82  $\Omega$ 



#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

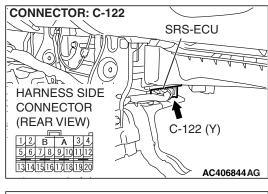


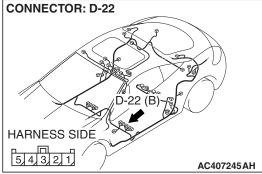
- (10)Measure the resistance between terminal 18, 4 and body ground.
  - It should be open circuit.

- (11)Measure the resistance between terminal 3 and terminal 4. Resistance should be less than 2 ohms.
- Q: Does the resistance meet the value above?
  - YES : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1520, B1521, B1522, B1523, B1524, B1525, B1526, B1527, B1528 or B1529 are set, replace the SRS-ECU. (Refer to P.52B-405.) Then go to Step 6.
  - NO: Go to Step 5.

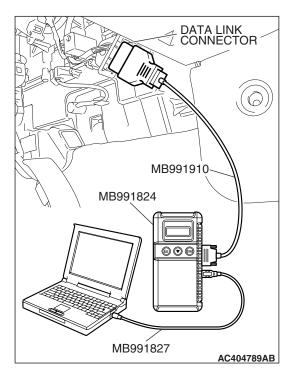
STEP 5. Check the harness wires between SRS-ECU connector C-122 (terminal No.3, 18 and 4) and driver's seat belt switch connector D-22 (terminal No.3, 4 and 5). Q: Are harness wires between SRS-ECU connector C-122

- Q: Are namess wires between SRS-ECU connector C-122 (terminal No.3, 18 and 4) and driver's seat belt switch connector D-22 (terminal No.3, 4 and 5) in good condition?
  - YES : Go to Step 6.
  - **NO :** Replace the harness wires between SRS-ECU connector C-122 and driver's seat belt switch connector D-22. Then go to Step 6.





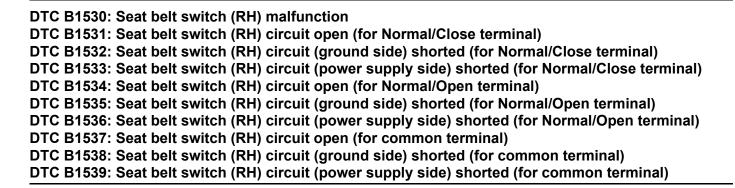
	TSB Revision	
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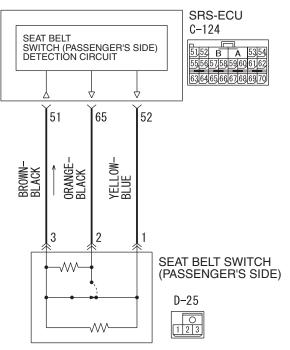
#### STEP 6. Recheck for diagnostic trouble code.

Check again if the DTC is set.

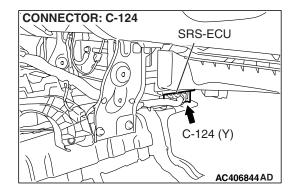
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.
- Q: Is DTC B1520, B1521, B1522, B1523, B1524, B1525, B1526, B1527, B1528 or B1529 set?
  - **YES :** Return to Step 1.
  - **NO :** The procedure is complete.



Passenger's Seat Belt Switch Circuit

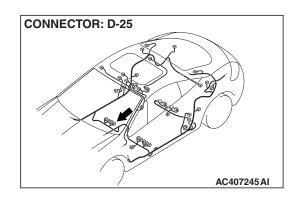


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#### 

If DTC B1530, B1531, B1532, B1533, B1534, B1535, B1536, B1537, B1538 or B1539 are set in the combination meter, always diagnose the CAN bus lines.



# **CIRCUIT OPERATION**

The SRS-ECU determines whether the seat belt is fastened or not according to the connection location of the seat belt switch in the seat buckle.

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# **DTC SET CONDITIONS**

Cause of trouble in each DTC is as follows.

DTC is set when the resistance between input terminals of the seat belt switch in the SRS-ECU is without the standard value.

DTC	SYMPTOM	
B1530	Malfunction of seat belt switch	
B1531	Malfunction of the Normal/Close terminal or short circuit in its harness	
B1532	Short to body ground in the Normal/Close terminal harness	
B1533	Short to the power supply in the Normal/Close terminal harness	
B1534	Malfunction of the Normal/Open terminal or short circuit in its harness	
B1535	Short to body ground in the Normal/Open terminal harness	
B1536	Short to the power supply in the Normal/Open terminal harness	
B1537	Malfunction of the common terminal or short circuit in its harness	
B1538	Short to body ground in the common terminal harness	
B1539	Short to the power supply in the common terminal harness	

# TROUBLESHOOTING HINTS

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

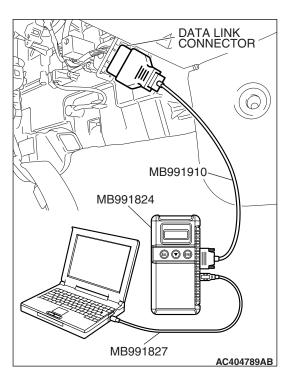
• Malfunction of the seat belt switch

# DIAGNOSIS

# **Required Special Tools:**

- MB991222: Probe
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

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STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

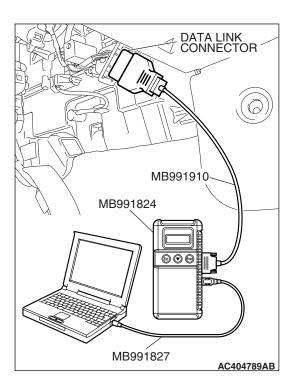
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Connect scan tool MB991958 to the data link connector.
- (3) Turn the ignition switch to the "ON" position.
- (4) Diagnose the CAN bus line.
- (5) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 3.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14). Then go to Step 2.



# STEP 2. Recheck for diagnostic trouble code.

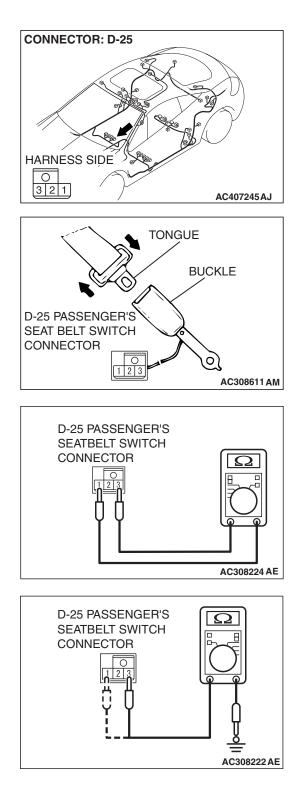
Check again if the DTC is set.

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

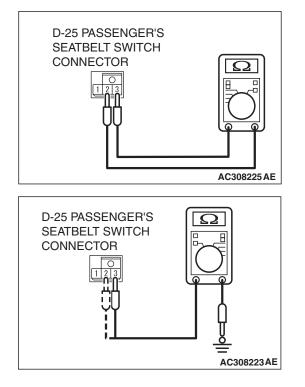
# Q: Is the DTC set?

- YES : Go to Step 3.
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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#### STEP 3. Check the passenger's seat belt switch.



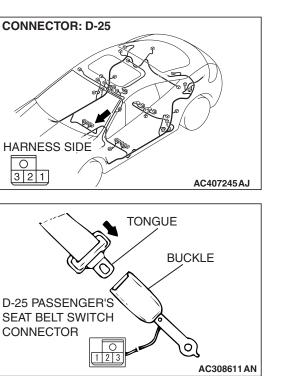
Disconnect passenger's seat belt switch connector D-25. Then check continuity between the switch terminals.

ITEM	TESTER CONNECTION	STANDARD VALUE	SPECIFIED CONDITION
Fastened seat	1 –3	820 ±20 Ω	_
belt	1 –Ground	-	No continuity
	3 –Ground	-	No continuity
	2 –3	-	Less than 2 ohms
Unfastened	2 –3	$820 \pm 20 \ \Omega$	_
seat belt	2 –Ground	-	No continuity
	3 –Ground	-	No continuity
	1 –3	-	Less than 2 ohms

# Q: Is passenger's seat belt switch in good condition?

YES : Go to Step 4.

NO: Replace inner seat belt. (Refer to GROUP 52A, Front Seat Belt P.52A-51.)

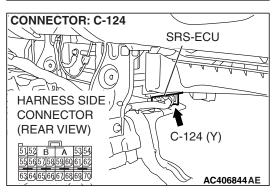


# STEP 4. Check the passenger's seat belt switch circuit D-25. Measure the resistance at SRS-ECU connector C-124.

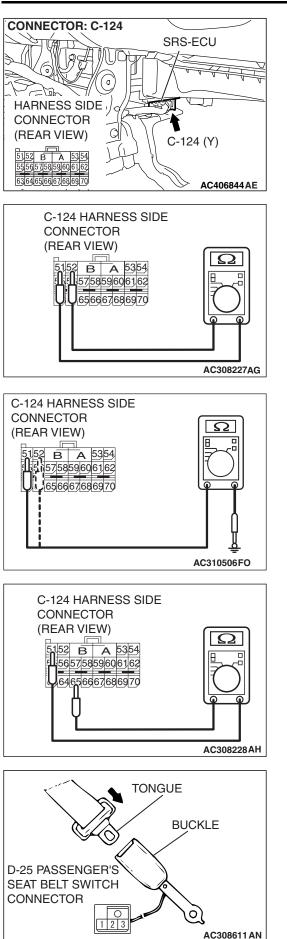
(1) Disconnect passenger's seat belt switch connector D-25.

(2) Install the passenger's seat belt to the seat belt switch.

(3) Disconnect SRS-ECU connector C-124 and measure at the harness side (rear side).



#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS



(4) Measure the resistance between terminal 52 and terminal 51.

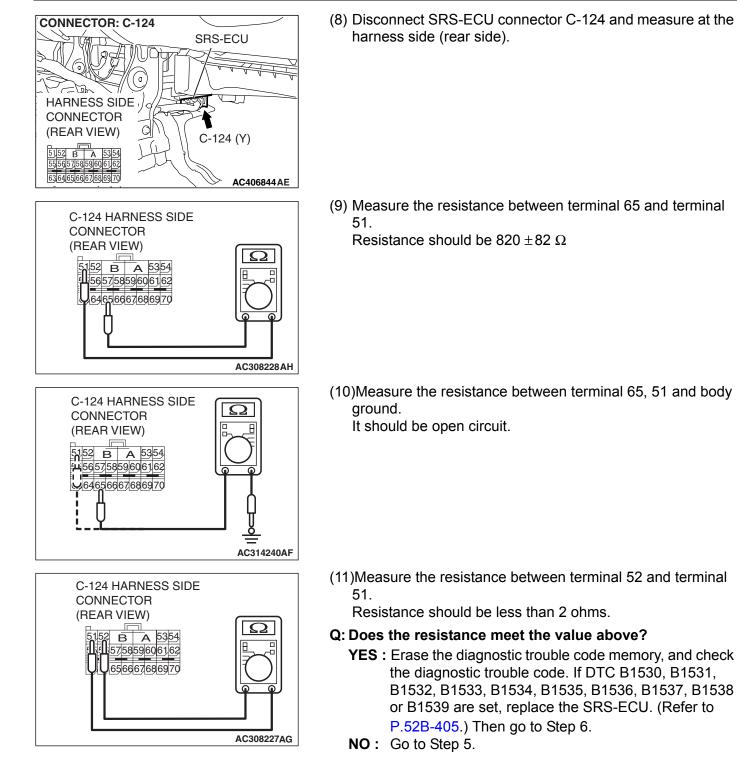
Resistance should be 820  $\pm$  82  $\Omega$ 

(5) Measure the resistance between terminal 52, 51 and body ground.It should be open circuit.

(6) Measure the resistance between terminal 65 and terminal 51.Resistance should be less than 2 ohms.

(7) Remove the passenger's seat belt from the seat belt switch.





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**CONNECTOR: C-124** 

Ton

CONNECTOR

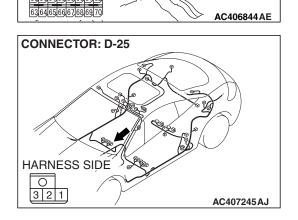
(REAR VIEW)

152 <u>B A 5354</u>

HARNESS SIDE

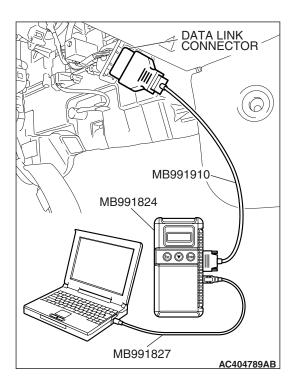
STEP 5. Check the harness wires between SRS-ECU connector C-124 (terminal No.52, 65 and 51) and passenger's seat belt switch connector D-25 (terminal No.1, 2 and 3).

- Q: Are harness wires between SRS-ECU connector C-124 (terminal No.52, 65 and 51) and passenger's seat belt switch connector D-25 (terminal No.1, 2 and 3) in good condition?
  - YES : Go to Step 6.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and passenger's seat belt switch connector D-25. Then go to Step 6.



SRS-ECU

C-124 (Y)



# 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 B1530, B1531, B1532, B1533, B1534, B1535, B1536, B1537, B1538 or B1539 set?
  - YES : Return to Step 1.
  - **NO :** The procedure is complete.

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#### DTC B1540: Occupant classification-ECU malfunction

DTC B1541: Occupant classification-ECU calibration malfunction

DTC B1542: Occupant classification sensor (S1) malfunction

DTC B1543: Occupant classification sensor (S2) malfunction

DTC B1558: Occupant classification-ECU ID-cord malfunction

#### 

**TROUBLESHOOTING HINTS** 

- If DTCs are set in the occupant classification-ECU, always diagnose the CAN main bus line.
- · Malfunction of the occupant classification-ECU

# **DTC SET CONDITIONS**

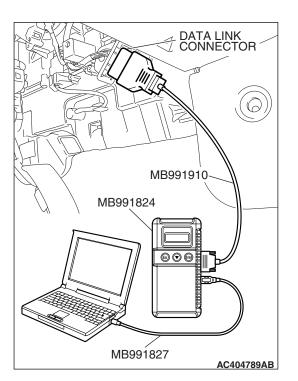
 These DTC are set when a fault is detected in the occupant classification-ECU. The most likely causes for this code to be set are shown in the table below:

CODE NO.	PART/CIRCUIT INTEGRAL TO occupant classification-ECU	SYMPTOM
B1540	Occupant classification-ECU	Malfunction of occupant classification-ECU
B1541		Malfunction of calibration function
B1542	Occupant classification-sensor	Malfunction of occupant classification sensor (S1)
B1543		Malfunction of occupant classification sensor (S2)
B1558	Occupant classification-ECU	Malfunction of ID code in occupant classification-ECU

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

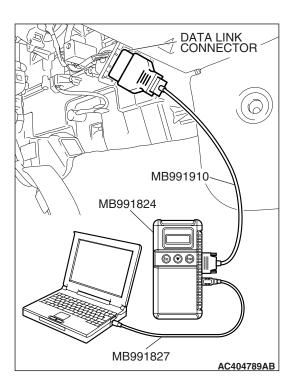
# 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# 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.

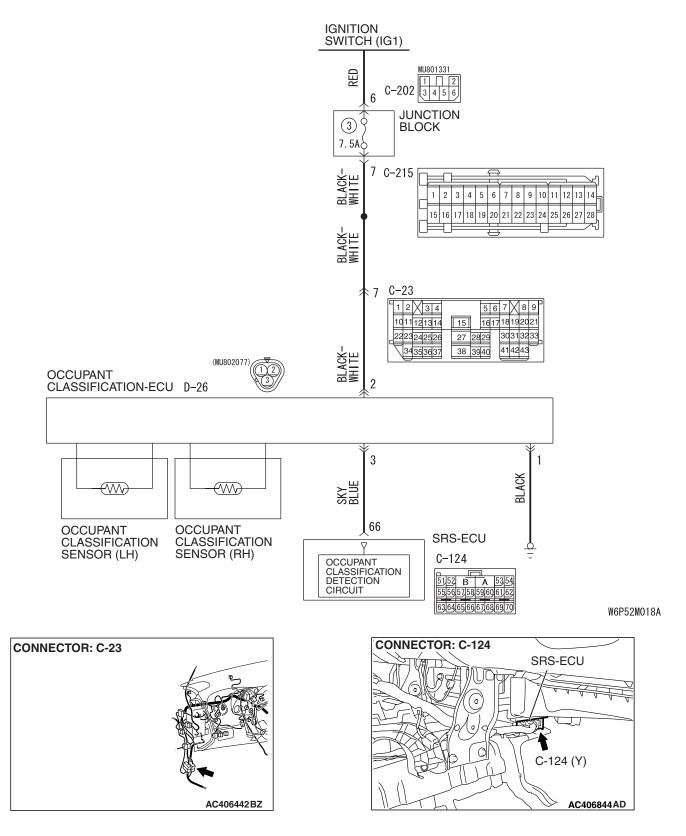
# Q: Are DTCs B1540, B1541, B1542, B1543, or B1558 set?

- **YES :** Replace the front seat slide adjuster (Refer to GROUP 52A, front seat assembly P.52A-45).
- **NO**: There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

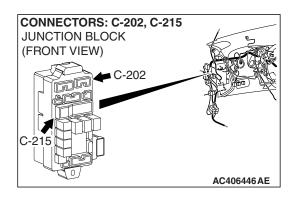
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#### DTC B1545: Occupant classification-ECU for Power Supply Circuit DTC B1546: Occupant classification-ECU for Communication System

#### **Occupant Classification Sensor Circuit**



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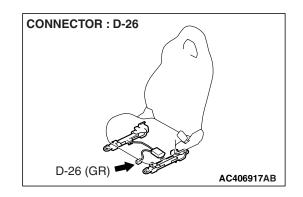


# 

If DTC B1545 or B1546 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **CIRCUIT OPERATION**

The load data from the occupant classification sensor is classified with the occupant classification-ECU, and its classified information is send to SRS-ECU. The SRS-ECU determines the air bag deployment based on this classified information, and controls the power supply circuit to the inflator.



# DTC SET CONDITIONS

These DTCs are set if communication between the occupant classification-ECU and the SRS-ECU is not possible or communication is faulty.

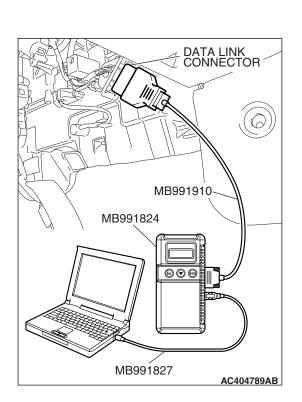
# **TROUBLESHOOTING HINTS**

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

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

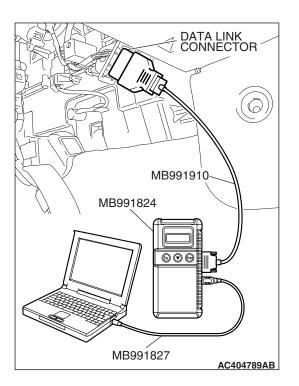
#### 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



#### STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

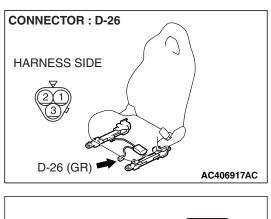
- (1) Erase the DTC.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check if the DTC is set.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

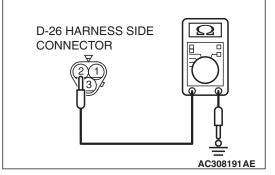
#### Q: Is the DTC set?

- YES : Go to Step 3.
- **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS





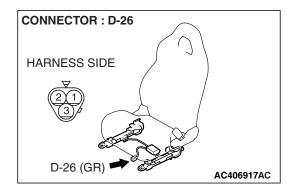
# STEP 3. Measure the resistance at occupant classification-ECU connector D-26.

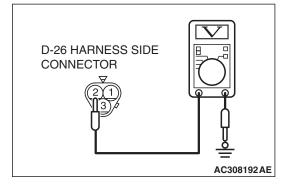
(1) Disconnect the connector D-26.

- (2) Check for continuity between D-26 harness side connector terminals 2 and body ground. It should be 2 ohms or less.
- Q: Is the measured resistance 2 ohms or less?
  - YES : Then go to Step 4.
  - **NO :** Repair the wiring harness between occupant classification-ECU connector D-26 terminals 2 and the body ground. Then go to Step 8.

# STEP 4. Measure the voltage at occupant classification-ECU connector D-26.

- (1) Disconnect the connector D-26.
- (2) Turn the ignition switch to the "ON" position.

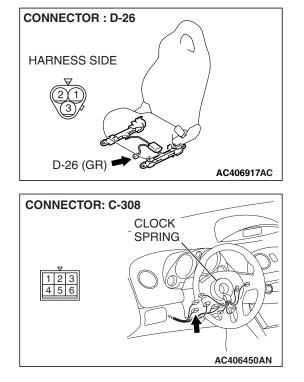


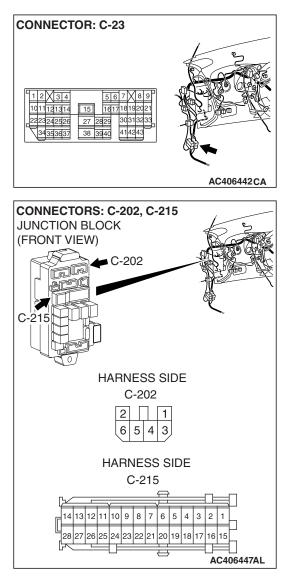


- (3) Measure the voltage between terminal 2 and ground. It should measure approximately 12 volts (battery positive voltage).
- Q: Is battery positive voltage (approximately 12 volts) present?
  - **YES :** Go to Step 5. **NO :** Go to Step 8.

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STEP 5. Check the harness wires for open circuit or short circuit between occupant classification-ECU connector D-26 (terminal No.2) and ignition switch connector C-308 (terminal No.2).





#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SRS AIR BAG DIAGNOSIS

NOTE: After inspecting intermediate connectors C-23, C-202 and C-215 inspect the wiring harness. If intermediate connectors C-23, C-202 and C-215 are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection *P.00E-2.* Then go to Step 8.

- Q: Are the harness wires between occupant classification-ECU connector D-26 (terminal No.2) and ignition switch connector C-308 (terminal No.2) in good condition?
  - YES : Then go to Step 6.
  - **NO :** Replace the harness wires between occupant classification-ECU connector D-26 and ignition switch connector C-308. Then go to Step 8.

STEP 6. Check the harness wires for open circuit or short circuit between SRS-ECU connector C-124 (terminal No.66) and occupant classification-ECU connector D-26 (terminal No.3).

- Q: Are the harness wires between SRS-ECU connector C-124 (terminal No.66) and occupant classification-ECU connector D-26 (terminal No.3) in good condition?
  - **YES** : Erase the diagnostic trouble code memory, and check the diagnostic trouble code. If DTC B1545 or B1546 sets, replace the front seat slide adjuster (Refer to GROUP 52A, Front seat assembly P.52A-39). Then go to Step 7.
  - **NO :** Replace the harness wires between SRS-ECU connector C-124 and occupant classification-ECU connector D-26. Then go to Step 8.

# DATA LINK CONNECTOR MB991910 MB991824 OOO MB991827 AC404789AB

**CONNECTOR: C-124** 

Ton

CONNECTOR

(REAR VIEW)

63 64 65 66 67 68 69 70

2 B A 5354

CONNECTOR : D-26

HARNESS SIDE

D-26 (GR)

HARNESS SIDE

SRS-ECU

AC406844AE

AC406917AC

C-124 (Y)

# STEP 7. Recheck for diagnostic trouble code.

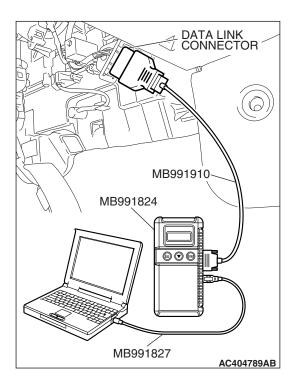
Check again if the DTC is set.

- (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 B1545 or B1546 set?

- YES : Replace the SRS-ECU (Refer to P.52B-405). Then go to Step 8.
- **NO**: The procedure is complete.

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#### 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 B1545 or B1546 set?

- YES: Return to Step 1.
- **NO**: The procedure is complete.

#### DTC B1548: Can Communication Impossible DTC B1549: Can Communication Error

#### 

If DTC B1548 or B1549 is set in the SRS-ECU, diagnose the CAN main bus line.

# **TROUBLE JUDGMENT**

DTC B1548 or B1549 will be stored when the SRS-ECU ceases CAN communication (bus off) and then resumes the communication when the ignition switch is turned to the "LOCK" (OFF) position.

# **TECHNICAL DESCRIPTION (COMMENT)**

The wiring harness wire or connectors may have loose, corroded, or damage terminals, or terminals pushed back in the connector, or the SRS-ECU may be defective.

# **TROUBLESHOOTING HINTS**

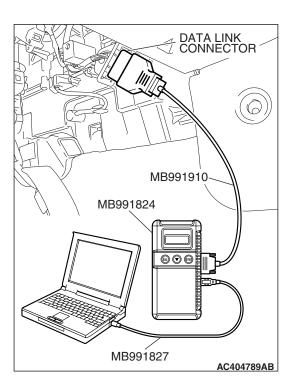
• Defective connector(s) or wiring harness

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

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# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

## 

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

- (1) Connect scan tool MB991958 to the data link connector.
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the check result satisfactory?

- **YES :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).
- **NO :** Repair the CAN bus lines (Refer to GROUP 54C, precautions on how to repair the can bus lines P.54C-5).

#### DTC B1556: Seat Slide Sensor System for Fault 2 (Malfunction of Seat Slide Sensor)

#### 

If DTC B1556 is set in the SRS-ECU, always diagnose the CAN main bus line.

# **DTC SET CONDITIONS**

These DTCs are set if the following conditions are detected from the seat slide sensor output:

- Seat slide sensor is not operating.
- Seat slide sensor characteristics are abnormal.
- Seat slide sensor output is abnormal.

# **TROUBLESHOOTING HINTS**

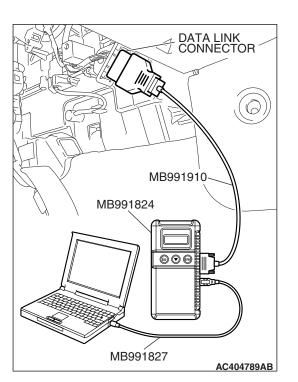
Malfunction of seat slide sensor

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

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STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

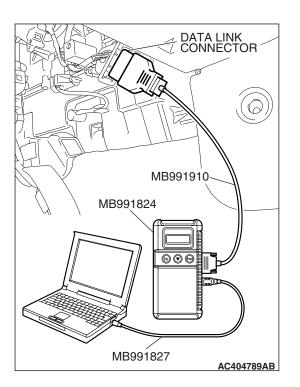
## 

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. Refer to "How to connect the scan tool P.52B-29."
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO :** Repair the CAN bus line (Refer to GROUP 54C, Diagnosis P.54C-14).



# 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 the DTC set?

- YES : Go to Step 3.
- **NO :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

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# STEP 3. Check the seat slide sensor. (Using scan tool MB991958, read the diagnostic trouble code.)

Replace seat slide sensor (Refer to P.52B-428). Check the diagnostic trouble code.

#### Q: Is either DTC B1556 set?

YES : Replace the SRS-ECU (Refer to P.52B-405).

NO: The procedure is complete.

#### DTC U1073: Bus Off

#### 

If DTC U1073 is set in the SRS-ECU, diagnose the CAN main bus line.

#### 

Whenever the ECU is replaced, ensure that the communication circuit is normal.

# **TROUBLE JUDGMENT**

DTC U1073 will be stored when the SRS-ECU ceases CAN communication (bus off) and then resumes the communication when the ignition switch is turned to the "LOCK" (OFF) position.

## **TECHNICAL DESCRIPTION (COMMENT)**

The wiring harness wire or connectors may have loose, corroded, or damage terminals, or terminals pushed back in the connector, or the SRS-ECU may be defective.

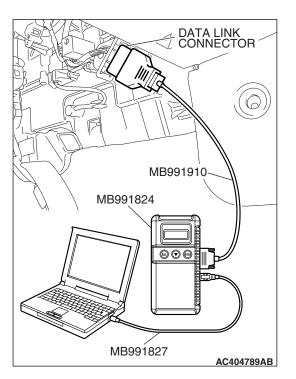
#### **TROUBLESHOOTING HINTS**

- Defective connector(s) or wiring harness
- Malfunction of the SRS-ECU

## DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A



STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

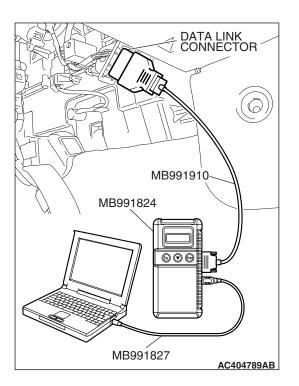
## 

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.
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the CAN bus line found to be normal?

- YES : Go to Step 2.
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, precautions on how to repair the can bus lines P.54C-5).



# STEP 2. Recheck for diagnostic trouble code.

Check again if the DTC is set.

- (1) Connect scan tool MB991958 to the data link connector
- (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 the check result satisfactory?

- **YES :** There is an intermittent malfunction such as poor engaged connector(s) or open circuit (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).
- **NO :** Replace the A/C-ECU. On completion, check that the DTC is not reset.

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## SYMPTOM CHART

M1524003400815

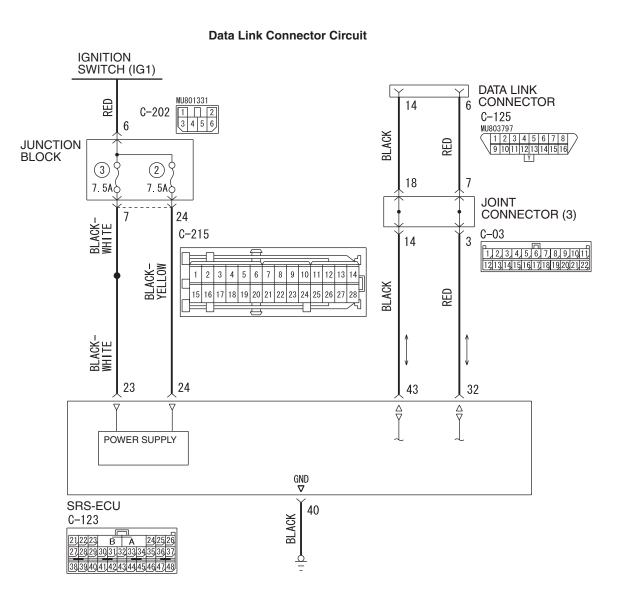
# 

During diagnosis, a DTC code associated with another system may be set when the ignition switch is turned on with connector(s) disconnected. After completing the repair, confirm all systems for DTC code(s). If DTC code(s) are set, erase them all.

SYMPTOM	INSPECTION PROCEDURE NO.	REFERENCE PAGE
Communication between the scan tool and the SRS-ECU is not possible.	1	P.52B-374
Power supply circuit system	2	P.52B-376
When the ignition switch is turned to the "ON" position (engine stopped), the SRS warning light does not illuminate.	3	P.52B-381
After the ignition switch is turned to the "ON" position, the SRS warning light does not go off within approximately seven seconds.	4	P.52B-381

# SYMPTOM PROCEDURES

# INSPECTION PROCEDURE 1: Communication between the Scan Tool and the SRS-ECU is not possible.



W6P52M019A

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# **TECHNICAL DESCRIPTION (COMMENT)**

If the scan tool (MUT-III Sub Assembly) can not communicate with the SRS system, the CAN bus lines may be defective. If the SRS system does not work, the SRS-ECU or its power supply circuit may be defective.

# TROUBLESHOOTING HINTS (THE MOST LIKELY CAUSES FOR THIS CASE:)

- Damaged wiring harness or connector
- Malfunction of the SRS-ECU

# DIAGNOSIS

## **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

# 

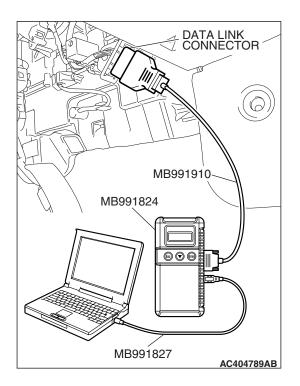
To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

Use scan tool MB991958 to diagnose the CAN bus lines.

- (1) Connect scan tool MB991958 to the data link connector.
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

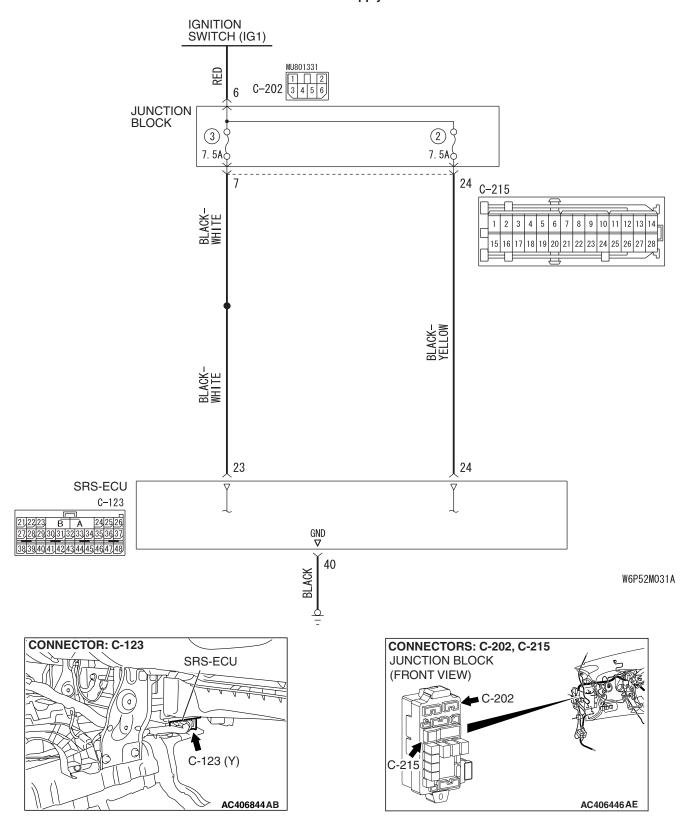
#### Q: Is the check result satisfactory?

- **YES :** Check and repair the power supply circuit system (Refer to P.52B-376).
- **NO**: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14).



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#### **INSPECTION PROCEDURE 2: Power Supply Circuit System**



**IG1 Power Supply Circuit** 



# **CIRCUIT OPERATION**

- The SRS-ECU is energized by the ignition switch (IG1) through multi-purpose fuse 3 and the SRS-ECU terminal 23 and multi-purpose fuse 2 and the SRS-ECU terminal 24.
- If the power supply to the SRS-ECU has failed, scan tool (MUT-III Sub Assembly) will not be able to communicate with it.

# TROUBLESHOOTING HINTS (THE MOST LIKELY CAUSES FOR THIS CASE:)

- Damaged wiring harness or connector
- Defective battery
- Charging system failed
- Malfunction of the SRS-ECU

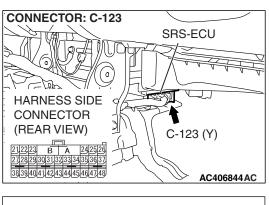
# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# STEP 1. Measure the resistance at SRS-ECU connector C-123.

(1) Disconnect the connector C-123.



# 

# 

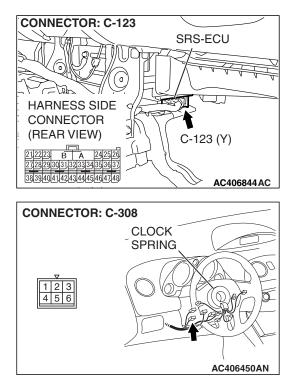
#### Do not insert a test probe into the terminal from its front side directly, as the connector contact pressure may be weakened.

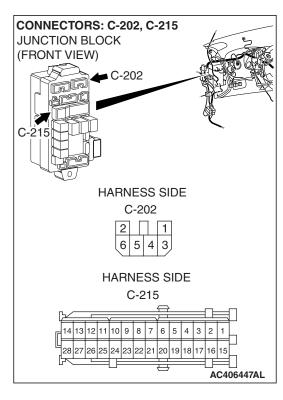
 (2) Check for continuity between C-123 harness side connector terminals 40 and body ground.
 It should be 2 ohms or less.

#### Q: Is the measured resistance 2 ohms or less?

- YES : Then go to Step 2.
- **NO**: Repair the wiring harness between SRS-ECU connector C-123 terminals 40 and the body ground. Then go to Step 5.

STEP 2. Check the harness wires for short circuit to ground between SRS-ECU connector C-123 (terminal No.23 and 24) and ignition switch connector C-308 (terminal No.2).





NOTE: After inspecting intermediate connectors C-202 and C-215 inspect the wiring harness. If intermediate connectors C-202 and C-215 are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 5.

- Q: Are the harness wires between SRS-ECU connector C-123 (terminal No.23 and 24) and ignition switch connector C-308 (terminal No.2) in good condition? YES : Go to Step 3.
  - **NO**: Replace the harness wires between SRS-ECU connector C-123 and ignition switch connector C-308. Then go to Step 5.

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#### STEP 3. Check the battery.

Check the battery (Refer to GROUP 54A, Battery test P.54A-6).

#### Q: Is the battery in good condition?

- YES : Go to Step 4.
- NO: Charge or replace the battery. Then go to Step 5.

#### STEP 4. Check the charging system.

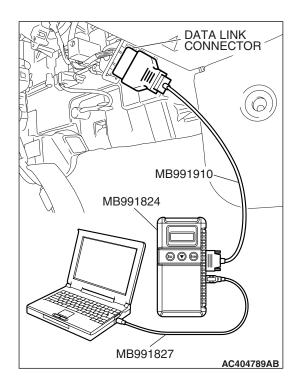
Check the charging system (Refer to GROUP 16, Charging system diagnosis P.16-4).

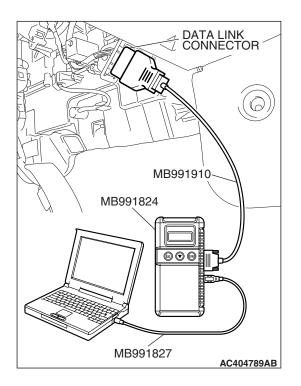
#### Q: Is the charging system in good condition?

- YES : Go to Step 5.
- **NO**: Repair or replace the charging system component(s). Then go to Step 5.

#### STEP 5. Retest the system.

- Q: Can the SRS-ECU communicate with the scan tool (MB991958)?
  - **YES**: It can be assumed that this malfunction is intermittent. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14.
  - NO: Replace the SRS-ECU (Refer to P.52B-405). Then go to Step 6.





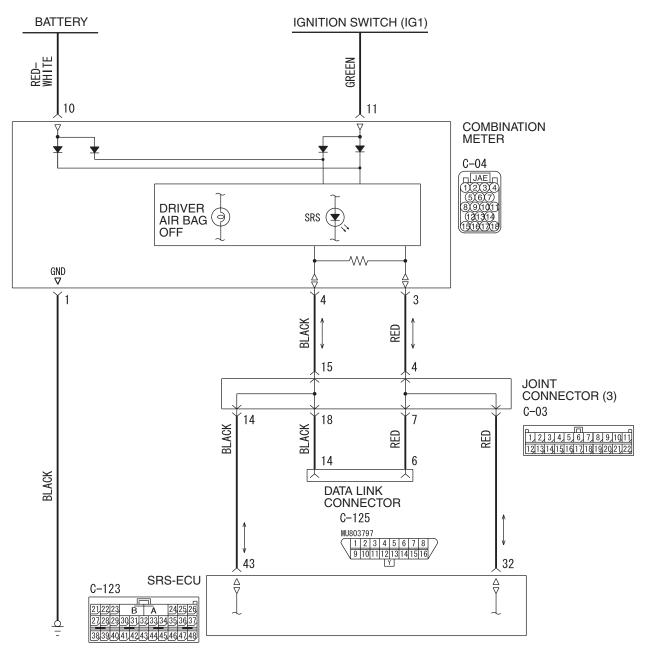
## STEP 6. Retest the system.

Q: Can the SRS-ECU communicate with the scan tool (MB991958)?

- **YES :** The procedure is complete.
- **NO**: Go to Step 1.

INSPECTION PROCEDURE 3: When the Ignition Switch is Turned to the "ON" Position (Engine Stopped), the SRS Warning Light does not Illuminate.

INSPECTION PROCEDURE 4: After the Ignition Switch is Turned to the "ON" Position, the SRS Warning Light does not go off within approximately seven seconds



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# **TECHNICAL DESCRIPTION (COMMENT)**

- The SRS-ECU sends the SRS warning light signal to the combination meter via the CAN communication.
- This may be caused by faults in the CAN bus line, the combination meter or the SRS-ECU.

# TROUBLESHOOTING HINTS (THE MOST LIKELY CAUSES FOR THIS CASE:)

- Damaged wiring harness or connector
- Combination meter defect
- Malfunction of the SRS-ECU

# DIAGNOSIS

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

# STEP 1. Using scan tool MB991958, diagnose the CAN bus line.

## 

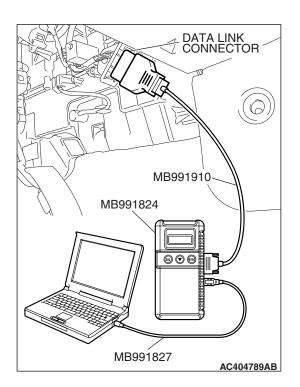
To prevent damage to scan tool MB991958, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991958.

Use scan tool MB991958 to diagnose the CAN bus lines.

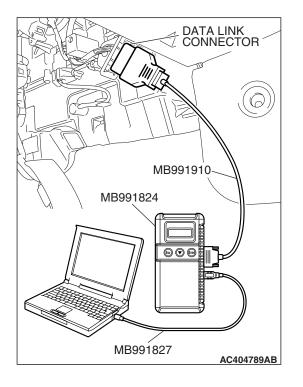
- (1) Connect scan tool MB991958 to the data link connector.
- (2) Turn the ignition switch to the "ON" position.
- (3) Diagnose the CAN bus line.
- (4) Turn the ignition switch to the "LOCK" (OFF) position.

#### Q: Is the check result satisfactory?

- YES : Go to Step 2.
- NO: Repair the CAN bus lines (Refer to GROUP 54C, Diagnosis-Can Bus Diagnostic Chart P.54C-14). Repair the CAN bus lines, and then go to Step 2.



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# STEP 2. Using scan tool MB991958, read the combination meter diagnostic trouble code.

Use scan tool MB991958 to check whether combination meter DTC U1112 has been set.

- (1) Connect scan tool MB991958 to the data link connector.
- (2) Turn the ignition switch to the "ON" position.
- (3) Check whether combination meter DTC U1112 has been set.

#### Q: Is combination meter DTC U1112 set?

- **YES :** Replace the SRS-ECU.
- **NO :** Replace the combination meter.

# DATA LIST REFERENCE TABLE

The following items can be read by the scan tool from the SRS-ECU input data.

M1524003500124

NO.	DATA LIST ITEM	CHECK CONDITION	NORMAL CONDITIONS
1	Failure continuation time 1 <sup>*1</sup>	Always	Maximum time to be stored: 9,999
2	Failure continuation time 2 <sup>*2</sup>	Always	minutes (approximately seven days)
3	Elimination times	Always	Maximum time to be stored: 255 days
4	Driver seat belt (Buckle SW1)	Wear the driver's seat belt.	Unfastened/Fastened
5	Passenger seat belt (Buckle SW1)	Wear the passenger's seat belt.	Unfastened/Fastened
6	Driver seat belt (Buckle SW2)	Undo the driver's seat belt.	Fastened/Unfastened
7	Passenger seat belt (Buckle SW2)	Undo the passenger's seat belt.	Fastened/Unfastened
8	Driver seat air bag Ignition	Do not apply any load to the driver's seat.	Permission/Prohibition
9	Passenger seat air bag Ignition	Do not apply any load to the passenger's seat.	Permission/Prohibition
10	Driver seat position	Slide the seat from the back-end position to the front-end position.	Rear/Front
11	Occupant classification	Apply a load to the passenger's seat.	Class 0/Class 1/Class 2/Not Clear/-
12	OCSS <sup>*3</sup> parts number	Always	-
13	Occupant weight	Apply a load to the passenger's seat.	kg/Unkown

NOTE:

• \*1: indicates the duration from the occurrence of failure to the first ignition signal output.

• \*2: indicates the duration from the first collision judgment or non-ignition judgment to the present.

• \*3:Occupant Classification Sensing System.

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# ACTUATOR TEST REFERENCE TABLE

The scan tool activates the following actuators for testing.

MUT-III SCAN TOOL DISPLAY	ITEM NO.	ITEM	PARTS TO BE ACTIVATED
SRS warning light	1	The SRS warning light illuminates.	CAN output
Passenger seat belt warn. light	2	Passenger's seat belt warning light illumination	SRS-ECU output
Passenger SRS OFF light	3	Passenger's air bag OFF indicator light illumination	

# FAIL-SAFE FUNCTION

If the SRS-ECU determines that the following parts are defective, the SRS-ECU operates the SRS warning light and controls as follows.

- If the seat belt switch is defective, the SRS-ECU determines that the seat belt is fastened and controls the seat belt with pre-tensioner.
- If the seat slide sensor is defective, the SRS-ECU determines that the seat is in its backward position and controls the air bag.
- If the occupant classification sensor or the occupant classification-ECU is defective, the SRS-ECU determines that the occupant classification sensor detects 30 kg (66 pounds) or more.} and controls the air bag and the passenger's air bag OFF indicator light.

# ACCURACY TESTING OF OCCUPANT CLASSIFICATION SENSOR

- The scan tool can be used to perform the following functions:
- Seat weight sensor accuracy check
- Zero-calibration

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# SPECIAL TOOLS

M1524000700732

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
MB990803AE	MB990803 Steering wheel puller	General service tool	Steering wheel removal
A MB991824 B MB991827 C MB991910 D DO NOT USE MB991910 F DO NOT USE MB991914 F MB991914 F MB991914 F MB991825 MB991825 MB991826 MB991826 MB991826	MB991958 A: MB991824 B: MB991827 C: MB991910 D: MB991911 E: MB991914 F: MB991825 G: MB991826 Scan tool (MUT-III sub assembly) A: Vehicle communication interface (V. C. I.) B: MUT-III USB cable C: MUT-III WSB cable C: MUT-III main harness A (Vehicles with CAN communication system) D: MUT-III main harness B (Vehicles without CAN communication system) E: MUT-III main harness C (for Daimler Chrysler models only) F: MUT-III measurement adapter G: MUT-III trigger harness	MB991824-KIT NOTE: G: MB991826 MUT-III Trigger Harness is not necessary when pushing V.C.I. ENTER key.	Checking diagnostic trouble code
MB991865	MB991865 Dummy resistor		SRS air bag, seat belt with pre-tensioner and curtain air bag circuit check
MB991866	MB991866 Resistor harness		Driver's and front passenger's air bag and side-airbag circuit check

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) TEST EQUIPMENT

TOOL	TOOL NUMBER AND	SUPERSESSION	APPLICATION
	NAME		
MB991884	MB991884 Resistor harness	Resistor harness (for pre-tensioner)	Seat belt with pre-tensioner and curtain air bag circuit check
MB991885	MB991885 Adapter harness	Pretensioner adapter harness	<ul> <li>Deployment of seat belt with pre-tensioner and curtain air bag inside the vehicle</li> <li>Deployment of seat belt with pre-tensioner and curtain air bag outside the vehicle</li> </ul>
A B C D D D D D D D D D D D D D D D D D D	MB991223 A: MB991219 B: MB991220 C: MB991221 D: MB991222 Harness set A: Test harness B: LED harness C: LED harness adaptor D: Probe	General service tools	Checking the continuity and measuring the voltage at the SRS-ECU harness connector
мВ992006	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**

M1524000800416

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

# **POST-COLLISION DIAGNOSIS**

M1524001100959

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 Tool:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

#### 

# 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).
- Read (and write down) all displayed diagnostic trouble codes (Refer to P.52B-32).

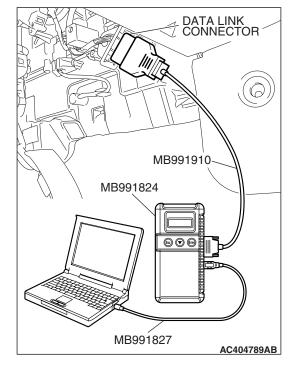
NOTE: If the battery power supply has been disconnected or disrupted by the collision, scan tool MB991958 cannot communicate with the SRS-ECU. Check the battery, then check and, if necessary, repair the front wiring harness and the instrument panel wiring harness before proceeding.

3. Read the data list (fault duration and how many times memories are erased), using scan tool MB991958.

#### Data list

NO.	DATA LIST ITEM	APPLICABILITY
1	Failure continuation time 1	Maximum time to be stored: 9,999 minutes
2	Failure continuation time 2	(approximately seven days)
3	Elimination times	Maximum time to be stored: 255

- 4. Erase the diagnostic trouble codes, and then turn the ignition switch to the "LOCK" (OFF) position.
- 5. Wait for at least one second, and then turn the ignition switch to the "ON" position again.
- 6. After waiting 15 seconds or more, note all displayed diagnostic trouble codes (Refer to P.52B-29).



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## **REPAIR PROCEDURE**

# WHEN FRONT AIR BAGS DEPLOY IN A COLLI-SION.

- 1. Replace the following parts with new ones:
- SRS-ECU (Refer to P.52B-405).
- Air bag modules (Refer to P.52B-408).
- Seat belt with pre-tensioner (Refer to P.52B-424).
- Front seat assembly <Passenger's side> (Refer to GROUP 52A, Front Seat Assembly P.52A-39).
- Front impact sensors (Refer to P.52B-402).
- 2. Check the following parts and replace if there are any malfunctions:
- Clock spring (Refer to P.52B-408).
- Seat slide sensor (Refer to P.52B-428).
- Seat belt switch (Refer to GROUP 52A, Front Seat Assembly P.52A-39).
- Steering wheel, steering column shaft assembly
- 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 and 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.37-25).
- Check the wiring harnesses for binding, the connectors for damage, poor connections, and the terminals for deformation (Refer to P.52B-26).

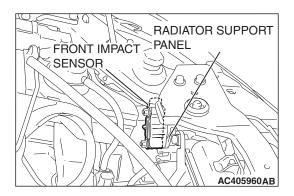
# WHEN SIDE-AIRBAGS DEPLOY IN A COLLISION.

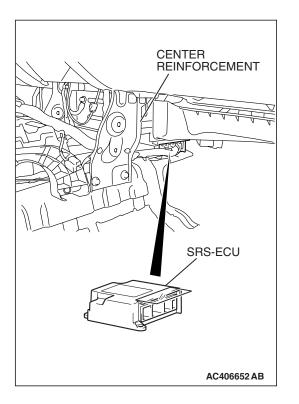
- 1. Replace the following parts with new ones:
- SRS-ECU (Refer to P.52B-405).
- Side impact sensors (Refer to P.52B-417).
- Front seat assembly (Refer to GROUP 52A, Front Seat Assembly P.52A-45).
- Curtain air bag modules (Refer to P.52B-420).
- Check the wiring harnesses for binding, the connectors for damage, poor connections, and the terminals for deformation (Refer to P.52B-26).

# 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-394.

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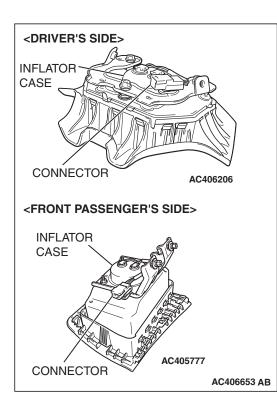
# FRONT IMPACT SENSOR

- 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 for dents, cracks or deformation.
- 2. Check the connector for damage, and the terminals for deformation.
- 3. Check the installation of the SRS-ECU.

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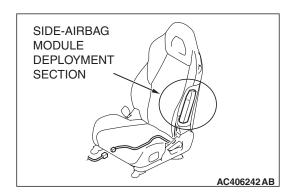


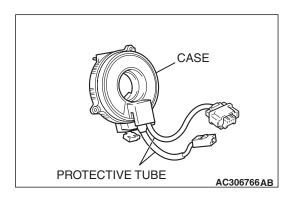
# AIR BAG MODULES

- 1. Check the pad cover for dents, cracks or deformation.
- 2. Check the connector for damage, terminal 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 installation 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 installation or alignment.

# FRONT SEATBACK ASSEMBLY (SIDE-AIRBAG MODULE)

- 1. Check the side-airbag module deployment section for dents or deformation.
- 2. Check that there is no connector damage, bent terminals or harness crimping.

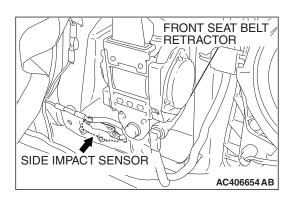


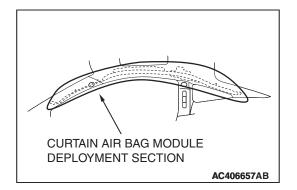


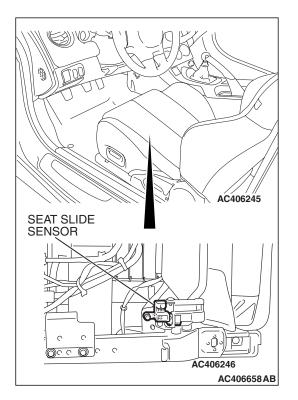
# **CLOCK SPRING**

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

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# SIDE IMPACT SENSOR

- 1. Check that there is no bending or corrosion in the center pillar.
- 2. Check that there is no denting, breakage or bending of the side impact sensor.
- 3. Check that there is no harness crimping, connector damage or bent terminals.

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

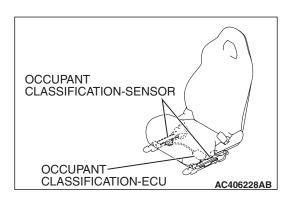
# **CURTAIN AIR BAG MODULE**

- 1. Check that the curtain air bag deployment part of the headlining is normal.
- 2. Check the inflator surface for cracks, dents or deformations.
- 3. Check the air bag for breakage.
- 4. Check the connector for damage, the terminal for deformation and the harness for binding.

# SEAT SLIDE SENSOR

- 1. Check that there is no connector damage, bent terminals or harness crimping.
- 2. Check the installation of the seat slide sensor.

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# **OCCUPANT CLASSIFICATION SENSOR**

- 1. Check the occupant classification-ECU case and occupant classification sensor for dents, cracks or deformation.
- 2. Check the connector for damage, and the terminals for deformation.
- 3. Check the installation of the occupant classification-ECU and occupant classification sensor.

# 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 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.
- Check the steering column shaft shock absorbing mechanism (Refer to GROUP 37, On-vehicle Service – Steering Column Shaft Assembly Shock Absorbing Mechanism Check P.37-25).

# SEAT BELT WITH PRE-TENSIONER

- 1. Check the seat belt for damage or deformation.
- 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 (FRONT WIRING HARNESS, INSTRUMENT PANEL WIRING HARNESS, AND FLOOR WIRING HARNESS)

Check the harnesses for binding, the connectors for damage, poor connection, and the terminals for deformation (Refer to P.52B-26).

# INDIVIDUAL COMPONENT SERVICE

#### A WARNING

M1524002900583

- If heat damage occurs during paint work, remove the SRS-ECU, the air bag modules, the clock spring, front seats, and the seat belt with pre-tensioner. Recheck the SRS system operability after reinstalling them.
  - 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 inspection, 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 to P.52B-402, SRS-ECU: refer to P.52B-405, Air bag modules and clock spring: refer to P.52B-408, Side impact sensor: refer to P.52B-417, Seat belt with pre-tensioner: refer to P.52B-424).

# ACCURACY CHECK OF OCCUPANT CLASSIFICATION SENSOR

M1524025100061

# 

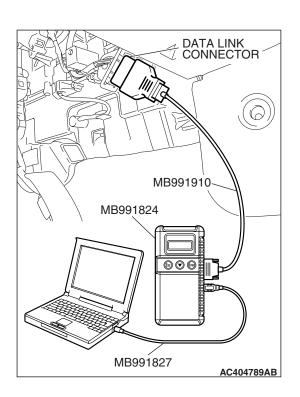
The following precaution must be observed when executing accuracy testing and calibration.

- Eliminate the occupant classification sensor friction.
- Perform the occupant classification sensor calibration at room temperature. (Proposal:  $20 \pm 15^{\circ}$  C (68  $\pm 27^{\circ}$  F)) (Before the calibration, place the occupant classification sensor more than 30 minutes at room temperature.)
- Do not apply any load or vibration while the weight check and the calibration is performed.
- Perform the weight check and the calibration after seat components are all assembled.

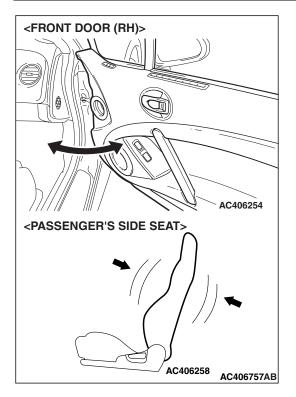
#### 

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.



#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) ON-VEHICLE SERVICE

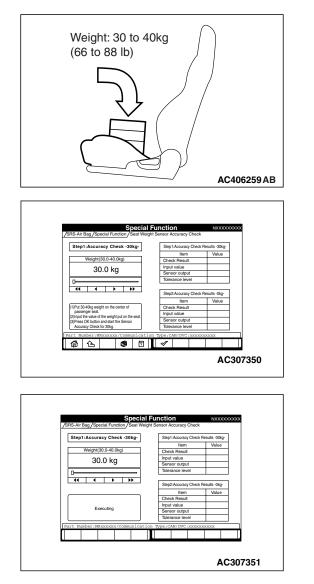


2. Open and close the front door (RH) 5 times firmly to remove the friction. And if the door does not open and close smoothly after the impact, hit the front and rear sides of the seatback about eight times each to remove the friction.

- 3. To execute accuracy check and calibration, operate scan tool MB991958 as follows.
  - (1) Select "Interactive Diagnosis".
  - (2) Select "Special Function".
  - (3) Select "Seat Weight Sensor Accuracy Check".

Special Function	ion NXXXXXXXXXX
BODY SRS-Air Bag Special Function	
Seat Weight Sensor Accuracy Check	
Please select function.	
(\$) (C) (D)	
	AC307349
	AC307349

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ISB	Revision	



(4) For accuracy check 30 kg (66 pounds), slide the seat to the front end, and put a 30 kg (66 pounds) weight on the center of the seat cushion. Then, carry out the friction removal in step (2) and press the OK button to execute accuracy check.

NOTE: If there is not a 30 kg (66 pounds) weight, load a square object of 30 to 40 kg (66 to 88 pounds). At this time, operate the arrow button of the weight input part on MUT-III to input the loaded weight value.

### 

\land Accur	acy Chec	k of 30k	g is NG
Please then sta	unload weig rt the Zero-	ht and rem calibration	ove friction procedure.

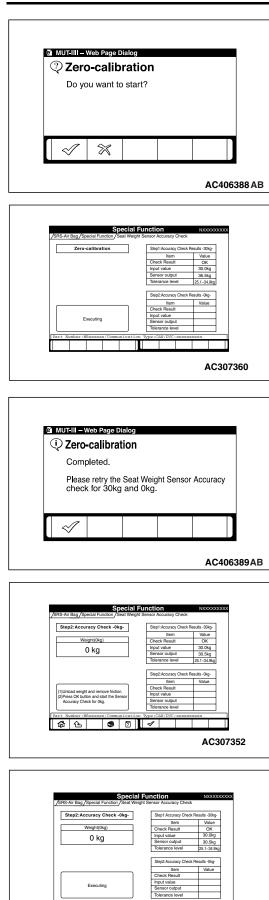
ſ		Zero	-calibrat	ion		Step1	Accurac	y Check	Results -30
ľ							Item		Valu
						Chec	k Resul	lt	OK
							value		30.0
							or output		36.5
						Toler	ance lev	vel	25.1~34
						Step2	Accurac	y Check	Results -0k
							Item	1	Valu
ſ	(4)11-					Chec	k Resul	lt	
1	(1)Unload weight and remove friction. (2)Press OK button and start the			Input	value				
		o-calibr			- I		or output		
l						Toler	ance lev	vel	
Pa	rt Na	mber:1	Rxxxxxx	:/Comm	inicat		AN/DVC	: X0000	200000
	ർ	1		۲	2	1			

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) ON-VEHICLE SERVICE

(5) If the tolerance level between the sensor output and the input value is within 4.9 kg (11 pounds), the screen for the accuracy check completion is displayed, and if more than 4.9 kg (11 pounds), the screen for abnormal condition is displayed.

NOTE: When the screen for the accuracy check of 0 kg (0 pound) is displayed, go to step (9). If the abnormal condition is displayed, check the seat installation condition. If the seat is improperly installed, install it properly and carry out the operation in step (4) again.

(6) When the abnormal condition is displayed, press the OK button and go to the calibration screen. If the cancel button is pressed the screen returns to step (4).



(7) Unload the weight, check the seat installation condition and carry out the friction removal in step (2) again, and press the OK button. When the execution dialog is displayed, press the OK button again to execute the calibration.

(8) The calibration has been completed when the screen as shown in the illustration is displayed. Press the OK button to return to the screen of step (4), and carry out the same procedure.

(9) When the screen for the accuracy check of 0 kg (0 pound) is displayed, unload the weight and slide the seat to the rear end. Then, carry out the friction removal in step (2) and press the OK button to execute the accuracy check.



AC307354

## ial Function Accuracy Check Re OK 61 6 **\$** 2 AC307356 MUT-III – Web Page Dialog (i) Seat Weight Sensor Accuracy Check Completed. Check Results displayed. $\ll$ AC406386AB MUT-III – Web Page Dialog Accuracy Check of 0kg is NG Please unload weight and remove friction then start the Zero-calibration procedure. X $\ll$ AC406390AB

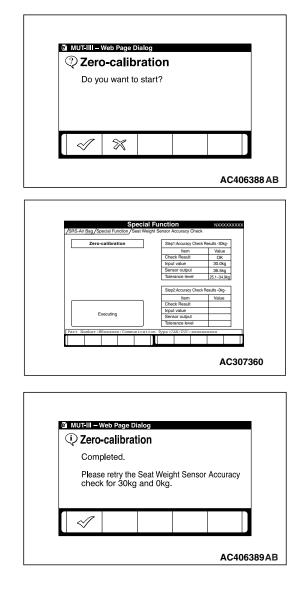
Zero-calibration	Step1:Accuracy Chec	k Results -30kg-
	Item	Value
	Check Result	OK
	Input value	30.0kg
	Sensor output	36.5kg
	Tolerance level	25.1-34.9k
(1)Unload weight and remove friction.	Item Check Result	Value
(2)Press OK button and start the	Input value	
Zero-calibration.	Sensor output	_
1 1	Tolerance level	

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) ON-VEHICLE SERVICE

(10)If the tolerance level between the sensor output and the input value is within 4.9 kg (11 pounds), the screen for the accuracy check completion is displayed, and if more than 4.9 kg (11 pounds), the screen for abnormal condition is displayed.

NOTE: If the abnormal condition is displayed, check the seat installation condition. If the seat is improperly installed, install it properly and repeat from step (4).

(11)When the abnormal condition is displayed, press the OK button and go to the calibration screen. Return to step (9) when the cancel button is pressed.)



(12)Check the seat installation condition and carry out the friction removal in step (2) again, and press the OK button. When the execution dialog is displayed, press the OK button again to execute the calibration.

(13)The calibration has been completed when the screen as shown in the illustration is displayed. Press the OK button to return to the screen of step (4), and carry out the same procedure.

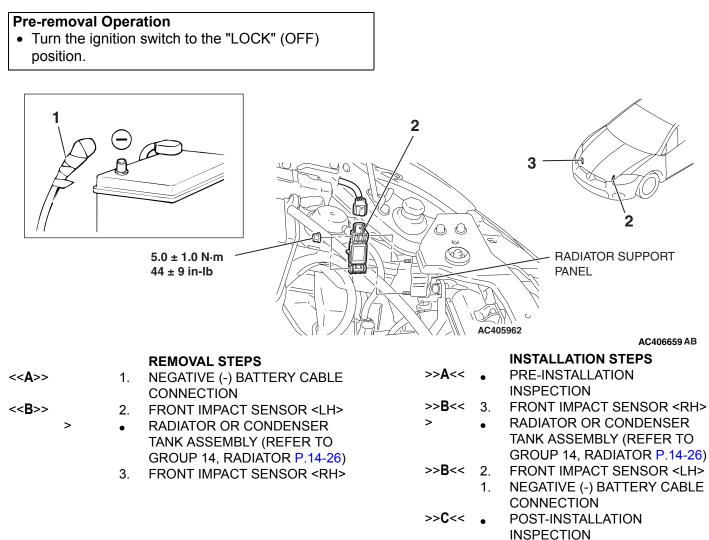
4. If the accuracy testing does not complete, an intermittent malfunction is suspected (Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points –How to Cope with Intermittent Malfunctions P.00-14).

## FRONT IMPACT SENSORS

#### **REMOVAL AND INSTALLATION**

A WARNING

- Never repair or disassemble the front impact sensor. If faulty, replace it.
- Handle the front impact sensors very carefully, taking care not to drop them. They must be replaced if they are dropped.
- Replace the sensors with new ones after the air bag has deployed.



NOTE: The figure indicates the front impact sensor <LH>. The impact sensor <RH> is symmetrical to this.

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#### **REMOVAL SERVICE POINT**

#### <<A>>NEGATIVE (-) BATTERY CABLE DISCON-NECTION

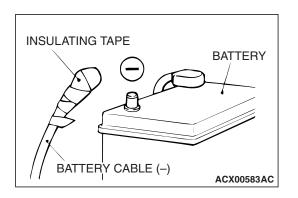
#### \land DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work (Refer to P.52B-26).

#### A 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>>FRONT IMPACT SENSOR <LH> REMOVAL

Remove the cooler tube assembly upper mounting bolt and remove the cooler tube assembly by sliding.

#### **INSTALLATION SERVICE POINTS**

#### >>A<<PRE-INSTALLATION INSPECTION

When installing a new front impact sensor, refer to "INSPEC-TION."

#### >>B<<FRONT IMPACT SENSOR INSTALLATION

#### A 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 indicated by the arrow on the label, and install it securely.
- 3. Install the cooler tube assembly upper mounting bolt.<RH>

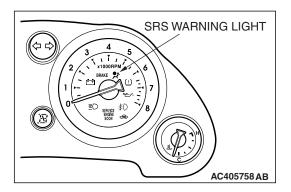
#### >>C<<POST-INSTALLATION INSPECTION

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

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### 52B-404

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) FRONT IMPACT SENSORS



- 3. Does the SRS warning light illuminate for approximately seven seconds, and go out?
- 4. If yes, the SRS system is functioning properly. If not, consult page P.52B-31.

#### INSPECTION

M1524001600493

#### A WARNING

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

NOTE: For checking of the front impact sensor other than described below, refer to the section concerning SRS diagnosis (Refer to P.52B-32).

- 1. Check the front impact sensor for dents, cracks or deformation.
- 2. Check the connector for damage, and terminals for deformation.
- 3. Check that there is no bending or corrosion in the radiator support panel.

## SRS CONTROL UNIT (SRS-ECU)

#### **REMOVAL AND INSTALLATION**

A 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.
- 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 here P.52B-387.
- When removing and installing the front passenger seat, be sure to carry out accuracy check occupant classification sensor after the seat has been installed in the vehicle. (On-vehicle Service P.52B-395.)

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

5.0 ± 1.0 N·m 44 ± 9 in-lb 2 AC405748 AC406662AB **INSTALLATION STEPS REMOVAL STEPS** >>**A**<< 2. SRS-ECU <<A>> NEGATIVE (-) BATTERY CABLE 1. FLOOR CARPET CONNECTION FLOOR CONSOLE ASSEMBLY 1. NEGATIVE (-) BATTERY CABLE (REFER TO GROUP 52A, FLOOR CONNECTION CONSOLE ASSEMBLY P.52A-28) >>B<< POST-INSTALLATION INSPECTION FLOOR CARPET SRS-ECU <<B>> 2 **TSB** Revision

52B-405

M1524002100725

#### **REMOVAL SERVICE POINTS**

#### <<A>> NEGATIVE (-) BATTERY CABLE DISCON-NECTION

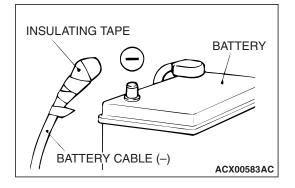
#### A DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work (Refer to P.52B-26).

#### A WARNING

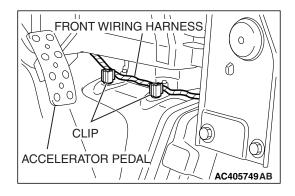
Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

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



#### <<B>> SRS-ECU REMOVAL

Remove the clip shown and remove the SRS-ECU by sliding to the left side.



#### **INSTALLATION SERVICE POINTS**

#### >>A<< SRS-ECU INSTALLATION

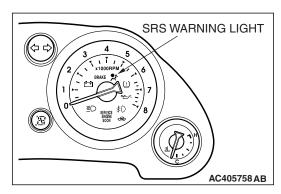
#### A WARNING

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.

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- 3. Does the SRS warning light illuminate for approximately seven seconds, and then go out?
- 4. If yes, the SRS system is functioning properly. If not, refer to P.52B-31.

#### INSPECTION

M1524002200539

A 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-373 for inspection of SRS-ECU for other than physical damage.

## AIR BAG MODULE(S) AND CLOCK SPRING

#### **REMOVAL AND INSTALLATION**

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#### A WARNING

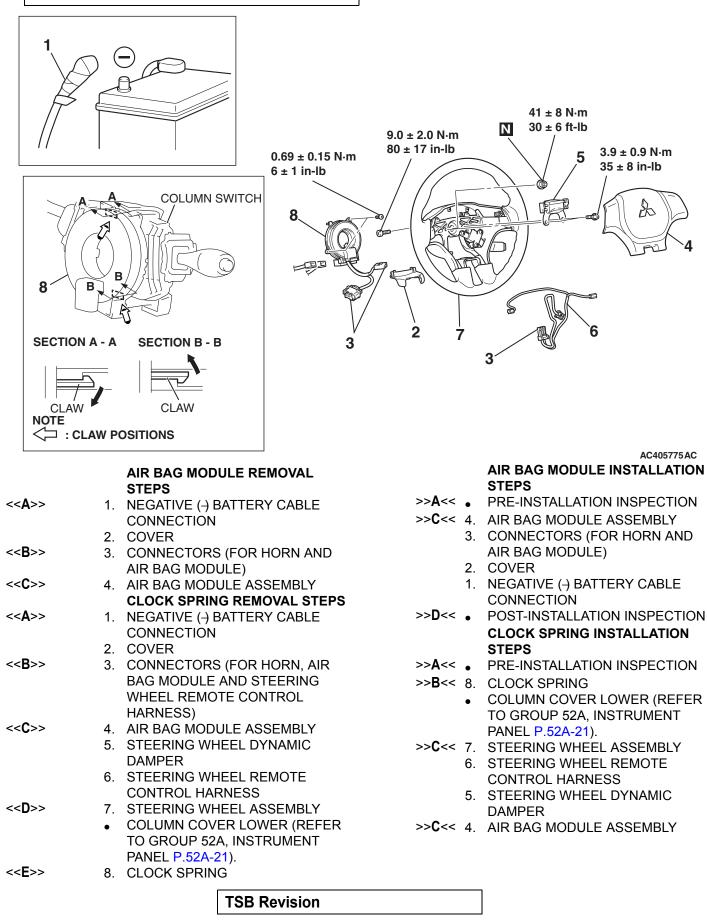
- Never attempt to disassemble or repair the air bag modules or clock spring. If faulty, replace it.
- Do not drop the air bag modules or clock spring or allow contact with water, grease or oil. Replace it if a dent, crack, deformation or rust is detected.
- The air bag modules should be stored on a flat surface with the pad cover 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, replace the clock spring with a new one.
- 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 (Refer to P.52B-432).
- When removing and installing the front passenger seat, be sure to carry out accuracy check occupant classification sensor after the seat has been installed in the vehicle. (On-vehicle Service P.52B-395.)

#### <SIDE-AIRBAG MODULE>

For removal and installation of the front seatback assembly with side-airbag module, refer to GROUP 52A, Front Seat P.52A-45.

#### <AIR BAG MODULE (DRIVER'S SIDE) AND CLOCK SPRING>

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



#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) AIR BAG MODULE(S) AND CLOCK SPRING

#### CLOCK SPRING INSTALLATION STEPS (Continued)

- 3. CONNECTORS (FOR HORN, AIR BAG MODULE, AND STEERING WHEEL REMOTE CONTROL HARNESS)
- 2. COVER
- 1. NEGATIVE (-) BATTERY CABLE CONNECTION
- >>D<< 
   POST-INSTALLATION INSPECTION

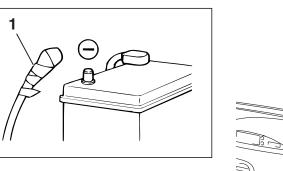
#### <AIR BAG MODULE (FRONT PASSENGER'S SIDE)>

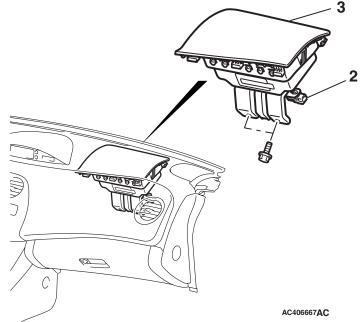
#### **Pre-removal Operation**

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

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A
- MB992006: Extra Fine Probe
- MB990803: Steering Wheel Puller





## AIR BAG MODULE REMOVAL STEPS

- <<**A**>>
- 1. NEGATIVE (-) BATTERY CABLE CONNECTION
- <<B>>
- 2. CONNECTORS
- <<F>> 3. AIR BAG MODULE

#### **Required Special Tools:**

- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: V.C.I.

## AIR BAG MODULE INSTALLATION STEPS

- >>A<< PRE-INSTALLATION INSPECTION
  - 3. AIR BAG MODULE
  - 2. CONNECTOR
    - 1. NEGATIVE (-) BATTERY CABLE CONNECTION
- >>D<< POST-INSTALLATION INSPECTION
- MB991827: MUT-III USB Cable
- MB991910: MUT-III Main Harness A

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#### **REMOVAL SERVICE POINTS**

#### <<A>> NEGATIVE (-) BATTERY CABLE DISCON-NECTION

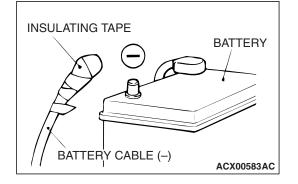
#### A DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-26).

#### A 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>> CONNECTOR (FOR AIR BAG MODULE) REMOVAL

Slide the outer housing of the clock spring or front passenger's air bag module connector in the arrow direction shown, and disconnect the connector.



#### A WARNING

- The air bag module must not be measured with an ohmmeter.
- The air bag module must not be disassembled.
- The removed air bag module should be stored in a clean, dry place with the deployment surface facing up.

Loosen the torx screw and remove the air bag module assembly.

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#### <<D>>STEERING WHEEL ASSEMBLY REMOVAL

МВ990803 ССО00991АВ

#### Use special tool MB990803 to remove the steering wheel.

#### <<E>>> CLOCK SPRING REMOVAL

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

## <<F>> AIR BAG MODULE REMOVAL (FRONT PASSENGER'S SIDE)

#### A WARNING

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

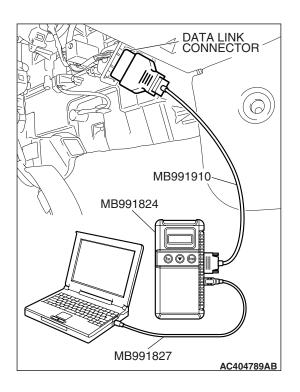
#### **INSTALLATION SERVICE POINTS**

#### >>A<< PRE-INSTALLATION INSPECTION

#### A WARNING

## **Dispose of air bag modules only according to the specified procedure. (Refer to P.52B-432).**

- 1. When installing the new air bag modules and clock spring, refer to "INSPECTION" (P.52B-414).
- 2. Connect the negative (-) battery cable.



#### 

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.

At this time, check that no DTC except B1400, B1410, B1480 and B1490 are set.

#### A DANGER

*Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to* **P.52B-26)**.

#### A 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

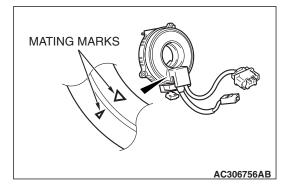
#### A WARNING

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.



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#### >>C<< STEERING WHEEL ASSEMBLY/AIR BAG MODULE ASSEMBLY INSTALLATION

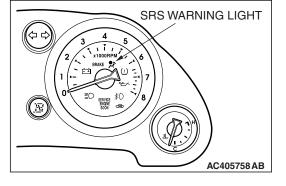
#### 

When installing the steering wheel and air bag module, ensure that the harness of the clock spring does not become caught or tangled.

- 1. Before installing the steering wheel and 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 the "ON" position.
- 3. Does the SRS warning light illuminate for approximately seven seconds, and go out?
- 4. If yes, the SRS system is functioning properly. If not, refer to P.52B-31.



#### INSPECTION

M1524002500626

#### AIR BAG MODULE CHECK

#### A DANGER

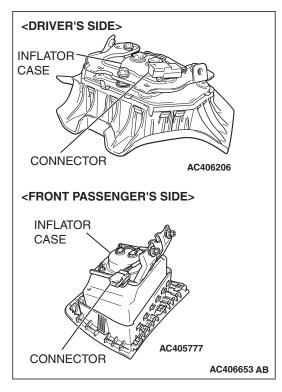
Never attempt to measure the circuit resistance of the air bag modules (squib), even if you are using the specified tester. If the circuit resistance is measured with a tester, accidental air bag deployment will result, and possible serious personal injury.

#### A 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-432).* 

1. Check the pad cover for dents, cracks or deformation.

#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) AIR BAG MODULE(S) AND CLOCK SPRING



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

## FRONT SEATBACK ASSEMBLY WITH SIDE-AIRBAG MODULE CHECK

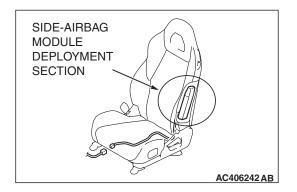
#### A DANGER

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

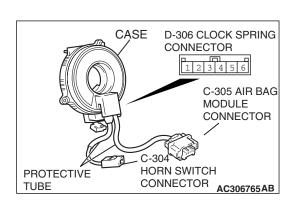
#### A WARNING

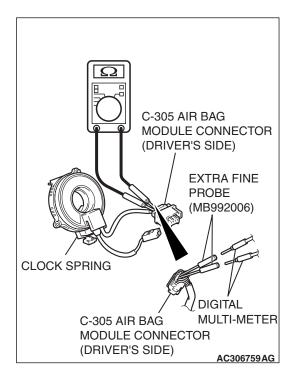
*If any improper part is found during the following inspection, replace the front seatback assembly with a new one. Dispose of the old one according to the specified procedure. (Refer to P.52B-432).* 

- 1. Check the air bag module deployment section for dents or deformation.
- 2. Check the connector for damage, the terminals for deformation, and the harness for binding.



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#### **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.
- Check to see that there is a charge (continuity) between the C-306 clock spring connector terminal 1 and C-304 horn switch.

#### 

## Do not directly insert a probe, etc. into the terminal from the front of the connector.

- 4. Insert the special tool (MB991222) from behind the airbag module connector of the C-305 driver's side.
- 5. As shown in the figure, connect the circuit tester to the special tool (MB992006) and check to see that there is a continuity between the terminals.

## SIDE IMPACT SENSOR

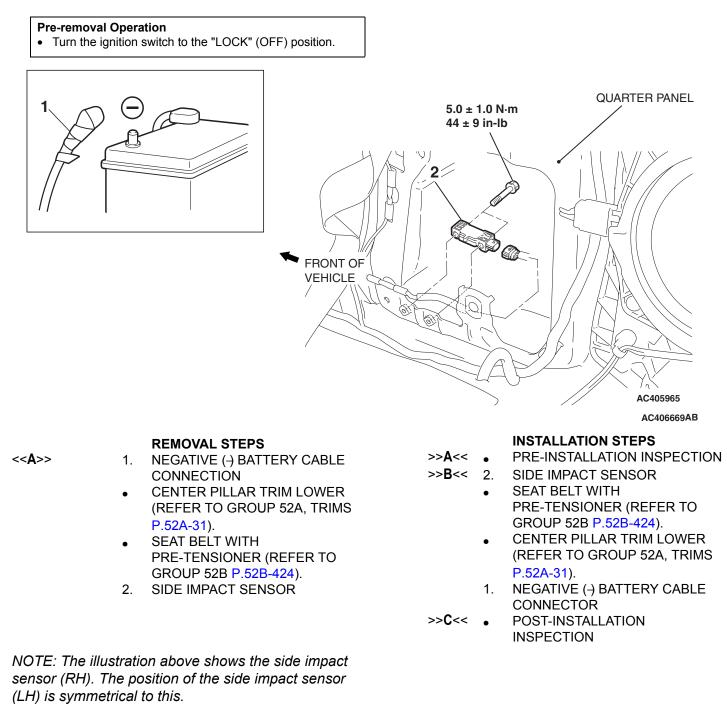
#### REMOVAL AND INSTALLATION

M1524004600566

A side impact sensor is installed behind the center pillar trim on both driver and passenger sides of the vehicle.

#### A WARNING

- Never attempt to disassemble or repair the side impact sensor. If faulty, replace it.
- Do not drop or subject the side impact sensor to impact or vibration. Replace the side impact sensor, if dents, cracking, deformation, or rust are present.
- Replace the side impact sensor after the air bag has deployed.



#### **REMOVAL SERVICE POINT**

#### << A>> NEGATIVE (-) BATTERY CABLE DISCON-**NECTION**

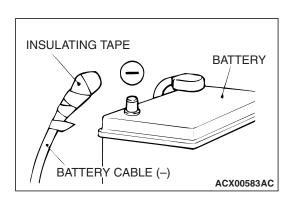
#### 

Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-26).

#### MARNING

#### 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 deployment.



#### INSTALLATION SERVICE POINTS

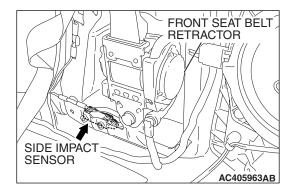
#### >>A<< PRE-INSTALLATION INSPECTION

Check the side impact sensor for dents, breakage and bending and measure the resistance between the terminals, even when installing a new side impact sensor.

#### >>B<< SIDE IMPACT SENSOR INSTALLATION

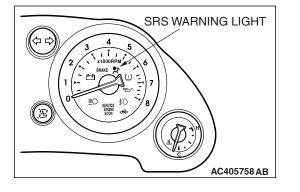
## **MARNING**If the side impact sensor is not installed securely and correctly, the side-airbag may not operate normally.

- 1. Securely connect the connector.
- 2. Securely install the side impact sensor so that the arrow on the label should face toward the outside of the vehicle.



#### >>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 go out?
- 4. If yes, the SRS system is functioning properly. If not, refer to P.52B-31.



#### INSPECTION

M1524004700499

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

NOTE: For checking of the side impact sensor other than described below, refer to the section concerning SRS diagnosis (Refer to P.52B-32).

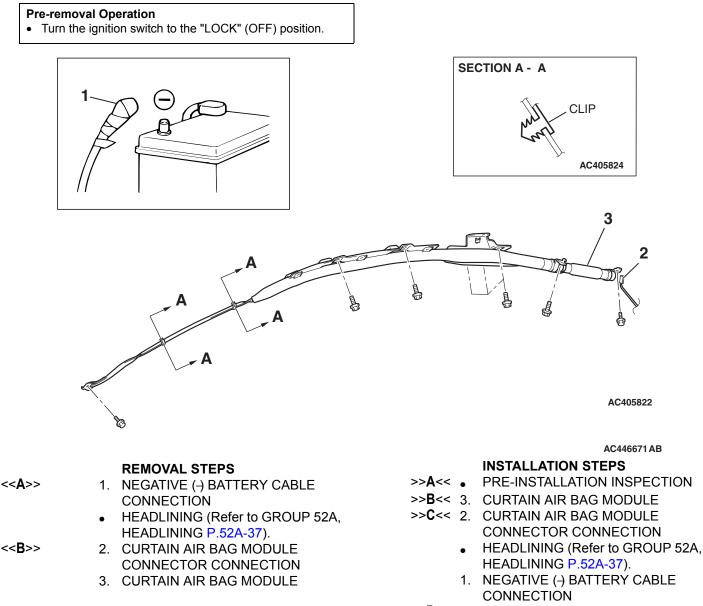
- 1. Check the side impact sensor and bracket for dents, cracks or deformation.
- 2. Check the connector for damage, and terminals for deformation.
- 3. Check that there is no bending or corrosion in the quarter panel.

## CURTAIN AIR BAG MODULE(S)

#### **REMOVAL AND INSTALLATION**

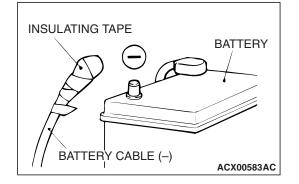
A WARNING

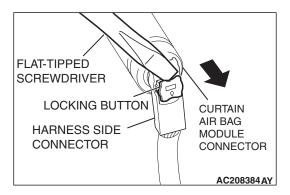
- Never attempt to disassemble or repair the curtain air bag modules. If faulty, replace it.
- Do not drop the curtain air bag modules or clock spring or allow contact with water, grease or oil. Replace it if a dent, crack, deformation or rust is detected.
- Do not expose the curtain air bag modules to temperatures over 93 °C (200 °F).
- Wear gloves and safety glasses when handling air bags that have already deployed.
- An undeployed curtain air bag module should only be disposed of in accordance with the procedures (Refer to P.52B-432).
- When removing and installing the front passenger seat, be sure to carry out accuracy check occupant classification sensor after the seat has been installed in the vehicle. (On-vehicle Service P.52B-395.)



>>D<< • POST-INSTALLATION INSPECTION

M1524013500103





#### **REMOVAL SERVICE POINTS**

#### <<A>> NEGATIVE (-) BATTERY CABLE DISCON-NECTION

#### A DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-26).

#### A 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>>CURTAIN AIR BAG MODULE CONNECTOR DISCONNECTION

- 1. Use a flat-tipped screwdriver to unlock the locking button of the harness-side connector by withdrawing it toward you in two stages.
- 2. Disconnect the curtain air bag module connector.

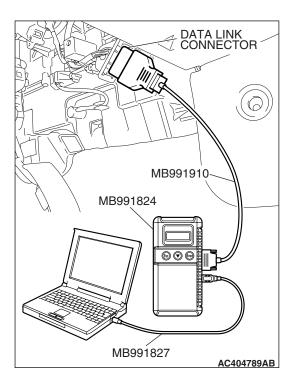
#### INSTALLATION SERVICE POINTS

#### >>A<< PRE-INSTALLATION INSPECTION

#### A WARNING

#### **Dispose of curtain air bag module only according to** *the specified procedure. (Refer to* **P.52B-432**).

- 1. When installing the new curtain air bag module, refer to "INSPECTION" (P.52B-423).
- 2. Connect the negative (-) battery cable.



#### 

# 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.

At this time, check that no DTC except 1440 and 1450 are set.

#### A DANGER

*Wait at least* 60 seconds after disconnecting the battery cable before doing any further work. (Refer to **P.52B-26**).

#### A WARNING

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

 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<< CURTAIN AIR BAG MODULE INSTALLATION

#### 

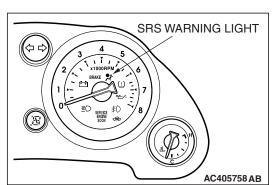
- Take care not to bend or distort the curtain air bag when installing it.
- Take care that the surrounding components do not trap the air bag.
- Take care that the front pillar trim clips or other parts do not interfere with the strap.

## >>C<< CURTAIN AIR BAG MODULE CONNECTOR CONNECTION

Connect the curtain air bag module connector, then securely lock the locking button of the harness-side connector.

#### >>D<< 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 go out?
- 4. If yes, the SRS system is functioning properly. If not, refer to P.52B-31.

#### INSPECTION

M1524013600092

# CURTAIN AIR BAG MODULE DEPLOYMENT SECTION AC406657AB

#### **CURTAIN AIR BAG MODULE CHECK**

#### MARNING

- If any improper part is found during the following inspection, replace the curtain air bag module (squib) assembly with a new one. Dispose of the old one according to the specified procedure (Refer to P.52B-432).
- Never attempt to measure the circuit resistance of the air bag module (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.
- 1. Check that the curtain air bag deployment part of the headlining is normal.
- 2. Check the inflator surface for cracks, dents or deformations.
- 3. Check the air bag for breakage.
- 4. Check the connector for damage, the terminal for deformation and the harness for binding.

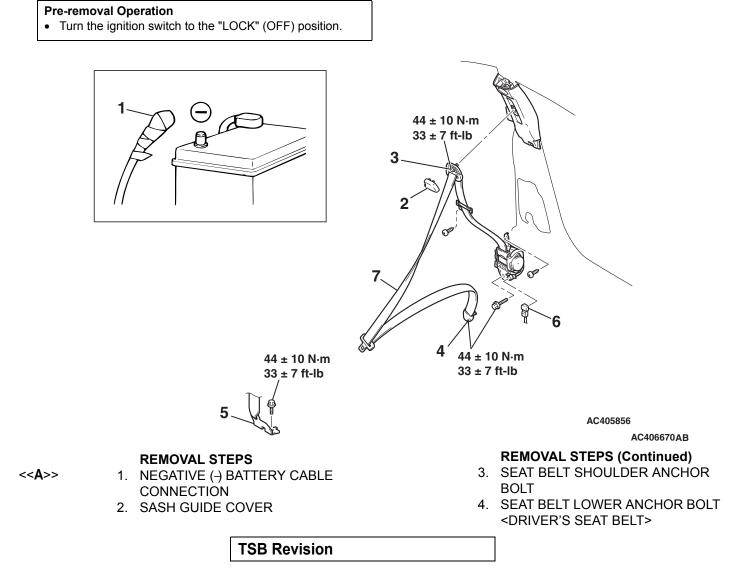
## SEAT BELTS WITH PRE-TENSIONER

#### **REMOVAL AND INSTALLATION**

M1524004100572

#### A WARNING

- Never attempt to disassemble or repair the seat belt pre-tensioner. If faulty, replace it.
- Be extremely careful when handling the seat belt with pre-tensioner. Do not subject it to shocks, drop it, bring it close to strong magnets or allow contact with water, grease or oil. Always replace it with a new part if any dents, cracks or deformation is found.
- Do not place anything on the seat belt pre-tensioner.
- Do not expose the seat belt pre-tensioner to temperatures over 90 °C (194 °F).
- After operating the seat belt pre-tensioner, replace the seat belt pre-tensioner with a new part.
- Gloves and protective goggles must be worn when handling a seat belt pre-tensioner once it has been used.
- If disposing of a seat belt with pre-tensioner which has not yet been operated, its seat belt pre-tensioner must be operated first before disposal. (Refer to P.52B-432).
- When removing and installing the front passenger seat, be sure to carry out accuracy check occupant classification sensor after the seat has been installed in the vehicle. (On-vehicle Service P.52B-395.)



#### **REMOVAL STEPS (Continued)**

- 5. OUTER SEAT BELT<PASSENGER'S SIDE>
- CENTER PILLAR TRIM, LOWER (REFER TO GROUP 52A, TRIMS P.52A-31).
- <<B>>
- 6. PRE-TENSIONER CONNECTOR CONNECTION 7. OUTER SEAT BELT<DRIVER'S
- SIDE>
- **INSTALLATION STEPS**
- >>A<< PRE-INSTALLATION INSPECTION
  - 7. OUTER SEAT BELT<DRIVER'S SIDE>
- >>B<< 6. PRE-TENSIONER CONNECTOR CONNECTION
  - CENTER PILLAR TRIM, LOWER (REFER TO GROUP 52A, TRIMS P.52A-31).
  - 5. OUTER SEAT BELT<PASSENGER'S SIDE>
  - 4. SEAT BELT LOWER ANCHOR BOLT <DRIVER'S SEAT BELT>
  - 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 (MUT-III Sub Assembly)
  - MB991824: V.C.I.

- MB991827: USB Cable
- MB991910: Main Harness A

#### **REMOVAL SERVICE POINTS**

#### <<A>> NEGATIVE (-) BATTERY CABLE DISCON-**NECTION**

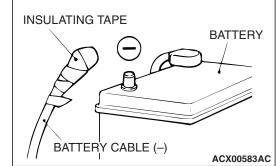
**A DANGER** Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-26).

## related accessories conds. WASH HANDS AFTER

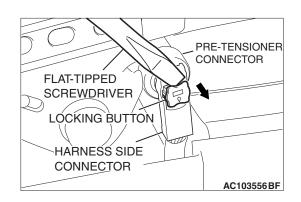
ry cable from the battery and tape the terminal to prevent accidental connection and seat belt pre-tensioner operation.

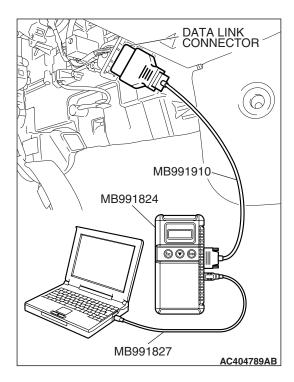
	<b>M</b> WARNING Battery posts, terminals and
	tain lead and lead compound
HANDLING.	
	Disconnect the negative (-) batter
	tane the terminal to prevent accide

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) SEAT BELTS WITH PRE-TENSIONER





#### <<B>>PRE-TENSIONER CONNECTOR DISCONNECTION

- 1. Use a flat-tipped screwdriver to unlock the locking button of the harness-side connector by withdrawing it toward you in two stages.
- 2. Disconnect the pretensioner connector.

### INSTALLATION SERVICE POINTS

#### >>A<< PRE-INSTALLATION INSPECTION

#### A WARNING

## Dispose of seat belt pre-tensioner only according to the specified procedure. (Refer to P.52B-432).

- 1. When installing the new seat belt pre-tensioner, refer to "INSPECTION" (P.52B-427).
- 2. Connect the negative (-) battery cable.

#### 

# 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.

At this time, check that no DTC except 1460 and 1470 are set.

#### A DANGER

*Wait at least* 60 seconds after disconnecting the battery cable before doing any further work. (Refer to **P.52B-26**).

#### A WARNING

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

 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.

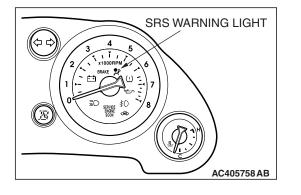
#### >>B<< PRE-TENSIONER CONNECTOR CONNECTION

Connect the pretensioner connector then securely lock the locking button of the harness-side connector.

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#### >>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 go out?
- 4. If yes, the SRS system is functioning properly. If not, refer to P.52B-31.



#### INSPECTION

M1524004200416

#### SEAT BELT WITH PRE-TENSIONER CHECK

#### A 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-432).
- 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.

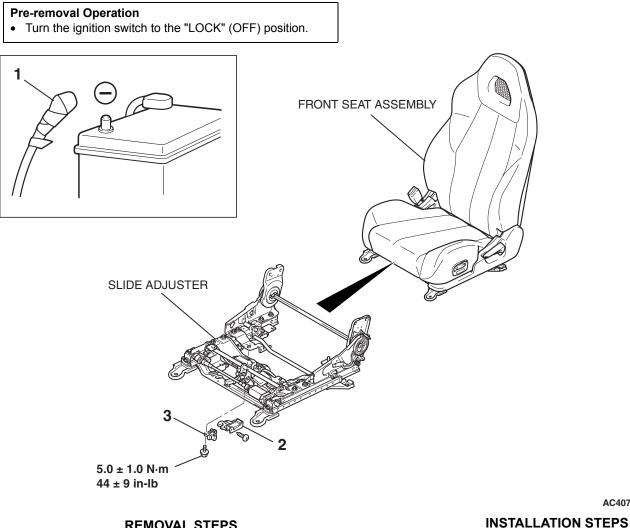
## SEAT SLIDE SENSOR

#### **REMOVAL AND INSTALLATION**

M1524025300076

#### A WARNING

- Never attempt to disassemble or repair the seat slide sensor. If faulty, replace it.
- Do not drop or subject the seat slide sensor to impact or vibration. Replace the seat slide sensor, if dents, cracking, deformation, or rust are present.



<<A>>

#### **REMOVAL STEPS**

- 1. NEGATIVE (-) BATTERY CABLE CONNECTION
- FRONT SEAT <DRIVER'S SIDE> ٠ (REFER TO GROUP 52A, FRONT SEAT ASSEMBLY P.52A-39).
- 2. SEAT SLIDE SENSOR COVER
- SEAT SLIDE SENSOR 3.

>>**A**<< >>**B**<< 3.

- SEAT SLIDE SENSOR SEAT SLIDE SENSOR COVER 2.
  - FRONT SEAT <DRIVER'S SIDE> (REFER TO GROUP 52A, FRONT SEAT ASSEMBLY P.52A-39).

PRE-INSTALLATION INSPECTION

AC407084 AB

- 1. NEGATIVE (-) BATTERY CABLE CONNECTOR
- >>C<< POST-INSTALLATION INSPECTION

#### **REMOVAL SERVICE POINT**

#### <<A>> NEGATIVE (-) BATTERY CABLE DISCON-NECTION

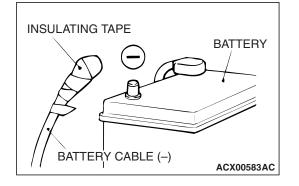
#### A DANGER

Wait at least 60 seconds after disconnecting the battery cable before doing any further work. (Refer to P.52B-26).

#### A WARNING

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

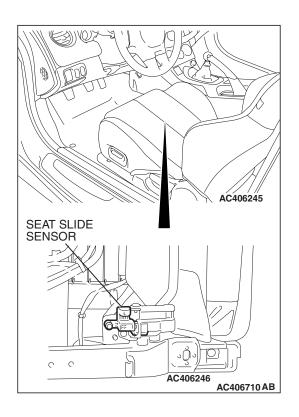
Disconnect the negative (-) battery cable from the battery and tape the terminal to prevent accidental connection and air bag deployment.



#### INSTALLATION SERVICE POINTS

#### >>A<< PRE-INSTALLATION INSPECTION

Check the seat slide sensor for dents, breakage and bending and measure the resistance between the terminals, even when installing a new seat slide sensor.



#### >>B<< SEAT SLIDE SENSOR INSTALLATION

#### MARNING

If the seat slide sensor is not installed securely and correctly, the driver's air bag may not operate normally.

Securely connect the 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 go out?
- 4. If yes, the SRS system is functioning properly. If not, refer to P.52B-31.

#### **INSPECTION**

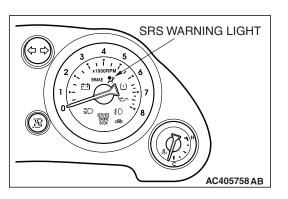
M1524025400062

#### A WARNING

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

NOTE: For checking of the seat slide sensor other than described below, refer to the section concerning SRS diagnosis (Refer to P.52B-32).

- 1. Check the seat slide sensor for dent, cracks or deformation.
- 2. Check the connector for damage, and terminals for deformation.
- 3. Check that there is no bending or corrosion in the slide adjuster.



## **OCCUPANT CLASSIFICATION SENSOR**

#### REMOVAL AND INSTALLATION

For disassembly and assembly of the front seat assembly, refer to GROUP 52A, Front Seat assembly P.52A-45.

#### INSPECTION

M1524025700041

M1524025600055

#### A WARNING

## If a dent, crack, deformation or rust is detected, replace with a new seat slide adjuster.

NOTE: For checking of the occupant classification sensor other than described below, refer to the section concerning SRS diagnosis (Refer to P.52B-32).

- 1. Check the occupant classification sensor for dent, cracks or deformation.
- 2. Check the connector for damage, and terminals for deformation.
- 3. Check that there is no bending or corrosion in the seat slide adjuster.
- 4. Carry out the accuracy check of occupant classification sensor (Refer to P.52B-395).

## AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES

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 Tool:**

MB991885: Adapter Harness

#### A WARNING

- If the vehicle is to be scrapped or otherwise disposed of, deploy the air bags and operate the seat belt pre-tensioners 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-tensioners 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 a loud noise when the air bags are deployed and when the seat belt pre-tensioners are operated, avoid residential areas whenever possible. If anyone is nearby, give warning of the impending noise.
- 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) <AIR BAG MODULE (DRIVER'S SIDE)>

1. Move the vehicle to an isolated spot.

#### A DANGER

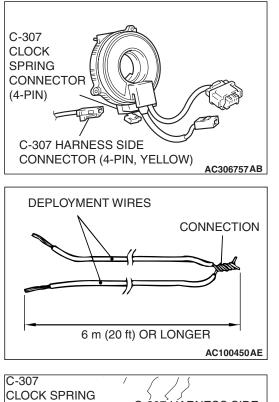
Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-26).

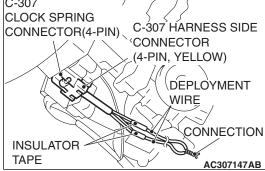
#### A WARNING

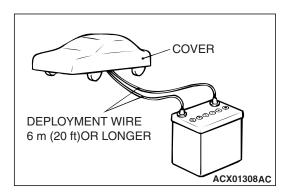
#### Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

- 2. Disconnect the negative (-) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.
- 3. Remove the column cover lower (Refer to GROUP 52A, Instrument Panel P.52A-21).

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4. Remove the connection between the C-307 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.

## 

# Never fail to do Step 6 in order to prevent accidental deployment caused by static.

- 6. Touch the vehicle's body with your bare hands to discharge static electricity.
- 7. Cut the instrument panel wiring harness (four-pin, yellow) shown in the figure, while the C-307 clock spring connector (four-pin) is disconnected.

NOTE: The disconnection location should be sufficiently away from the C-307 harness side connector with consideration to the expansion harness connection location upon disconnection.

- 8. Connect the yellow wire to the yellow-blue wire and the yellow-black wire to the yellow-violet wire of the wiring harness which has been cut. Connect each connected harness wire to the deployment wires, and insulate the connections with plastic tape. Then route the deployment wires out of the vehicle.
- 9. Connect the C-307 harness side connector connected with the expansion harness to the C-307 clock spring connector.

# MARNING

#### If the windshield 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.

10.To suppress the sound as much as possible, completely close all door windows, close the doors and put a cover on the vehicle.

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#### A 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) for post-deployment handling instructions.
- If the air bag module fails to deploy, do not go near the module.
- 11.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.
- 12.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-452).

# DEPLOYMENT INSIDE THE VEHICLE (WHEN DISPOSING OF A VEHICLE) <AIR BAG MODULE (FRONT PASSENGER'S SIDE)>

1. Move the vehicle to an isolated spot.

#### A DANGER

*Wait at least* 60 seconds after disconnecting the battery cables before doing any further work (Refer to **P.52B-26**).

## A WARNING

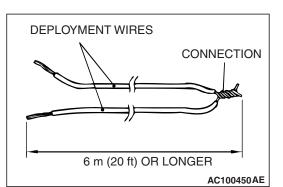
#### Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.

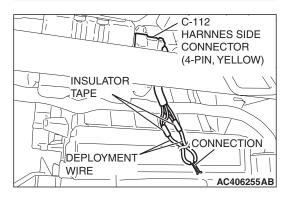
- 2. Disconnect the negative (-) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.
- 3. Remove the instrument panel parcel box (Refer to GROUP 52A, Instrument Panel P.52A-21).
- 4. Disconnect harness side connector C-112 (four-pin, yellow) from the air bag module connector.

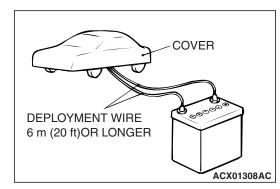
NOTE: If the C-112 air bag module connector is disconnected, both electrodes of the air bag module connector will be automatically shorted to prevent unintended deployment of the air bag due to static electricity, etc.

C-112	C-112
(FRONT	
-PASSENGER'S SIDE)	(4-PIN, YELLOW)
	AC406795AB

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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.

# 

# Never fail to do Step 6 in order to prevent accidental deployment caused by static.

- 6. Touch the vehicle's body with your bare hands to discharge static electricity.
- 7. Cut with a nipper, etc. instrument panel wiring harness C-112, while harness side connector C-112 (four-pin, yellow) is disconnected.

NOTE: The disconnection location should be sufficiently away from the C-112 harness side connector with consideration to the expansion harness connection location upon disconnection.

- 8. Connect the yellow-green wire to the yellow-pink wire and the yellow-red wire to the yellow-green wire of the wiring harness which has been cut. Connect each connected harness wire to the deployment wires, and insulate the connections with plastic tape. Then route the deployment wires out of the vehicle.
- Connect instrument panel wiring harness C-112 connected with the deployment wires to air bag module connector C-112 (four-pin, yellow).

# 

# 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.

10.To suppress the operation sound as much as possible, completely close all door windows, close the doors and put a cover on the vehicle.

# 

- 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) for post-deployment handling instructions.
- If the air bag module fails to deploy, do not go near the module.
- 11.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.

12.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-452).

# DEPLOYMENT INSIDE THE VEHICLE (WHEN DISPOSING OF A VEHICLE) <SIDE-AIRBAG MODULE>

1. Move the vehicle to an isolated spot.

## A DANGER

*Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-26).* 

# A 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.

#### A WARNING The side-airbag modules for both the driver's side and passenger's side should be deployed.

3. Remove the connection between the D-23 or D-28 side-airbag module connector (two-pin, yellow) and the harness side connector (two-pin, yellow).

NOTE: If the air bag module connector is disconnected from the floor 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.

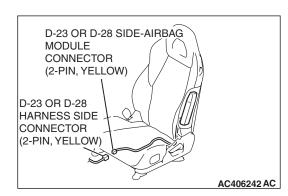
4. Obtain two suitable wires, which are 6 meters (20 feet) or longer, as deployment wires. Then connect the wires at one end to short.

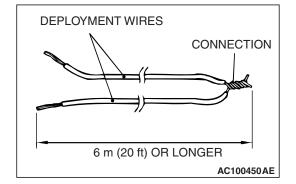
NOTE: This prevents the air bag from unintentional deployment caused by static electricity, etc.

# 

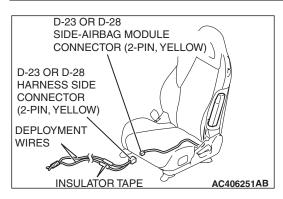
# Never fail to do Step 5 in order to prevent accidental deployment caused by static.

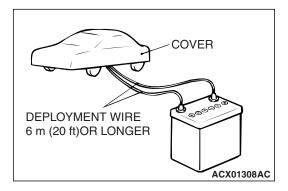
5. Touch the vehicle's body with your bare hands to discharge static electricity.





#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-437 AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES





6. Cut the floor wiring harness (two-pin, yellow) shown in the figure, while the D-23 or D-28 side-airbag module connector (two-pin) is disconnected.

NOTE: The disconnection location should be sufficiently away from the D-23 or D-28 harness side connector with consideration to the expansion harness connection location upon disconnection.

- 7. Individually connect a harness to the two disconnected harnesses, cover the connection areas with insulator tape, and then pull out the expansion harness outside the vehicle.
- 8. Connect the D-23 or D-28 harness side connector connected with the expansion harness to the D-23 or D-28 air bag module 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 a cover on the vehicle.

## A 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) 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-452).

# DEPLOYMENT INSIDE THE VEHICLE (WHEN DISPOSING OF A VEHICLE) <CURTAIN AIR BAG MODULE>

1. Move the vehicle to an isolated spot.

## A WARNING

*Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-26).* 

#### A 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.

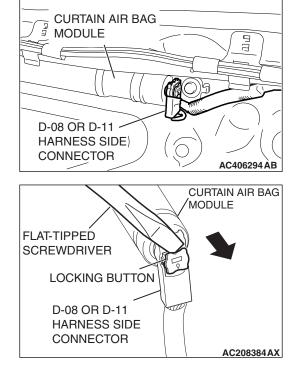
#### A WARNING

# The curtain air bag modules for both the right side and left side should be deployed.

- 3. Remove the headlining (Refer to GROUP 52A, headlining P.52A-37).
- 4. Disconnect harness side connector D-08 or D-11 (two-pin, black) from the curtain air bag module.

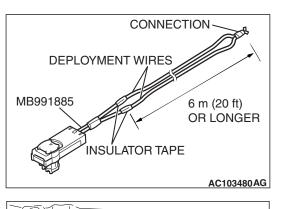
NOTE: If the curtain air bag module connector is disconnected from the floor wiring harness, both electrodes of the curtain air bag module connector will be automatically shorted to prevent unintended operation of the curtain air bag module due to static electricity, etc.

- (1) Use a flat-tipped screwdriver to unlock the harness side connector (two-pin, black) locking button by withdrawing it toward you in two stages.
- (2) Disconnect the D-08 or D-11 harness side connector.



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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-439 AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES



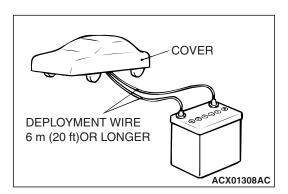
MB991885

DEPLOYMENT WIRES AC

D-08 OR D-11 CURTAIN AIR BAG CONNECTOR (2-PIN) 0 0

AC406295AB

- Connect deployment wires, each 6 meters (20 feet) or longer, to the two leads of special tool adapter harness (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 deployment of the air bag module.
- Connect the D-08 or D-11 curtain air bag module two-pin connector (black) to special tool adapter harness (MB991885), and move the deployment wires out of the vehicle.



# 

#### 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 vehicle.

# A 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) for post-deployment handling instructions.
- If the air bag module fails to deploy, do not go near the module. Contact your distributor.
- 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 curtain air bag module according to the Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452).

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# DEPLOYMENT INSIDE THE VEHICLE (WHEN DISPOSING OF A VEHICLE) <SEAT BELT PRE-TENSIONER>

1. Move the vehicle to an isolated spot.

# A DANGER

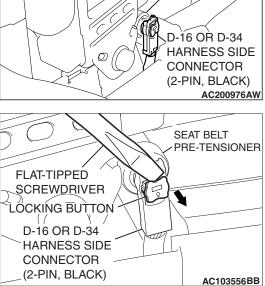
Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-26).

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

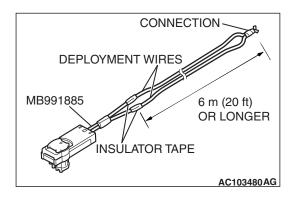
- 2. Disconnect the negative (-) and positive (+) battery cables from the battery terminals, and then remove the battery from the vehicle.
- 3. Remove the center pillar lower trim (Refer to GROUP 52A, TRIMS P.52A-31).
- 4. Disconnect harness side connector D-16 or D-34 (two-pin, black) from the seat belt pre-tensioner.

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 harness side connector (two-pin, black) locking button by withdrawing it toward you in two stages.
- (2) Disconnect the D-16 or D-34 harness side connector.



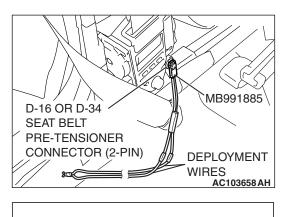
SEAT BELT PRE-TENSIONE



 Connect deployment wires, each 6 meters (20 feet) or longer, to the two leads of special tool adapter harness (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.

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# SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-441



DEPLOYMENT WIRE

6 m (20 ft)OR LONGER

COVER

ACX01308AC

 Connect the D-16 or D-34 seat belt pre-tensioner two-pin connector (black) to special tool adapter harness (MB991885), and move the deployment wires out of the vehicle.

# A 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.

#### A 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-452) 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 the, 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 operated seat belt pre-tensioner Disposal (Refer to P.52B-452).

# DEPLOYMENT OUTSIDE THE VEHICLE <AIR BAG MODULE (DRIVER'S SIDE)>

## A DANGER

*Wait at least* 60 seconds after disconnecting the battery cables before doing any further work (Refer to **P.52B-26**).

#### A 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.

# 

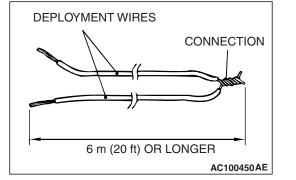
Once disconnected, both electrodes of the driver's air bag module connector short automatically to prevent accidental deployment caused by static etc. Still, in consideration of the accidental deployment, store the air bag module on a flat place with deployment surface facing up. Do not put anything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

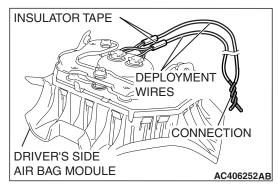
- Remove the air bag module from the vehicle (Refer to P.52B-408).
- 3. Prepare two wires longer than 6 meters (20 feet) for deployment and connect the terminals in one end to short-circuit. This is to prevent accidental deployment caused by static etc.

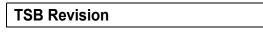
## 

# Never fail to do Step 4 in order to prevent accidental deployment caused by static.

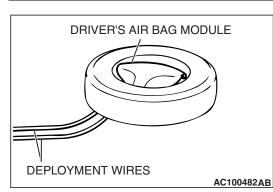
- 4. Touch the vehicle's body with your bare hands to discharge static electricity.
- 5. Connect the yellow-red wire to the yellow-black wire and the yellow-blue wire to the yellow-green wire of the wiring harness which has been cut. Connect each connected harness wire to the deployment wires, and insulate the connections with plastic tape.

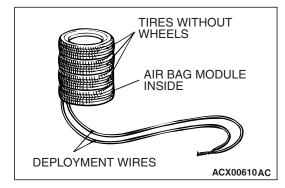


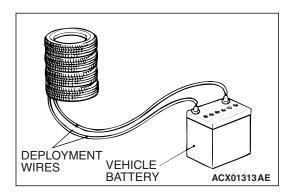




#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-443 AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES







- 6. Install a nut to the bolt behind the driver's air bag module and tie thick wire there for securing.
- 7. Route the deployment wires connected to the driver's air bag module beneath an old tire and wheel assembly. Then, using the wire tied to the bolt, secure the driver's air bag module to the tire and wheel assembly with the deployment surface facing up.
- 8. Place three old tires without wheels on the tire secured with the driver's air bag module.

A 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) 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-452).

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# DEPLOYMENT OUTSIDE THE VEHICLE <AIR BAG MODULE (FRONT PASSENGER'S SIDE)>

## A DANGER

*Wait at least* 60 seconds after disconnecting the battery cables before doing any further work (Refer to **P.52B-26**).

#### A 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.

# 

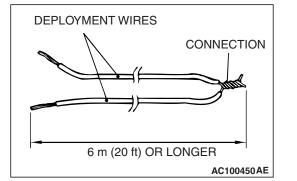
Once disconnected, both electrodes of the front passenger's air bag module connector short automatically to prevent accidental deployment caused by static etc. Still, in consideration of possible accidental deployment, store the air bag module on flat place with deployment surface facing up. Do not put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

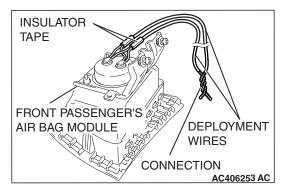
- 2. Remove the air bag module from the vehicle (Refer to P.52B-408).
- 3. Prepare two wires longer than 6 meters (20 feet) for deployment and connect the terminals in one end to short-circuit. This is to prevent accidental deployment caused by static etc.

#### 

# Never fail to do Step 4 in order to prevent accidental deployment caused by static.

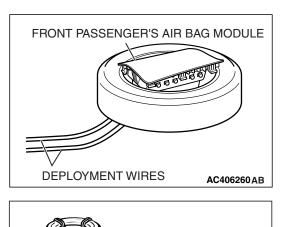
- 4. Touch the vehicle's body with your bare hands to discharge static electricity.
- 5. Connect the yellow-green wire to the yellow-pink wire and the yellow-red wire to the yellow-green wire of the wiring harness which has been cut. Connect each connected harness wire to the deployment wires, and insulate the connections with plastic tape.







# SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-445



TIRES WITHOUT

ACX00611AB

WHEELS

DEPLOYMENT

WIRES

6. Pass the thick wire through the air bag module mounting hole, and then secure the air bag module to an old tire with a wheel in it so that the pad on the module is facing upwards.

7. Place three old tires without wheels on top of the tire secured to the air bag module, and secure all tires together with ropes (four locations).

## A 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) for post-deployment handling instructions.
- If the air bag fails to deploy, do not go near the module.
- 8. 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.
- Discard the deployed air bag module as specified in Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452).

DEPLOYMENT WIRES

# **DEPLOYMENT OUTSIDE VEHICLE <SIDE-AIRBAG MODULE>**

## A DANGER

*Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-26).* 

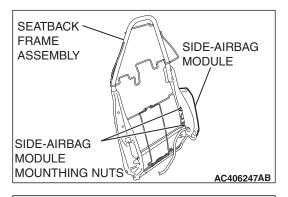
## A WARNING

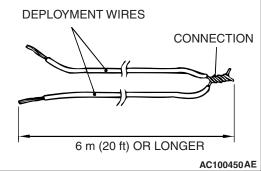
- Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.
- Deploy the air bag in a wide, flat area at least 6 meters (20 feet) away from obstacles and other people.
- Do not perform deployment outside if a strong wind is blowing. If there is a slight 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.

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Once disconnected, both electrodes of the side-airbag 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 front seatback assembly with side-airbag module from the vehicle (Refer to P.52B-408).
- 3. After disassembling the front seatback assembly, remove the side air bag module mounting nuts from the seatback frame assembly.





4. 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.

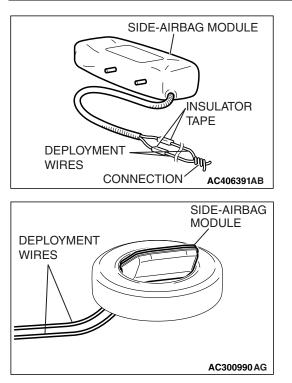
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# Never fail to do Step 5 in order to prevent accidental deployment caused by static.

5. Touch the vehicle's body with your bare hands to discharge static electricity.

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-447 AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES



TIRES WITHOUT WHEELS DEPLOYMENT WIRES ACX00611AB

DEPLOYMENT WIRES

6. Using pliers, cut the side-airbag module connector from the harnesses. Connect the deployment wires to each harness that has been cut and insulate the connections with insulator tape.

- 7. Route connected to the deployment wires beneath an old tire and wheel assembly and connect it to the side-airbag module connector.
- 8. Install a nut to the side-airbag module mounting bolt, tie thick wire there for securing and secure the side-airbag module to an old tire and wheel assembly with the deployment surface facing up.
- 9. Place three old tires without wheels on top of the tire secured to the air bag module, and secure all tires together with ropes (four locations).
- A 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) for post-deployment handling instructions.
- If the air bag fails to deploy, do not go near the module.
- 10.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.
- 11.Discard the deployed air bag module as specified in Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452).

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# DEPLOYMENT OUTSIDE THE VEHICLE <CURTAIN AIR BAG MODULE>

## A DANGER

*Wait at least* 60 seconds after disconnecting the battery cables before doing any further work (Refer to **P.52B-26**).

#### A 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.

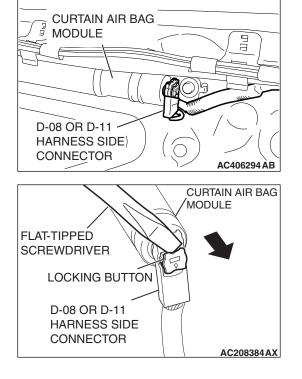
## A WARNING

Once disconnected, both electrodes of the curtain 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 headlining (Refer to GROUP 52A, Headlining P.52A-37).
- 3. Disconnect harness side connector D-08 or D-11 (two-pin, black) from the curtain air bag module.

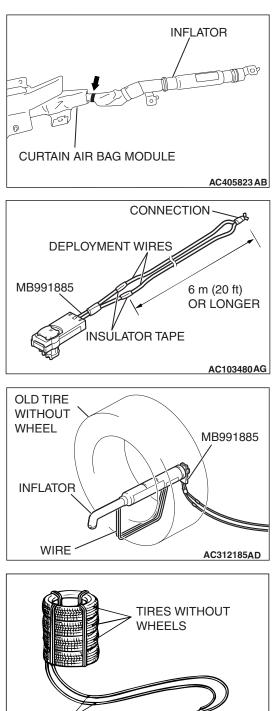
NOTE: If the curtain air bag module connector is disconnected from the floor wiring harness, both electrodes of the curtain air bag module connector will be automatically shorted to prevent unintended operation of the curtain air bag module due to static electricity, etc.

- (1) Use a flat-tip screwdriver to unlock the harness side connector (two-pin, black) locking button by withdrawing it toward you in two stages.
- (2) Disconnect the D-08 or D-11 harness side connector.





# SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-449



DEPLÓYMENT

WIRES

4. Cut the inflator and the air bag with a knife.

- Connect deployment wires, each 6 meters (20 feet) or longer, to the two leads of special tool adapter harness (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 deployment of the air bag module.
- 6. Feed a thick wire through the bracket of the inflator, and connect it to an old tire without a wheel.
- 7. Connect the special tool adapter harness (MB991885) to the inflator connector.

8. Place three old tires without wheels on top of the tire secured to the inflator, and secure all tires together with ropes (four locations).

ACX00611AB

# DEPLOYMENT WIRES

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- Before deployment, check carefully to be sure that no one is nearby.
- The inflator will be guite 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 and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452) for post-deployment handling instructions.
- If the air bag fails to deploy, do not go near the module. Contact your distributor.
- 9. At a location as far away from the inflator 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 inflator.
- 10.Discard the deployed inflator as specified in Deployed Air Bag Module and Operated Seat Belt Pre-tensioner Disposal (Refer to P.52B-452).

# DEPLOYMENT OUTSIDE THE VEHICLE <SEAT **BELT PRE-TENSIONER>**

## A DANGER

Wait at least 60 seconds after disconnecting the battery cables before doing any further work (Refer to P.52B-26).

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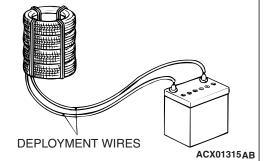
- Battery posts, terminals and related accessories contain lead and lead compounds. WASH HANDS AFTER HANDLING.
- Operate the seat belt pre-tensioner in a wide, flat area at least 6 meters (20 feet) away from obstacles and other people.
- Do not perform operation outside if a strong wind is blowing. If 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.

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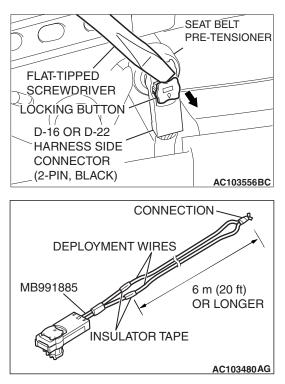
Store the seat belt pre-tensioner on a flat surface with its operation surface facing up. Do not place anything on top of them.

2. Remove the seat belt pre-tensioner from the vehicle (Refer to P.52B-424).

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# SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-451



DEPLOYMENT WIRES AC303963AB

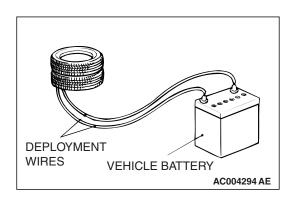
- 3. Use a flat-tipped screwdriver to unlock the harness side connector locking button by withdrawing it toward you in two stages.
- 4. Disconnect the D-16 or D-22 harness side connector.

- 5. Connect two wires, each 6 meters (20 feet) or longer, to the two leads of special tool adapter harness (MB991885), 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 operation of the seat belt pre-tensioner.
- 6. Connect the special tool adapter harness (MB991885), which the deployment wires is attached to, to the seat belt pre-tensioner connector.

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#### 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 in two places.
- 8. Pull the seat belt out to the outside of the tire, and then place one tire without a wheel on top.



## **MARNING**

- 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-452) 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 seat belt 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 operate the seat belt pre-tensioner.
- 10.Discard the operated seat belt pre-tensioner as specified in Deployed Air Bag Module and Seat Belt pre-tensioner Disposal (Refer to P.52B-452).

# 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.

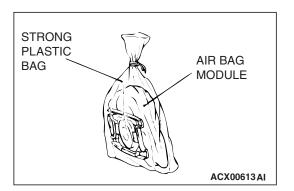
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*If after following these precautions, any material does get into the eyes or on the skin, immediately rinse the affected area with a large amount of clean water. If any irritation develops, seek medical attention.* 

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.

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#### SUPPLEMENTAL RESTRAINT SYSTEM (SRS) 52B-453 AIR BAG MODULE AND SEAT BELT PRE-TENSIONER DISPOSAL PROCEDURES



- 4. Tightly seal the air bag module or 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

M1524004900396

ITEM	SPECIFICATION			
Air bag module(s) and clock spring				
Steering wheel dynamic damper mounting bolt	3.9 ±0.9 N ⋅ m (35 ±8 in-lb)			
Steering wheel nut	41 ±8 N⋅ m (30 ±6 ft-lb)			
Clock spring screw	0.69 ±0.15 N ⋅ m (6 ±1 in-lb)			
Torx screw	9.0 ±2.0 N ⋅ m (80 ±17 in-lb)			
Front impact sensor				
Front impact sensor nut	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)			
Final anchor bracket	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)			
Seat slide sensor				
Seat slide sensor mounting bolt	5.0 ±1.0 N ⋅ m (44 ±9 in-lb)			
Side impact sensor				
Side impact sensor nut	5.0 ±1.0 N ⋅ m (44±9 in-lb)			
SRS control unit (SRS-ECU)				
SRS-ECU mounting bolt	5.0 ±1.0 N ⋅ m (44 ±9 in-lb)			