GROUP 52A

INTERIOR

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WARNINGS REGARDING SERVICING OF SUPPLEMENTAL RESTRAINT SYSTEM (SRS) EQUIPPED VEHICLES

⚠ WARNING

- Improper service or maintenance of any component of the SRS, or any SRS-related component, can lead to personal injury or death to service personnel (from inadvertent firing of the air bag) or to the driver and passenger (from rendering the SRS inoperative).

 Service or maintenance of any SRS component or SRS-related component must be performed only at an acceptable of the service of the servi
- authorized MITSUBISHI dealer.
- MITSUBISHI dealer personnel must thoroughly review this manual, and especially its GROUP 52B Supplemental Restraint System (SRS) before beginning any service or maintenance of any component of the SRS or any SRSrelated component.

The SRS includes the following components: SRS air bag control unit, SRS warning light, front impact sensors, air bag module, clock spring, and interconnecting wiring. Other SRS-related components (that may have to be removed/installed in connection with SRS service or maintenance) are indicated in the table of contents by an asterisk (*). 52A-2 INTERIOR

FRONT SEAT ASSEMBLY	52A-39	REMOVAL AND INSTALLATION	
INSPECTION		REAR SEAT BELT	
REAR SEAT ASSEMBLY	52A-44	SPECIFICATIONS	
FRONT SEAT BELT	52A-47	SPECIFICATIONSSERVICE SPECIFICATIONS	

GENERAL DESCRIPTION

M1521000100117

OPERATION

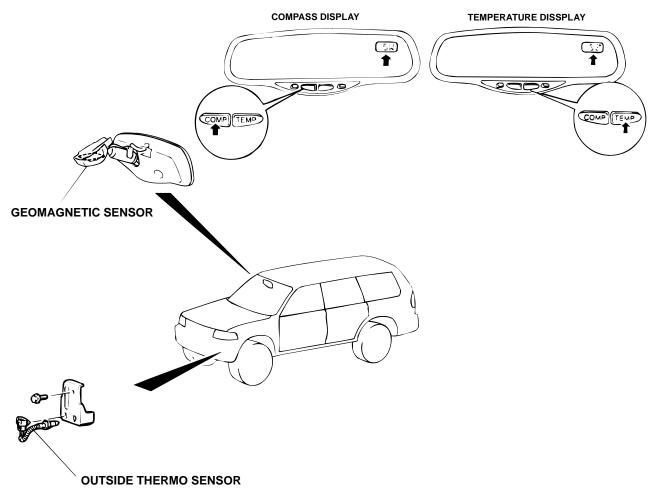
Seat belt warning system

- When the ignition switch is turned "ON," the decision circuit operates and the seat belt warning light inside of the combination meter flashes four times for 6 seconds.
- The decision circuit output makes the seat belt tone alarm sound intermittently for 6 seconds to indicate unfastening of the seat belt.
- When the seat belt is buckled (seat belt buckle switch is turned "OFF"), the seat belt tone alarm stops sounding.
 - When the ignition switch is turned "OFF," both seat belt warning light and tone alarm do not operate.

Inside rear view mirror with compass and temperature display

- The compass or temperature will appear on the upper right of the mirror when the switch at the center of the inside rear view mirror is pressed.
- The compass detects the vehicle direction with the geomagnetic sensor built in the inside rear view mirror, and displays eight directions with the LCD.
- The outside temperature meter calculates the information from the outside thermo sensor, and displays the temperature with the LCD.

INSIDE REAR VIEW MIRROR WITH COMPASS AND TEMPERATURE DISPLAY CONSTRUCTION DIAGRAM



AC003225AC

SEAT BELT DIAGNOSIS

INTRODUCTION TO SEAT BELT WARNING SYSTEM DIAGNOSIS

M1523003700062

The seat belt warning system is controlled by the ETACS-ECU.

The seat belt warning system flashes the seat belt warning light in the combination meter for 6 seconds after the ignition switch is turned "ON," and sounds a seat belt tone alarm if the seat belt is not fastened. If one of the following symptoms occurs, a malfunction may have occurred.

- The seat belt warning light does not flicker even when the ignition switch is turned "ON."
- The seat belt tone alarm does not sound even when the ignition switch is turned "ON" while the seat belt is not fastened.
- The seat belt tone alarm does not sound even when the seat belt is fastened within 6 seconds after the seat belt tone alarm starts sounding.

SEAT BELT WARNING SYSTEM DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1523002700069

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

- 1. Gather information about the problem from the customer.
- 2. Verify that the condition described by the customer exists.
- 3. If you cannot verify the condition, the malfunction is intermittent. Refer to GROUP 00, How to Cope With Intermittent Malfunctions P.00-6.
- 4. Find the malfunction by following the Symptom Chart.

SYMPTOM CHART

M1523003000063

SYMPTOM	INSPECTION PROCEDURE NO.	REFERENCE PAGE
When the seat belt is not fastened and the ignition switch is turned to the "ON" position, the seat belt tone alarm does not sound and the seat bet warning light does not illuminate or flash.	1	P.52A-5
When the seat belt is not fastened and the ignition switch is turned to the "ON" position, the seat belt warning light illuminates or flashes, but the seat belt tone alarm does not sound.	2	P.52A-5
When the seat belt is not fastened and the ignition switch is turned to the "ON" position, the seat belt tone alarm sounds, but the seat belt warning light does not illuminate or flash.	3	P.52A-5
After the ignition switch is turned to the "ON" position, the seat belt tone alarm does not stop sounding for 6 seconds, even though the seat belt is buckled immediately.	Refer to inspection procedure No.2	P.52A-5

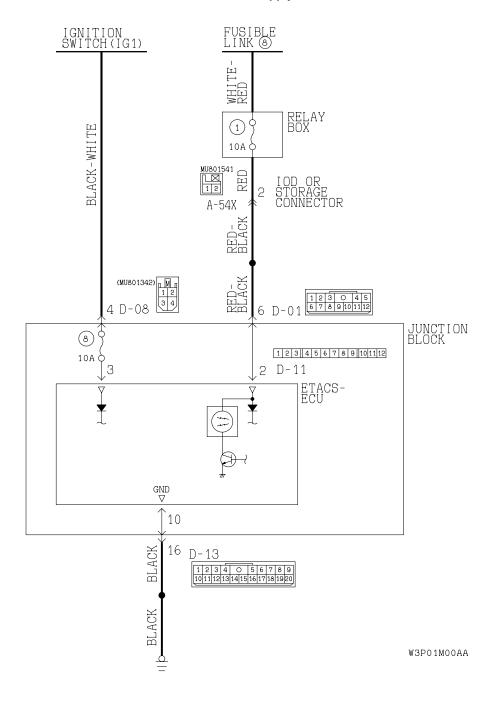
NOTE: When no input signals can be checked with the scan tool, there may be a malfunction in the diagnostics circuit system.

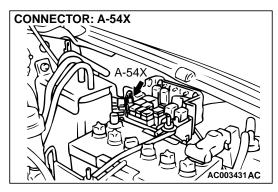
SYMPTOM PROCEDURES

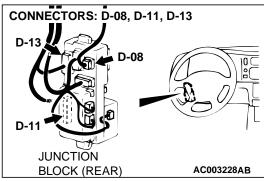
M1523003900077

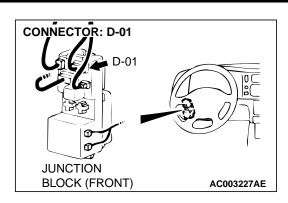
INSPECTION PROCEDURE 1: When the Seat Belt is not Fastened and the Ignition Switch is Turned to the "ON" Position, the Seat Belt Tone Alarm does not Sound and the Seat Belt Warning Light does not Illuminate or Flash.

ETACS-ECU Power Supply Circuit









CIRCUIT OPERATION

- The ETACS-ECU powered from fusible link number 6.
- The ETACS-ECU can determine a position of the ignition switch by the ignition switch circuit voltage.

TECHNICAL DESCRIPTION (COMMENT)

The cause may be a malfunction of the ETACS-ECU power supply circuit system or of the ground circuit system.

TROUBLESHOOTING HINTS

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

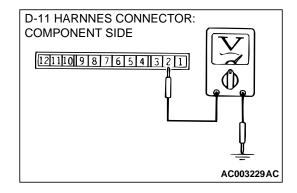
DIAGNOSIS

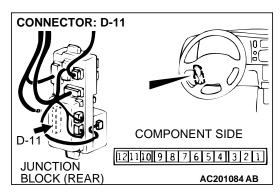
STEP 1. Measure the power supply line voltage at the junction block connector D-11

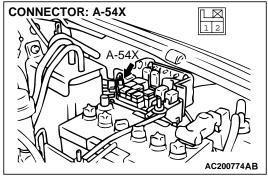
- 1. Remove the ETACS-ECU and measure at the junction block side.
- 2. Voltage between terminal 2 and ground.
 - The measured value should be approximately 9 volts or more.

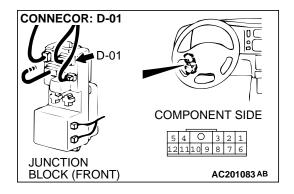
Q: Does the measured voltage correspond with this range?

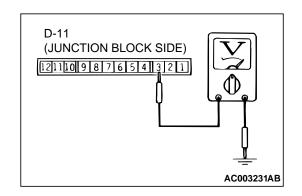
YES: Go to Step 3. NO: Go to Step 2.











STEP 2. Check the harness wires between fusible link number 6 and ETACS-ECU connector D-11 (terminal No. 2). NOTE: Check the intermediate connectors A-54X, D-01, and then the wiring harness. If the intermediate connectors A-54X and D-01 are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 7.

Q: Are the harness wires between fusible link number 6 and ETACS-ECU connector D-11 (terminal No. 2) in good condition?

YES: Go to Step 7.

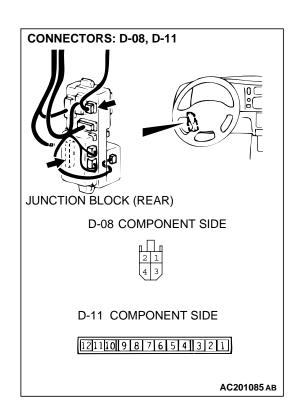
NO: Repair it. Then go to Step 7.

STEP 3. Measure the ignition switch (IG1) line voltage the at the junction block connector D-11.

- 1. Turn the ignition switch "ON."
- 2. Measure the voltage between terminal 3 and the ground.
 - The measured value should be approximately 9 volts or more.
- 3. Turn the ignition switch "LOCK" (OFF) position.

Q: Does the measured voltage correspond with this range?

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



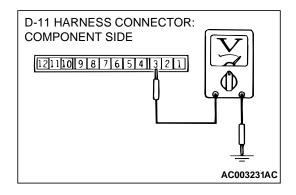
STEPS 4. Check the harness wires between ignition switch (IG1) and ETACS-ECU connector D-11 (terminal No. 3).

NOTE: Check the intermediate connector D-08, and then the wiring harness. If the intermediate connector D-08 is damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. If the connector has been repaired or replaced, go to Step 7.

Q: Is the harness wore between the ignition switch (IG₁) and the ETACS-ECU connector D-11 (terminal No. 3) in good condition?

YES: Go to Step 7.

NO: Repair them. Then go to Step 7.



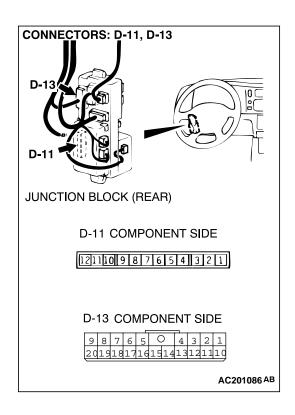
STEP 5. Measure the ground line resistance at the junction block connector D-11.

Check for continuity between terminal 10 and the ground.

• The measured value should be 2 ohms or less.

Q: Does the measured resistance value correspond with this range?

YES: Go to step 7. NO: Go to Step 6.



STEP 6. Check the harness wires between the ETACS-ECU connector D-11 (terminal No. 10) and the ground.

NOTE: Check the intermediate connector D-13, and then the wiring harness. If the intermediate connector D-13 is damaged repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 7.

Q: Are the harness wires between the ETACS-ECU connector D-11 (terminal No.10) and the ground in good condition?

YES: Go to Step 7.

NO: Repair it. Then go to Step 7.

STEP 7. Retest the system.

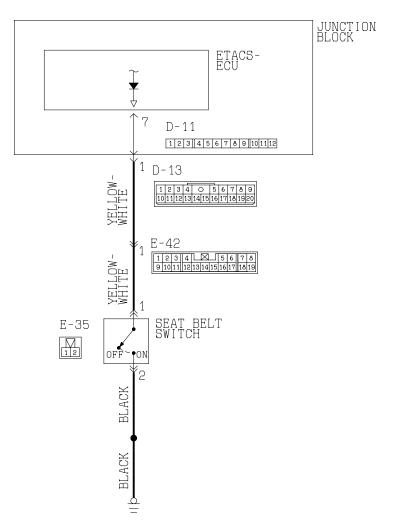
Q: Does the seat belt tone alarm sound, or does the seat belt warning light illuminate or flash?

YES: This procedure is complete. (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunction P.00-6.)

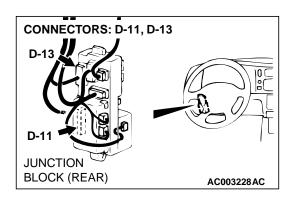
NO: There is no action to be taken.

INSPECTION PROCEDURE 2: When the Seat Belt is not Fastened and the Ignition Switch is Turned to the "ON" Position, the Seat Belt Warning Light Illuminates or Flashed, but the Seat Belt Tone Alarm does not Sound.

Seat Belt Switch Circuit

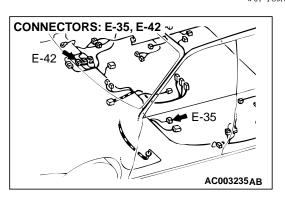


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CIRCUIT OPERATION

• The system determines whether the seat belt is fastened by the seat belt switch.



 The system flashes the seat belt warning light for 6 seconds after the ignition switch is turned "ON," and also sounds the seat belt tone alarm if the seat belt is not fastened.

TSB Revision

TECHNICAL DESCRIPTION (COMMENT)

There may be a malfunction in the seat belt buckle switch circuit.

TROUBLESHOOTING HINTS

- Malfunction of the seat belt buckle switch
- Malfunction of the ETACS-ECU
- Damaged wiring harnesses or connectors

DIAGNOSIS

Required Special Tools:

- MB991502: Scan tool (MUT-II)
- MB991529: Diagnostic Trouble Code Check Harness



⚠ CAUTION

To prevent damage to scan tool MB991502, always turn the ignition switch to the "LOCK" (OFF) position before connecting or disconnecting scan tool MB991502.

When using scan tool MB991502

- 1. Connect the scan tool MB991502 to the data link connector.
- 2. If tone alarm of scan tool MB991502 sounds once when the seat belt buckle switch is operated (ON/OFF), the ETACS-ECU input signal for that switch circuit system is normal.

When using a voltmeter

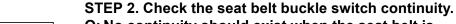
- 1. Use special tool MB991529 to connect a voltmeter between the ground terminal 4 or 5 and the ETACS terminal 9 of the data link connector.
- 2. If the voltmeter indicator deflects once when the seat belt buckle switch is operated (ON/OFF), the ETACS-ECU input signal for that switch circuit system is normal.

Q: Is the switch circuit system normal?

YES: Replace the ETACS-ECU P.52A-47. Then go to Step

NO: Go to Step 2.



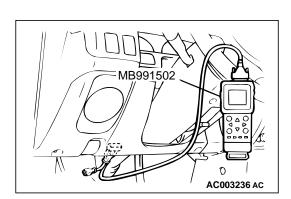


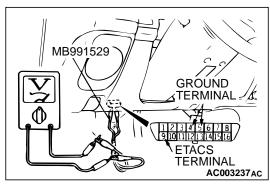
Q: No continuity should exist when the seat belt is fastened, while continuity should exist when the seat belt is unfastened?

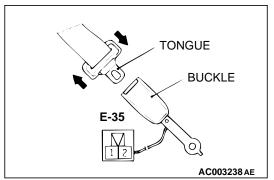
YES: Go to Step 3.

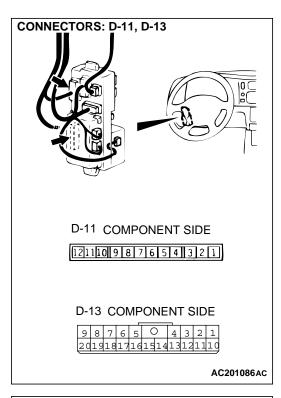
NO: Replace the seat belt buckle P.52A-47. Then go to

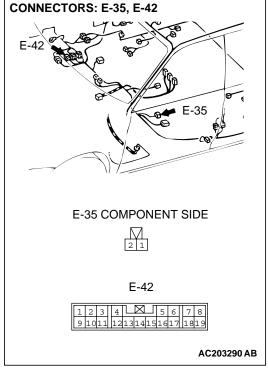
Step 5.











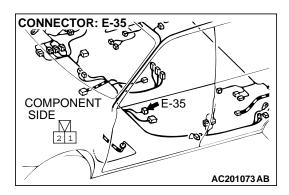
STEP 3. Check the harness wires between ETACS-ECU connector D-11 (terminal No. 7) and seat belt buckle switch connector E-35.

NOTE: Check the intermediate connector D-13 and E-42, and then the wiring harness. If the intermediate connectors D-13 and E-42 are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 5.

Q: Is the harness wires between ETACS-ECU connector D-11 (terminal No. 7) and seat belt buckle switch connector in good condition?

YES: Go to Step 4.

NO: Repair them. Then go to Step 5.



STEP 4. Check the harness wire between seat belt buckle switch connector E-35 (terminal No.2) and ground.

Q: Is the harness wire between seat belt buckle switch connector E-35 (terminal No.2) and ground in good condition?

YES: Go to Step 5.

NO: Repair them. Then go to Step 5.

STEP 5. Retest the system.

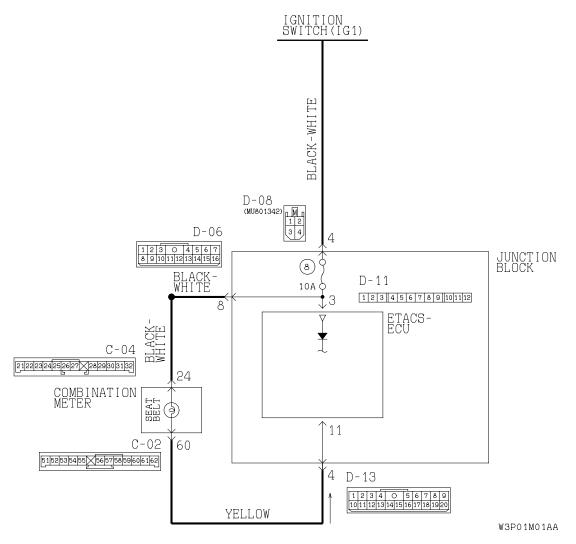
Q: The seat belt warning light illuminate or flash, but does the seat belt tone alarm sound?

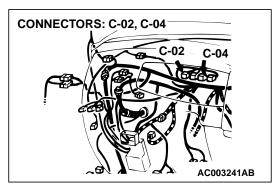
YES: This procedure is complete. (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunction P.00-6.)

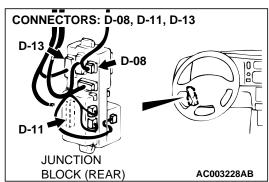
NO: There is no action to be taken.

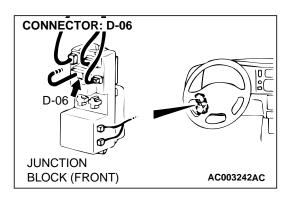
INSPECTION PROCEDURE 3: When the Seat Belt is not Fastened and the Ignition Switch is Turned to the "ON" Position, the Seat Belt Tone Alarm Sounds, but the Seat Belt Warning Light does not Illuminate or Flash.

Seat Belt Warning Light Circuit









CIRCUIT OPERATION

- The voltage from the ignition switch circuit flashes the seat belt warning light.
- The system flashes the seat belt warning light for 6 seconds after the ignition switch is turned "ON," and sounds the seat belt tone alarm if the seat belt is not fastened.

TECHNICAL DESCRIPTION (COMMENT)

There may be a malfunction of the seat belt warning light circuit or ETACS-ECU.

TROUBLESHOOTING HINTS

- Malfunction of the seat belt warning light bulb
- Malfunction of the ETACS-ECU
- Damaged wiring harnesses or connectors

DIAGNOSIS

STEP 1. Check the seat belt warning light circuit line at junction block connector D-11.

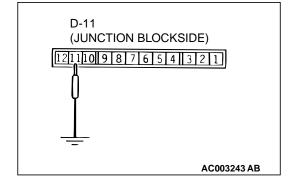
- 1. Remove the ETACS-ECU and measure at the junction block side.
- 2. Turn the ignition switch "ON."
- Connect terminal 11 to the ground.
 The system is normal if the seat belt warning light illuminates.
- 4. Turn the ignition switch "OFF."

Q: Does the warning light illuminate?

YES: Replace the ETACS-ECU P.52A-47. Then go to Step

4

NO: Go to Step 2.



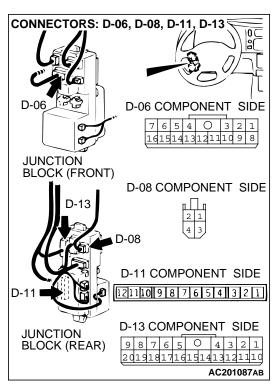
STEP 2. Check the seat belt warning light bulb.

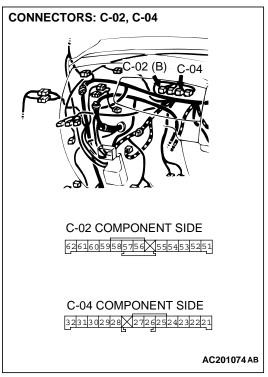
Q: Is the seat belt warning light bulb normal?

YES: Go to Step 3.

NO: Replace the seat belt warning light bulb. Then go to

Step 4.





STEP 3. Check the harness wires between the ignition switch (IG1) and junction block connector D-11(terminal No 3).

NOTE: Check the intermediate connectors C-02, C-04, D-06, D-08, D-13, and then their wiring harness. If the intermediate connectors C-02, C-04, D-06, D-08, D-13 are damaged, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 4.

Q: Is the harness wire between the ignition switch (IG₁) and junction block connector D-11 (terminal No.3) in good condition?

YES: Go to Step 4.

NO: Repair them. Then go to Step 4.

STEP 4. Retest the system.

Q: The seat belt tone alarm sound, but does the seat belt warning light illuminate or flash?

YES: This procedure is complete. (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunction P.00-6.)

NO: There is no action to be taken.

COMPASS AND TEMPERATURE DISPLAY DIAGNOSIS

INTRODUCTION TO COMPASS AND TEMPERATURE DISPLAY DIAGNOSIS

M1521004200075

If the compass and temperature do not function, there may be trouble in the electrical system, or the calibration of the compass may be faulty.

M1524003100267

COMPASS AND TEMPERATURE DISPLAY DIAGNOSTIC TROUBLESHOOTING STRATEGY

Use these steps to plan your diagnostic strategy. If you follow them carefully, you will be sure that you have exhausted most of the possible ways to find a inside rear view mirror with compass and temperature display fault.

1. Gather information from the customer.

- 2. Verify that the condition described by the customer exists.
- 3. Find the malfunction by following the Symptom Chart.
- 4. Verify malfunction is eliminated.

SYMPTOM CHART

M1521003500073

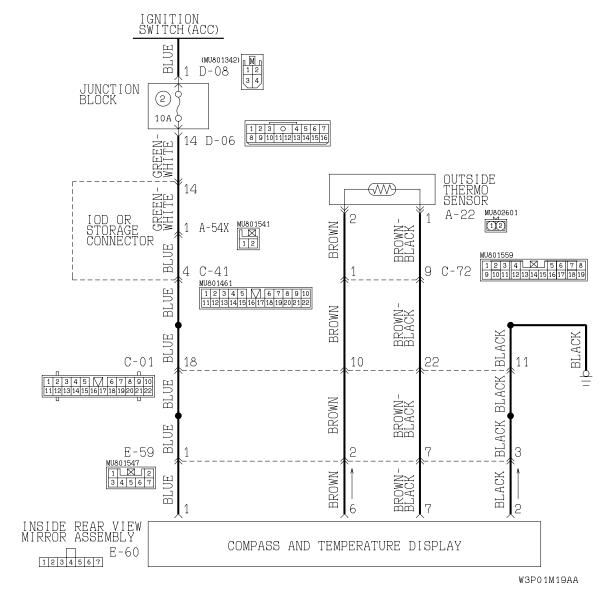
SYMPTOM	INSPECTION PROCEDURE NO.	REFERENCE PAGE
There is no display.	1	P.52A-18
The advance direction is deviated.	2	P.52A-18
The compass cannot be calibrated.	3	P.52A-18
There is a discrepancy between the actual out side temperature and displayed temperature or an error displays (CS, OS).	4	P.52A-18

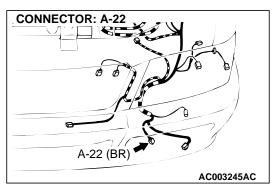
SYMPTOM PROCEDURES

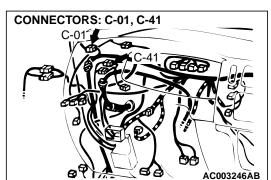
M1521004400079

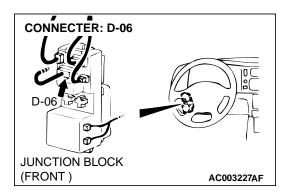
INSPECTION PROCEDURE 1: There is no display.

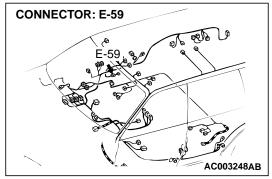
Outside Temperature Meter and Electronic Compass Circuit

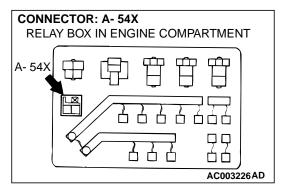




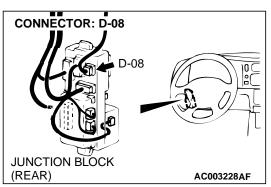








CONNECTOR: C-72 C-72 (B) AC003247AC



CIRCUIT OPERATION

The power is constantly supplied to the inside rear view mirror (with compass and temperature display).

TECHNICAL DESCRIPTION (COMMENT)

The inside rear view mirror (with compass and temperature display), harness, or connector may be defective.

TROUBLESHOOTING HINTS

- Malfunction of the inside rear view mirror (with compass and temperature display)
- Damaged harness or connector

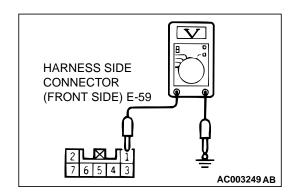
DIAGNOSIS



- 1. Remove the inside rear view mirror (with compass and temperature display) P.52A-38.
- 2. Disconnect the connector.
- 3. Check at inside rear view mirror (with compass and temperature display) harness side connector (front side) E-59.
- 4. Measure the voltage between terminal number 1 and body ground.
 - Voltage should be 9 volts or more



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

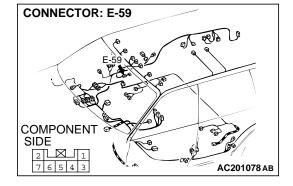


STEP 2. Check harness connector E-59 at the inside rear view mirror (with compass and temperature display) connector for damage.

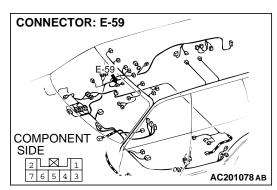
Q: Is harness connector E-59 is good condition?

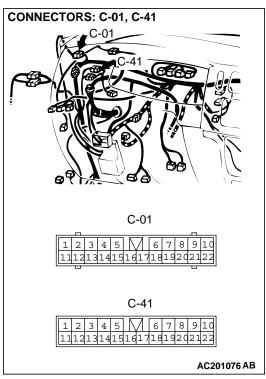
YES: Go to Step 3.

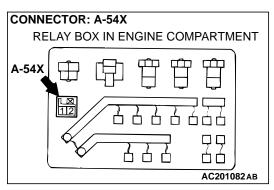
NO: Repair or replace it. Then go to Step 6.

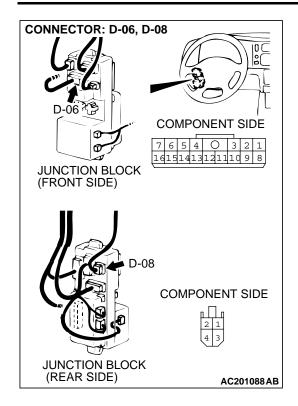


STEP 3. Check the harness wires between the inside rear view mirror (with compass and temperature display) connector E-59 (terminal No.1) and ignition switch (ACC).







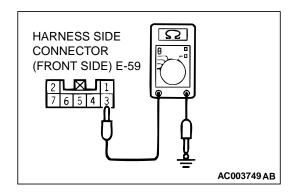


NOTE: After inspecting intermediate connector C-01 and C-41, junction block connectors D-06, D-08 and IOD or storage connector A-54X, inspect the wire. If intermediate connector C-01 and C-41, junction block connectors D-06, D-08, and IOD or storage connector A-54X are damaged, repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Is the harness wires between inside rear view mirror (with compass and temperature display) connector E-59 (terminal No.1) and ignition switch (ACC) in good condition?

YES: Go to Step 6.

NO: Repair them. Then go to Step 6.

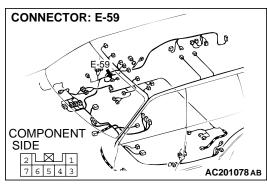


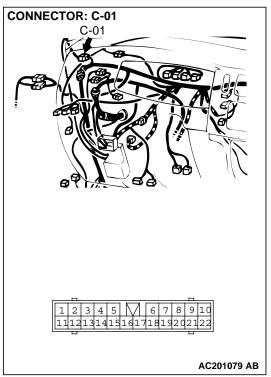
STEP 4. Measure the resistance at the inside rear view mirror (with compass and temperature display) ground circuit.

- 1. Remove the inside rear view mirror (with compass and temperature display) P.52A-38.
- 2. Disconnect the connector.
- 3. Check at inside rear view mirror (with compass and temperature display) harness side connector (front side) E-59.
- 4. The measured value should be 2 ohms or less.

Q: Does the measured resistance value correspond with this range?

YES: Go to Step 6. NO: Go to Step 5.





STEP 5. Check the harness wires between inside rear view mirror (with compass and temperature display) E-59 (terminal No.3) and body ground.

NOTE: After inspecting intermediate connectors C-01, inspect the wire. If intermediate connectors C-01 is damaged, repair the wire. If intermediate connectors C-01 is damaged, repair or replace it. Refer to GROUP 00E, Harness connector inspection P.00E-2.

Q: Is the harness wires between inside rear view mirror (with compass and temperature display) connector E-59 (terminal No.3) and body ground in good condition?

YES: Replace the inside rear view mirror (with compass and temperature display) P.52A-38. Then go to Step

NO: Repair them. Then go to Step 6.

STEP 6. Check the symptoms.

Q: Does the outside temperature meter and electronic compass display values normally?

YES: There is no action to be taken.

NO: This procedure is complete. (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunction P.00-6.)

INSPECTION PROCEDURE 2: The Advance Direction is Deviated.

CIRCUIT OPERATION

Refer to Outside Temperature Meter and Electronic Compass Circuit P.52A-18. The vehicle direction is displayed by the output of the geomagnetic sensor built into the outside temperature meter and electronic compass.

TECHNICAL DESCRIPTION (COMMENT)

The vehicle magnetism tends to be disturbed particularly at such places as tunnel, railway crossing, area along railway, elevated road, urban area crowded with high-storied buildings, area above subway, etc. If disturbed, the driving direction marker will fluctuate.

TROUBLESHOOTING HINTS

The calibration of the compass or compass variance failed.

DIAGNOSIS

The calibration of the compass or compass variance P.52A-28, P.52A-29.

INSPECTION PROCEDURE 3: The Compass Cannot be Calibrated.

CIRCUIT OPERATION

Refer to Outside Temperature Meter and Electronic Compass Circuit P.52A-24.

TECHNICAL DESCRIPTION (COMMENT)

The inside rear view mirror (with compass and temperature display) may be defective.

TROUBLE SHOOTING HINTS

Malfunction of the inside rear view mirror (with compass and temperature display).

DIAGNOSIS

Check that the calibration of the compass can be carried out at another place.

- 1. Move the vehicle to be checked to another place.

 NOTE: Move to a wide flat place where calibration of the compass can be carried out.
- Check again that calibration of the compass can be carried out.

NOTE: If the calibration is correct, the following causes can be assumed.

- Calibration is difficult due to the magnet direction and direction of the vehicle at the start of calibration.
- There is a disturbing magnetic field in the area, and calibration is difficult.

If the calibration is correct, check that the malfunction is eliminated.

If the calibration is incorrect, replace the inside rear view mirror (with compass and temperature display) P.52A-38. Then, check that the malfunction is eliminated.

INSPECTION PROCEDURE 4: There is a Discrepancy Between the Actual Outside Temperature and Displayed Temperature or an Error Displays (CS, OS).

CIRCUIT OPERATION

Refer to Outside Temperature Meter and Electronic Compass Circuit P.52A-18.

 A thermistor is used for the thermo sensor. The resistance value fluctuate according to ambient temperature. The inside rear view mirror (with compass and temperature display) calculates outside temperature according to the changes in this resistance value, and displays it on the inside rear view mirror (with compass and temperature display).



The outside thermo sensor, inside rear view mirror (with compass and temperature display) harness, or connector may be defective.

TROUBLESHOOTING HINTS

- Malfunction of the outside thermo sensor
- Malfunction of the inside rear view mirror (with compass and temperature display)
- Damaged harness or connector

DIAGNOSIS

STEP 1. Check the outside thermo sensor internal resistance.

- 1. Remove the outside thermo sensor P.52A-38.
- 2. Check the internal resistance of the outside thermo sensor are at the standard values at temperature of 20°C (68°F) and 40°C (104°F).

Standard value:

Approximately 1,200 Ω [at 20°C (68°F)] Approximately 500 Ω [at 40 °C (104°F)]

Q: Does the out side thermo sensor resistance meet standard values above?

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



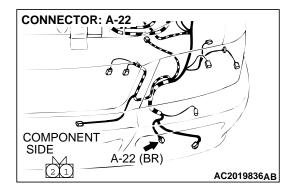
THERMOMETER

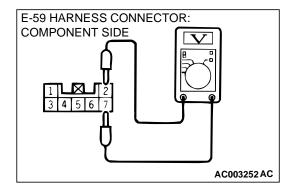
STEP 2. Check harness connector A-22 at the outside thermo sensor for loose, corroded or damaged terminals, or terminals pushed back in the connector.

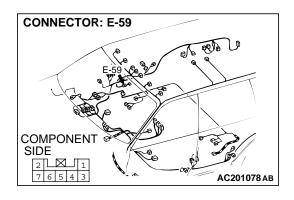
Q: Is harness connector A-22 in good condition?

YES: Go to Step 6.

NO: Repair or replace it. Then go to Step 6.







STEP 3. Measure the outside thermo sensor voltage.

- 1. Remove the inside rear view mirror (with compass and temperature display) P.52A-38.
- 2. Measure from the rear side of the harness connector E-59 with the connector connected.
- 3. Measure voltage between terminal number 2 and number 7 when the outside thermo sensor is at the following temperatures.
 - Voltage should be approximately 2.90 volts [when 0°C (32 °F) is displayed]
 - Voltage should be approximately 1.86 volts [when 20°C (68 °F) is displayed]
 - Voltage should be approximately 1.10 volts [when 40°C (104 °F) is displayed]

Q: Does the voltage between terminal number 2 and number 7 meet the above values?

YES: Replace the inside rear view mirror (with compass and temperature display). Then go to Step 6.

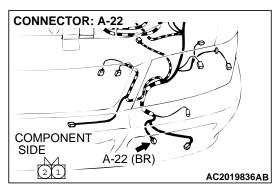
NO: Go to Step 4.

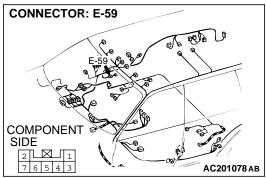
STEP 4. Check harness connector E-59 at the inside rear view mirror (with compass and temperature display) connector for loose, corroded or damaged terminals, or terminals pushed back in the connector.

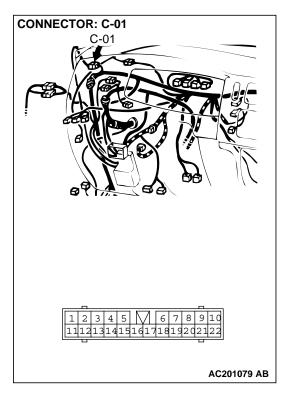
Q: Is harness connector E-59 in good condition?

YES: Go to Step 5.

NO: Repair or replace it. Then go to Step 6.







STEP 5. Check the harness wires between outside thermo sensor connector A-22 (terminal No.1 and 2) and inside rear view mirror (with compass and temperature display) connector E-59 (terminal No.2 and 7).

NOTE: After inspecting intermediate connector C-01, inspect the wire. If intermediate connector C-01 is damage, repair or replace it. Refer to GROUP 00E, Harness Connector Inspection P.00E-2.

Q: Is the harness wires between outside thermo sensor connector A-22 (terminal No.1 and 2) and inside rear view mirror (with compass and temperature display) connector E-59 (terminal No.2 and 7) in good condition?

YES: Go to Step 6.

NO: Repair them. Then go to Step 6.

STEP 6. Retest the system.

Q: Is there any discrepancy between the actual outside temperature and displayed temperature, or is any error (CS, OS) displayed?

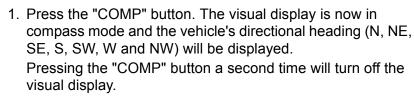
YES: This procedure is complete. (If no malfunctions are found in all steps, an intermittent malfunction is suspected. Refer to GROUP 00, How to Use Troubleshooting/Inspection Service Points – How to Cope with Intermittent Malfunction P.00-6.)

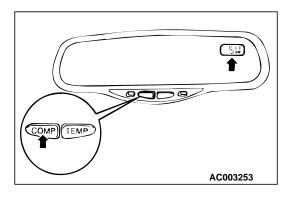
NO: There is no action to be taken.

ON-VEHICLE SERVICE

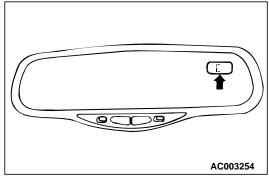
M1524011500044

PROCEDURES FOR CALIBRATING THE COMPASS



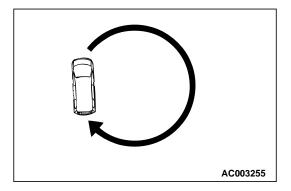


2. If the display reads "C," there may be a strong magnetic field interfering with the compass. In this case, the compass may need calibration.



3. Drive the vehicle in a circle at about 5 mph (8km/h) or less until the display reads a direction.

You can also calibrate the compass by driving your vehicle on your everyday routine and after several turns the compass will become calibrated and will display a direction.



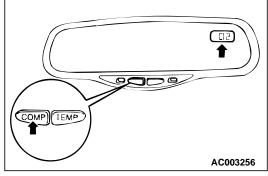
M1524012000042

PROCESSES FOR ADJUSTING THE COMPASS VARIANCE

1. Under certain circumstances, as during a long distance cross-country trip, it will be necessary to adjust for compass variance.

Compass variance is the difference between earth's magnetic north and true geographic north. If not adjusted to account for compass variance, your compass could give false readings.

2. Press the "COMP" button for more than 3 seconds. The current zone number will appear in the display.



- 3. Find your current location and variance zone number on the map given on the left.
- 4. Press the "COMP" button until the new zone number appears in the display.

After you stop pressing the button in, the display will show a compass direction within a few seconds.

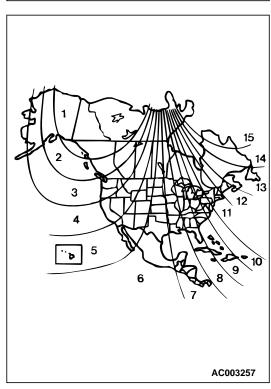
NOTE: Do not install the ski rack, antenna, etc. Which are attached to the vehicle by means of a magnet. They affect the operation of the compass.

NOTE: If the compass deviates from the correct indication soon after repeated adjustment, have the compass checked at an authorized Mitsubishi dealer.

NOTE: The compass may not indicate the correct compass point in the places shown below:

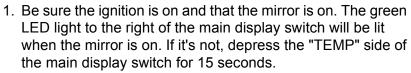
- Tunnels
- · Areas along he railroad
- Underpass
- Transforming station
- Area with many office buildings
- Area over the subway
- Up or down a steep hill

The compass returns to the correct compass point when the vehicle moves to an area where the geomagnetism in stabilized.

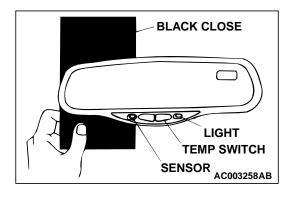


M1524012500047

AUTO-DIMMING FEATURE TEST



- 2. Cover the forward-facing light sensor on the back of the mirror with a black cloth.
- 3. While in a well-lit area, make sure light strikes the sensor on the front of the mirror, simulating glare from vehicles behind you. The mirror will dim within 2 minutes if the testing for the first time. If the mirror does not dim, replace the inside rear view mirror.



SPECIAL TOOLS

M1521000600189

TOOL	TOOL NUMBER AND	SUPERSESSION	APPLICATION	
	NAME			
	MB990784 Ornament remover	General service tool	Removal of switch, trim, etc.	
MB990784				
B991502	MB991502 Scan tool (MUT-II)	MB991496-OD	ETACS-ECU input signal checking	
MB991529	MB991529 Diagnostic trouble code check harness	Tool not necessary if scan tool (MUT-II) is available	ETACS-ECU input signal checking (When using the voltmeter)	
B C C	MB991223 A: MB991223 Test harness B: MB991220 LED harness C: MB991221 LED harness adapter D: MB991222 Probe	MB991223	Measurement of terminal voltage A: Connector pin contact pressure inspection B: Power circuit inspection C: Power circuit inspection D: Commercial tester connection	
MB991223AE				

INSTRUMENT PANEL ASSEMBLY

REMOVAL AND INSTALLATION

M1521001700208

MARNING

For removal and installation of the passenger's side air bag module, always observe the service procedures described in GROUP 52B, Air Bag Module and Clock Spring P.52B-72.

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

NAME	SYMBOL	SIZE (D × L) mm (in)	COLOR	SHAPE
Tapping screw	А	5 × 12 (0.20 × 0.47)	-	4
	В	5 × 14 (0.20 × 0.55)		
	С	5 × 16 (0.20 × 0.63)		ACX01282
	D	5 × 20 (0.20 × 0.79)		
	E	5 × 12 (0.20 × 0.47)	Black	
	F	5 × 16 (0.20 × 0.63)		
	G	5 × 20 (0.20 × 0.79)		
	Н	5 × 12 (0.20 × 0.47)	-	0
	1	5 × 16 (0.20 × 0.63)		ACX01283
Washer assembled screw	J	5 × 16 (0.20 × 0.63)	-	() 1111 1118 AC001594
	K	5 × 16 (0.20 × 0.63)	-	
	L	5 × 20 (0.20 × 0.79)	-	- CANTITURE
	M	5 × 20 (0.20 × 0.79)	Black	AC003835
Washer assembled bolt	N	6 × 16 (0.24 × 0.63)	-	AC003836
	0	8 × 20 (0.31 × 0.79)	-	AC003837
	P	6 × 20 (0.24 × 0.79)	-	AC003838
	Q	6 × 16 (0.24 × 0.63)	-	Qd
	R	8 × 20 (0.31 × 0.79)		ACX00614

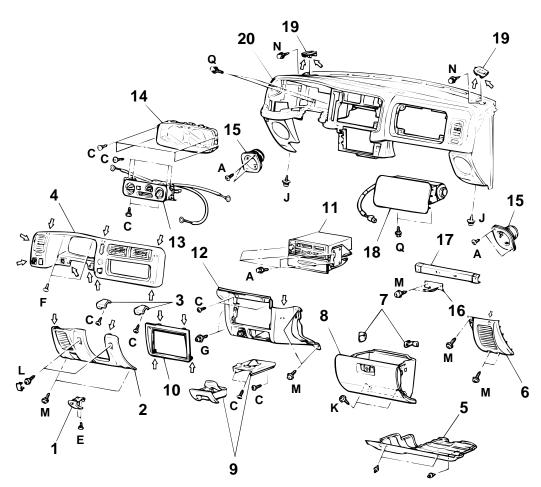
D: Thread diameter

L: Effective thread length

TSB Revision

Pre-removal and Post-installation Operation

- Floor Console Assembly Removal and Installation (Refer to P.52A-35.)
- Steering Wheel and Column Cover Removal and Installation (Refer to GROUP 37A, Steering Column and Shaft P.37A-23.)



NOTE

: Metal clip position

REMOVAL STEPS

- 1. HOOD LOCK RELEASE HANDLE
- 2. KNEE PROTECTOR ASSEMBLY
- 3. KNEE PROTECTOR BRACKET
- 4. METER BEZEL ASSEMBLY
- 5. UNDER COVER
- 6. CORNER COVER
- 7. STOPPER
- 8. GLOVE BOX ASSEMBLY
- 9. ASHTRAY ASSEMBLY
- 10. AUDIO PANEL
- 11. RADIO AND TAPE PLAYER AND BOX ASSEMBLY
- 12. CENTER UNDER COVER ASSEMBLY

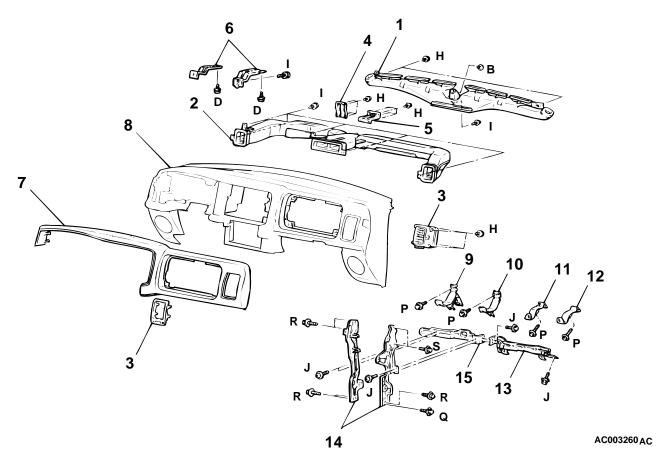
REMOVAL STEPS (Continued)

AC003259AC

- 13. HEATER CONTROL ASSEMBLY (REFER TO GROUP 55, HEATER CONTROL ASSEMBLY AND A/C SWITCH P.55-29.)
- 14. COMBINATION METER
- 15. SPEAKER
- 16. GLOVE BOX STRIKER
- 17. GLOVE BOX UPPER FRAME
- 18. FRONT PASSENGER'S SIDE AIR BAG MODULE (REFER TO GROUP 52B, AIR BAG MODULES AND CLOCK SPRING P.52B-72.)
- 19. SIDE DEFROSTER GRILL
- 20. INSTRUMENT PANEL ASSEMBLY

DISASSEMBLY AND ASSEMBLY

M1521001900194



DISASSEMBLY STEPS

- 1. DEFROSTER NOZZLE ASSEMBLY
- 2. DISTRIBUTION DUCT
- 3. AIR OUTLET ASSEMBLY
- 4. COMBINATION METER REINFORCEMENT
- 5. INSTRUMENT PANEL REINFORCEMENT
- 6. MULTI-METER BRACKET
- 7. INSTRUMENT PAD

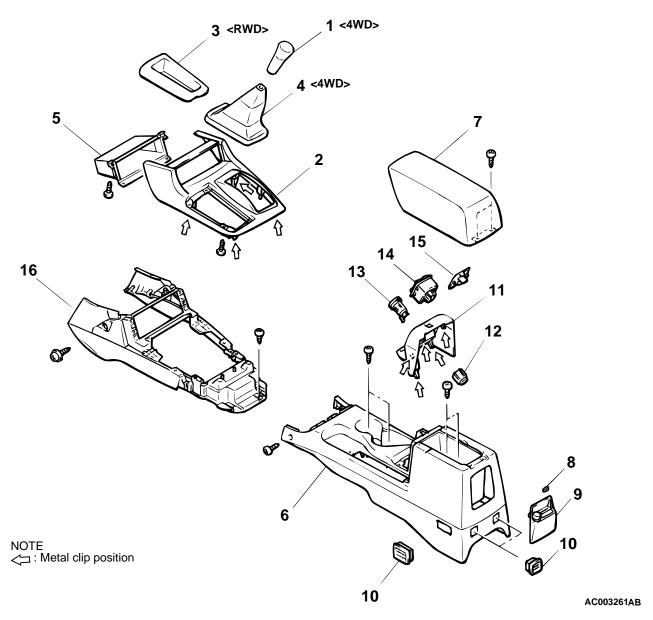
DISASSEMBLY STEPS (Continued)

- 8. INSTRUMENT PANEL
- 9. STAY A
- 10. STAY B
- 11. STAY C
- 12. STAY D
- 13. GLOVE BOX FRAME
- 14. CENTER REINFORCEMENT
- 15. CENTER FRAME A

FLOOR CONSOLE ASSEMBLY

REMOVAL AND INSTALLATION

M1521002200176



REMOVAL STEPS

- 1. SHIFT LEVER KNOB <4WD>
- 2. CONSOLE PANEL
- FRONT CONSOLE PANE TRAY <RWD>
- 4. TRANSFER LEVER BOOT <4WD>
- 5. BOX
- 6. REAR FLOOR CONSOLE ASSEMBLY
- 7. CONSOLE LID ASSEMBLY
- 8. KNOB

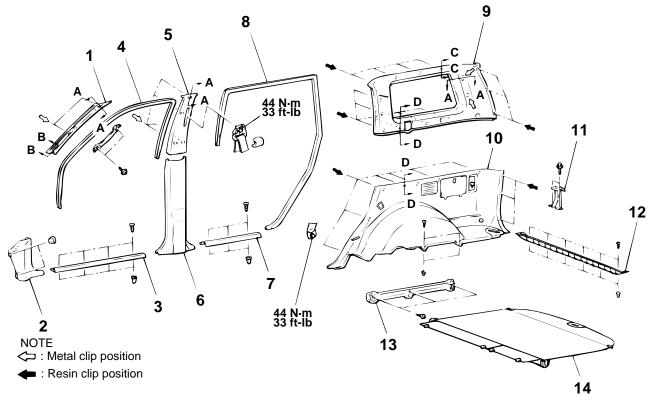
REMOVAL STEPS (Continued)

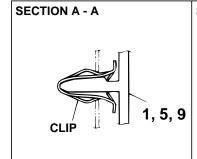
- 9. REAR HEATER CONTROL PANEL ASSEMBLY
- 10. FOOT GRILL
- 11. SWITCH PANEL
- 12. OUTER CASE
- 13. SOCKET
- 14. HEATED SEAT SWITCH <VEHICLES WITH HEATED SEAT>
- 15. PLUG
- 16. FRONT FLOOR CONSOLE ASSEMBLY

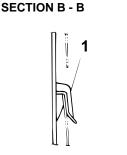
TRIMS

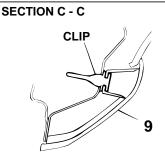
REMOVAL AND INSTALLATION

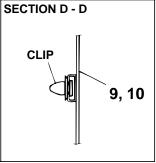
M1521001100228











AC003262AB

REMOVAL STEPS

- 1. FRONT PILLAR TRIM
- 2. COWL SIDE TRIM
- 3. FRONT SCUFF PLATE
- 4. FRONT DOOR OPENING WEATHERSTRIP, INNER
- 5. CENTER PILLAR TRIM, UPPER
- 6. CENTER PILLAR TRIM, LOWER
- 7. REAR SCUFF PLATE

REMOVAL STEPS (Continued)

- 8. REAR DOOR OPENING WEATHERSTRIP, INNER
- 9. QUARTER TRIM, UPPER
- 10. QUARTER TRIM, LOWER
- 11. PARCEL HOOK
- 12. REAR END TRIM
- 13. SHELF HOLDER
- 14. TONNEAU COVER <VEHICLES WITH TONNEAU COVER>

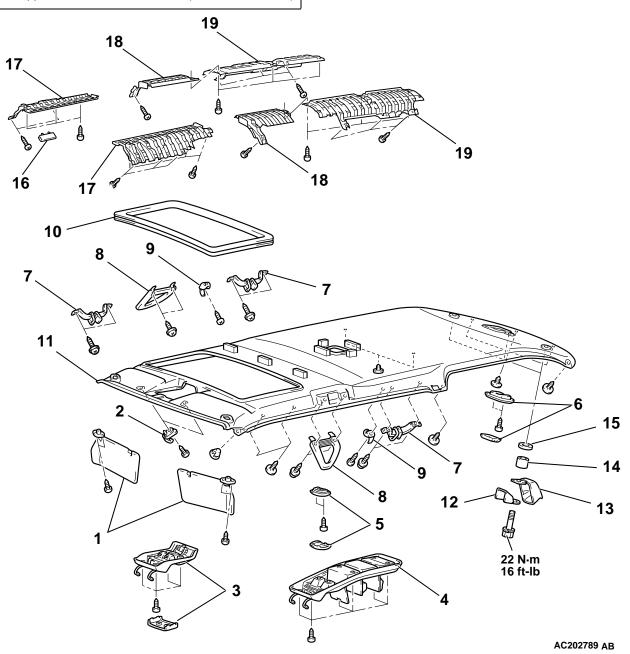
HEADLINING

REMOVAL AND INSTALLATION

M1521001400207

Pre- removal and Post- installation Operation

Front Pillar Trim, Center Pillar Trim, Upper and Quarter Trim, Upper Removal and Installation (Refer to P.52A-36.)



HEADLINING REMOVAL STEPS

- 1. SUNVISOR ASSEMBLY
- 2. SUNVISOR HOLDER
- 3. MAP LIGHT ASSEMBLY <VEHICLES WITH SUNROOF>
- 4. OVERHEAD CONSOLE ASSEMBLY <VEHICLES WITHOUT SUNROOF>
- 5. DOME LIGHT ASSEMBLY
- 6. CARGO ROOM LIGHT ASSEMBLY
- 7. ASSIST GRIP
- 8. GRIP

HEADLINING REMOVAL STEPS

- 9. COAT HANGER
- 10. HEADLINING TRIM
- 11. HEADLINING

TETHER ANCHOR REMOVAL STEPS

- 12. TETHER ANCHOR BRACKET
- 13. COVER
- 14. SPACER 10 mm (0.4 inch)
- 15. FIVER WASHER

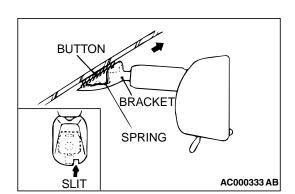
E/A REMOVAL STEPS

- HEADLINING
- 16. E/A TUBE
- 17. E/A SIDE ROOF (A)
- 18. E/A SIDE ROOF (B)
- 19. E/A SIDE ROOF (C)

INSIDE REAR VIEW MIRROR

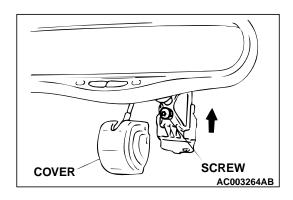
REMOVAL SERVICE POINTS

M1521002700148



<Vehicles without compass and temperature display> Insert a narrow flat-tip screwdriver into the slit in the inside rear view mirror bracket, keep the spring pushed in and remove the inside rear view mirror in the direction of the arrow in the illustration.

NOTE: While the spring is pushed in, connection between the spring and the pawl of the button is released.



< Vehicles with compass and temperature display>

- 1. Disconnect the connector on the inside rear view mirror side
- 2. Remove the cover.
- 3. Loosen the screw, and remove the inside rear view mirror by sliding it in the direction of the arrow.

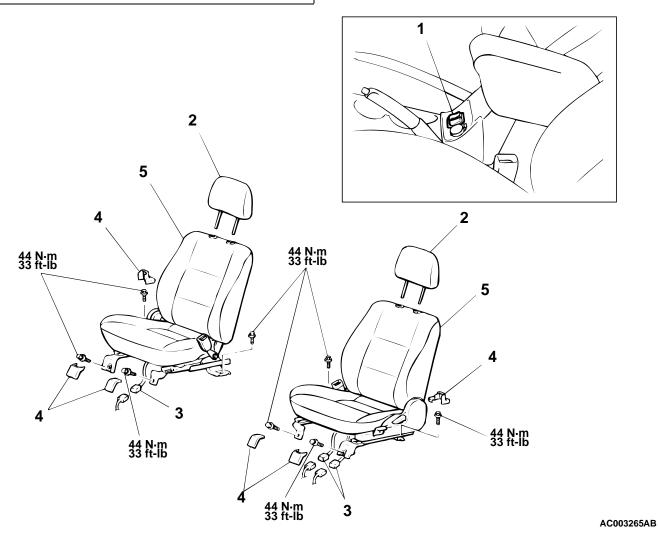
FRONT SEAT ASSEMBLY

REMOVAL AND INSTALLATION

M1522001300195

Pre-removal and Post-installation Operation

 Rear Floor Console Assembly Removal and Installation (Refer to P.52A-35.)



 HEATED SEAT SWITCH <VEHICLES WITH HEATED SEAT> (REFER TO P.52A-35.)

2. HEAD RESTRAINT

FRONT SEAT ASSEMBLY REMOVAL STEPS

- 3. HARNESS CONNECTORS
- 4. SEAT ANCHOR COVER
- 5. FRONT SEAT ASSEMBLY

INSTALLATION SERVICE POINT

>>A<<

>>A<< FRONT SEAT ASSEMBLY INSTALLATION

First install all of the front seat assembly mounting nuts and bolts, and then tighten them to the specified torque.

M1522001400084



CONTINUITY TEST OF HEATED SEAT SWITCH

1. Follow the table below to check between terminals for continuity.

ITEM	SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
Driver's seat side	HI	1 – 5 3 – 8	Less than 2 ohms
	OFF	1 - 5 3 - 8 3 - 5	Open circuit
	LO	3 – 5	Less than 2 ohms
Front passenger's seat side	HI	4 – 5 8 – 9	Less than 2 ohms
	OFF	4 - 5 8 - 9 5 - 9	Open circuit
	LO	5 – 9	Less than 2 ohms

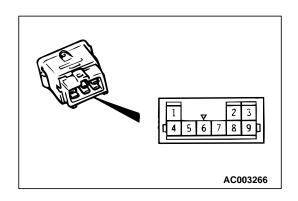
- Check that the indicator is lighted at HI or LO when battery voltage is supplied or the terminal 5 ad the terminal 8 is ground.
- 3. Check that the illumination is lighted when battery voltage is supplied to the terminals 2 and 6.

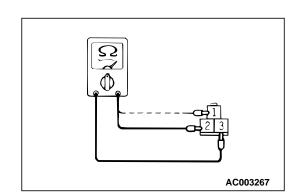
SEAT CUSHION HEATER CHECK

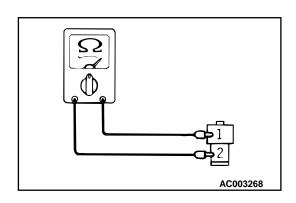
Measure the resistance between terminals.

Standard value:

Between terminals 2 and 3: Approximately 11 Ω Between terminals 1 and 3:Approximately 9 Ω







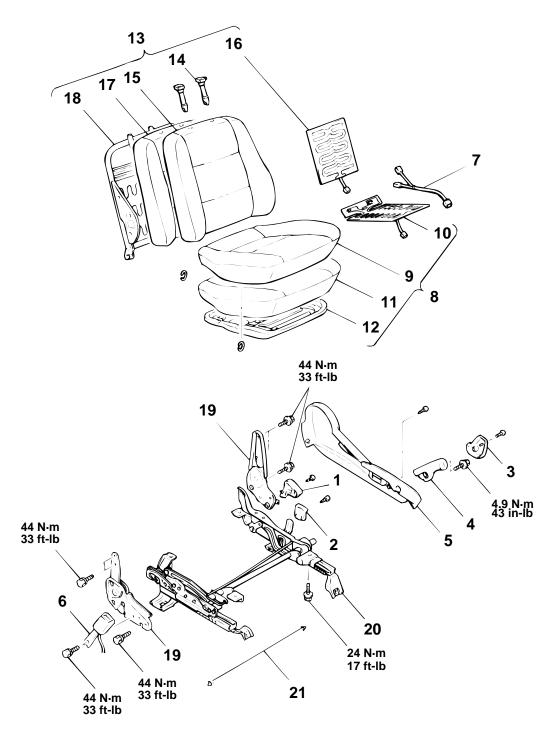
SEATBACK HEATER CHECK

Measure the resistance between terminals.

Standard value: Approximately 10 $\boldsymbol{\Omega}$

DISASSEMBLY AND ASSEMBLY

M1522001500229



DISASSEMBLY STEPS

- 1. RECLINING ADJUSTER KNOB
- 2. SLIDE ADJUSTER KNOB
- 3. FRONT SEAT HEIGHT ADJUSTER INNER LEVER <VEHICLES WITH HEIGHT ADJUSTER>
- FRONT SEAT HEIGHT ADJUSTER LEVER <VEHICLES WITH HEIGHT ADJUSTER>
- 5. FRONT SEAT SHIELD COVER

DISASSEMBLY STEPS (Continued)

AC003269 AB

- 6. INNER SEAT BELT
- SEAT HEATER HARNESS <VEHICLES WITH HEATED SEAT>
- 8. FRONT SEAT CUSHION ASSEMBLY
- 9. FRONT SEAT CUSHION COVER
- 10. FRONT SEAT CUSHION HEATER <VEHICLES WITH HEATED SEAT>
- 11. FRONT SEAT CUSHION PAD
- 12. FRONT SEAT CUSHION FRAME

DISASSEMBLY STEPS (Continued)

- 13. FRONT SEATBACK ASSEMBLY
- 14. HEAD RESTRAINT GUIDE
- 15. FRONT SEATBACK COVER
- 16. FRONT SEATBACK HEATER <VEHICLES WITH HEATED SEAT>

DISASSEMBLY STEPS (Continued)

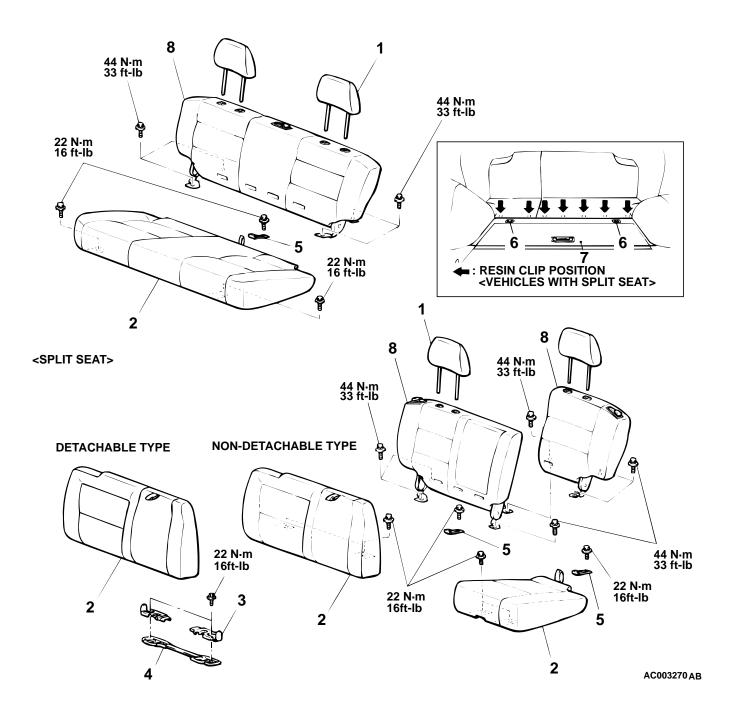
- 17. FRONT SEATBACK PAD
- 18. FRONT SEATBACK FRAME
- 19. RECLINING ADJUSTER
- 20. SEAT ADJUSTER
- 21. PULL WIRE

REAR SEAT ASSEMBLY

REMOVAL AND INSTALLATION

M1522001800178

<BENCH SEAT>



- 1. HEAD RESTRAINT REAR SEAT REMOVAL STEPS
- 2. REAR SEAT CUSHION ASSEMBLY
- 3. STRIKER COVER
- 4. STRIKER ASSEMBLY
- 5. CATCH

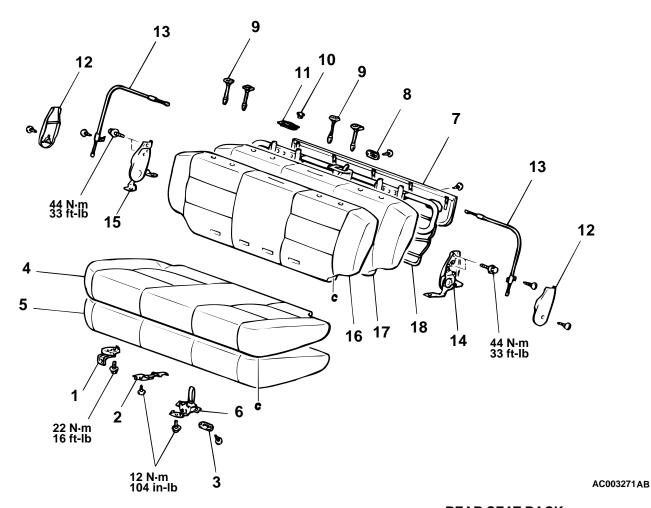
REAR SEAT REMOVAL STEPS

- 6. PARCEL HOOK
- 7. CARGO FLOOR BOX, FRONT <VEHICLES WITH SPLIT SEAT>
- 8. REAR SEATBACK ASSEMBLY

DISASSEMBLY AND ASSEMBLY

M1522002000205

<BENCH SEAT>



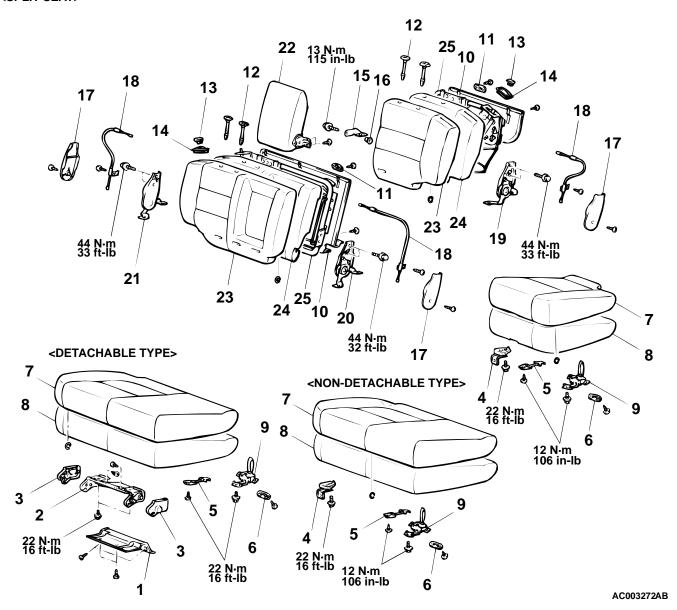
REAR SEAT CUSHION DISASSEMBLY STEPS

- 1. HINGE
- 2. BAND
- 3. LOCK COVER
- 4. REAR SEAT CUSHION COVER
- 5. REAR SEAT CUSHION PAD
- 6. LOCK BRACKET
 REAR SEAT BACK
 DISASSEMBLY STEPS
- 7. PANEL
- 8. SHELF CLIP
- 9. HEAD RESTRAINT GUIDE

REAR SEAT BACK DISASSEMBLY STEPS

- 10. KNOB
- 11. GARNISH
- 12. RECLINING COVER
- 13. CONTROL CABLE
- 14. RECLINING ADJUSTER <LH>
- 15. RECLINING ADJUSTER, OUTER <RH>
- 16. REAR SEATBACK COVER
- 17. REAR SEATBACK PAD
- 18. REAR SEATBACK FRAME

<SPLIT SEAT>



REAR SEAT CUSHION DISASSEMBLY STEPS

- 1. BOTTOM COVER
- 2. LEVER ASSEMBLY
- 3 BRACKET COVER
- 4. HINGE
- 5. BAND
- 6. LOCK COVER
- 7. REAR SEAT CUSHION COVER
- 8. REAR SEAT CUSHION PAD
- 9. LOCK BRACKET

REAR SEATBACK DISASSEMBLY STEPS

- 10. PANEL
- 11. SHELF CLIP
- 12. HEAD RESTRAINT GUIDE
- 13. KNOB

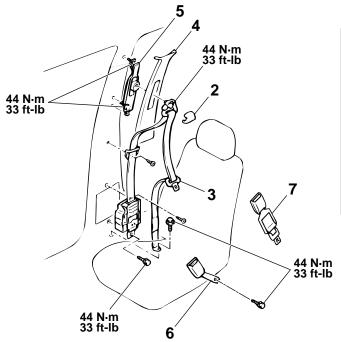
REAR SEATBACK DISASSEMBLY STEPS

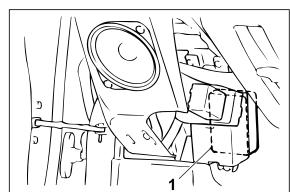
- 14 GARNISH
- 15. HINGE BRACKET
- 16. BUSH
- 17. RECLINING COVER
- 18. CONTROL CABLE
- 19. RECLINING ADJUSTER <LH>
- 20. RECLINING ADJUSTER, INNER <LH>
- 21. RECLINING ADJUSTER, OUTER <RH>
- 22. ARMREST
- 23. REAR SEATBACK COVER
- 24. REAR SEATBACK PAD
- 25. REAR SEATBACK FRAME

FRONT SEAT BELT

REMOVAL AND INSTALLATION

M1523001300198





AC103792 AB

- 1. ETACS-ECU
 OUTER SEAT BELT REMOVAL
 STEPS
- CENTER PILLAR TRIM, LOWER (REFER TO P.52A-36.)
- 2. SASH GUIDE COVER
- 3. OUTER SEAT BELT
- 4. CENTER PILLAR TRIM, UPPER (REFER TO P.52A-36.)
- 5. ADJUSTABLE SEAT BELT ANCHOR

INNER SEAT BELT REMOVAL STEPS

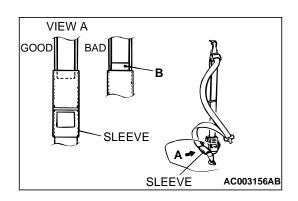
- FRONT SEAT (REFER TO P.52A-39.)
- 6. INNER SEAT BELT
- 7. FRONT SEAT BELT EXTENSION

INSPECTION

M1523001400236

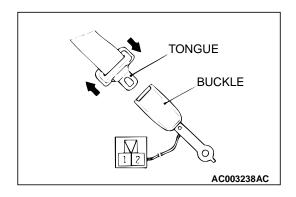


Check that the B section (red) of the label attached to the outer seat belt is not exposed from the outer seat belt sleeve. If it is exposed, replace the outer seat belt.



SEAT BELT BUCKLE SWITCH CONTINUITY CHECK

Follow the table bellow to check the seat belt buckle switch for continuity.

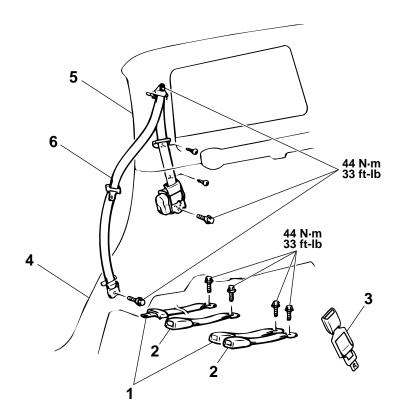


ITEM	TESTER CONNECTION	SPECIFIED CONDITION
Fastened seat belt	1 – 2	Open circuit
Unfastened seat belt	1 – 2	Less than 2 ohms

REAR SEAT BELT

REMOVAL AND INSTALLATION

M1523001600207



AC103793 AB

- 1. CENTER SEAT BELT
- 2. INNER SEAT BELT
- 3. EXTENDER SEAT BELT ASSEMBLY

OUTER SEAT BELT REMOVAL STEPS

- 4. QUARTER TRIM, LOWER (REFER TO P.52A-36.)
- 5. QUARTER TRIM, UPPER (REFER TO P.52A-36.)
- 6. OUTER SEAT BELT

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

M1521004100120

ITEM	SPECIFICATION	
Adjustable seat belt anchor bolt	44 N·m (33 ft-lb)	
Front inner seat belt bolt	44 N·m (33 ft-lb)	
Front outer seat belt bolt	44 N·m (33 ft-lb)	
Front seat adjuster bolt	24 N·m (17 ft-lb)	
Front seat bolt	44 N·m (33 ft-lb)	
Front seat height adjuster lever bolt	4.9 N·m (43 in-lb)	
Front seat reclining adjuster bolt	44 N·m (33 ft-lb)	
Rear center seat belt bolt	44 N·m (33 ft-lb)	
Rear inner seat belt bolt	44 N·m (33 ft-lb)	
Rear outer seat belt bolt	44 N·m (33 ft-lb)	
Rear seat band bolt	12 N·m (104 in-lb)	
Rear seat catch bolt	22 N·m (16 ft-lb)	
Rear seat cushion assembly bolt	22 N·m (16 ft-lb)	
Rear seat hinge bolt	22 N·m (16 ft-lb)	
Rear seat hinge bracket bolt	13 N·m (115 in-lb)	
Rear seat lever assembly bolt	22 N·m (16 ft-lb)	
Rear seat lock bracket screw	12 N·m (104 in-lb)	
Rear seat reclining adjuster bolt	44 N·m (33 ft-lb)	
Rear seatback assembly bolt	44 N·m (33 ft-lb)	
Striker assembly	22 N·m (16 ft-lb)	
Tether anchor bracket bolt	22 N·m (16 ft-lb)	

SERVICE SPECIFICATIONS

M1522000300062

ITEM		STANDARD VALUE
Seat cushion Ω	Between terminals 2 and 3	Approximately 11
	Between terminals 1 and 3	Approximately 9
Seatback Ω	Between terminals 1 and 2	Approximately 10

NOTES