GROUP 42

BODY

CONTENTS

HOOD

HOOD DIAGNOSIS

INTRODUCTION TO HOOD DIAGNOSIS

M1421005800114

Wind noise at the hood may be caused by improper hood adjustment.

HOOD DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1421005900092

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 hood 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

M1421006000070

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
Difficult locking and unlocking	1	P.42-5
Uneven body clearance	2	P.42-6
Uneven height	3	P.42-6

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Difficult locking and unlocking

DIAGNOSIS

STEP 1. Check the release cable routing condition.

Q: Is the release cable routing condition good?
YES : Go to Step 2.
NO : Repair it, then go to Step 4.

STEP 2. Check the engagement of the hood latch and hood striker.

Q: Are the hood latch and hood striker engaged correctly?
YES : Go to Step 3.
NO : Adjust it. Refer to P.42-7. Then go to Step 4.

STEP 3. Check for proper lubrication of release cable.

Q: Is the release cable properly lubricated?
YES : Go to Step 4.
NO : Lubricate, then go to Step 4.

STEP 4. Check symptoms.

Q: Does the hood lock operate easily?
YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 2: Uneven body clearance

DIAGNOSIS

STEP 1. Check the hood installation condition.

Q: Is the hood installation in good condition?
YES : Go to Step 2.
NO : Adjust it. Refer to P.42-7. Then go to Step 2.

STEP 2. Check symptoms.

Q: Is the clearance with the body even?
YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 3: Uneven height

DIAGNOSIS

STEP 1. Check the hood bumper height.

Q: Is the hood bumper height proper?
YES : Go to Step 2.
NO : Adjust it. Refer to P.42-7. Then go to Step2.

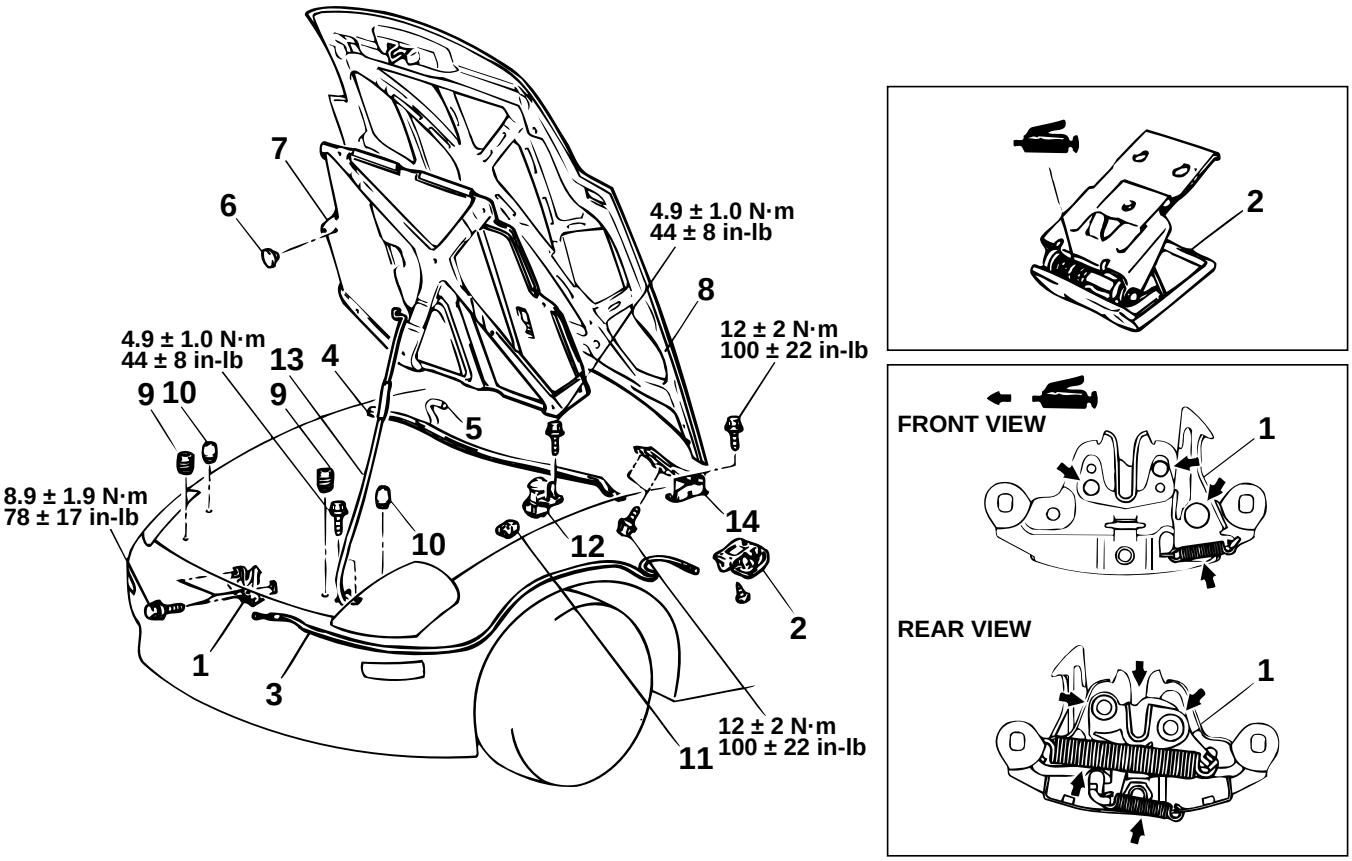
STEP 2. Check symptoms.

Q: Are the hood and body height even?
YES : This diagnosis is complete.
NO : Return to Step 1.

HOOD

REMOVAL AND INSTALLATION

M1421001600066



ADJUSTMENT OF FOOD LATCH AND HOOD STRIKER ENGAGEMENT

ADJUSTMENT OF HOOD INSTALLATION AND BUMPER

AC000448 AC

HOOD LATCH REMOVAL STEPS

- FRONT BUMPER (REFER TO GROUP 51P.51-3.)

1. HOOD LATCH

HOOD LOCK RELEASE CABLE REMOVAL STEPS

2. HOOD LOCK RELEASE HANDLE
3. HOOD LOCK RELEASE CABLE

HOOD AND HOOD HINGE REMOVAL STEPS

4. HOOD WEATHERSTRIP
5. WASHER HOSE CONNECTION
6. CLIP
7. HOOD INSULATOR
8. HOOD

>>A<< 9. BUMPER A

>>A<< 10. BUMPER B

11. HOOD DAMPER

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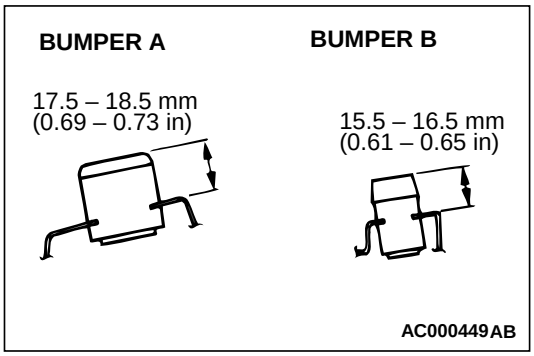
HOOD AND HOOD HINGE
REMOVAL STEPS (Continued)

12. HOOD SWITCH <VEHICLES WITH THEFT-ALARM SYSTEM>
13. HOOD SUPPORT ROD
- FRONT DECK GARNISH (REFER TO GROUP 51P.51-15.)

14. HOOD HINGE



INSTALLATION SERVICE POINT

>>A<< BUMPER B/BUMPER A INSTALLATION

Install bumpers A and B as shown in the illustration.
Be sure they are adjusted so the hood is even with the body on all sides.

INSPECTION

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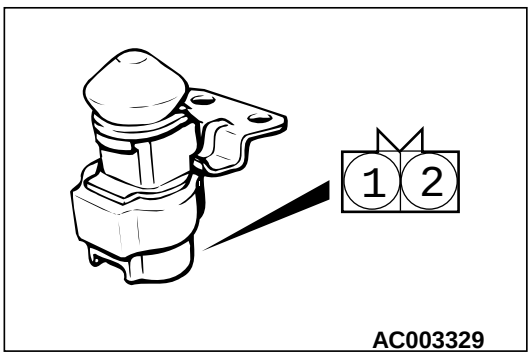
HOOD SWITCH CONTINUITY CHECK <VEHICLES WITH THEFT-ALARM SYSTEM>



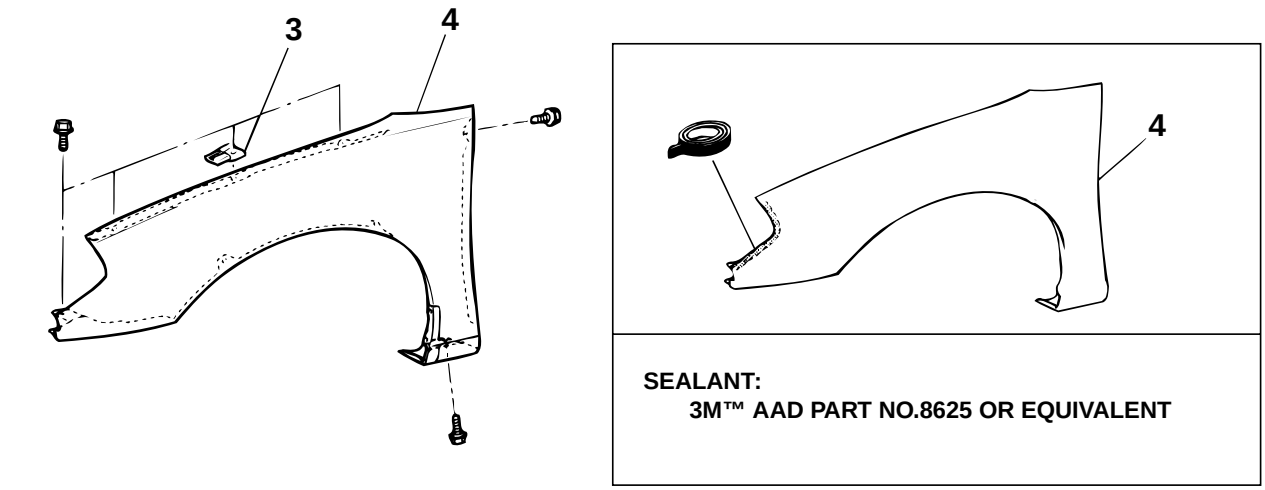
SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
Hood switch unpressed	1 – 2	Continuity
Hood switch depressed	-	No Continuity

FENDER

REMOVAL AND INSTALLATION

M1421001900067

Pre-removal and Post-installation Operation
- Front Bumper Removal and Installation (Refer to GROUP 51, Front Bumper P.51-3.)
- Headlight Removal and Installation (Refer to GROUP 54A, Headlight P.54A-73.)



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REMOVAL STEPS
1. FRONT STONE GUARD OR FRONT SIDE AIR DAM
2. SPLASH SHIELD
3. HOOD DAMPER BRACKET
4. FENDER

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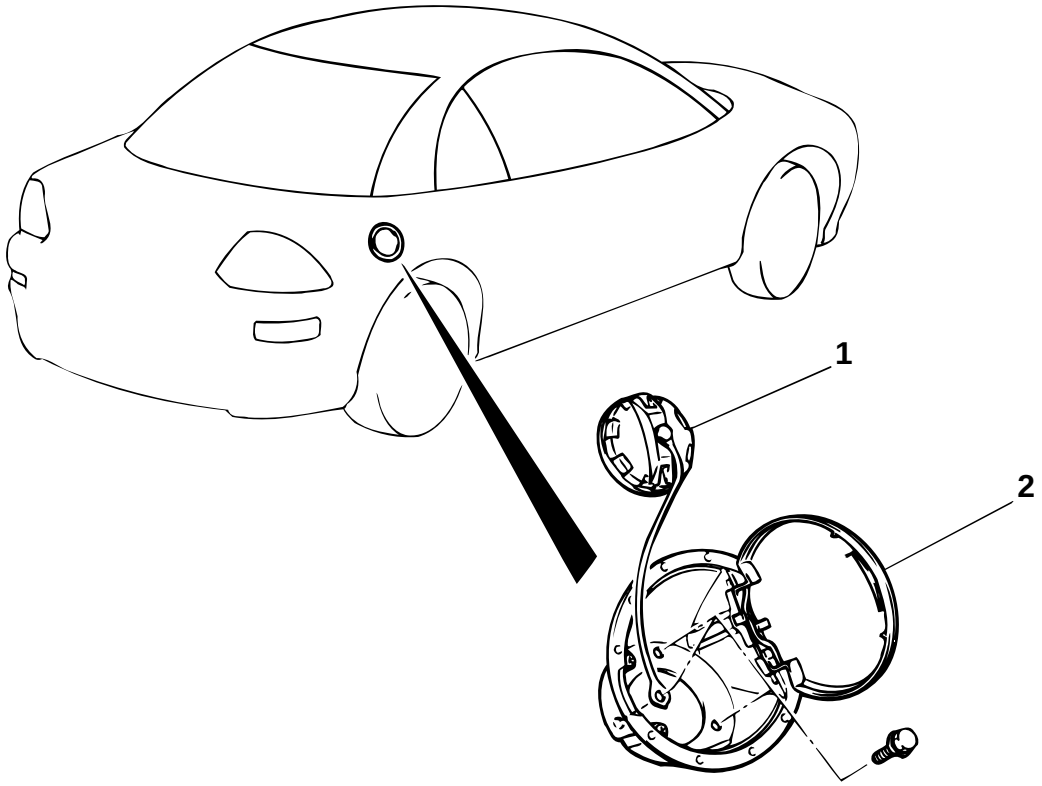
FUEL FILLER LID

REMOVAL AND INSTALLATION

M1421002500073



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REMOVAL STEPS
1. FUEL CAP
2. FUEL FILLER DOOR

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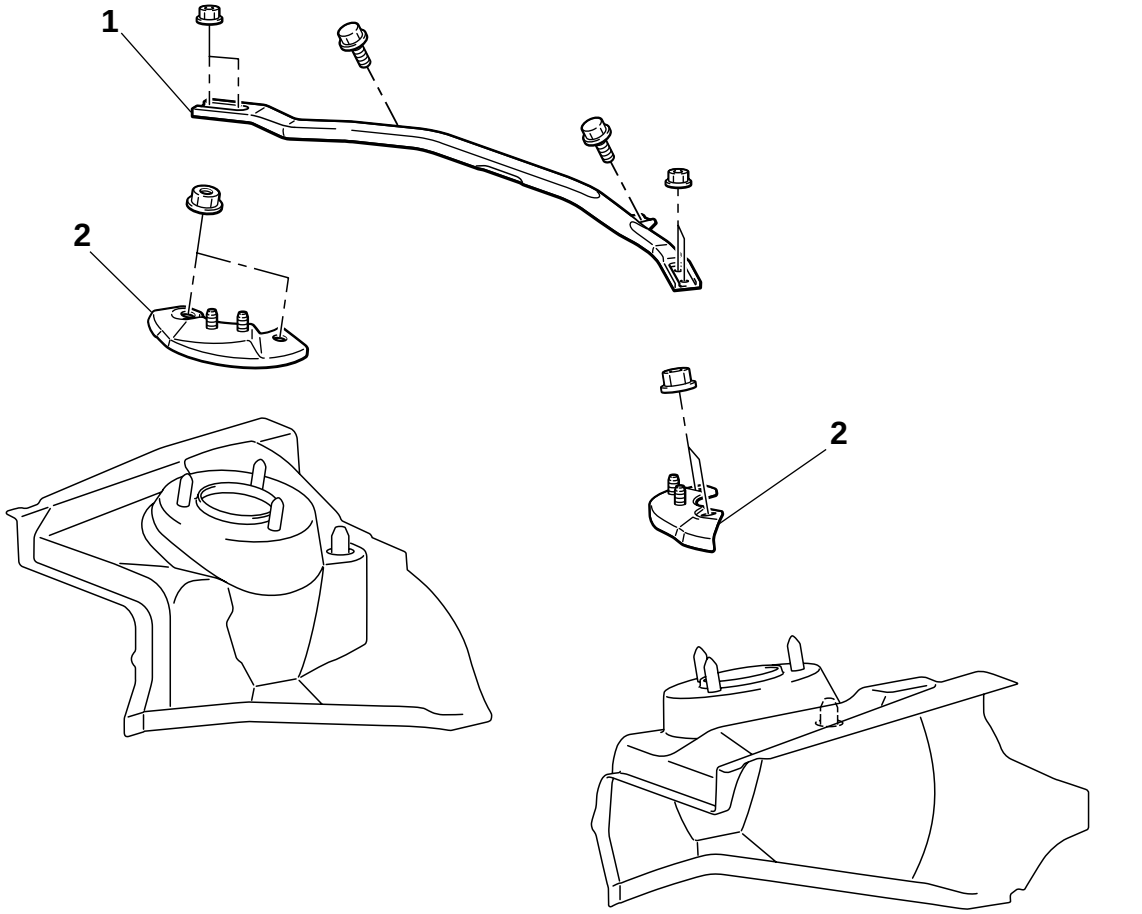
STRUT TOWER BAR

REMOVAL AND INSTALLATION

M1421005600046



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REMOVAL STEPS
1. STRUT TOWER BAR ASSEMBLY
2. STRUT TOWER BAR BRACKET

WINDOW GLASS

WINDOW GLASS DIAGNOSIS

INTRODUCTION TO WINDOW GLASS DIAGNOSIS

M1422006700072

If water leaks from the windshield, the quarter window glass <ECLIPSE>, the liftgate glass <ECLIPSE>, or the seal or body flange may be faulty.

WINDOW GLASS DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1422006800079

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 window glass 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.

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SYMPTOM CHART

M1422006900087

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
Water leak through windshield	1	P.42-12
Water leak through quarter window glass		
Water leak through liftgate glass		

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Water leak through windshield/Water leak through quarter window glass/Water leak through liftgate glass

DIAGNOSIS

STEP 1. Check if the seal is faulty.

Q: Is the seal faulty?
YES : Repair it, then go to Step 3.
NO : Go to Step 2.

STEP 2. Check if the body flange is deformed.

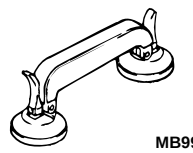
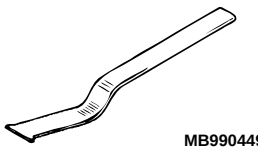
Q: Is the body flange deformed?
YES : Repair or replace it, then go to Step 3.
NO : Go to Step 3.

STEP 3. Check symptoms.

Q: Is any water leaking?
YES : Return to Step 1.
NO : This diagnosis complete.

SPECIAL TOOLS

M1422000600066

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 MB990480	MB990480 Glass holder	General service tool	Removal and installation of window glass
 MB990449	MB990449 Window molding remover	General service tool	Removal of drip molding

WINDOW GLASS

GENERAL DESCRIPTION

M1422000100072

The windshield, quarter window <ECLIPSE> and liftgate glass <ECLIPSE> are attached by an urethane-base adhesive to the window frame. This adhesive provides improved glass holding and sealing, and also permits use of body openings having a greater structural strength.

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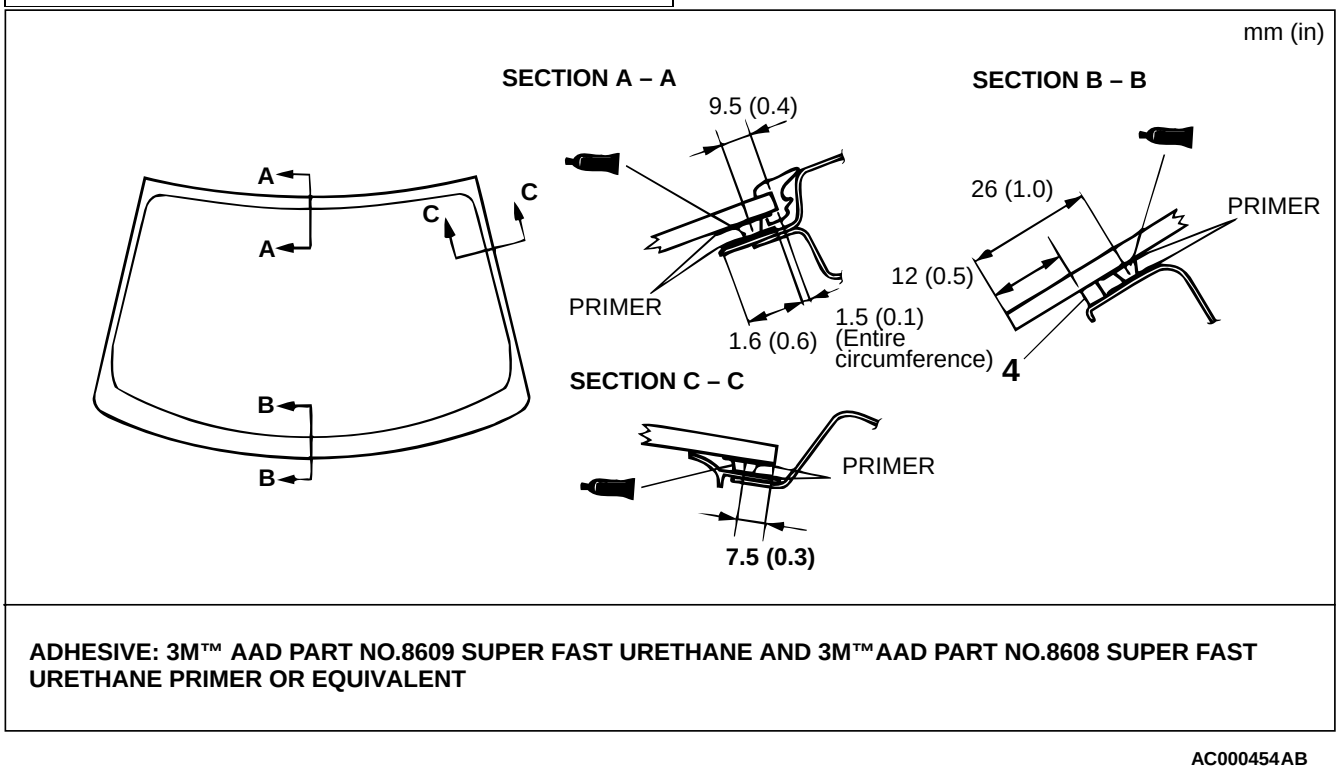
ITEM	APPLICATION	QUANTITY
Wire (dia × length)	For cutting adhesive	Five pieces of wire 0.6 mm × 1 m (0.02 in × 3.3 ft)
Glass adhesive knife	For cutting adhesive	One
Sealant gun	For adhesive application	One
Wiping shop towels	-	As required
Sealer	For prevention of water leaks and gathering after adhesive application	As required
3M™ AAD Part No. 8880 or equivalent	For cleaning	As required
Glass holder MB990480	For holding window glass	Two
Window molding remover MB990449	For roof drip molding removal	One

WINDSHIELD

REMOVAL AND INSTALLATION

M1422001000078

Pre-removal and Post-installation Operation
- Front Deck Garnish Removal and Installation (Refer to GROUP 51 P.51-15.)
- Drip Garnish Removal and Installation (Refer to GROUP 51P.51-9.) <ECLIPSE SPYDER>
- Front Pillar Trim Removal and Installation (Refer to GROUP 52A P.52A-10.)
- Headlining Removal and Installation (Refer to GROUP 52A P.52A-14.)
- Inside Rear View Mirror Removal and Installation (Refer to GROUP 52A P.52A-15.)



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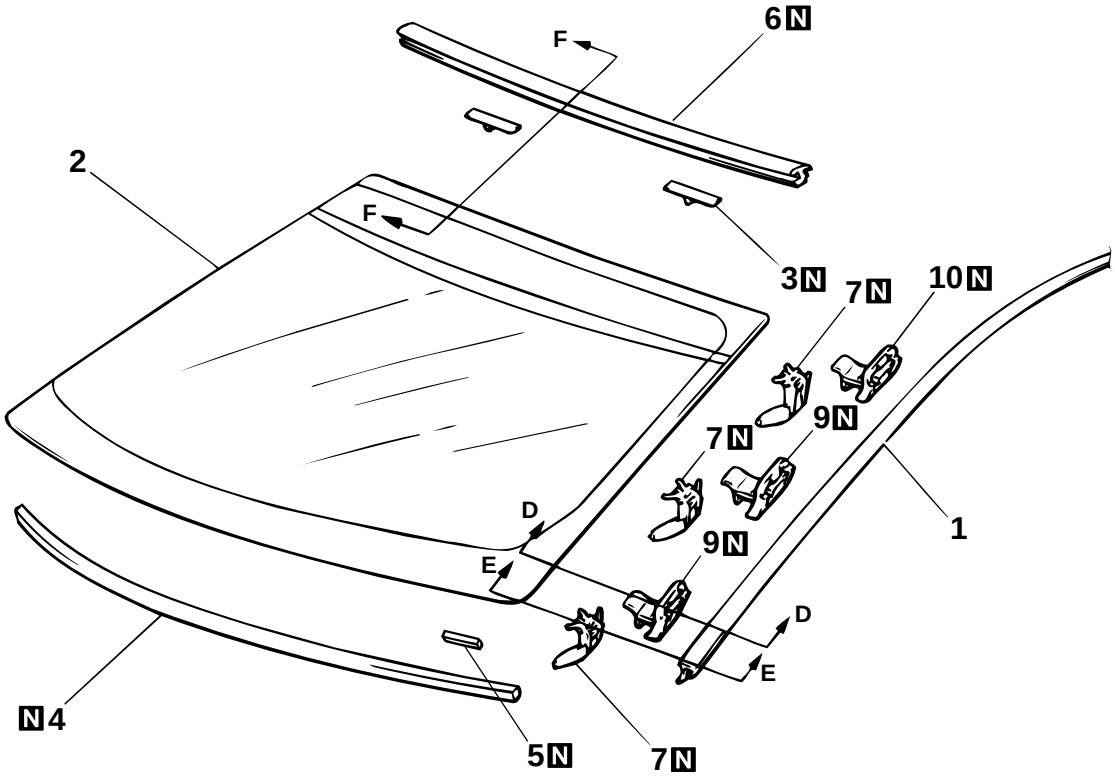

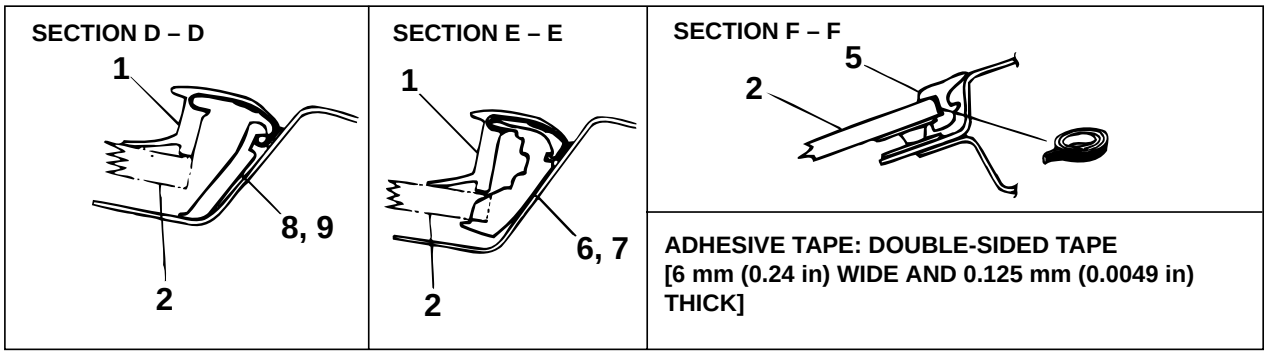

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REMOVAL STEPS

<<A>> >>D<< 1. ROOF DRIP MOLDING <ECLIPSE>
<<B>> >>C<< 2. WINDSHIELD
>>C<< 3. GLASS STOPPER
>>C<< 4. WINDOW SPACER
>>C<< 5. SPACER
>>C<< 6. WINDSHIELD UPPER MOLDING
>>B<< 7. FRONT DRIP MOLDING CLIP A <ECLIPSE>

REMOVAL STEPS (Continued)

>>B<< 8. FRONT DRIP MOLDING CLIP B <ECLIPSE>
>>A<< 9. DRIP MOLDING CLIP A <ECLIPSE>
>>A<< 10. DRIP MOLDING CLIP B <ECLIPSE>

Required Special Tool:

- MB990480: Glass Holder
- MB990449: Window molding remover

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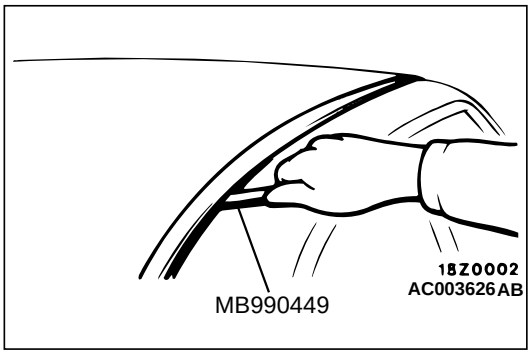
REMOVAL SERVICE POINTS

<<A>> ROOF DRIP MOLDING REMOVAL



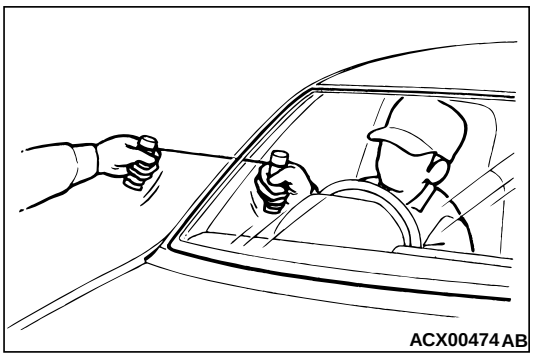
⚠ CAUTION

If the roof drip molding has become warped, should be replaced (do not re-use).

Use special tool MB990449 to lever out the roof drip moulding.

<<B>> WINDSHIELD REMOVAL

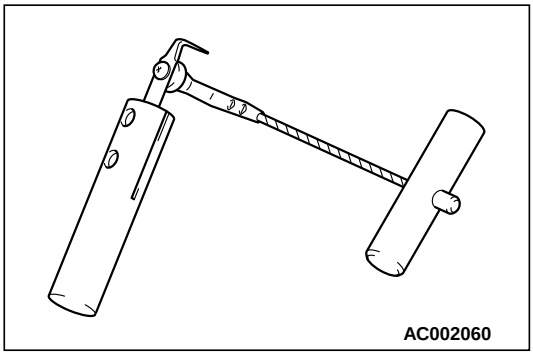
1. To protect the body (paint surface), apply cloth tape to all body areas around the installed
2. Using piano wire
   (1) Using a sharp-point drill, make a hole in the windshield adhesive.
   (2) Pass the piano wire from the inside of the vehicle through the hole.
   (3) Using a sharp-point drill, make a hole in the windshield adhesive.
   (4) Pass the piano wire from the inside of the vehicle through the hole.



⚠ CAUTION

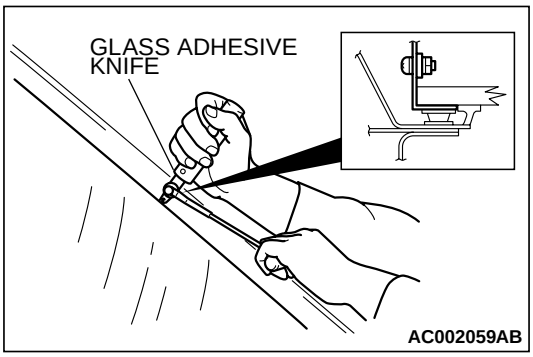
Do not let the piano wire touch the edge of the windshield.

   (5) Pull the piano wire alternately from the inside and outside along the windshield to cut the adhesive.


AC002060

⚠ CAUTION
Putting glass adhesive knife too deeply into windshield adhesive may damage windshield.

3. Using glass adhesive knife
   Keep glass adhesive knife at right angles with the windshield edge, and put the blade at windshield edge and surface. Then cut away adhesive along the windshield edge.



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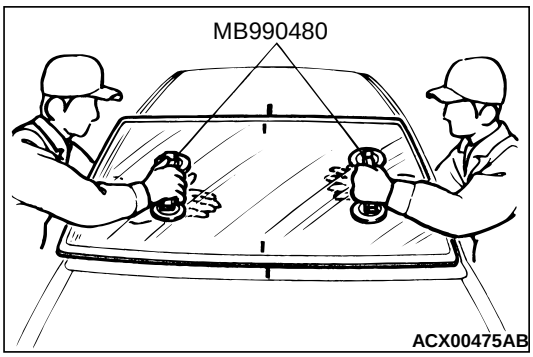

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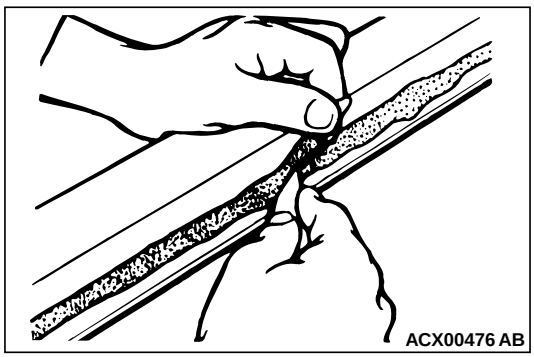
4. Make mating marks on the windshield and body.
5. Use special tool MB990480 to remove the windshield.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⚠ CAUTION
- **Be careful not to remove more adhesive than is necessary.**
- **Be careful also not to damage the paintwork on the body surface with the knife. If the paintwork is damaged, repair the damaged area with repair paint or anti-rust agent.**

6. Use a knife to cut away the remaining adhesive so that the thickness is within 2 mm (0.08 inch) around the entire circumference of the body flange.
7. Finish the flange surfaces so that they are smooth.

⚠ CAUTION
Allow the cleaned area to dry for at least three minutes. Do not touch any surface that has been cleaned.

8. When reusing the windshield, remove the adhesive still adhering to the windshield, and clean with 3M™ AAD Part number 8906 or equivalent.
9. Clean the body side in the same way.

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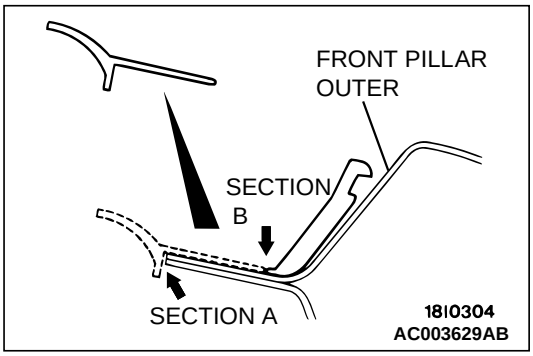
INSTALLATION SERVICE POINTS

>>A<< DRIP MOLDING CLIP A/DRIP MOLDING CLIP B INSTALLATION

1. The drip molding clips A and B differ according to where they are used, so check the identification color before installation.

APPLICABLE LOCATION	IDENTIFICATION COLOR
Drip molding clips A	Gray
Drip molding clips B	Green



2. After installing the clip to outer front pillar in alignment with its section A, cut from section B.

>>B<< FRONT DRIP MOLDING CLIP A/FRONT DRIP MOLDING CLIP B INSTALLATION

Clips A and B differ according to where they are used, so check the identification color before installation.

APPLICABLE LOCATION	IDENTIFICATION COLOR
Front drip molding clips A <LH>	Gray
Front drip molding clips A <RH>	Yellow
Front drip molding clips B	Violet

>>C<< WINDSHIELD UPPER MOLDING/SPACER/WINDOW SPACER/GLASS STOPPER/WINDSHIELD INSTALLATION

1. When replacing the windshield, temporarily set the windshield against the body, and place a mating mark on the windshield and body.
2. Use 3M™ AAD Part number 8906 or equivalent to de grease the inside and outside of the windshield and the body flanges.

⚠ CAUTION

- **The primer strengthens the adhesive, so be sure to apply it evenly around the entire circumference. However, a too thick application will weaken the adhesive.**
- **Do not touch the coated surface.**

3. Soak a sponge in the primer, and apply evenly to the windshield and the body in the specified places.

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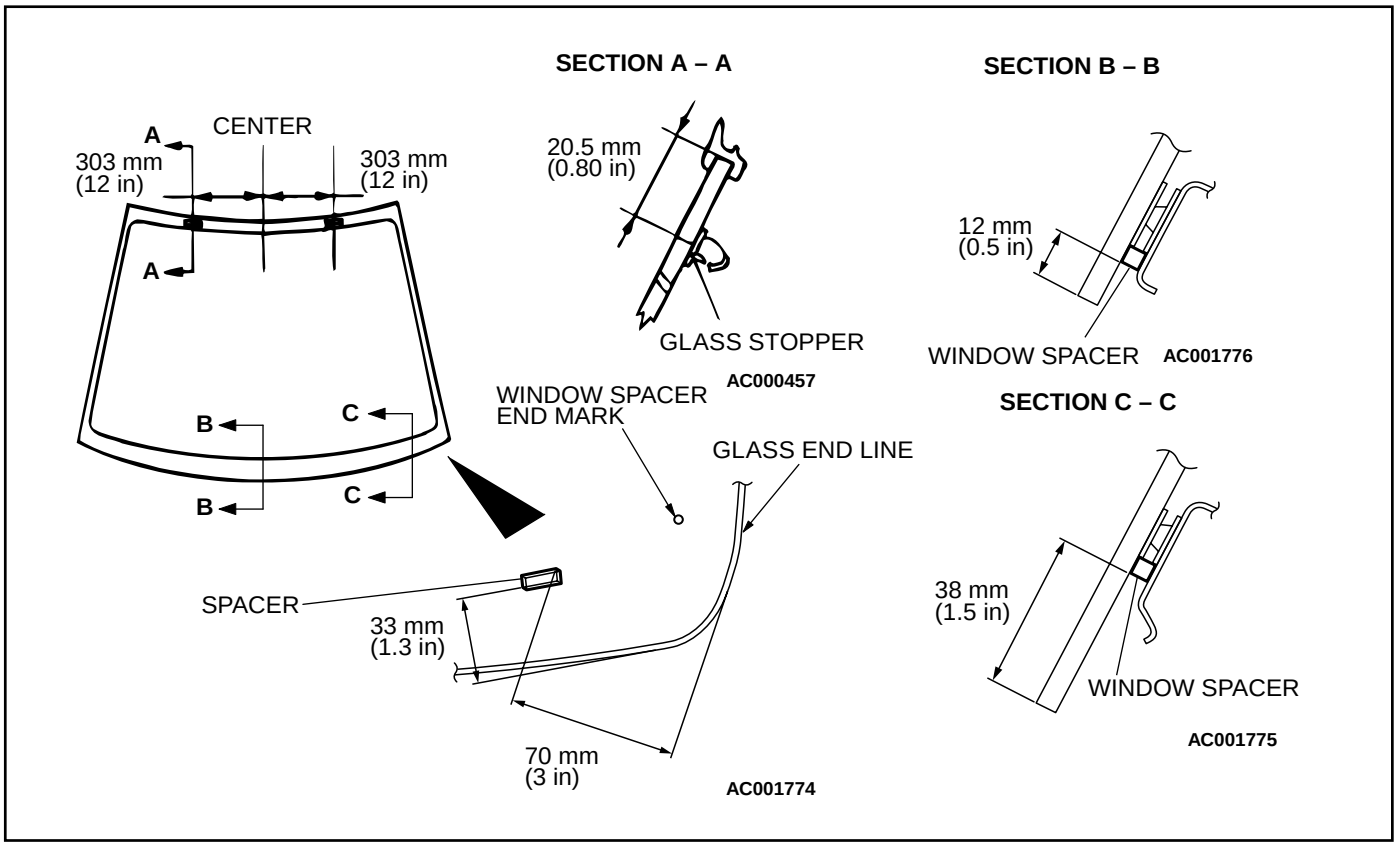
4. Apply the primer, and then let it dry for 3 to 30 minutes, depending on ambient temperature and humidity.
5. Install the windshield upper molding to the windshield.
6. Install the glass stopper to the windshield.
7. Place the window spacer to the windshield so that it inclines toward the windshield and its right and left clearances are equal. Then install the spacer firmly so that it is firmly anchored.



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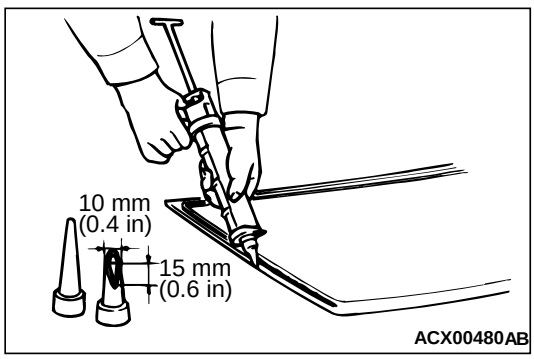

8. Fill a sealant gun with adhesive. Then apply the adhesive evenly around the windshield within 30 minutes after applying the primer.

   NOTE: Cut the tip of the sealant gun nozzle into a V shape to simplify adhesive application.
9. Align the mating marks on the windshield and the body, and lightly press the windshield evenly so that it adheres completely.
10. Use a spatula or similar tool to remove any excessive adhesive. Clean the surface with 3M™ AAD Part number 8906 or equivalent. Avoid moving the vehicle until the adhesive sets.

⚠ CAUTION

- **Do not move the vehicle unless absolutely necessary.**
- **When testing for water leakage, do not pinch the end of the hose to spray the water.**

11. Wait 30 minutes or more, and then test for water leakage.

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>>D<< ROOF DRIP MOLDING INSTALLATION
Install the clip to the roof drip molding before installing the molding to the vehicle body.

QUARTER WINDOW GLASS

REMOVAL AND INSTALLATION

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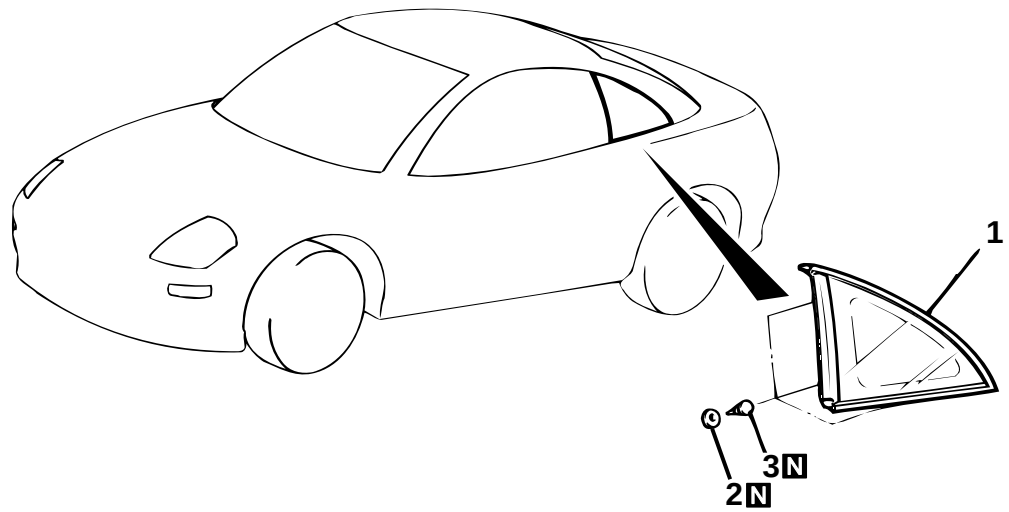
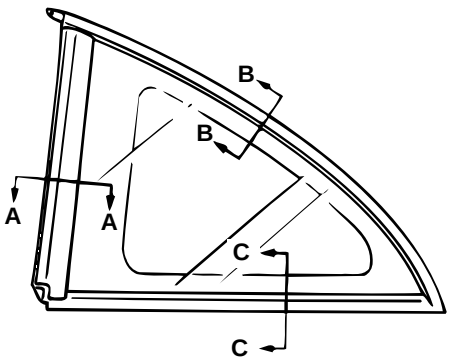
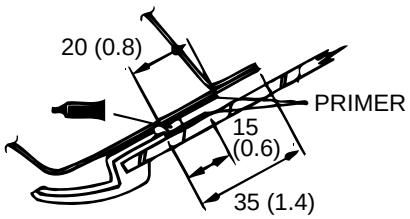
Pre-removal and Post-installation Operation
- Quarter Trim Upper Removal and Installation (Refer to GROUP 52A P.52A-10.)



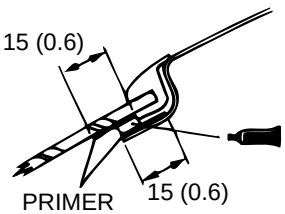
mm (in)



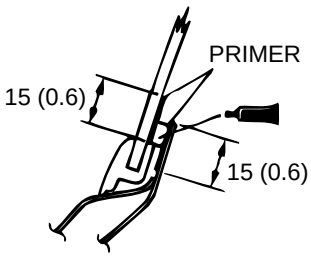
SECTION A – A



SECTION B – B



SECTION C – C



ADHESIVE: 3M™ AAD PART NO.8609 SUPER FAST URETHANE AND 3M™ AAD PART NO.8608 SUPER FAST URETHANE PRIMER OR EQUIVALENT

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REMOVAL STEPS

<<A>> >>A<< 1. QUARTER WINDOW GLASS ASSEMBLY

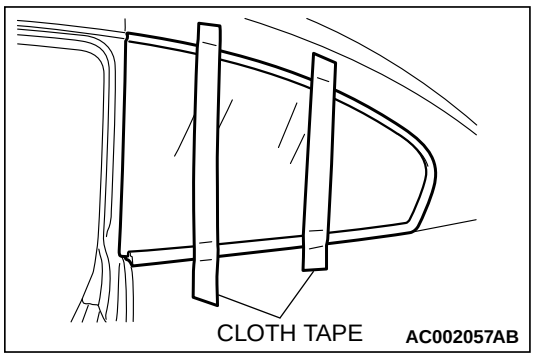
REMOVAL STEPS (Continued)

2. PACKING
3. CLIP

REMOVAL SERVICE POINT

<<A>> QUARTER WINDOW GLASS REMOVAL

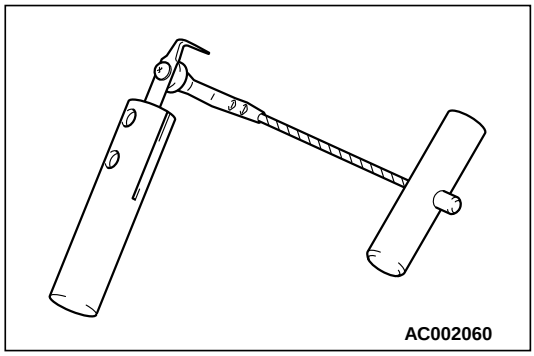
1. Apply cloth tape to protect quarter window glass.

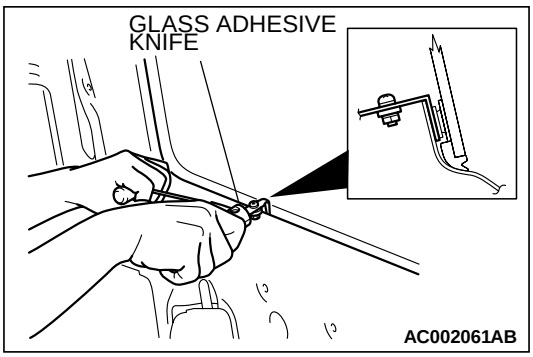


⚠ CAUTION
Putting glass adhesive knife too deeply into windshield adhesive may damage quarter window glass.

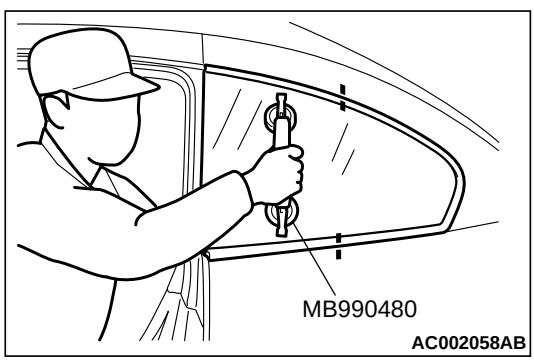
2. Use glass adhesive knife to cut away adhesive.
   Keep glass adhesive knife at right angles with body flange (from inside the vehicle), and put the blade at body flange. Then cut away adhesive along the body flange.

   NOTE: If glass adhesive knife does not reach the body flange, refer to WINDSHIELD P.42-13.





3. Make mating marks on the quarter window glass and body.
4. Use special tool MB990480 to remove the quarter window glass.



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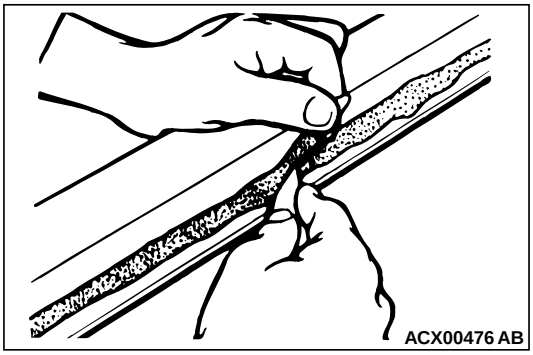

ACX00476 AB

⚠ CAUTION

- **Be careful not to remove more adhesive than is necessary.**
- **Be careful also not to damage the paintwork on the body surface with the knife. If the paintwork is damaged, repair the damaged area with repair paint or anti-rust agent.**

5. Use a knife to cut away the remaining adhesive so that the thickness is within 2 mm (0.08 inch) around the entire circumference of the body flange.
6. Finish the flange surfaces so that they are smooth.

⚠ CAUTION

Allow the cleaned area to dry for at least three minutes. Do not touch any surface that has been cleaned.

7. When reusing the quarter window glass, remove the adhesive still adhering to the quarter window glass, and clean with 3M™ AAD Part number 8906 or equivalent.
8. Clean the body side in the same way.

INSTALLATION SERVICE POINT

>>A<< QUARTER WINDOW GLASS INSTALLATION

1. Carry out the following procedure to re-install quarter window glass.

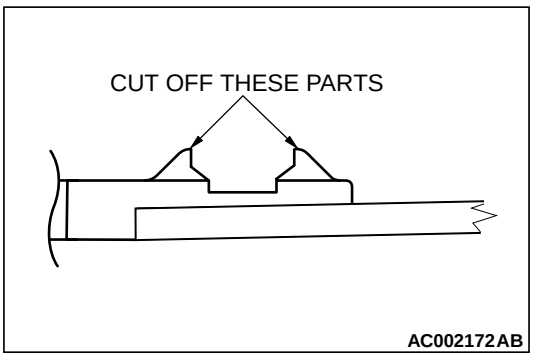
⚠ CAUTION

Do not forget packing.

(1) Fit clips into body.
(2) Cut away clip fitting convex on quarter window glass.

NOTE: Convex gets broken when quarter window glass is removed.

2. Remove the quarter window glass using the same procedure as for the windshield remove. (Refer to P.42-13.)



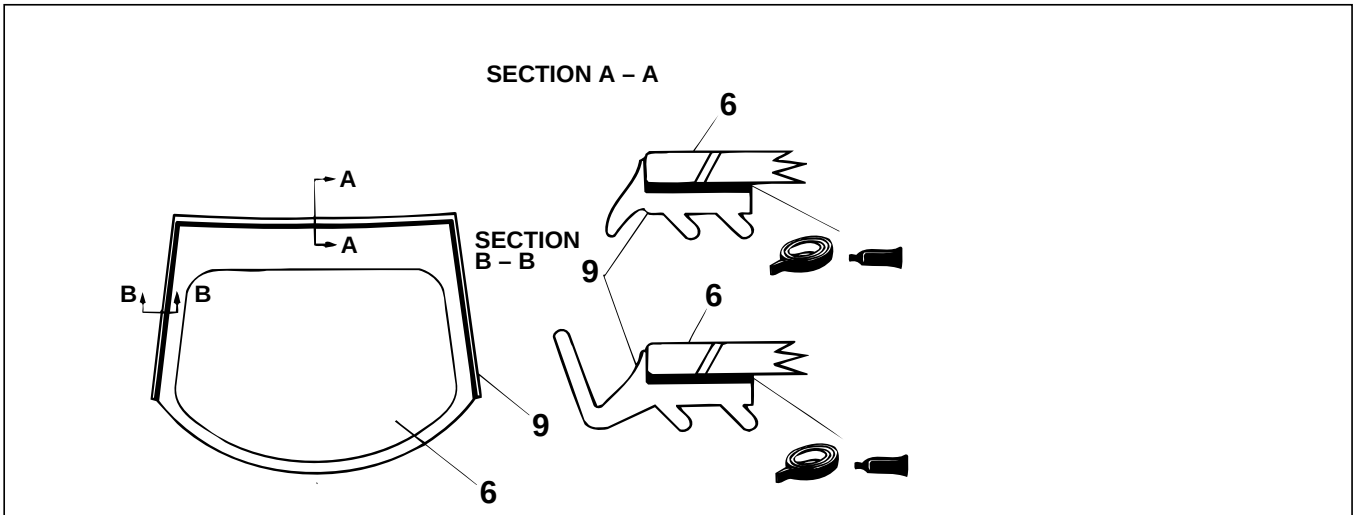
AC002172 AB

LIFT GATE WINDOW GLASS

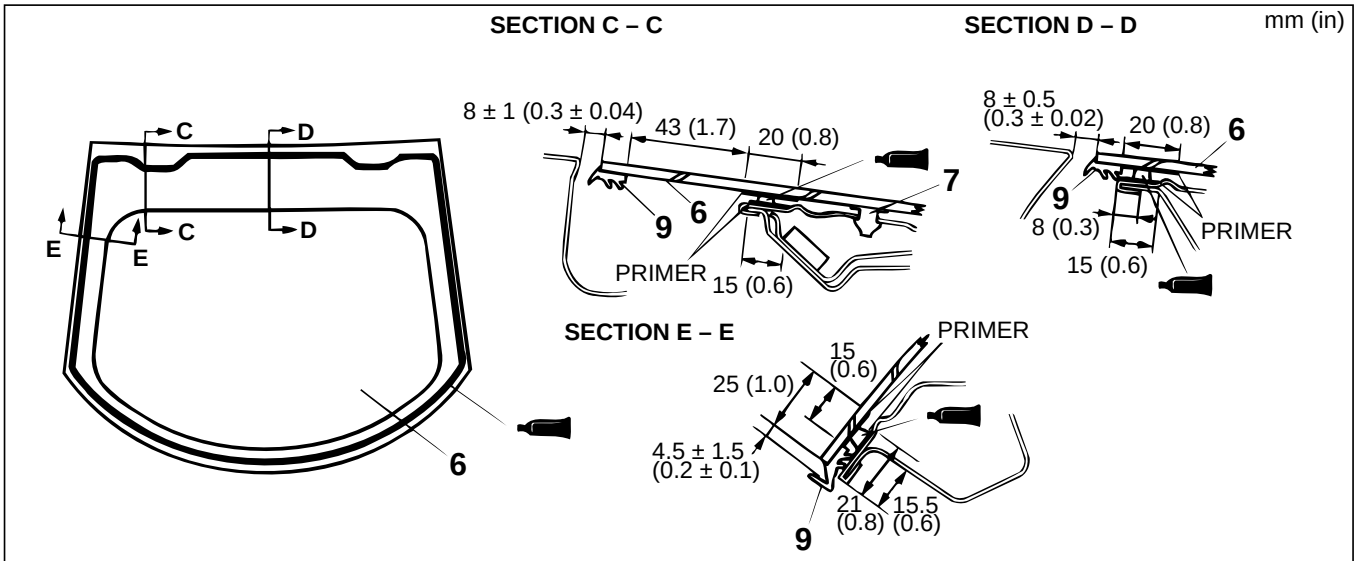
REMOVAL AND INSTALLATION

M1422003700040

Pre-removal and Post-installation Operation
- Liftgate Trim Removal and Installation (Refer to P.42-91.)
- Rear Wiper Arm, Wiper Motor and Washer Nozzle Removal and Installation (Refer to GROUP 51 P.51-20.)



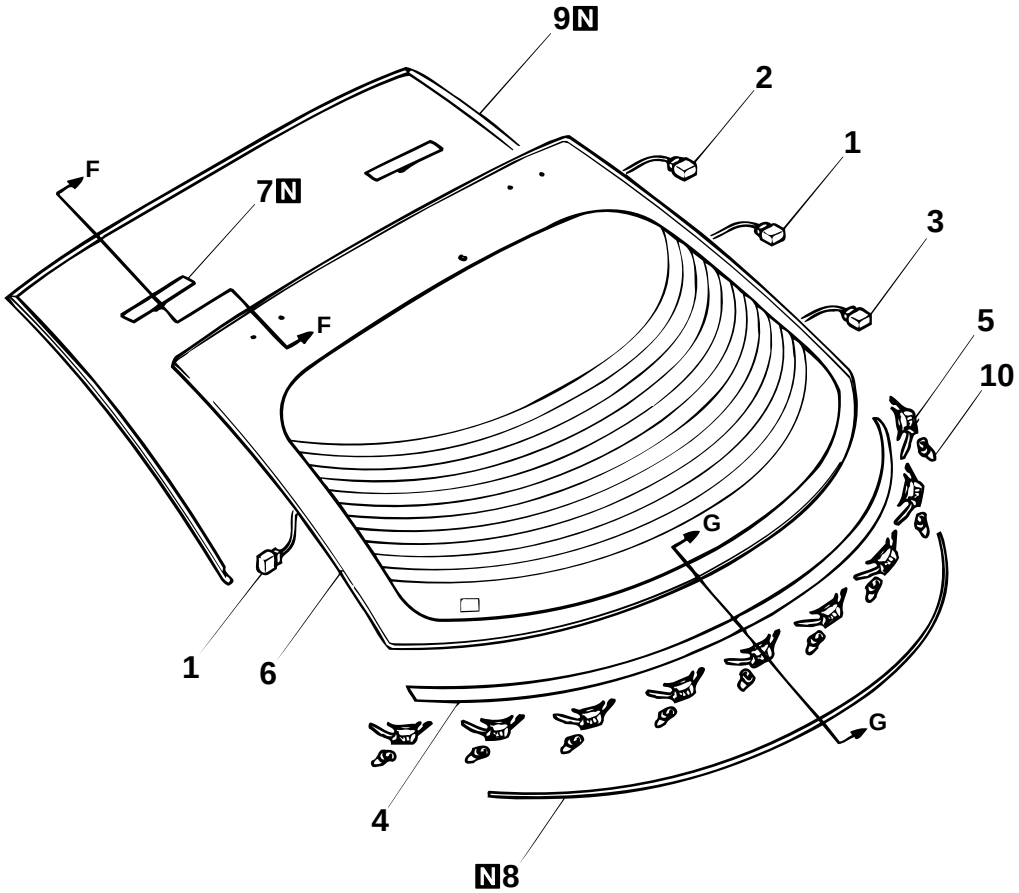
ADHESIVE TAPE: DOUBLE-SIDED TAPE [6 mm (0.2 in) WIDE AND 0.125 mm (0.0049) THICK] AND 3M™ AAD PART NO.8608 SUPER FAST URETHANE PRIMER OR EQUIVALENT

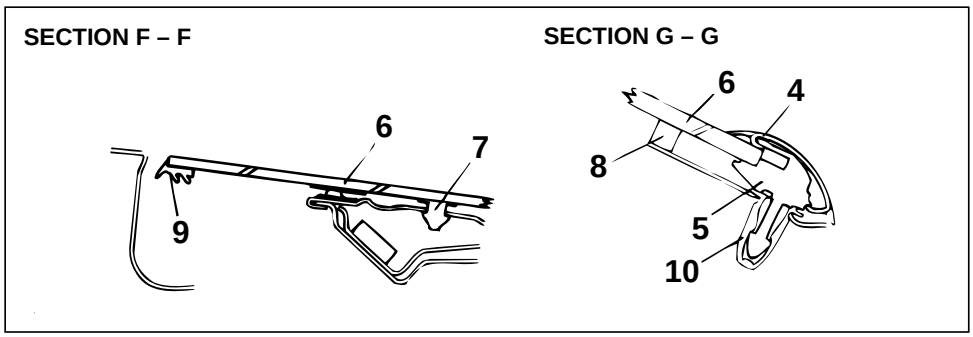


ADHESIVE: 3M™ AAD PART NO. 8609 SUPER FAST URETHANE AND 3M™ AAD PART NO.8608 SUPER FAST URETHANE PRIMER OR EQUIVALENT

AC000459AB

TSB Revision





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REMOVAL STEPS

1. HARNESS CONNECTOR (FOR LIFTGATE WINDOW DEFOGGER)
2. HARNESS CONNECTOR (FOR MAIN GLASS ANTENNA)
3. HARNESS CONNECTOR (FOR SUB GLASS ANTENNA)

<<A>> 4. LIFTGATE LOWER MOULDING

5. LIFTGATE MOULDING CLIP

<<B>> >>A<< 6. LIFTGATE WINDOW GLASS

REMOVAL STEPS (Continued)

>>A<< 7. GLASS STOPPER

>>A<< 8. WINDOW SPACER

9. LIFTGATE UPPER MOULDING
10. CLIP GROMMET A

Required Special Tool:

- MB990480: Glass Holder
- MB990449: Window molding remover

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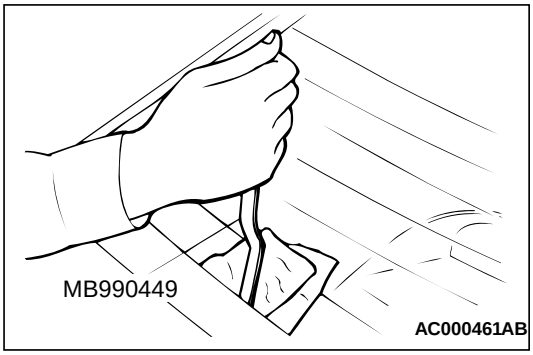
REMOVAL SERVICE POINTS

<<A>> LIFTGATE LOWER MOLDING REMOVAL



⚠ CAUTION

If liftgate lower molding has become warped, it should not be reused.

Use special tool MB990449 to lever out the molding.

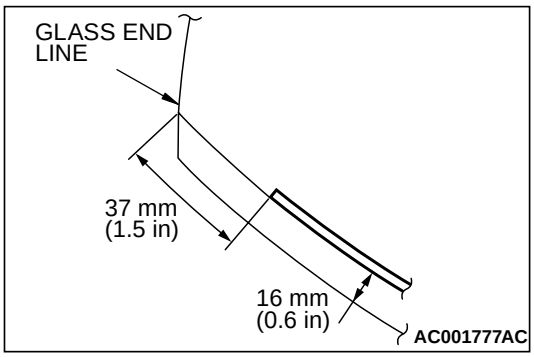
<<B>> LIFTGATE WINDOW GLASS REMOVAL

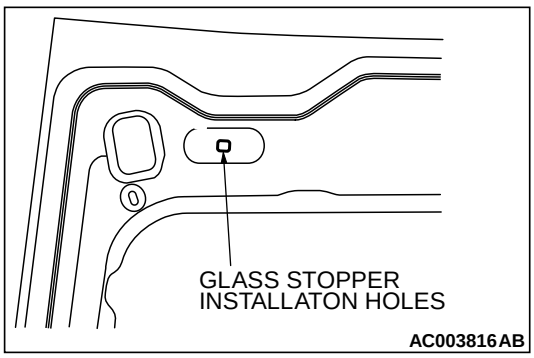
Remove the liftgate window glass using the same procedure as for the windshield. (Refer to P.42-13.)

INSTALLATION SERVICE POINT

>>A<< WINDOW SPACER/GLASS STOPPER/LIFTGATE WINDOW GLASS INSTALLATION

1. Use 3M™ AAD Part number 8906 or equivalent. to degrease the inside and outside edges of the liftgate window glass and the surface of the body flange.
2. Install glass stopper so that it is bent toward inside the liftgate window glass and is firmly sticked.





3. Install glass stopper on liftgate window glass at the same place as glass stopper is installed on body flange
4. Apply primer and adhesive.
5. Install the glass in the same way as for the windshield. (Refer to P.42-13.)

TSB Revision

QUARTER WINDOW GLASS AND REGULATOR ASSEMBLY

GENERAL DESCRIPTION

M1422000100094

POWER WINDOWS

Power windows are used in all vehicles. When the power window main switch is operated, the quarter windows will open or close. This system has the following operations and features.

- A timer function has been provided so that when all doors are closed and ignition is turned off, the power window can be operated for 30 seconds from the time the ignition is turned off.
- The power window main switch contains a one-touch down switch that will automatically open the quarter windows.

WINDOW GLASS DIAGNOSIS

INTRODUCTION TO WINDOW GLASS DIAGNOSIS

M1422006700102

If water leaks from the quarter window glass, causes for these faults can include faults in the glass, weatherstrip or drain hole.

WINDOW GLASS DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1422006800109

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 window glass 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

M1422006900117

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
Quarter window glass water leak	1	P.42-25
Quarter window malfunction	2	P.42-26
Water leak around quarter window glass edge	3	P.42-26
Water leak from quarter trim	4	P.42-26
Wind noise around quarter window	5	P.42-27

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Quarter window glass water leak

DIAGNOSIS

STEP 1. Check if the seal is faulty.

Q: Is the seal faulty?
YES : Repair it, then go to Step 3.
NO : Go to Step 2.

STEP 2. Check if the body flange is deformed.

Q: Is the body flange deformed?
YES : Repair or replace it, then go to Step 3.
NO : Go to Step 3.

STEP 3. Check symptoms.

Q: Is any water leaking?
YES : Return to Step 1.
NO : This diagnosis complete.

TSB Revision

INSPECTION PROCEDURE 2: Quarter window malfunction

DIAGNOSIS

STEP 1. Check the quarter window installation condition.

Q: Is the quarter window installation condition good?
YES : Go to Step 2.
NO : Adjust it. (Refer to P.42-40.) Then go to Step 3.

STEP 2. Inspect the window regulator assembly.

Q: Is the window regulator assembly in good condition?
YES : Go to Step 3.
NO : Repair or replace it, then go to Step 3.

STEP 3. Check symptoms.

Q: Does the quarter window operate correctly?
YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 3: Water leak around quarter window glass edge

DIAGNOSIS

STEP 1. Check the weatherstrip.

Q: Is the weatherstrip in good condition?
YES : Go to Step 2.
NO : Replace it, then go to Step 3.

STEP 2. Check quarter window glass fit (alignment).

Q: Is the quarter window glass fit (alignment) correct?
YES : Go to Step 3.
NO : Adjust it. Refer to P.42-40. Then go to Step 3.

STEP 3. Check symptoms.

Q: Is any water leaking?
YES : Return to Step 1.
NO : This diagnosis is complete.

INSPECTION PROCEDURE 4: Water leak from quarter trim

DIAGNOSIS

STEP 1. Check the drain hole.

Q: Is the drain hole clogged?
YES : Replace it, then go to Step 3.
NO : Go to Step 2.

STEP 2. Check the waterproof cover.

Q: Is the waterproof cover in good condition?
YES : Go to Step 3.
NO : Repair or replace it, then go to Step 3.

STEP 3. Check symptoms.

Q: Is any water leaking?
YES : Return to Step 1.
NO : This diagnosis is complete.

TSB Revision

INSPECTION PROCEDURE 5: Wind noise around quarter window

DIAGNOSIS

STEP 1. Check the weatherstrip for holding condition.

Q: Is the weatherstrip holding firmly?
YES : Go to Step 2.
NO : Adjust fit of quarter window glass. Refer to P.42-40. Then go to Step 4.

STEP 2. Check the clearance.

Q: Is the clearance between the quarter window glass and the rear rail weatherstrip holder proper?
YES : Go to Step 3.
NO : Adjust it. Refer to P.42-40. Then go to Step 4.

STEP 3. Check the quarter window regulator assembly.

Q: Is the quarter window regulator deformed?
YES : Repair or replace it. then go to Step 4.
NO : Go to Step 4.

STEP 4. Check symptoms.

Q: Has the wind noise been improved?
YES : Return to Step 1.
NO : This diagnosis complete.

POWER WINDOW DIAGNOSIS

INTRODUCTION TO POWER WINDOWS DIAGNOSIS

M1429002600074

The quarter window is controlled by the convertible top control module. For troubleshooting, refer to Electric Convertible Top Diagnosis P.42-113. When the power window main switch is operated, the quarter window regulator motor operates and opens or closes the quarter window.
A timer function has been provided to allow the quarter windows to be opened or closed in 30 seconds after the ignition switch is turned from "ON" to "LOCK" (OFF) position when a door <LH> and <RH> is closed (door switch is OFF).

If the following types of symptom occur, there may be a fault.

- None of the quarter windows open or close.
- There are quarter windows that do not open or close using the power window main switch.
- When parking there are quarter windows that do not open using the convertible top switch.
- The windows cannot be opened or closed using the power window main switch within 30 seconds after the ignition switch is turned from "ON" to "LOCK" (OFF) position.

POWER WINDOWS DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1429002700071

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 power windows fault.

1. Gather information from 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

M1429002800089

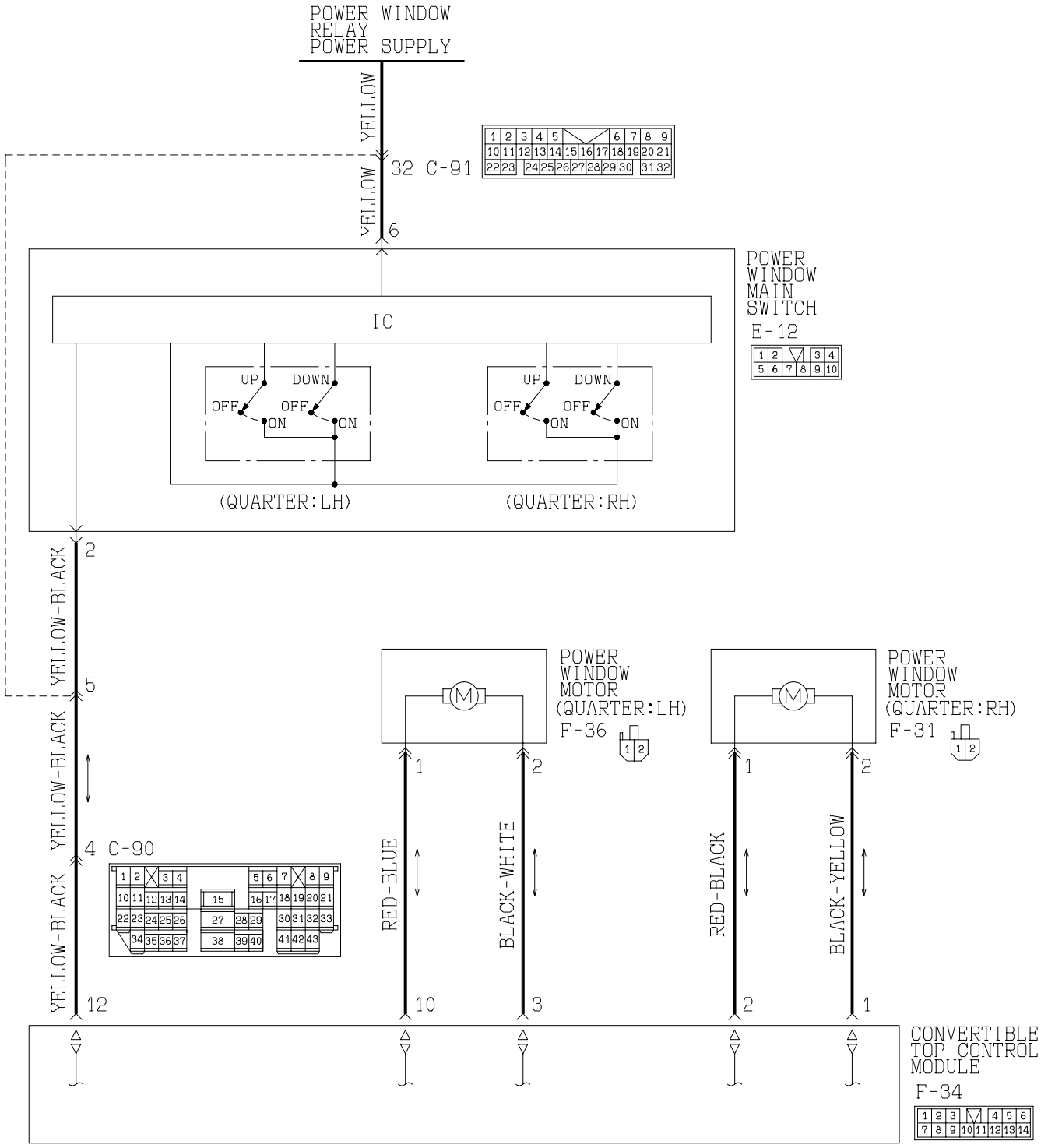
SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
None of the quarter windows open or close.	1	P.42-29
Only the quarter window <LH> does not open and close.	2	P.42-33
Only the quarter window <RH> does not open and close.	3	P.42-36
The quarter windows cannot be opened or closed by the power window main switch within 30 seconds after the ignition switch is turned from "ON" to "LOCK" (OFF) position. (However, this is before the front doors <LH> and <RH> are opened.)	-	Refer to GROUP 54B, Diagnosis P.54B-9.

TSB Revision

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: None of the quarter windows are open or close.

Quarter Window Regulator Motor Drive Circuit



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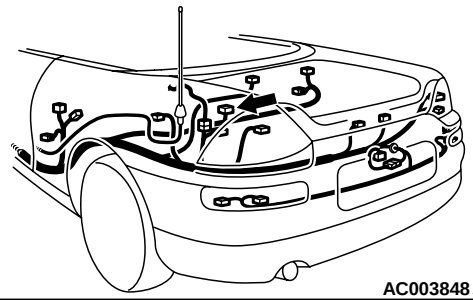
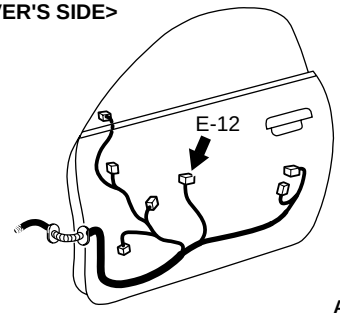
TSB Revision

CONNECTOR: F-34



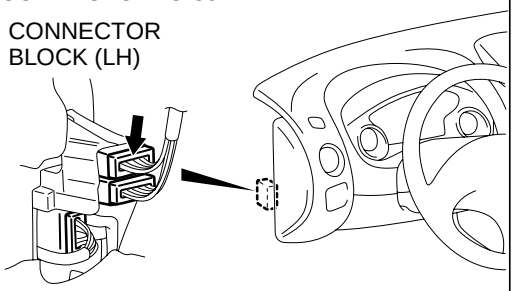
AC003848 AB

CONNECTOR: E-12
<DRIVER'S SIDE>



AC001794 AC

CONNECTOR: C-89



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CIRCUIT OPERATION

- When the power main switch is operated, signal is sent to the convertible top control module in order to operate the quarter window regulator motor to open/close the quarter window.

TECHNICAL DESCRIPTION (COMMENT)

- The cause may be a malfunction of the quarter window regulator motor drive circuit.

TROUBLESHOOTING HINTS

- Malfunction of the convertible top control module
- Malfunction of the power main switch
- Damaged harness wires or connectors

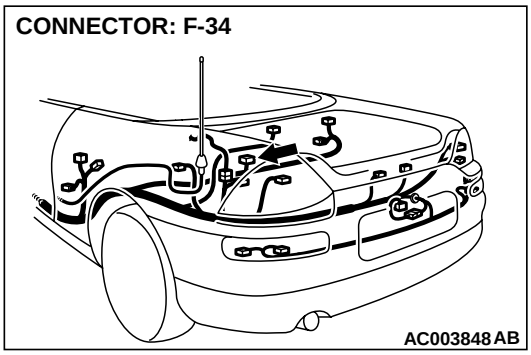
TSB Revision

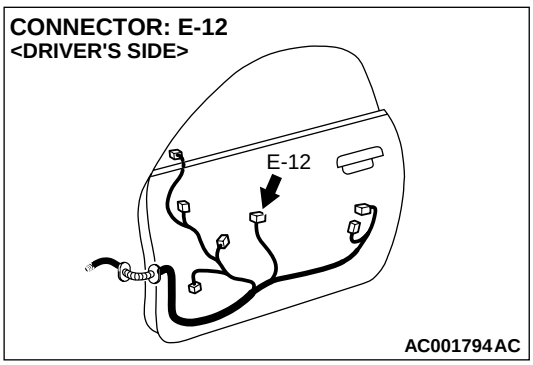
DIAGNOSIS

STEP 1. Check harness wires between convertible top control module connector F-34 and power window main switch connector E-12.

Q: Are there any damaged wires between convertible top control module connector F-34 and power main switch connector E-12?

YES : Repair then, go to Step 4.
NO : Go to Step 2.

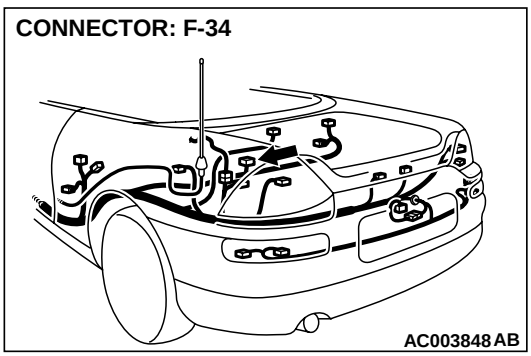


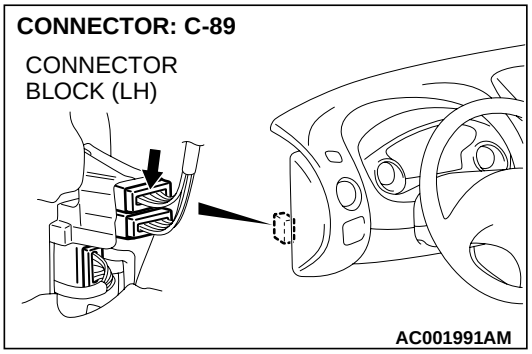


STEP 2. Check harness wires between convertible top control module connector F-34 and connector block connector C-89.

Q: Are there any damaged wires between convertible top control module connector F-34 and connector block connector C-89?

YES : Repair then, go to Step 4.
NO : Go to Step 3.





TSB Revision

STEP 3. Check the power window main switch.

(1) Exchange the power window main switch with one in good condition to check that the quarter window glass operates properly. (Refer to P.42-71.)

(2) If normal operates can not be seen, replace the convertible top control module. (Refer to P.42-157.)

Q: Is the power window main switch damaged?

YES : Replace it, then go to Step 4.

NO : Go to Step 4.

STEP 4. Check symptoms.

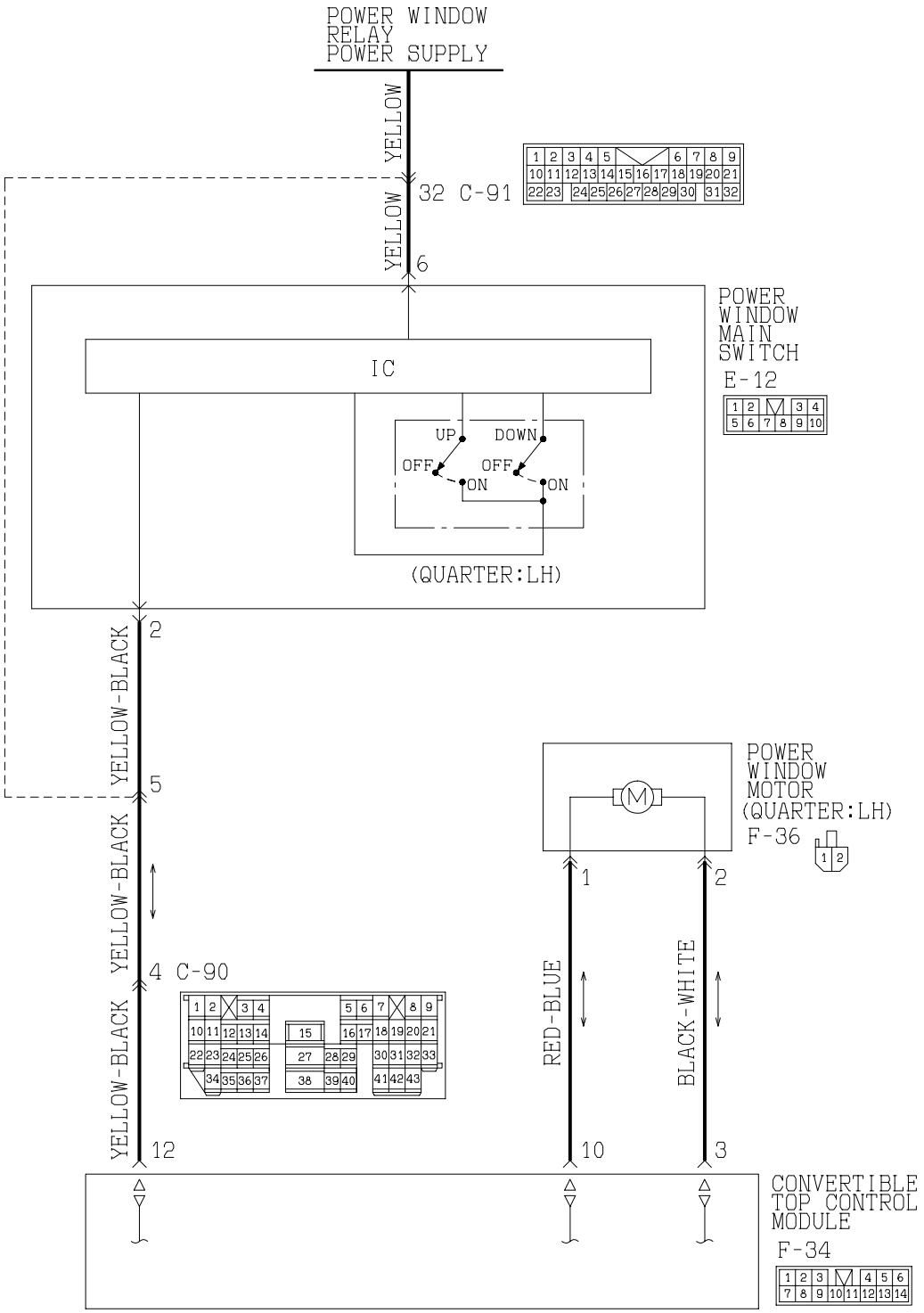
Q: Does the quarter windows open and close normally?

YES : This diagnosis is complete.

NO : Return to Step 1.

INSPECTION PROCEDURE 2: Only the quarter window <LH> does not open and close.

Quarter Window Regulator Motor <LH> Drive Circuit



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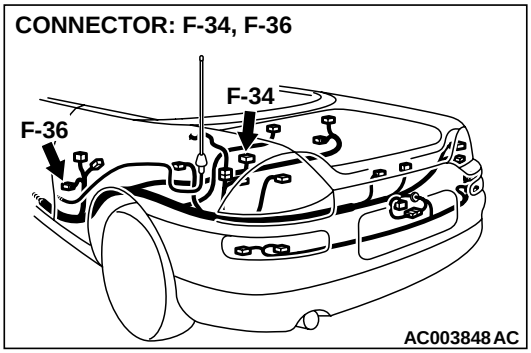


CIRCUIT OPERATION

- When the power window switch is operated, signal is sent to the convertible top control module in order to operate the quarter window regulator motor to open/close the quarter window.

TECHNICAL DESCRIPTION (COMMENT)

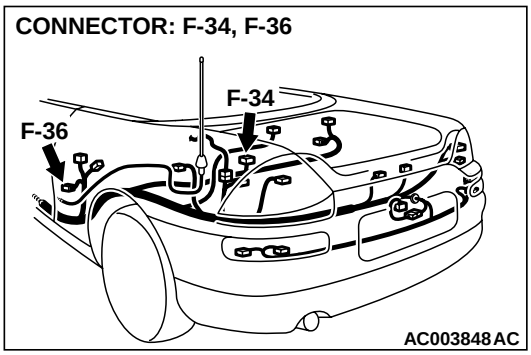
- The cause may be a malfunction of the quarter window regulator motor <LH> drive circuit.

TROUBLESHOOTING HINTS

- Malfunction of the convertible top control module.
- Malfunction of the quarter window regulator motor assembly <LH>.
- Damaged harness wires or connectors.

DIAGNOSIS

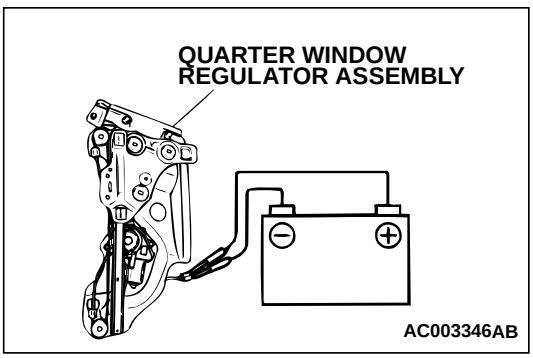
STEP 1. Check harness wires between convertible top control module connector F-34 and quarter window regulator motor <LH> connector F-36.



Q: Are there any damaged wires between convertible top control module connector F-34 and quarter window regulator motor <LH> connector F-36?

YES : Replace it, then go to Step 4.
NO : Go to Step 2.

STEP 2. Check the quarter window regulator motor <LH> operation.



(1) Check that the motor runs smoothly when the battery is connected directly to the motor terminals.
(2) Furthermore, check that the motor operates in reverse when the terminal connections are reversed. (Refer to P.42-40.)

Q: Is the quarter window regulator motor <LH> damaged?

YES : Replace it, then go to Step 4.
NO : Go to Step 3.

TSB Revision

STEP 3. Check the power window main switch continuity.

(1) Exchange the power window main switch with one in good condition to check that the quarter window glass operates properly. (Refer to P.42-71.)
(2) If normal operates can not be seen, replace the convertible top control module. (Refer to P.42-157.)

Q: Is the power window main switch damaged?

YES : Replace it, then go to Step 4.
NO : Go to Step 4.

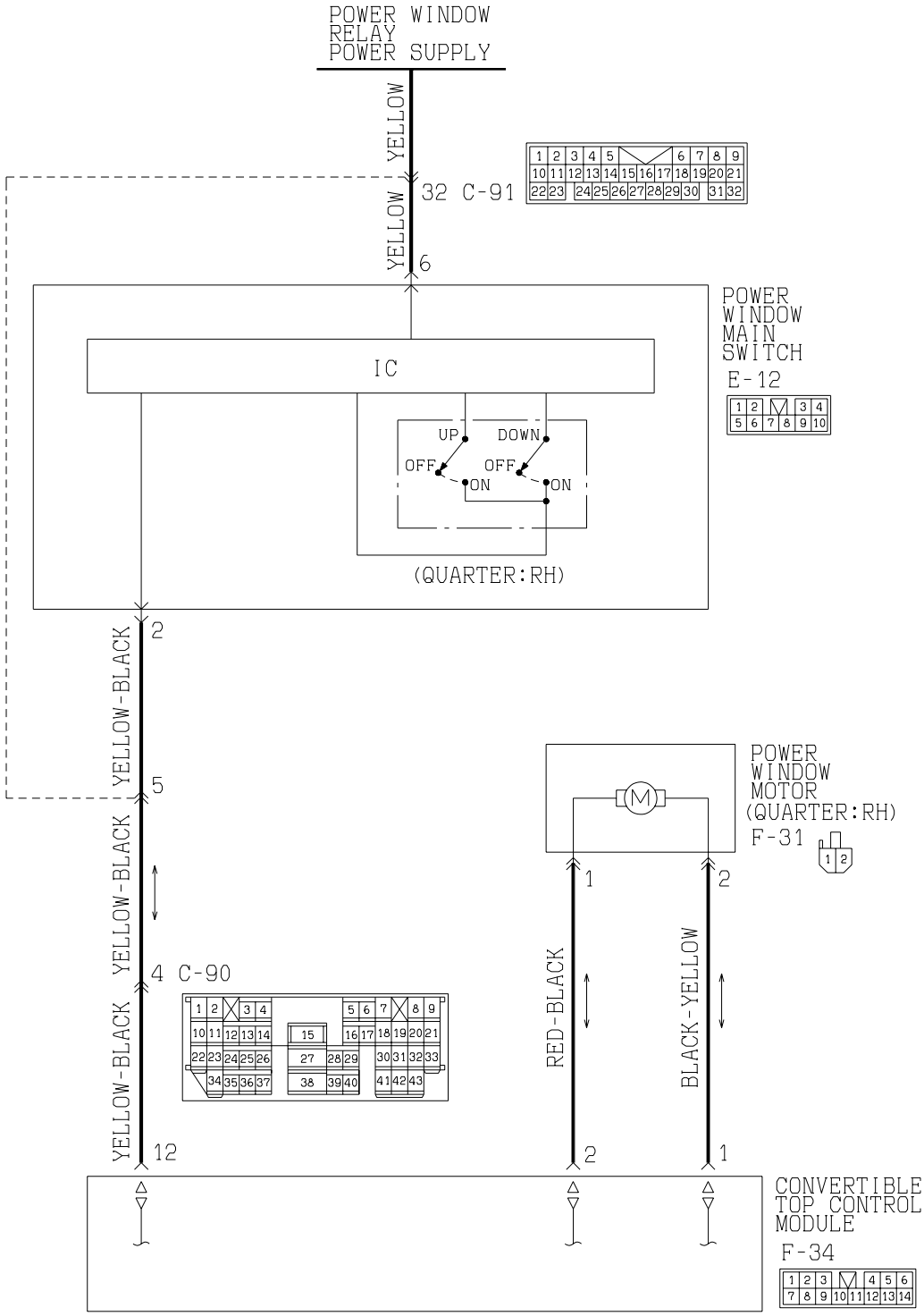
STEP 4. Check symptoms.

Q: Does the quarter windows open and close normally?

YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 3: Only the quarter window <RH> does not open and close.

Quarter Window Regulater Motor <RH> Drive Circuit



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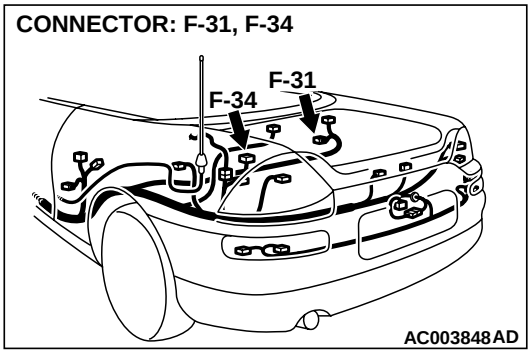


CIRCUIT OPERATION

- When the power window main switch is operated, signal is sent to the convertible top control module in order to operate the quarter window regulator motor to open/close the quarter window.

TECHNICAL DESCRIPTION (COMMENT)

- The cause may be a malfunction of the quarter window regulator motor <RH> drive circuit.

TROUBLESHOOTING HINTS

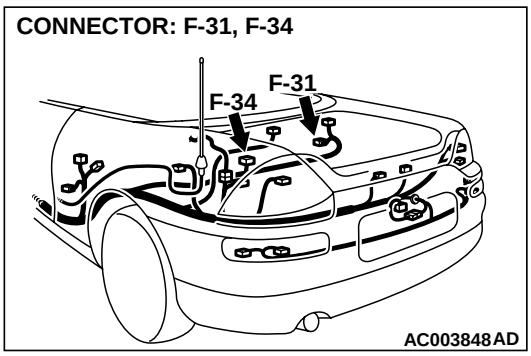
- Malfunction of the power window main switch
- Malfunction of the quarter window regulator motor assembly <RH>
- Damaged harness wires or connectors

DIAGNOSIS

STEP 1. Check harness wires between convertible top control module connector F-34 and quarter window regulator motor connector F-31.

Q: Are there any damaged wires between convertible top control module connector F-34 and quarter window regulator motor connector F-31?

YES : Replace it, then go to Step 4.
NO : Go to Step 2.

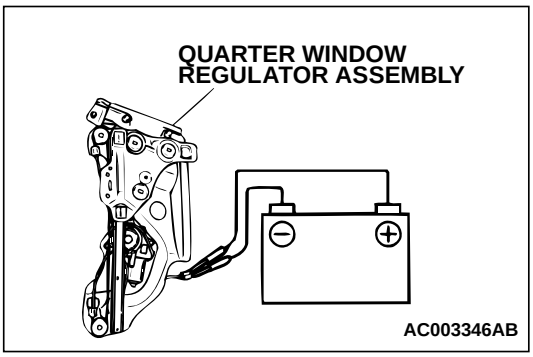


STEP 2. Check the quarter window regulator motor <RH> operation.

(1) Check that the motor runs smoothly when the battery is connected directly to the motor terminals.
(2) Furthermore, check that the motor operates in reverse when the terminal connections are reversed. (Refer to P.42-40.)

Q: Is the quarter window regulator motor <RH> damaged?

YES : Replace it, then go to Step 4.
NO : Go to Step 3.



TSB Revision

STEP 3. Check the power window main switch continuity.

(1) Exchange the power window main switch with one in good condition to check that the quarter window glass operates properly. (Refer to P.42-71.)

(2) If normal operates can not be seen, replace the convertible top control module. (Refer to P.42-157.)

Q: Is the power window main switch damaged?

YES : Replace it, then go to Step 4.

NO : Go to Step 4.

STEP 4. Check symptoms.

Q: Does the quarter windows open and close normally?

YES : This diagnosis is complete.

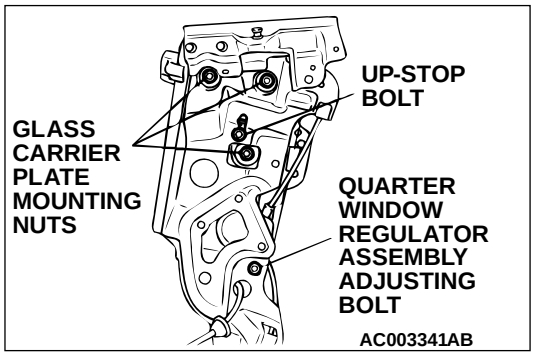
NO : Return to Step 1.

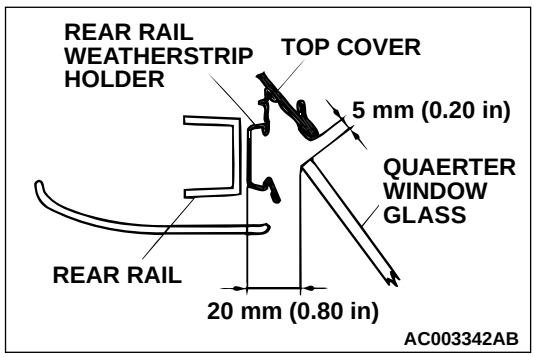
ON-VEHICLE SERVICE

QUARTER WINDOW GLASS ADJUSTMENT

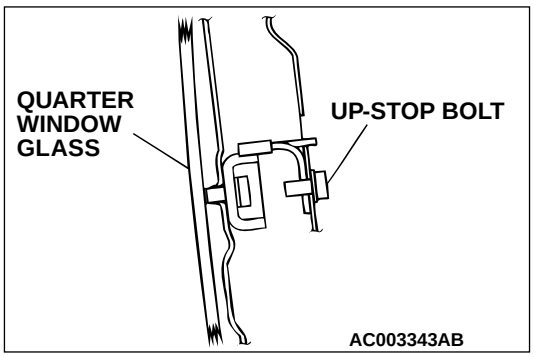
M1422005800021

1. Remove the quarter lower trim. (Refer to GROUP 52A P.52A-10.)
2. Remove the topstack rear rail weatherstrip. (Refer to P.42-155.)
3. Loosen the bolts and nuts of the following parts.
   - Quarter window regulator assembly
   - Glass carrier plate
   - Up-stop





4. Tighten the glass carrier plate mounting nuts so that the gap between the quarter window glass and topstack rear rail weatherstrip holder meets the value shown.
5. Using the quarter window regulator assembly adjusting bolt, adjust so that the gap between the quarter window glass and topstack rear rail weatherstrip holder meets the value shown.



6. Press the up-stop against the quarter window glass stop, and then tighten the up-stop bolt.

7. Lock the adjusting bolt with a nut.

⚠ CAUTION

Ensure that the weatherstrip is not wrinkled or out of position.

8. Install the topstack rear rail weatherstrip. (Refer to P.42-155.)
9. Install the quarter lower trim. (Refer to GROUP 52AP.52A-10.)
10. Check the quarter window glass alignment according to the following procedure.
    (1) The upper end of the front door glass and the quarter window glass should be positioned so that standard value (a) is met.

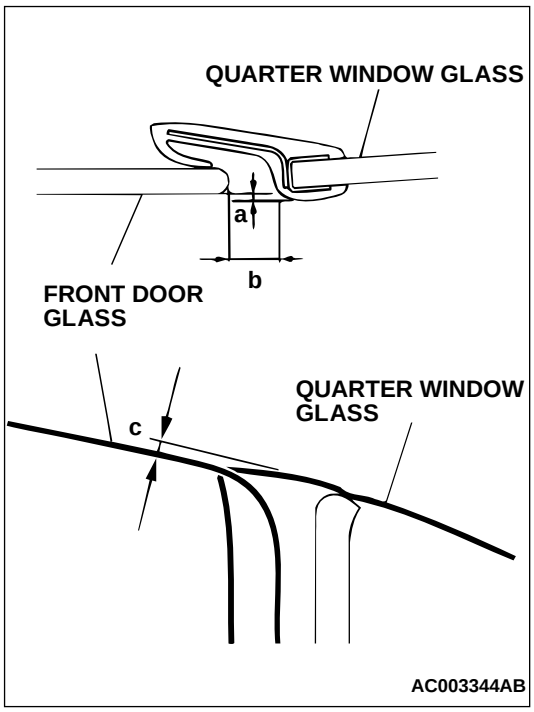
    Standard value (a): 1.0 ± 1.0 mm (0.04 ± 0.04 inches)

    (2) The front door glass and the quarter window glass should be positioned to meet standard value (c) so that gap in their upper end lines is smooth.

    Standard value (c): 3.0 ± 1.0 mm (0.12 ± 0.04 inches)

    (3) The end line of the front door glass and the front line of the quarter window glass should be parallel in the interval of standard value (b).

    Standard value (b): 8.7 mm (0.34 inches)

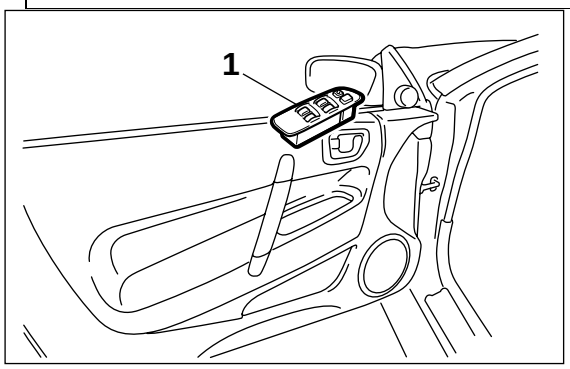


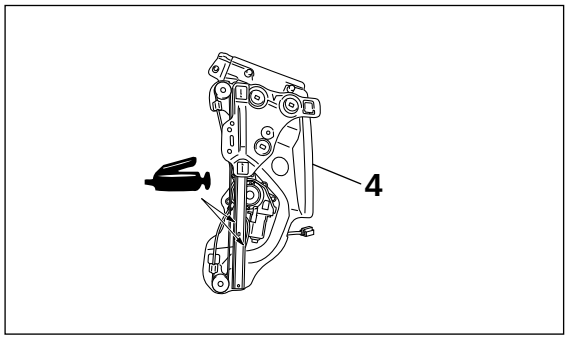
QUARTER WINDOW GLASS AND REGULATOR ASSEMBLY

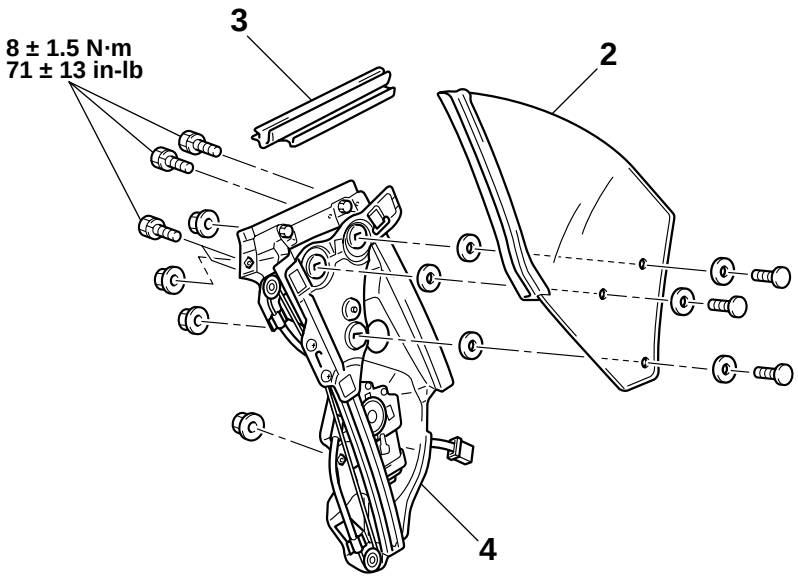
REMOVAL AND INSTALLATION

M1422006000028

Post-installation Operation
- Quarter Window Glass Adjustment (Refer to P.42-38.)







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POWER WINDOW MAIN SWITCH SWITCH REMOVAL STEPS
1. POWER WINDOW MAIN SWITCH (REFER TO.)

QUARTER WINDOW GLASS REMOVAL STEPS
- REAR SPEAKER GARNISH (REFER TO GROUP 52A P.52A-10.)
- QUARTER BELT MOULDING (REFER TO GROUP 51 P.51-9.)

<<A>> 2. QUARTER WINDOW GLASS

<<A>>

QUARTER WINDOW REGULATOR ASSEMBLY REMOVAL STEPS
2. QUARTER WINDOW GLASS
- QUARTER TRIM (REFER TO GROUP 52A P.52A-10.)
- REAR SPEAKER (REFER TO GROUP 54A P.54A-181.)

3. QUARTER WINDOW INNER BELTLINE MOULDING

<<B>> 4. QUARTER WINDOW REGULATOR ASSEMBLY

<<B>>

REMOVAL SERVICE POINTS

<<A>> QUARTER WINDOW GLASS REMOVAL

1. Completely raise the quarter window.
2. Remove the quarter window

<<B>> QUARTER WINDOW REGULATOR ASSEMBLY REMOVAL

Disconnect regulator motor connector, remove the quarter window regulator assembly.

TSB Revision

INSPECTION

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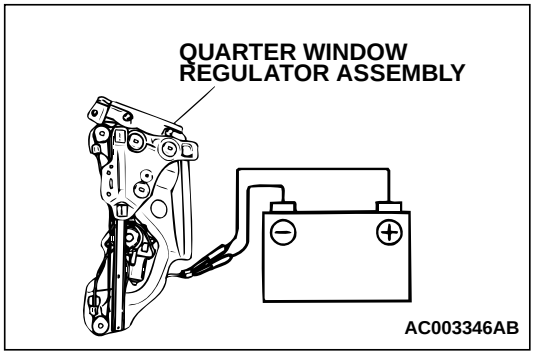
QUARTER WINDOW REGULATOR MOTOR CHECK
Check that motor runs smoothly when the battery is connected directly to the motor terminals.
Furthermore, check that the motor operates in reverse when the terminal connections are switched.



DOOR

GENERAL DESCRIPTION

M1423000100075

OPERATION

CENTRAL DOOR LOCKING SYSTEM

The central door locking system operates the door lock actuator to lock or unlock the doors using the operation of the door lock switch or key built into the driver's side inside door lock knob and power window (main or sub) switch.The system has the following operations and features:

- All doors can be locked or unlocked using the door (LH or RH) key cylinder key operation.
- All doors can be locked using the driver's inside door lock knob.
- All doors can be locked using the door lock switch built into the power window (main or sub) switch.
- You cannot lock an open door if the key is in the ignition switch. The key reminder function automatically unlocks all doors when the door is locked.

Power windows

Power windows are used in all vehicles. When the power window (main or sub) switch is operated, the door windows will open or close. This system has the following operations and features:

- When the power window main switch lock/unlock switch is locked, the door windows can only be opened or closed by the power window main switch on the driver's door.
- When all doors are closed and the ignition is turned off, the power windows can be operated for 30 seconds from the time the ignition is turned off.
- The power window main switch contains a one-touch down switch that will automatically fully open driver's side door window only.

CENTRAL DOOR LOCKING SYSTEM DIAGNOSIS

M1427000700057

The central door locking system is controlled by the smart wiring system (SWS). For troubleshooting, refer to GROUP 54B, Diagnosis P.54B-6.

TSB Revision

POWER WINDOW DIAGNOSIS

INTRODUCTION TO POWER WINDOWS DIAGNOSIS

M1429002600052

The power window relay is controlled by the smart wiring system (SWS). For troubleshooting, refer to GROUP 54B, Diagnosis P.54B-9. When the power window switch (main or sub) is operated, the power window motor operates and opens or closes the door window.
A timer function has been provided to allow the door windows to be opened or closed in 30 seconds after the ignition switch is turned from "ON" to "LOCK" (OFF) position when a front door <LH> and <RH> is closed (door switch is OFF). When the lock switch is changed from unlock to lock, the door windows can only be opened or closed by the power window main switch on the driver's side.

If the following types of symptom occur, there may be a fault.

- None of the door windows open or close.
- There are door windows that do not open or close using the power window (main or sub) switch.
- The windows cannot be opened or closed using the power window (main or sub) switch within 30 seconds after the ignition switch is turned from "ON" to "LOCK" (OFF) position.

POWER WINDOWS DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1429002700059

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 power windows fault.

1. Gather information from 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

M1429002800067

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
None of the door windows open or close.	-	Refer to GROUP 54B, Diagnosis P.54B-6.
Only the front door window <LH> does not open and close.	1	P.42-43
Only the front door window <RH> does not open and close.	2	P.42-47
There are door windows that do not open or close using the power window sub switch (on passenger's door). (However, they open or close when the power window main switch is used.)	3	P.42-53
None of the door windows are opened or closed by the power window main switch (on driver's door). (However, they are opened or closed by the power window sub switch.)	4	P.42-55
The door windows cannot be opened or closed by the power window (main or sub) switch within 30 seconds after the ignition switch is turned from "ON" to "LOCK" position. (However, this is before the front doors LH and RH are opened.)	-	Refer to GROUP 54B, Diagnosis P.54B-6.

TSB Revision

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Only the door window <LH> does not open and close.

Power Window Motor <LH> Drive Circuit

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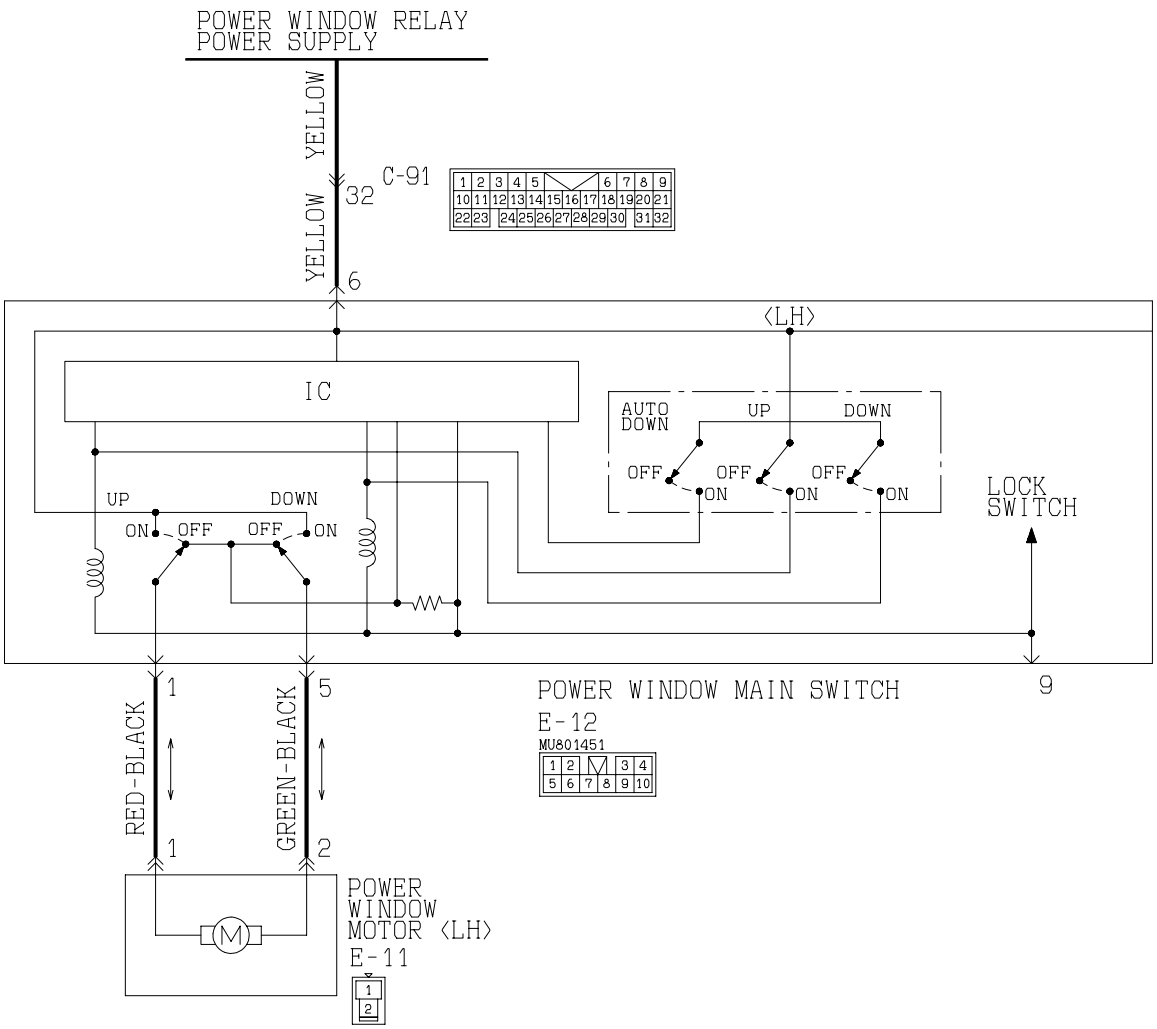

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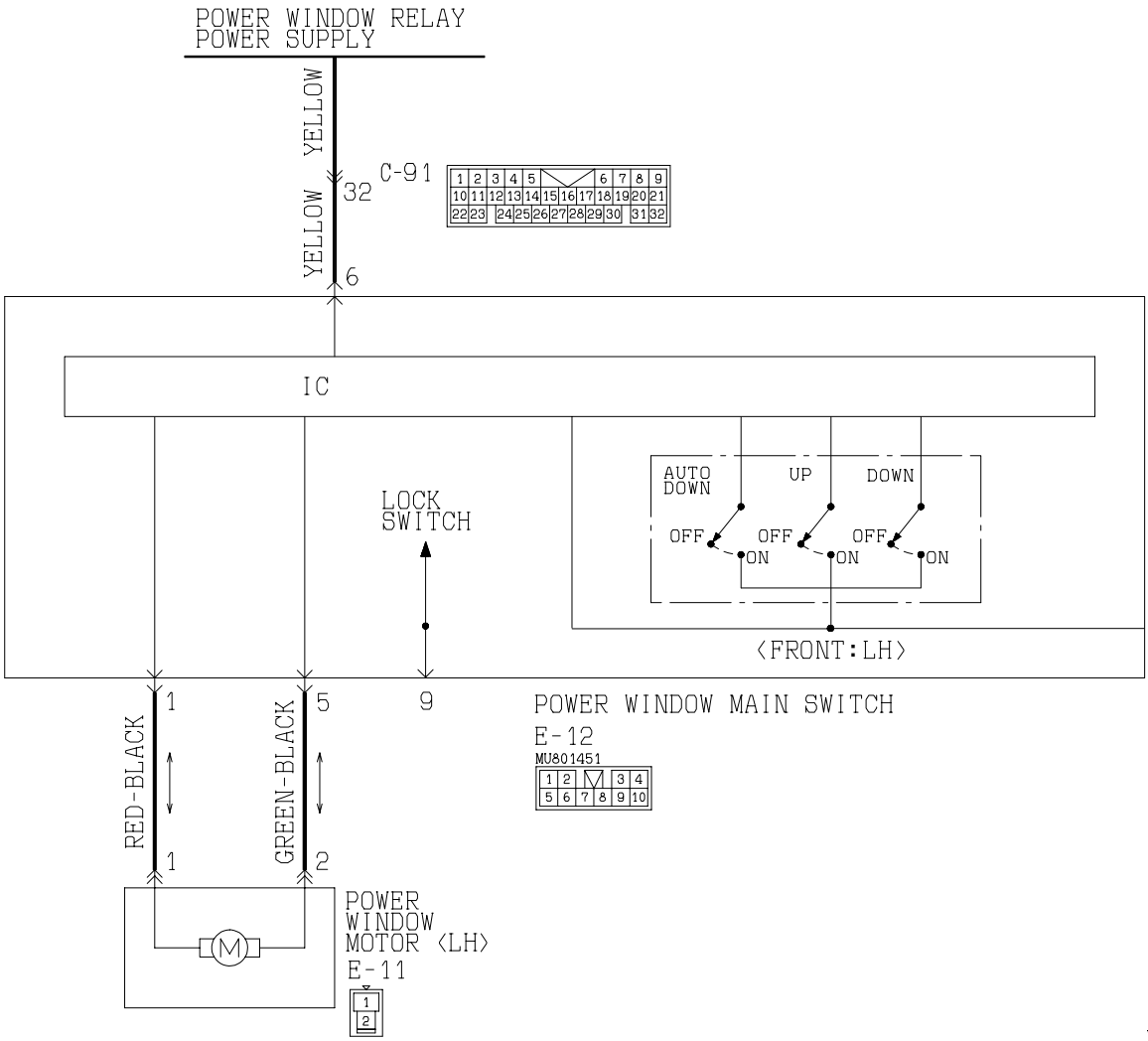
TSB Revision

<ECLIPSE SPYDER>



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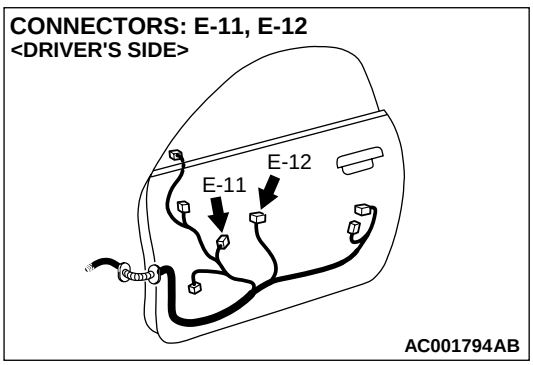


CIRCUIT OPERATION

- When the power window switch is operated up or down, the operation side relay turns on, the power window motor operates, and opens or closes the door window <LH>.

TECHNICAL DESCRIPTION (COMMENT)

- The cause may be a malfunction of the power window motor <LH> drive circuit.

TROUBLESHOOTING HINTS

- Malfunction of the power window relay.
- Malfunction of the ETACS-ECU.
- Damaged harness wires or connectors.

TSB Revision

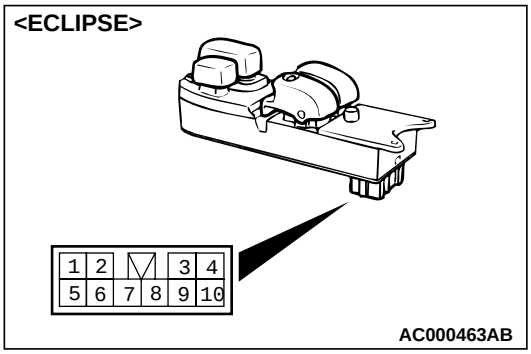
DIAGNOSIS

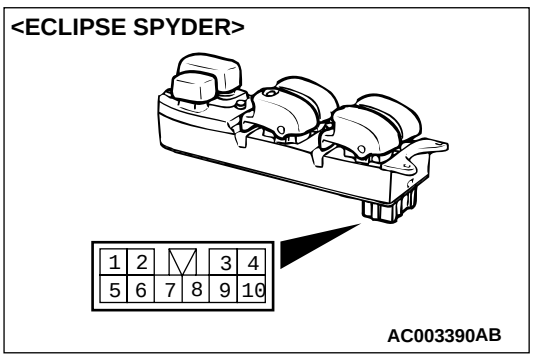
STEP 1. Check the power window main switch continuity.

(1) Remove the power window main switch. (Refer to P.42-71.)

(2) Check the continuity when the power window main switch is turned to the UP position or DOWN position.

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
UP	1 – 6, 5 – 9	Continuity
OFF	1 – 5 – 9	Continuity
DOWN	1 – 9, 5 – 6	Continuity





Q: Is the power window main switch damaged?

YES : Replace it, then go to Step 4.

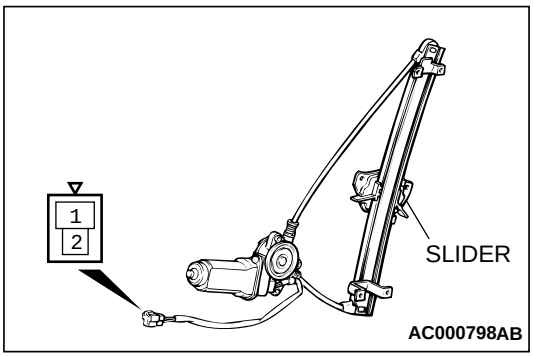
NO : Go to Step 2.

STEP 2. Check the front power window motor <LH> operation.

(1) Remove the power window motor <LH>. (Refer to P.42-74.)

(2) Connect a battery directly to the motor terminals and check that the motor runs smoothly.

TESTER CONNECTION	SLIDER POSITION
1–Battery(+), 2–Battery(-)	UP
2–Battery(+), 1–Battery(-)	DOWN



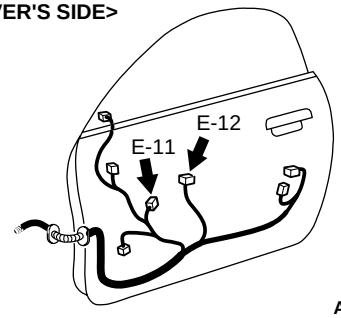
Q: Is the front power window motor <LH> damaged?

YES : Replace it, then go to Step 4.

NO : Go to Step 3.

TSB Revision

CONNECTORS: E-11, E-12
<DRIVER'S SIDE>



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STEP 3. Check the harness wires between power window main switch connector E-12 and power window motor <LH> connector E-11.

Q: Are there any damaged wires between power window main switch connector E-12 and power window motor <LH> connector E-11?

YES : Repair them, then go to Step 4.
NO : Go to Step 4.

STEP 4. Check symptoms

Q: Does the door window <LH> open and close normally?

YES : This diagnosis is complete.
NO : Return to Step 1.

TSB Revision

INSPECTION PROCEDURE 2: Only the door window <RH> does not open and close.

Power Window Motor <RH> Drive Circuit

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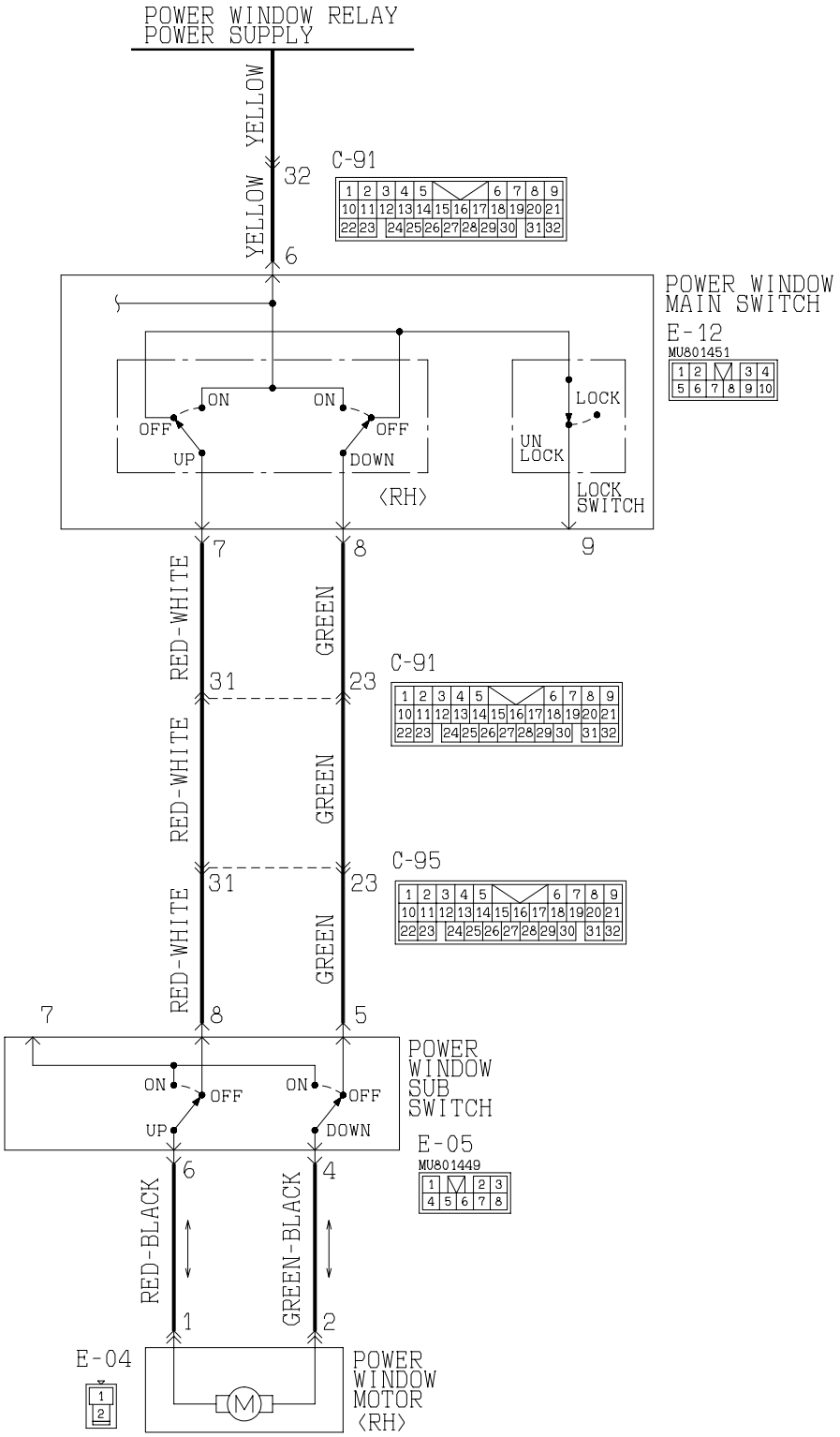

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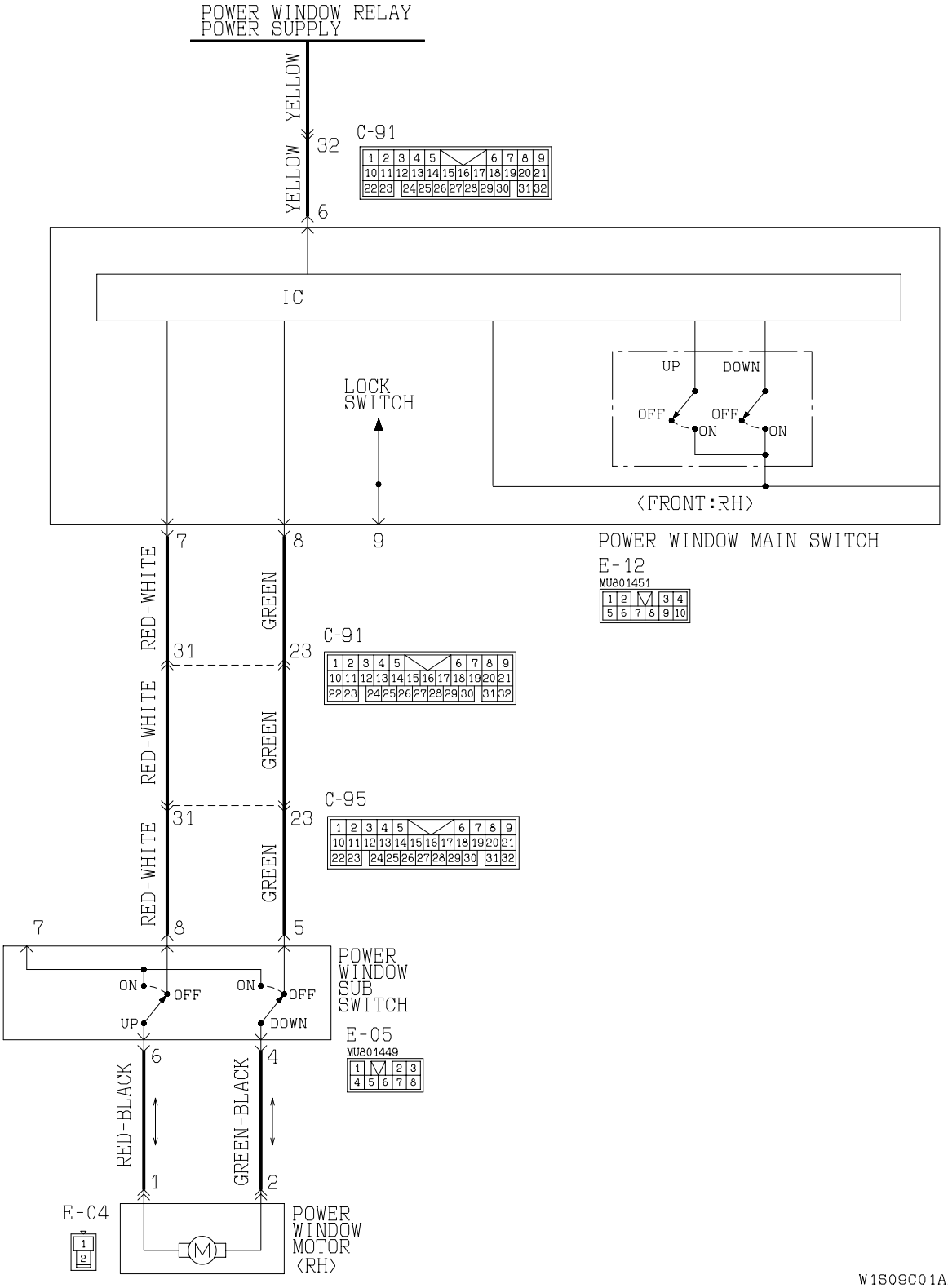
TSB Revision

<ECLIPSE SPYDER>



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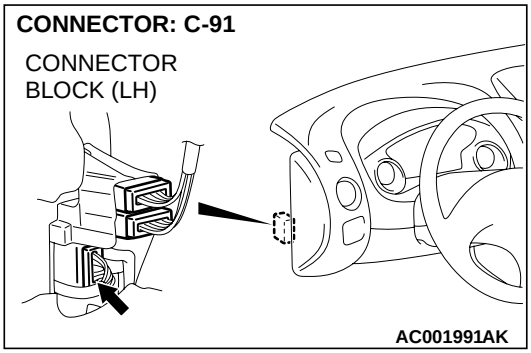
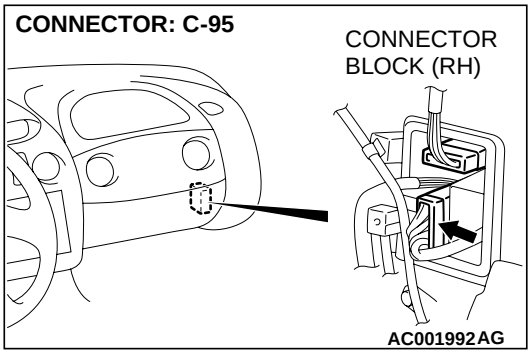
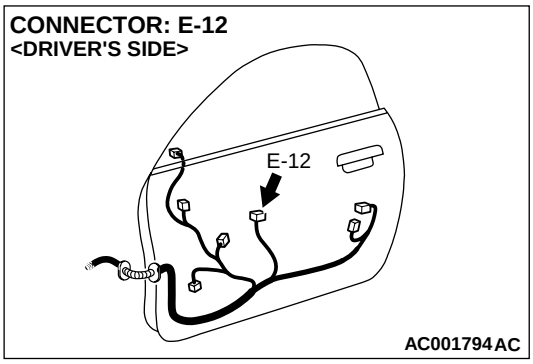
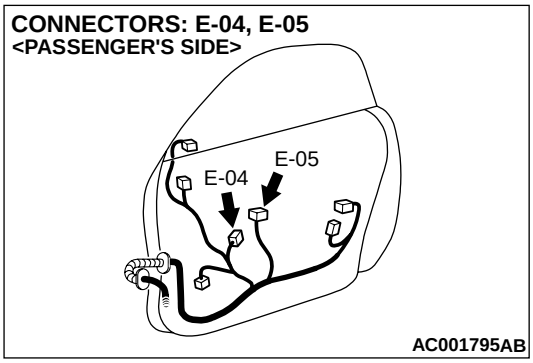
TSB Revision









CIRCUIT OPERATION

- When the power window switch is operated up or down, the power window motor operates and opens or closes the door window.

TECHNICAL DESCRIPTION (COMMENT)

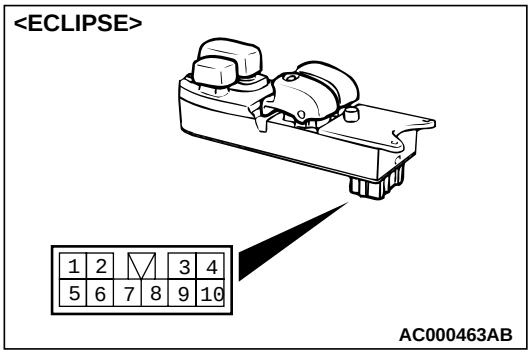
- The cause may be a malfunction of the power window motor <RH> drive circuit.

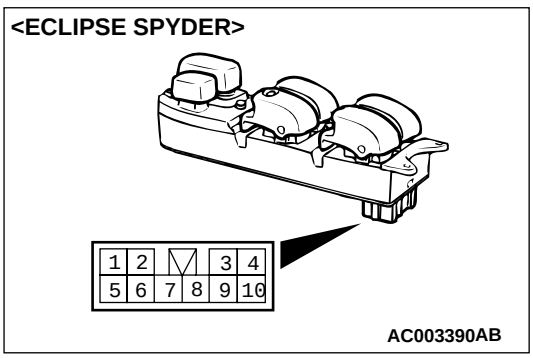
TROUBLESHOOTING HINTS

- Malfunction of the power window main switch
- Malfunction of the power window sub-switch
- Malfunction of the power window motor <RH>
- Damaged harness wires or connectors

TSB Revision

DIAGNOSIS





STEP 1. Check the power window main switch continuity.

(1) Remove the power window main switch. (Refer to P.42-71.)

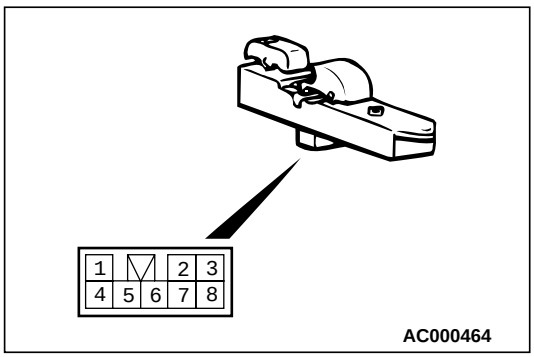
(2) Check the continuity when the power window main switch <RH> is turned to the UP position or DOWN position.

FRONT <RH> SWITCH POSITION		TESTER CONNECTION	SPECIFIED CONDITION
When the lock switch is locked.	UP	6 – 7	Continuity
	OFF	7 – 8	Continuity
	DOWN	6 – 8	Continuity
When the lock switch is unlocked.	UP	6 – 7, 8 – 9	Continuity
	OFF	7 – 8 – 9	Continuity
	DOWN	6 – 8, 7 – 9	Continuity

Q: Is the power window main switch damaged?

YES : Replace it, then go to Step 6.

NO : Go to Step 2.



STEP 2. Check the power window sub-switch continuity.

(1) Remove the power window sub-switch. (Refer to P.42-71.)

(2) Check the continuity when the power window sub-switch is turned to the UP position or DOWN position.

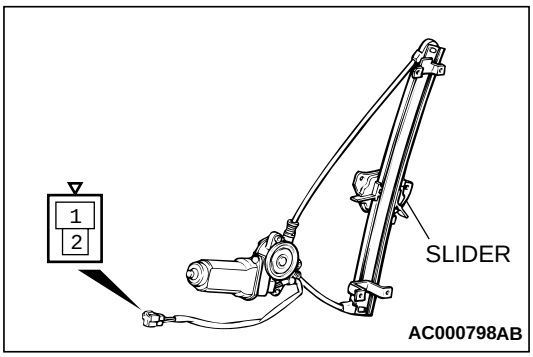
SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
UP	4 – 5, 6 – 7	Continuity
OFF	4 – 5, 6 – 8	Continuity
DOWN	6 – 8, 4 – 7	Continuity

Q: Is the power window sub-switch damaged?

YES : Replace it, then go to Step 6.

NO : Go to Step 3.

TSB Revision



STEP 3. Check the power window motor <RH> operation.

(1) Remove the power window regulator <RH>. (Refer to P.42-74.)

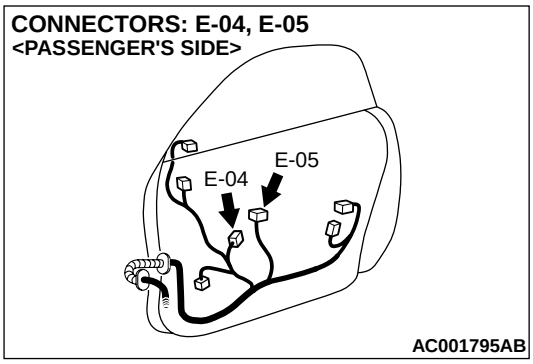
(2) Connect a battery directly to the motor terminals and check that the motor runs smoothly.

TESTER CONNECTION	SLIDER POSITION
1–Battery(+), 2–Battery(-)	UP
2–Battery(+), 1–Battery(-)	DOWN

Q: Is the power window motor <RH> damaged?

YES : Replace it, then go to Step 6.

NO : Go to Step 4.



STEP 4. Check the harness wires between power window sub-switch connector E-05 and power window motor <RH> connector E-04.

Q: Are there any damaged wires between power window sub-switch connector E-05 and power window motor <RH> connector E-04?

YES : Repair them, then go to Step 6.

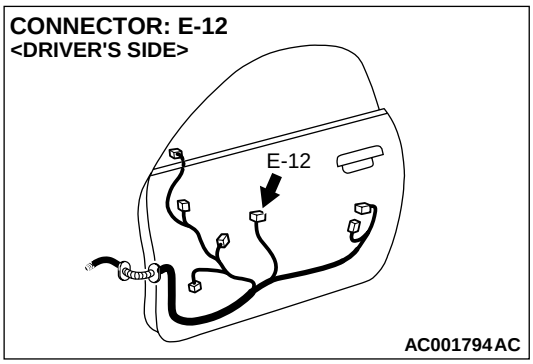
NO : Go to Step 5.

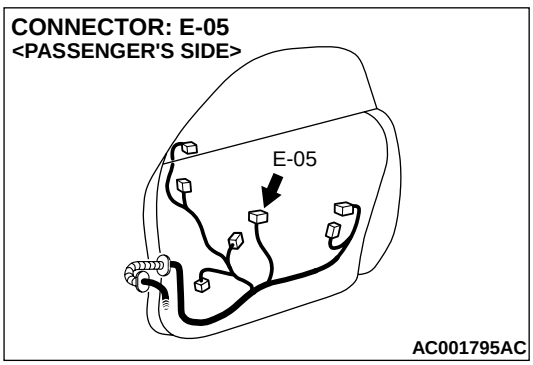
STEP 5. Check the harness wires between power window main switch connector E-12 and power window sub-switch connector E-05.

Q: Are there any damaged wires between power window main switch connector E-12 and power window sub-switch connector E-05?

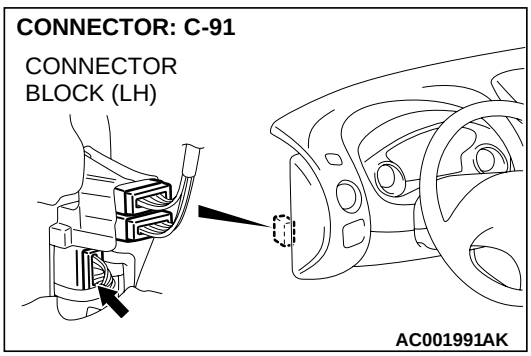
YES : Repair them, then go to Step 6.

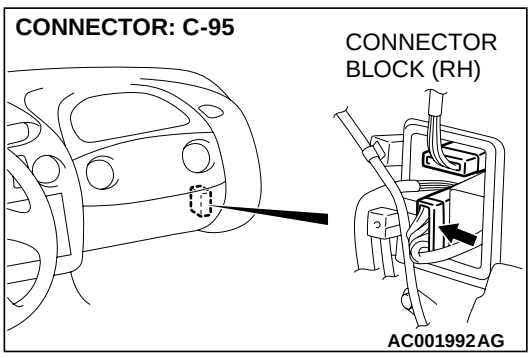
NO : Go to Step 6.





NOTE: After inspecting intermediate connector C-91 or C-95, inspect the wire. If intermediate connector C-91 or C-95 is damaged, repair or replace it. Refer to GROUP 00E P.00E-2, Harness Connector Inspection. Then go to Step 6.





STEP 6. Check symptoms

Q: Does the door window <RH> open and close normally?

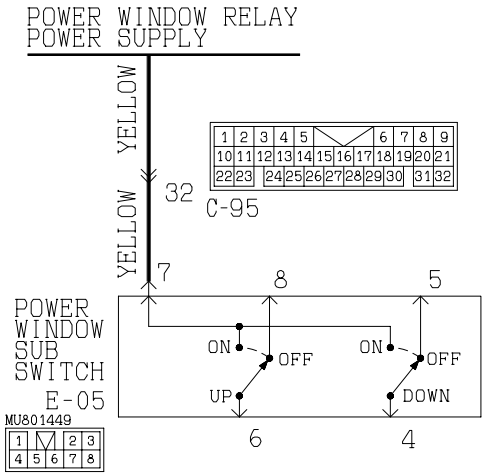
YES : This diagnosis is complete.

NO : Return to Step 1.

TSB Revision

INSPECTION PROCEDURE 3:Some door windows do not or close using the power window sub switch (on passenger doors).(However,they open or close when the power window main switch is used.)

Power Window Sub-Switch Power Supply



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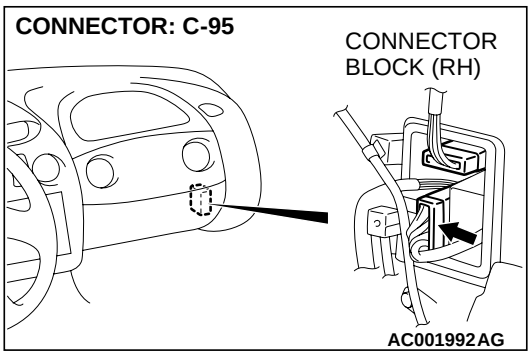
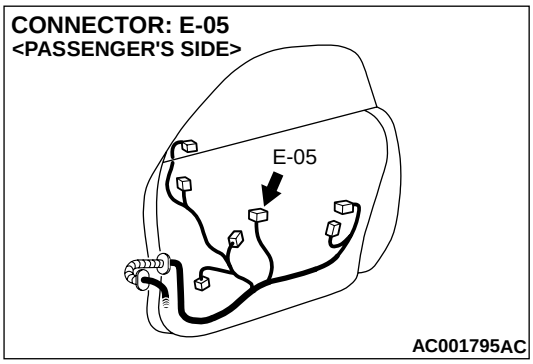




CIRCUIT OPERATION

- Power is supplied to the power window sub-switch from the power window relay.

TECHNICAL DESCRIPTION (COMMENT)

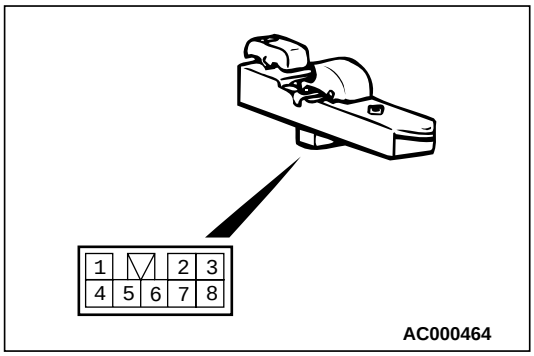
- The cause may be a malfunction of the power window sub-switch power supply circuit.

TROUBLESHOOTING HINTS

- Malfunction of the power window sub-switch <RH>
- Damaged harness wires or connectors

TSB Revision

DIAGNOSIS



STEP 1. Check the power window sub-switch continuity.

(1) Remove the power window sub-switch. (Refer to P.42-71.)

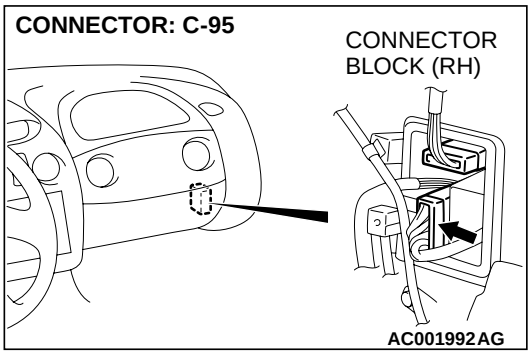
(2) Check the continuity when the power window sub-switch is turned to the UP position or DOWN position.

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
UP	4 – 5, 6 – 7	Continuity
OFF	4 – 5, 6 – 8	Continuity
DOWN	6 – 8, 4 – 7	Continuity

Q: Is the power window sub-switch damaged?

YES : Replace it, then go to Step 3.

NO : Go to Step 2.

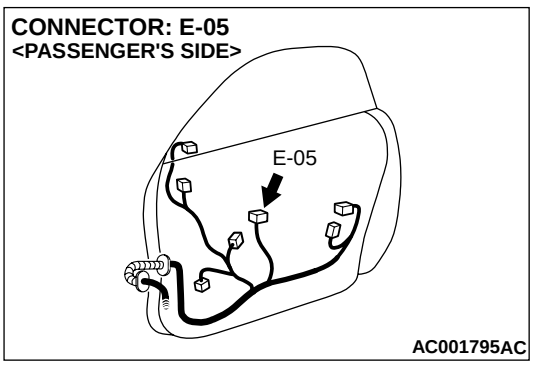


STEP 2. Check the harness wires between power window sub-switch connector E-05 and connector block connector C-95.

Q: Are there any damaged wires between power window sub-switch connector E-05 and connector block connector C-95?

YES : Repair them, then go to Step 3.

NO : Go to Step 3.



STEP 3. Check symptoms

Q: Can the power window sub-switch on the passenger's door open or close all door windows?

YES : This diagnosis is complete.

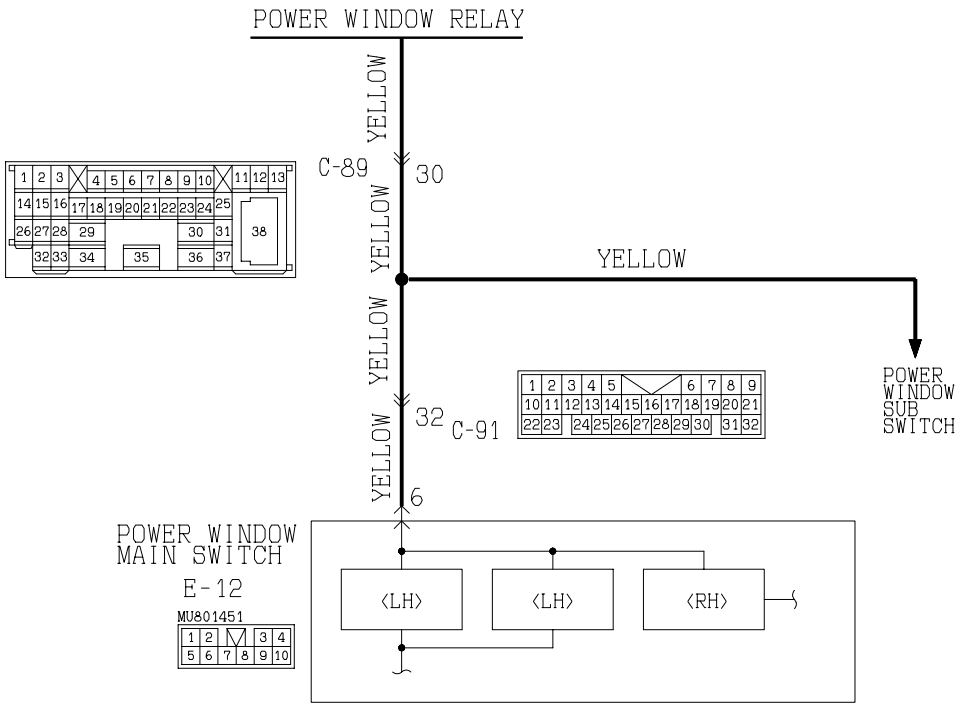
NO : Return to Step 1.

TSB Revision

INSPECTION PROCEDURE 4: None of the door windows are opened or closed by the power window main switch (on driver's door). However, they are opened or closed by the power window sub-switch on passenger's door.

Power Window Main Switch Power Circuit

<ECRLIPSE>



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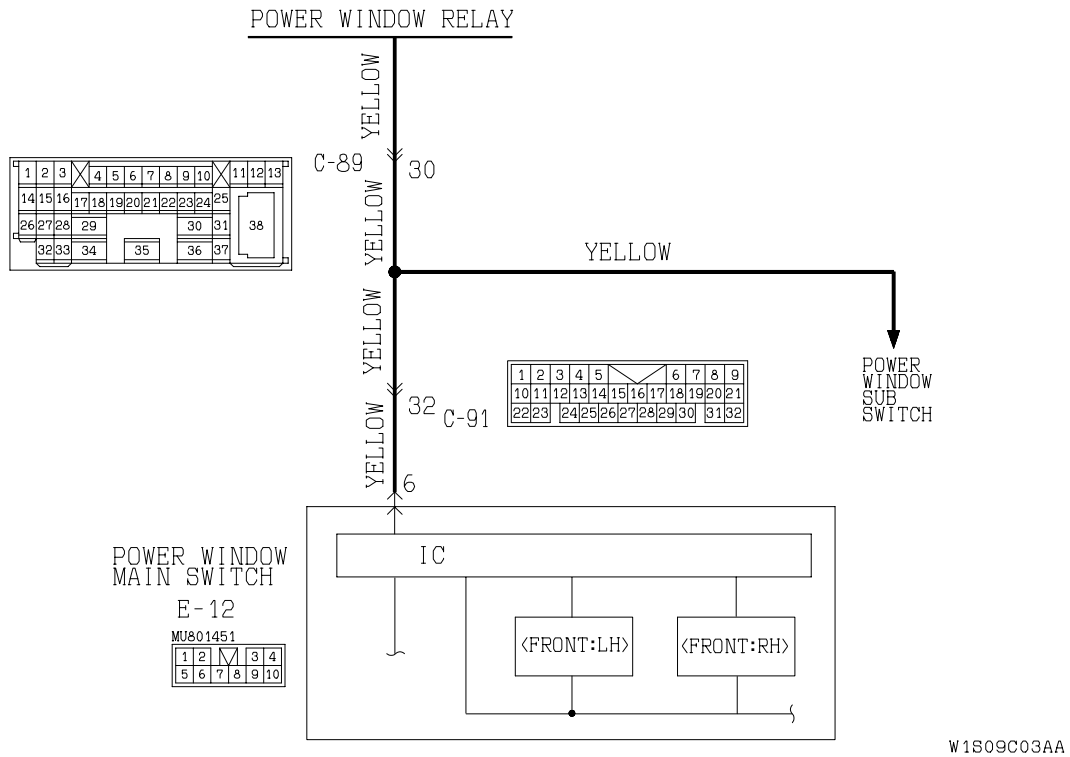
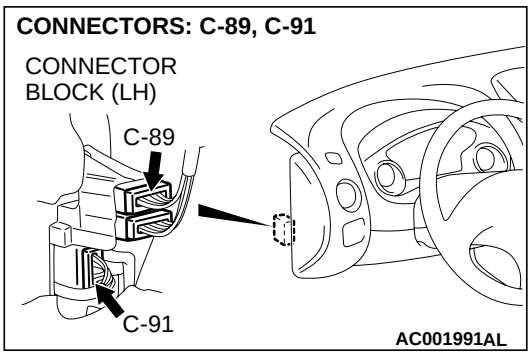
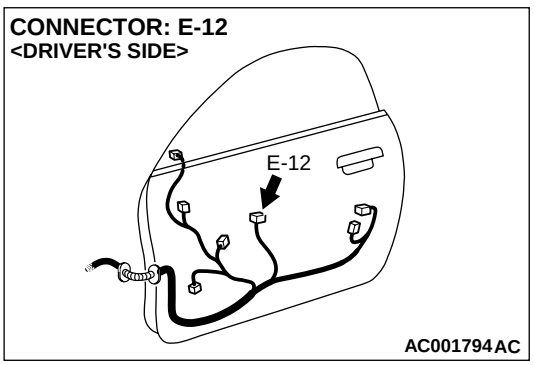
TSB Revision

<ECLIPSE SPYDER>







CIRCUIT OPERATION

- Power is supplied to the power window sub-switch from the power window relay.

TECHNICAL DESCRIPTION

- The cause may be a malfunction of the power window main switch power supply circuit.

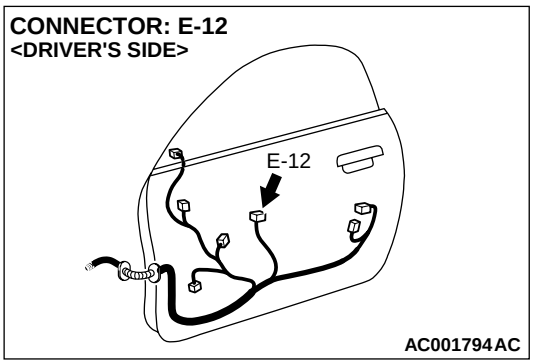
TROUBLESHOOTING HINTS

- Damaged harness wires or connectors

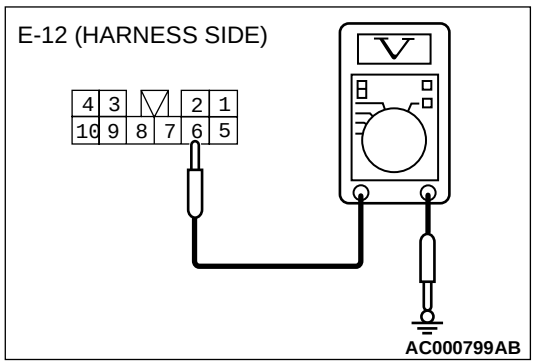
TSB Revision

DIAGNOSIS

STEP 1. Check the power supply line at power window main switch connector E-12.



(1) Remove the power window main switch. (Refer to P.42-71.)

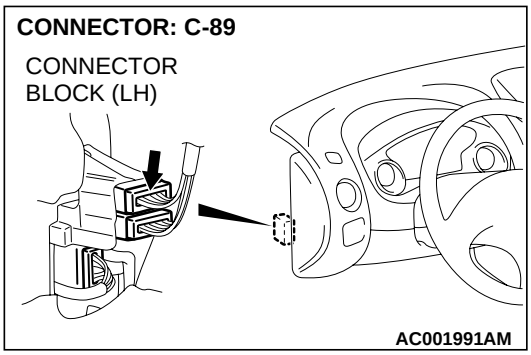


(2) Measure at the harness side the voltage between terminal 6 and ground when the ignition switch is turned ON.
- Voltage should be approximately 12 volts (battery positive voltage).

Q: Is the voltage approximately 12 volts?

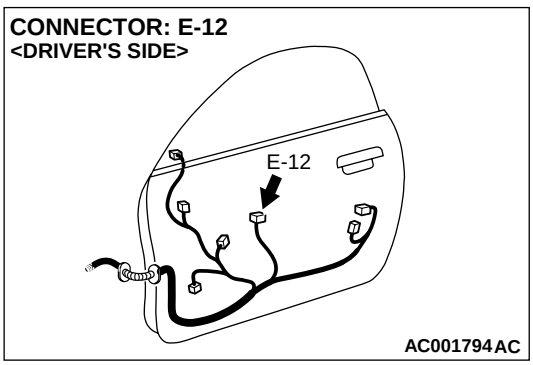
YES : Go to Step 3.
NO : Go to Step 2.

STEP 2. Check the harness wires between power window main switch connector E-12 and connector block connector C-89.

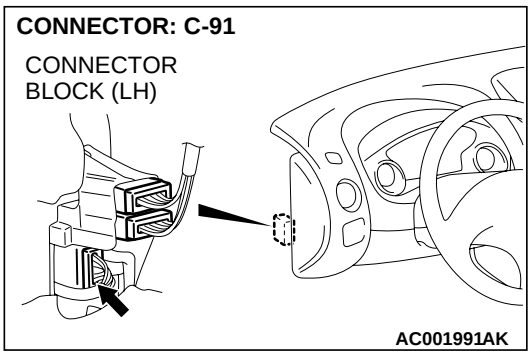


Q: Are there any damaged wires between power window main switch connector E-12 and connector block connector C-89?

YES : Repair them, then go to Step 3.
NO : Go to Step 3.



TSB Revision



NOTE: After inspecting intermediate connector C-91, inspect the wire. If connector block connector C-91 is damaged, repair or replace it. Refer to GROUP 00E P.00E-2, Harness Connector Inspection. Then go to Step 3.

STEP 3. Check symptoms.

Q: Can the power window main switch on the driver's door open or close all door windows?

YES : This diagnosis is complete.
NO : Return to Step 1.

DOOR DIAGNOSIS

DOOR DIAGNOSIS

M1423000700118

The central door locking system is controlled by the Simplified by the Simplified Wiring System (SWS). Refer to GROUP 54B, Diagnosis for troubleshooting P.54B-6.

INTRODUCTION TO GLASS AND DOOR DIAGNOSIS

M1423007300081

Glass and door faults include water leaks and improper opening and closing. Causes for these faults can include faults in the glass, weatherstrip, drain hole, waterproof film or door installation.

GLASS AND DOOR DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1423006700086

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 glass and door 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

M1423007000109

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
Water leak through door window glass	1	P.42-59
Door window malfunction	2	P.42-59
Water leak through door edge	3	P.42-59
Water leak from door center	4	P.42-60
Door hard to open	5	P.42-60
Door does not open or close completely	6	P.42-60
Uneven gap between body	7	P.42-61
Wind noise around door	8	P.42-61

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SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Water leak through door window glass

DIAGNOSIS

STEP 1. Check the door window glass installation.

Q: Is the door window glass installed correctly?
YES : Go to Step 2.
NO : Adjust it. (Refer to P.42-64.) Then go to Step 3.

STEP 2. Check the clearance at the top of the window glass.

Q: Is the clearance at the top of the window glass correct?
YES : Go to Step 3.
NO : Adjust it. (Refer to P.42-64.) Then go to Step 3.

STEP 3. Check symptoms.

Q: Is any water leaking?
YES : Return to Step 1.
NO : This diagnosis is complete.

INSPECTION PROCEDURE 2: Door window malfunction

DIAGNOSIS

STEP 1. Check the door window installation condition.

Q: Is the door window installation condition good?
YES : Go to Step 2.
NO : Adjust it. (Refer to P.42-64.) Then go to Step 4.

STEP 2. Check the door sash.

Q: Is the door sash in good condition?
YES : Go to Step 3.
NO : Repair or replace it, then go to Step 4.

STEP 3. Inspect the window regulator assembly.

Q: Is the window regulator assembly in good condition?
YES : Go to Step 4.
NO : Repair or replace it, then go to Step 4.

STEP 4. Check symptoms.

Q: Does the door window operate correctly?
YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 3: Water leak through door edge

DIAGNOSIS

STEP 1. Check the weatherstrip.

Q: Is the weatherstrip in good condition?
YES : Go to Step 2.
NO : Replace it, then go to Step 3.

STEP 2. Check door fit (alignment).

Q: Is the door fit (alignment) correct?
YES : Go to Step 3.
NO : Adjust it. (Refer to P.42-64.) Then go to Step 3.

STEP 3. Check symptoms.

Q: Is any water leaking?
YES : Return to Step 1.
NO : This diagnosis is complete.

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INSPECTION PROCEDURE 4: Water leak through door center

DIAGNOSIS

STEP 1. Check the drain hole.

Q: Is the drain hole clogged?
YES : Replace it, then go to Step 3.
NO : Go to Step 2.

STEP 2. Check the waterproof film.

Q: Is the waterproof film in good condition?
YES : Go to Step 3.
NO : Repair or replace it, then go to Step 3.

STEP 3. Check symptoms.

Q: Is any water leaking?
YES : Return to Step 1.
NO : This diagnosis is complete.

INSPECTION PROCEDURE 5: Door hard to open

DIAGNOSIS

STEP 1. Adjust the latch and striker engagement.
(Refer to P.42-64.)

Q: Is the latch and striker engagement adjusted?
YES : Go to Step 2.
NO : Adjust it. (Refer to P.42-64.) Then go to Step 4.

STEP 2. Check for possible lock rod damage.

Q: Is the possible lock rod damaged?
YES : Repair or replace it, then go to Step 4.
NO : Go to Step 3.

STEP 3. Check door handle flexibility (amount of movement of handle required to open door).

Q: Is the door handle flexibility good?
YES : Go to Step 4.
NO : Adjust it. (Refer to P.42-69 and P.42-69.) Then go to Step 4.

STEP 4. Check symptoms.

Q: Does the door open easily?
YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 6: Door does open or close completely

DIAGNOSIS

STEP 1. Check the door hinge position.

Q: Is the door hinge position correct?
YES : Go to Step 2.
NO : Adjust it. (Refer to P.42-64.) Then go to Step 4.

STEP 2. Check the door.

Q: Is the door in good condition?
YES : Go to Step 3.
NO : Repair or replace it, then go to Step 4.

STEP 3. Check the grease.

Q: Is the door check or door hinge grease sufficient?
YES : Go to Step 4.
NO : Apply the grease, then go to Step 4.

STEP 4. Check symptoms.

Q: Does the door open and close correctly?
YES : This diagnosis is complete.
NO : Return to Step 1.

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INSPECTION PROCEDURE 7: Uneven gap between body

DIAGNOSIS
Adjust the door fit. (Refer to P.42-64.) Then check that the gap has been improved.

INSPECTION PROCEDURE 8: Wind noise around door

DIAGNOSIS

STEP 1. Check the weatherstrip for holding condition.

Q: Is the weatherstrip installed properly?
YES : Go to Step 2.
NO : Repair or replace it. Then go to Step 5.

STEP 2. Check the weatherstrip for installation condition.

Q: Is the weatherstrip installed properly?
YES : Go to Step 3.
NO : Repair or replace it. Then go to Step 5.

STEP 3. Check the clearance.

Q: Is the clearance between the door glass and the door weatherstrip holder proper?
YES : Go to Step 4.
NO : Adjust it. (Refer to P.42-64.) Then go to Step 5.

STEP 4. Check the door.

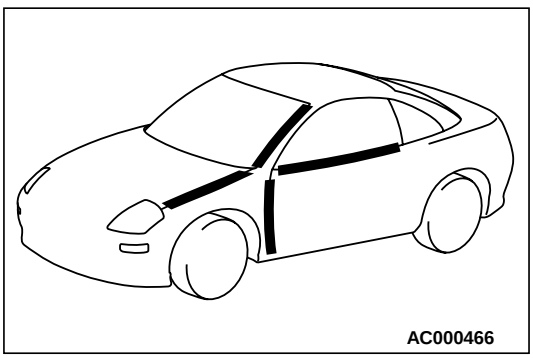
Q: Is the door deformed?
YES : Repair or replace it. Then go to Step 5.
NO : Go to Step 5.

STEP 5. Check symptoms.

Q: Has the wind noise been improved?
YES : Return to Step 1.
NO : This diagnosis complete.

HOW TO LOCATE WIND NOISES

M1421004200067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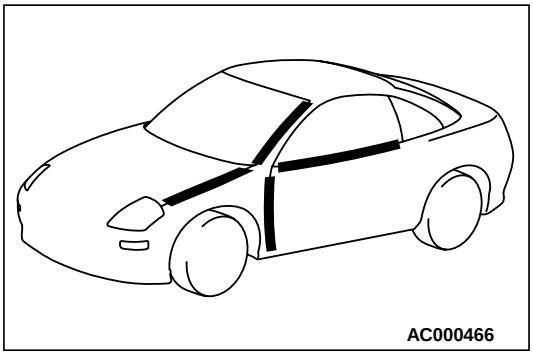
AC000466

1. Attach cloth tape to every place, such as panel seams, projections, molding seams, glass and body seams, etc. which might conceivably be the source of wind noise.
2. Then make a road test to check that the places not covered by tape are not sources of wind noise.
3. Remove the strips of tape one by one, making a road test after each is removed, until a wind noise source is discovered.

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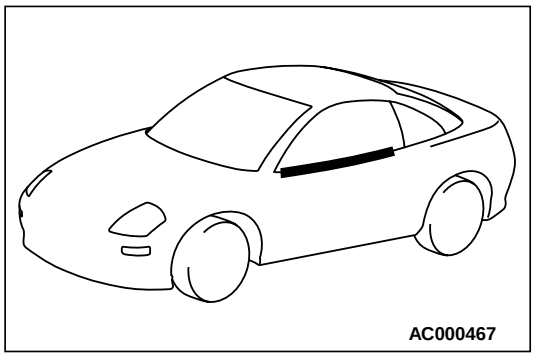
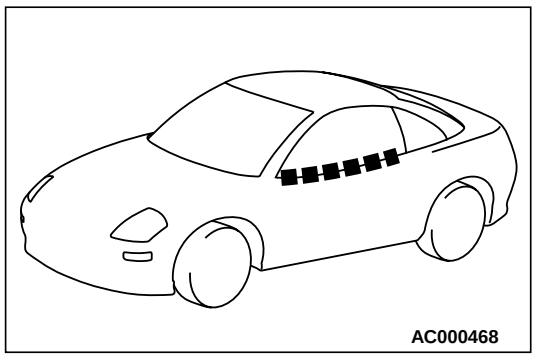
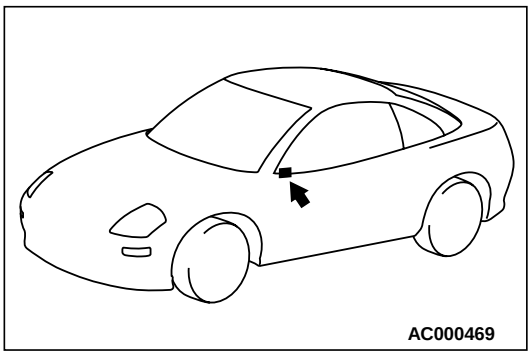


4. When such a place is found, cover it again and repeat the procedure to check if there are any other noise source.
5. If no others are found, the last remaining tape is the only source.



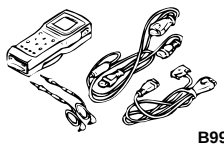
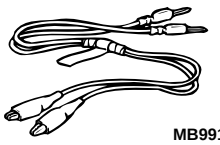
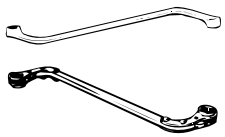
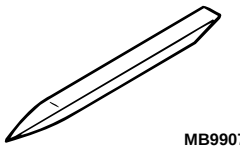
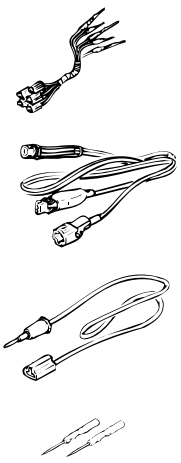
6. Cut the remaining piece of tape into smaller pieces, attach it again as it was before, and then remove the pieces one by one to narrow down the source.



7. Check that wind noise occurs when the last remaining tape is removed, and that noise does not occur when it is re-attached.
8. When the source(s) of the wind noise is finally located, attach butyl tape, body sealer or similar material to obstruct this source as much as possible.

SPECIAL TOOLS

M1423000600070

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 B991502	MB991502 Scan tool (MUT-II)	DRB-III scan tool	ETACS-ECU input signal or diagnostic trouble code checking
 MB991529	MB991529 Diagnostic trouble code check harness	MB991529	ETACS-ECU input signal or checking (when using a voltmeter)
 MB990900	MB990900 or MB991164 Door adjusting wrench	MB990900-01	Adjustment of door fit
 MB990784	MB990784 Ornament remover	General service tool	Removal of trim, etc.
 MB991223	MB991223 Harness set • A: MB991219 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

TSB Revision

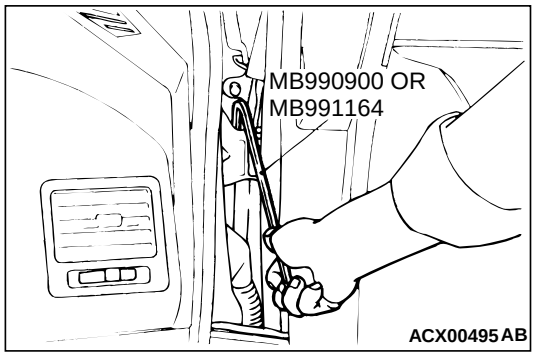
ON-VEHICLE SERVICE

DOOR FIT ADJUSTMENT

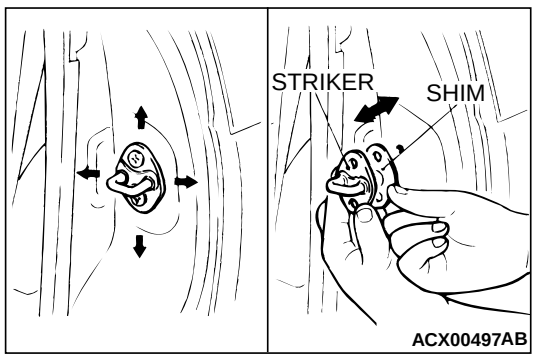
M1423000900059

⚠ CAUTION

- **Attach protection tape to the fender and door edges where the hinge is installed.**
- **Do not rotate special tool MB991164 with a torque of over 98 N·m (72 ft-lb)**



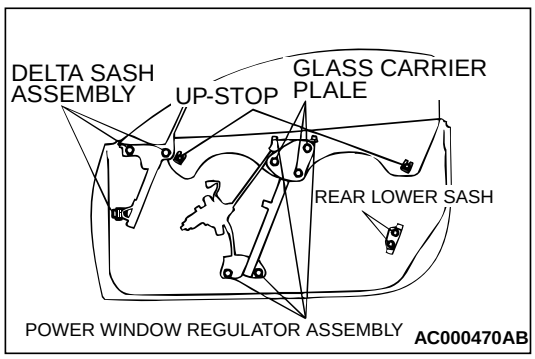
1. Use special tool MB990900 or MB991164 to loosen the hinge mounting bolts on the body side, and then adjust the clearance around the door so that it is uniform on all sides.
2. When there is a stepped section in the door and body, use special tool MB990900 or MB991164 to loosen the hinge mounting bolts on the door side, and ten adjust the door fit.



3. If the door opening and closing are stiff, adjust the linking of the striker and the door latch using the shim, while moving the striker up and down, or left and right.

DOOR WINDOW GLASS ADJUSTMENT

M1423001000060



1. Remove the door trim and waterproof film. (Refer to P.42-71.)
2. Remove the drip line weatherstrip. <ECLIPSE> (Refer to P.42-83.)
3. Remove the topstack rail weatherstrip. <ECLIPSE SPYDER> (Refer to P.42-155.)
4. Loosen the bolts and nuts of the following parts.
   - Delta sash assembly
   - Power window regulator assembly
   - Glass carrier plate
   - Up-stop
   - Rear lower sash
5. Tighten the power window regulator assembly upper bolts and the glass carrier plate mounting bolts so that the clearances between the weatherstrip holder and the window glass as well as between the door panel and the window glass meet the respective standard values. (Sections A – A, B – B, C – C, D – D, E – E, F – F.)

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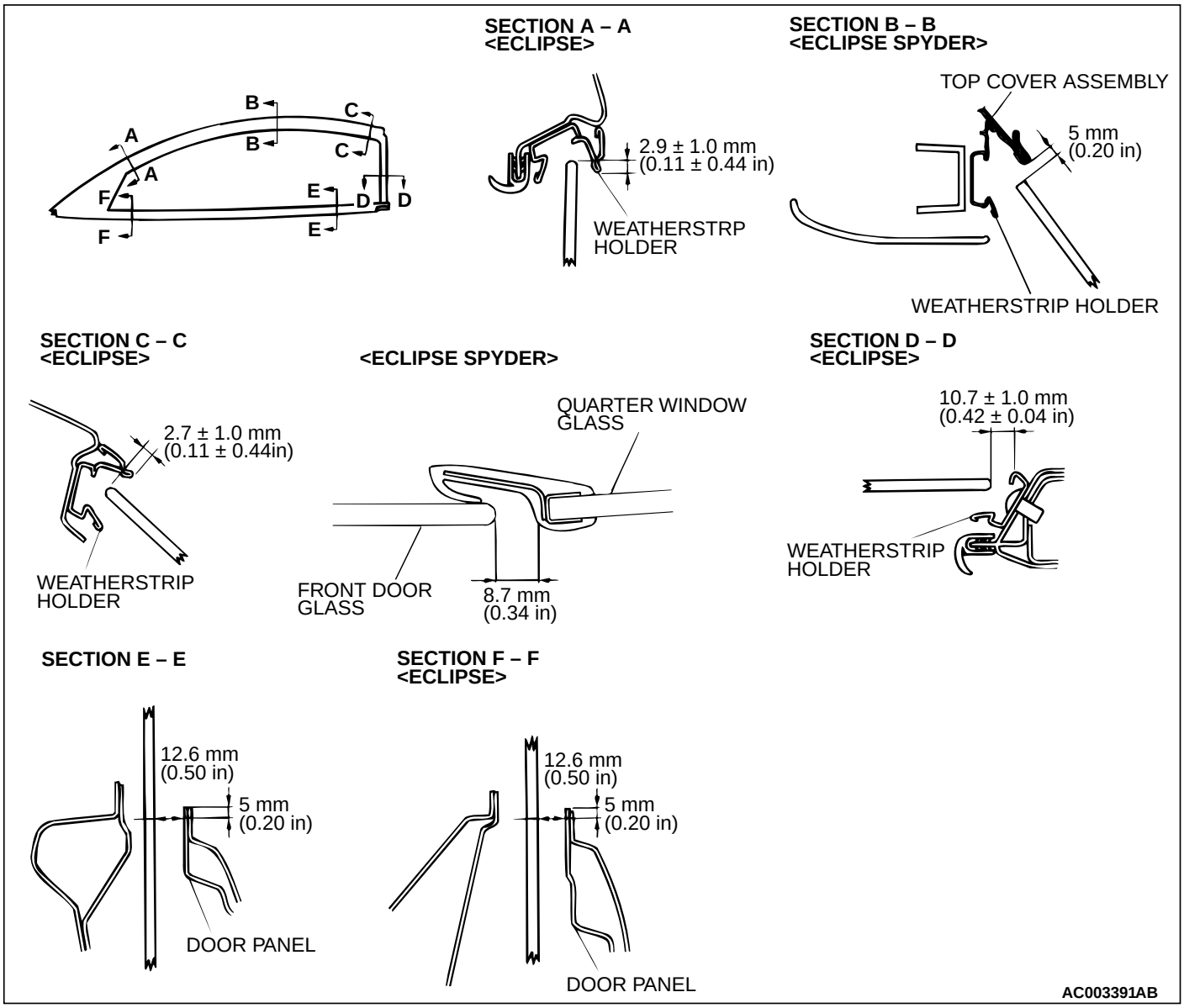

⚠ CAUTION

The right and left adjusting bolts should turned by the same number of threads.

6. Turn the lower adjusting bolts (right and left) of the power window regulator assembly until the clearances between the weatherstrip and the window glass meet the respective standard values. (Sections G – G, H – H, I – I, J – J.)

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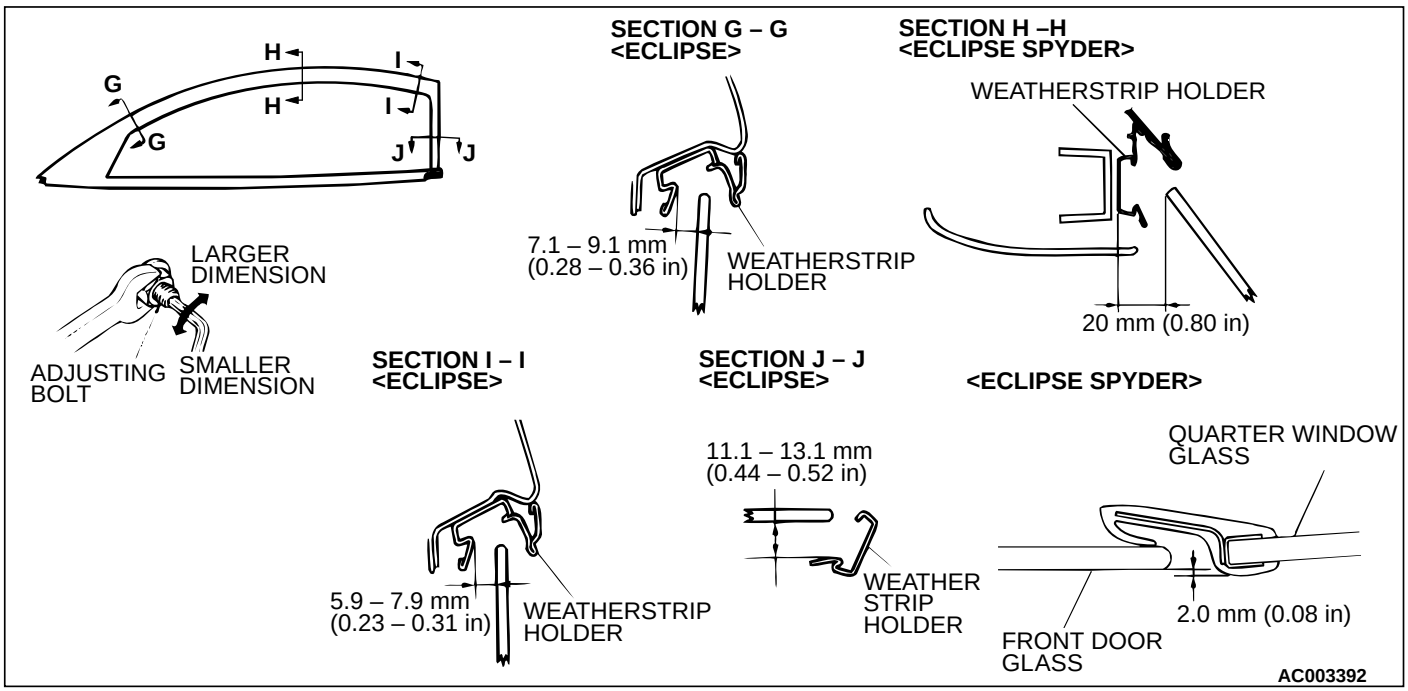
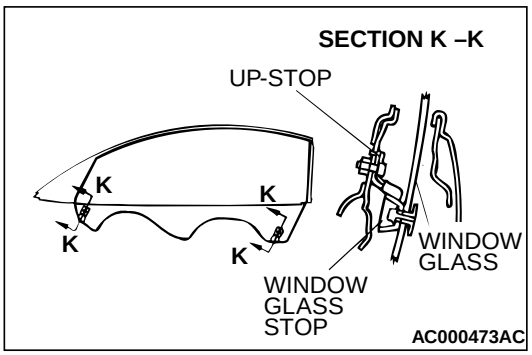
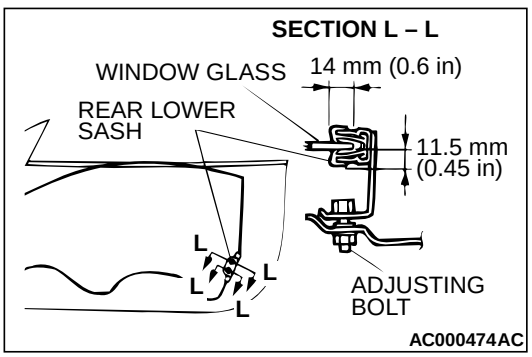




7. Press the up-stop against the window glass stop, and then tighten the up-stop nut.

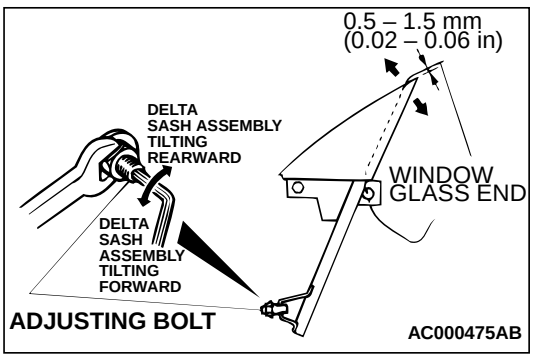


8. Lower the window glass to the extreme position.

⚠ CAUTION

The adjusting bolts should be turned by the same number of threads.

9. Tighten the adjusting bolts (upper and lower) until the rear lower sash is positioned as shown in the illustration, and then lock the nuts place.



10. Raise the window glass to the extreme position.
11. Turn the adjusting bolt until the gap between the delta sash assembly and the window glass end meets the shown dimension.
12. Lower the window glass.
13. Lock the adjusting bolt of the delta sash assembly with a nut
14. Tighten the two upper bolts at the delta sash assembly.

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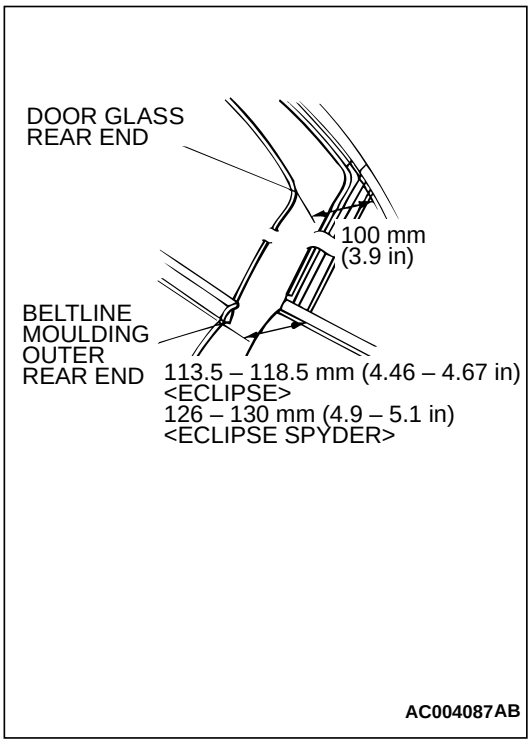

⚠ CAUTION
Ensure that the weatherstrip is not wrinkled or out of position.

15. Install the drip line weatherstrip to the weatherstrip holder. <ECLIPSE> (Refer to P.42-83.)
16. Install the topstack rail weatherstrip to the weatherstrip holder. <ECLIPSE SPYDER> (Refer to P.42-155.)
17. Install the door trim and the waterproof film (Refer to P.42-71.)
18. Check the door window glass alignment according to following procedure.
    (1) Close the door window glass fully, and close the door until the clearance between the door window glass rear end and the weatherstrip reaches 100 mm (3.9 inches). At this time, the distance between the rear end of the belt line molding outer and the quarter panel should be 113.5 – 118.5 mm (4.46 – 4.67 inches) <ECLIPSE> and 126 – 130 mm (4.9 – 5.1 inches) <ECLIPSE SPYDER>.

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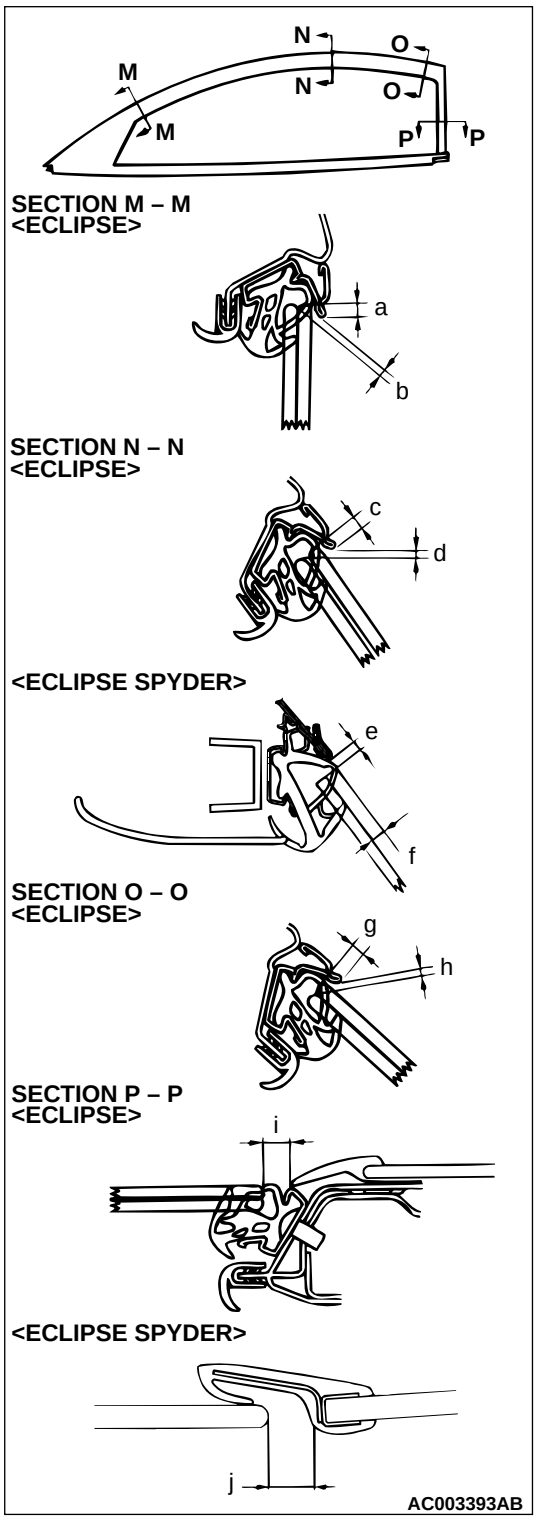


(2) The clearance between the glass and the glass catch should be within the range of standard values (a, c, e, g) when the window is fully closed and the door is closed gently.

Standard value

(a): 2.9 ± 1.0 mm (0.11 ± 0.04 inches)
(c): 4.5 ± 1.0 mm (0.18 ± 0.04 inches)
(e): 5.0 mm (0.20 inches)
(g): 3.4 mm (0.13 inches)
(i): 10.7 ± 1.0 mm (0.42 ± 0.04 inches)
(j): 8.7 mm (0.32 inches)

NOTE: IF the clearance is too small, the glass catch will move above the glass when the door is closed. If the clearance is too large, wind noise may be generated at high vehicle speeds because the glass catch is not hooked onto the glass.

(3) The amount of catch of the door catch on the door glass and the weatherstrip should be at the standard values b, d, f:

when the window is closed fully and then the door is closed.

Standard value

(b): 2.7 ± 1.0 mm (0.11 ± 0.04 inches)
(d): 2.7 ± 1.0 mm (0.11 ± 0.04 inches)
(f): 8.0 mm (0.32 inches)
(h): 2.4 ± 1.0 mm (0.09 ± 0.04 inches)

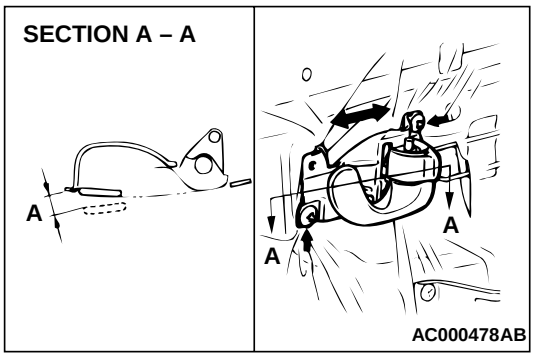
(4) The door glass should slide smoothly over its full range of movement when the door is closed.

(5) The glass catch and the weatherstrip should be parallel with the door glass and the two up-stops should touch simultaneously when the glass is fully closed.

TSB Revision

DOOR INSIDE HANDLE PLAY CHECK AND ADJUSTMENT

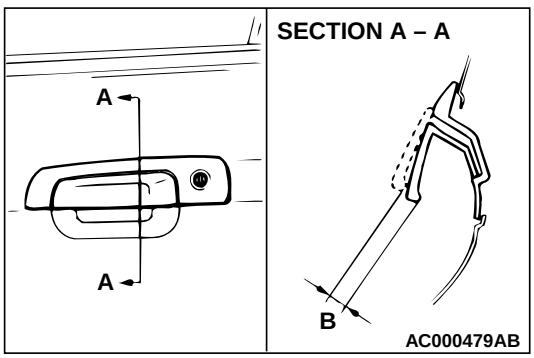
M1423001500054



1. Check that the door inside handle play is within the standard value range.
   Standard value (A): 3.2 mm (0.13 inch)
2. If the door inside handle play is outside the standard value range, remove the door trim. (Refer to P.42-71.)
3. Loosen the inside handle mounting screws, and then move the inside handle back and forth to adjust the play.

DOOR OUTSIDE HANDLE PLAY CHECK

M1423001600051



1. Check that the door outside handle play is within the standard value range.
   Standard value (B): 2.4 mm (0.09 inch)
2. If the door outside handle play is not within the standard value range, check the door outside handle or the door latch assembly. Replace if necessary.

CIRCUIT BREAKER (INCORPORATED IN THE POWER WINDOW MOTOR) INSPECTION

M1429001000046

1. Pull the power window switch to the UP position to fully close the door window glass, and keep pulling the switch for a further 10 seconds.
2. Release the power window switch from the UP position and immediately press it to the DOWN position. The condition of the circuit breaker is good if the door window glass starts to move downwards within 60 seconds.

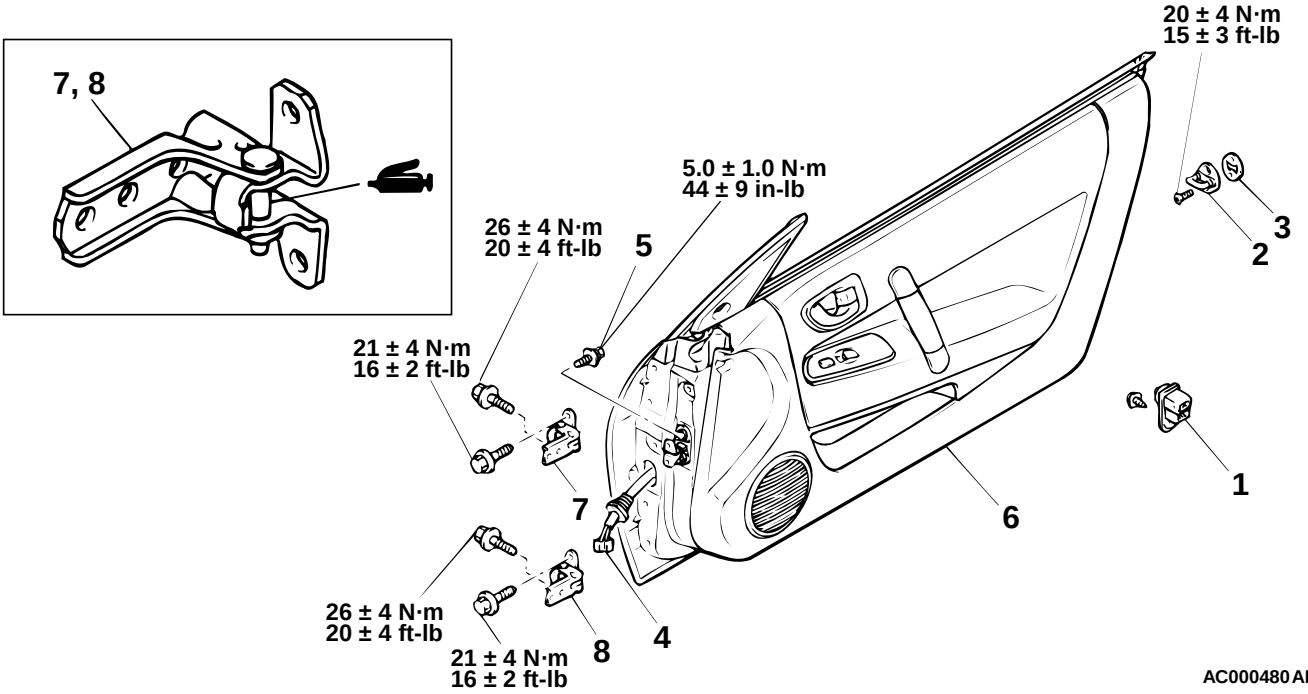
TSB Revision

DOOR ASSEMBLY

REMOVAL AND INSTALLATION

M1423002200067

Post-installation Operation
- Door Fit Adjustment (Refer to P.42-64.)



DOOR SWITCH REMOVAL STEPS
1. DOOR SWITCH

STRIKER REMOVAL STEPS
2. STRIKER
3. STRIKER SHIM

DOOR ASSEMBLY REMOVAL STEPS
- SCUFF PLATE AND COWL SIDE TRIM (REFER TO GROUP 52A P.52A-10.)

4. HARNESS CONNECTOR

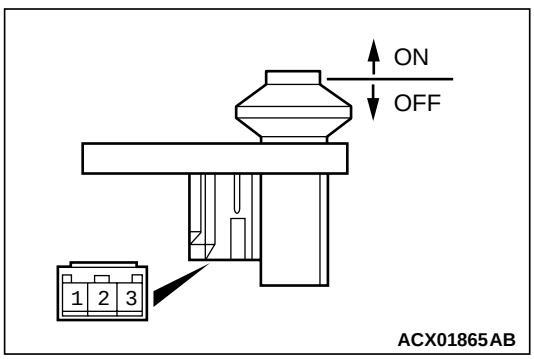
DOOR ASSEMBLY REMOVAL STEPS
5. DOOR CHECK CONNECTING BOLT
6. DOOR ASSEMBLY
7. DOOR UPPER HINGE
8. DOOR LOWER HINGE

Required Special Tool
- MB990900 or MB991164: Door Adjusting Wrench

INSPECTION

M1423006000076

DOOR SWITCH CONTINUITY CHECK



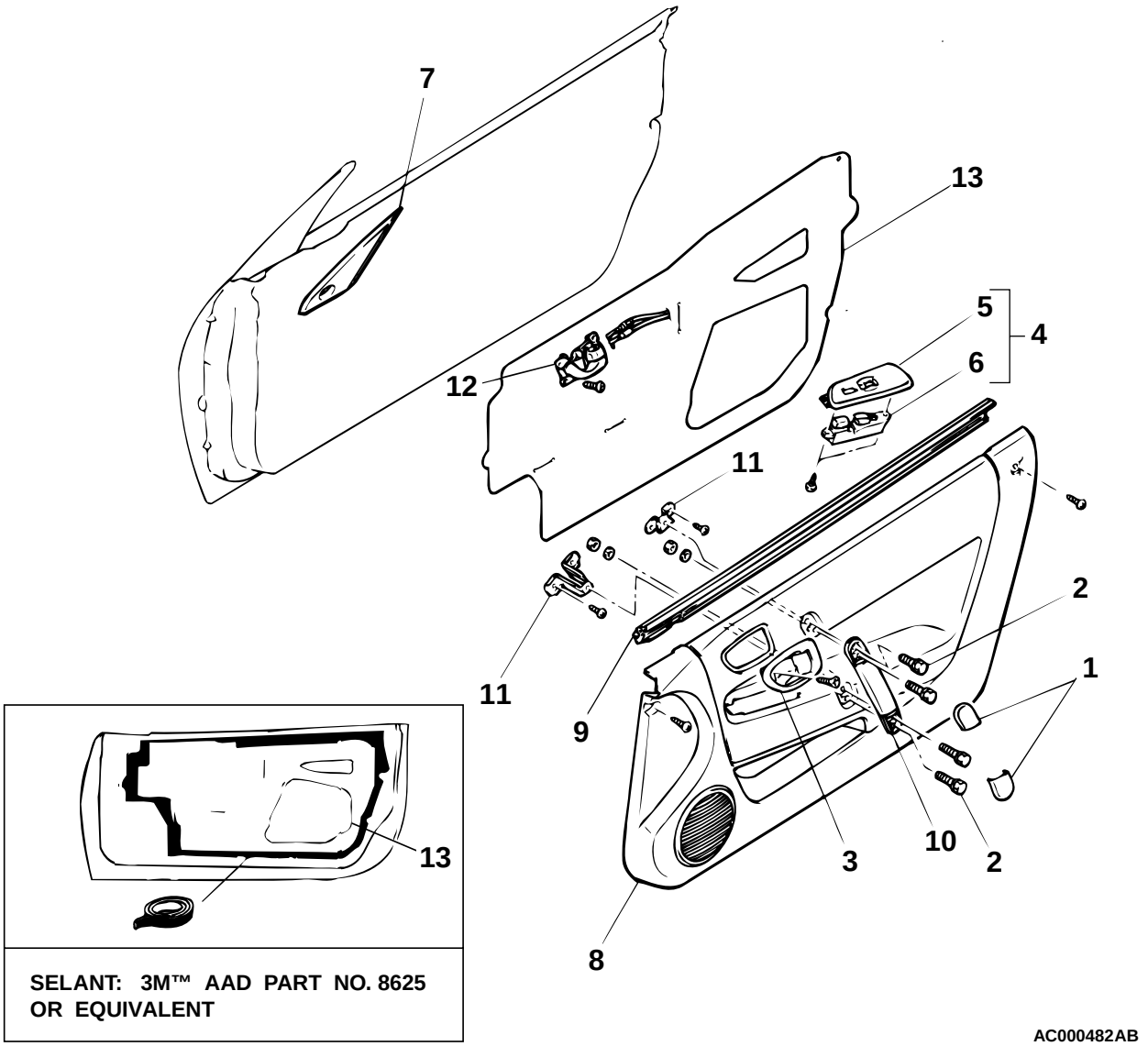
SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
Released (ON)	1 – 2	Continuity
Depressed (OFF)	-	No Continuity

TSB Revision

DOOR TRIM AND WATERPROOF FILM

REMOVAL AND INSTALLATION

M1423004300060



REMOVAL STEPS

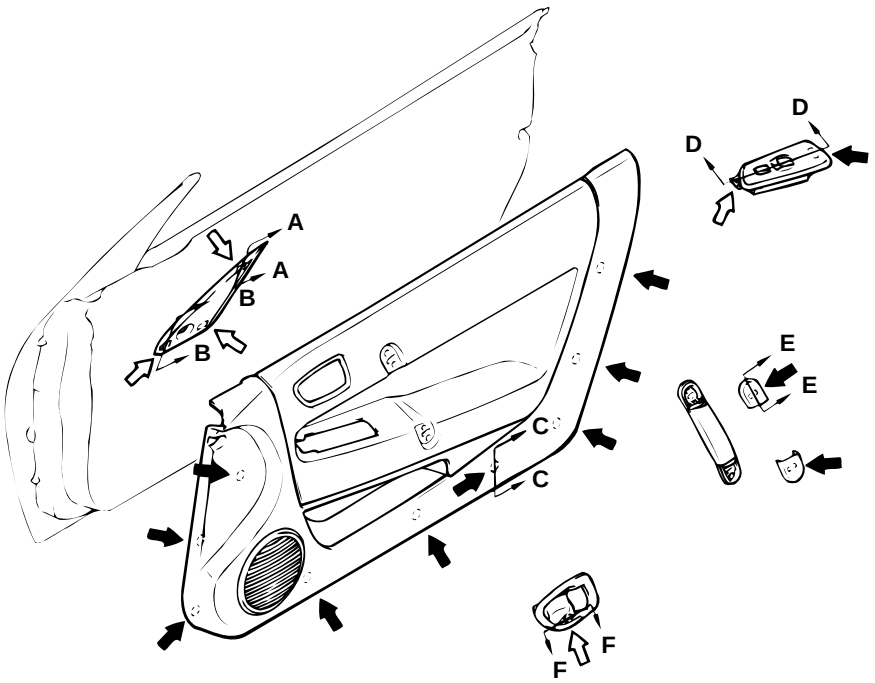
1. DOOR GRIP COVER
2. BOLT
3. DOOR INSIDE HANDLE COVER
4. POWER WINDOW SWITCH AND POWER WINDOW SWITCH PANEL ASSEMBLY
5. POWER WINDOW SWITCH PANEL
6. POWER WINDOW SWITCH

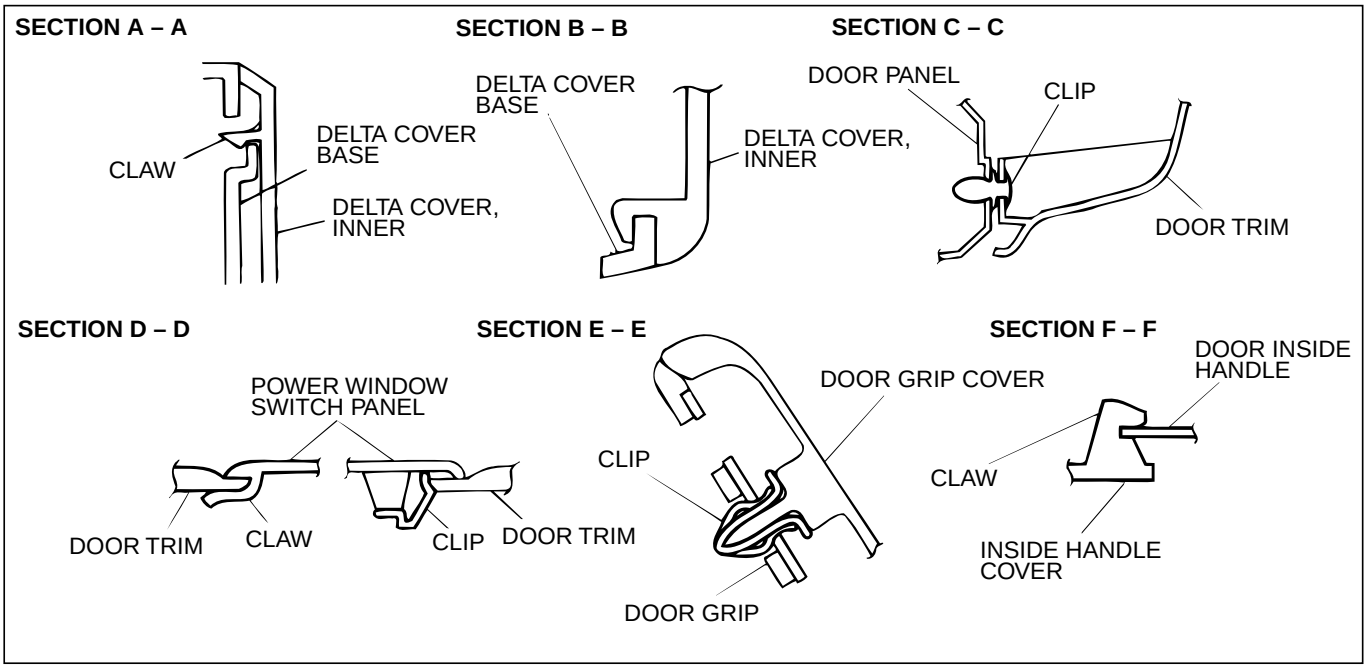
REMOVAL STEPS (Continued)

7. INNER DELTA COVER OR TWEETER COVER
8. DOOR TRIM
9. DOOR BELT LINE MOULDING ASSEMBLY
10. DOOR GRIP
11. DOOR GRIP BRACKET
12. DOOR INSIDE HANDLE
13. WATERPROOF FILM

TSB Revision

CLIP AND CLAW POSITIONS





NOTE
: CLIP POSITIONS
: CLAW POSITIONS

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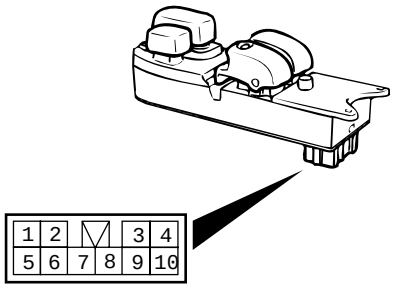
TSB Revision

INSPECTION

M1429001600060

POWER WINDOW SWITCH CONTINUITY CHECK

<ECLIPSE>



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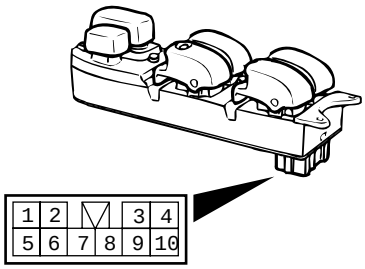
<ECLIPSE SPYDER>



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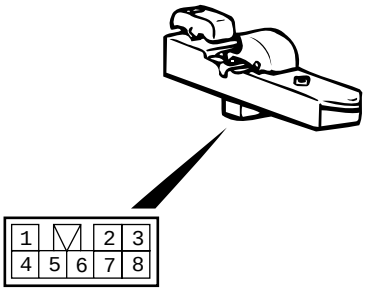

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POWER WINDOW MAIN SWITCH CHECK

SWITCH POSITION		TESTER CONNECTION	SPECIFIED CONDITION
LH	UP	1 – 6, 5 – 9	Continuity
	OFF	1 – 5 – 9	Continuity
	DOWN	5 – 6, 1 – 9	Continuity
RH	UP	6 -7, 8 – 9*	Continuity
	OFF	7 – 8 – 9*	Continuity
	DOWN	6 – 8, 7 – 9*	Continuity

*NOTE: *:Lock switch to UNLOCK position.*

POWER WINDOW SUB SWITCH CHECK

SWITCH POSITION		TESTER CONNECTION	SPECIFIED CONDITION
Sub switch	UP	6 – 7, 4 – 5	Continuity
	OFF	4 – 5, 6 – 8	Continuity
	DOWN	4 – 7, 6 – 8	Continuity

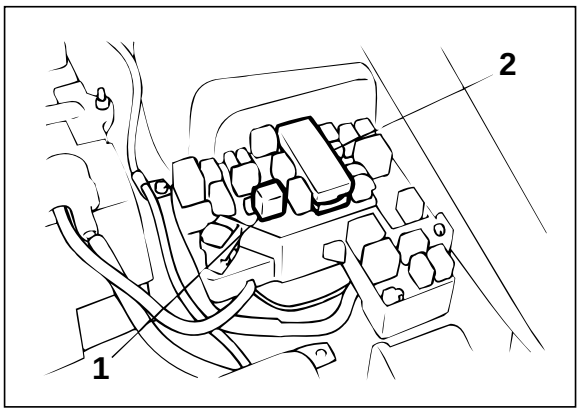
TSB Revision

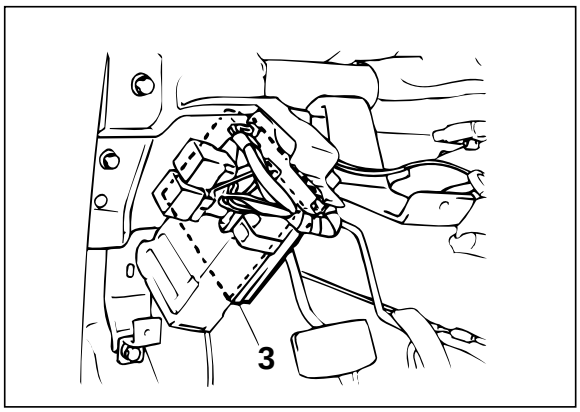
DOOR GLASS AND REGULATOR

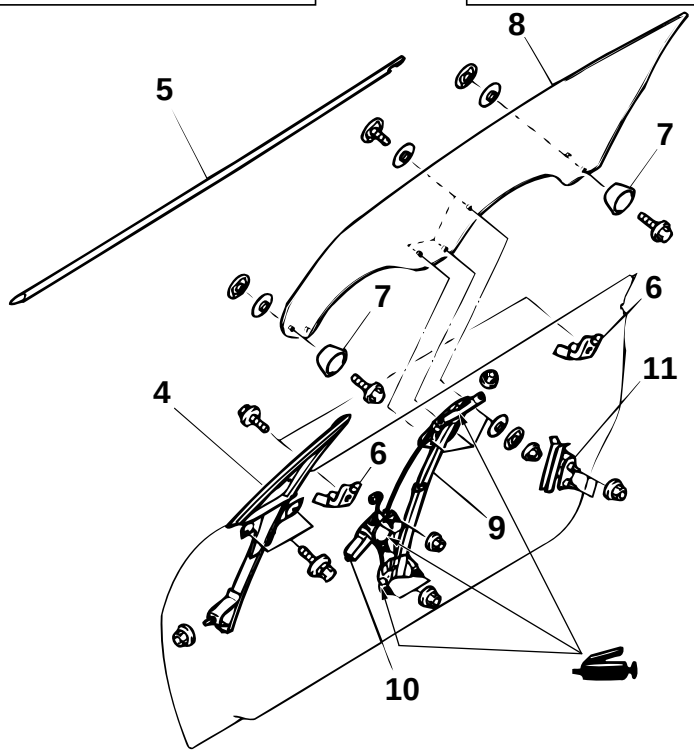
REMOVAL AND INSTALLATION

M1429001300069

Pre-removal Operation	Post-installation Operation
• Door Trim and Waterproof Film Removal (Refer to P.42-71.)	• Door Trim and Waterproof Film Removal (Refer to P.42-71.) • Door Window Glass Adjustment (Refer to P.42-64.)







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REMOVAL STEPS
1. POWER WINDOW RELAY
2. FRONT-ECU
3. ETACS-ECU

DOOR WINDOW GLASS AND DOOR WINDOW REGULATOR ASSEMBLY REMOVAL STEPS
4. DOOR DELTASASH
5. DOOR BELTLINE MOLDING (REFER TO P.42-83.)

DOOR WINDOW GLASS AND DOOR WINDOW REGULATOR ASSEMBLY REMOVAL STEPS (Continued)
6. DOOR WINDOW GLASS UP STOP
7. DOOR WINDOW STOP

>>B<< 8. DOOR WINDOW GLASS

>>A<< 9. POWER WINDOW REGULATOR ASSEMBLY

>>A<< 10. POWER WINDOW MOTOR

11. DOOR WINDOW REAR LOWER SASH

TSB Revision

INSTALLATION SERVICE POINTS

>>A<< POWER WINDOW MOTOR/WINDOW REGULATOR ASSEMBLY INSTALLATION

1. Power window motor and window regulator assembly installation procedure

⚠ CAUTION

Do not operate the power window motor until the glass installation is finished.

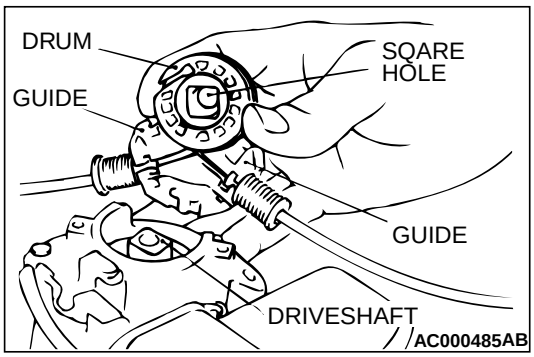
(1) Connect the power window motor to the body-side harness connector, and then turn on the ignition switch.

(2) Continue to pull the power window switch until the power window motor stops.

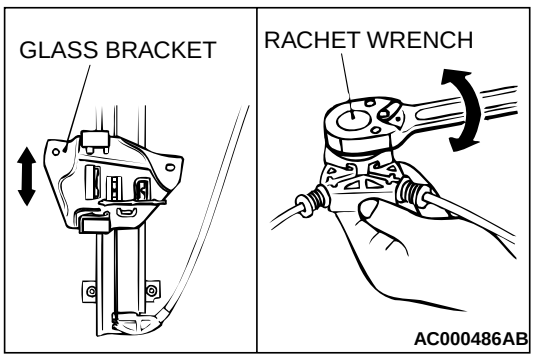
NOTE: Power window motor stops automatically and the limit switch incorporated in the power motor will be reset.

(3) Turn off the ignition switch, and then remove window motor from the body-side harness connector.

(4) Align the power window motor drive shaft and the square hole in the drum by the following procedure, while using the guide and the opening in the motor housing as a reference for the installation position.

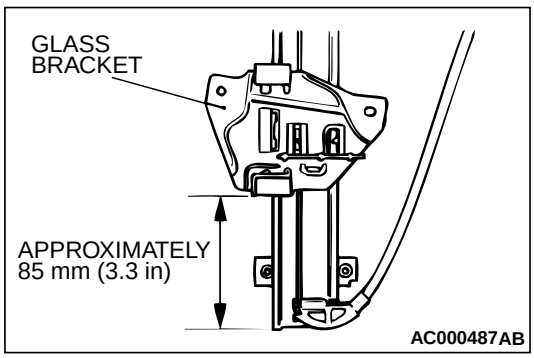


a. Align the square hole with the drive shaft by sliding the glass bracket (glass mounting section) or by turning the drum using a ratchet wrench [with a socket diameter of 12.7 mm (0.50 inches)].

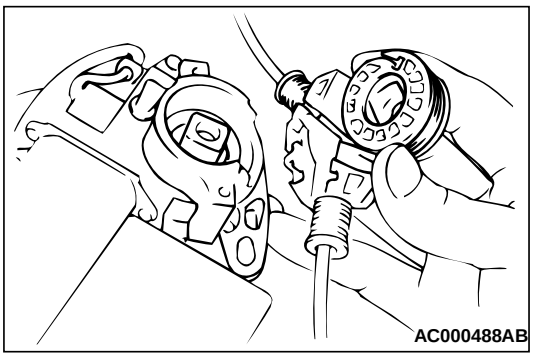


b. Turn the drum to position the glass bracket as shown in the illustration. Support the drum and the guide with your hand while turning the drum, otherwise the wires may pull out of the drum.

c. If the wires pull out of the drum, re-insert them by following the drum and regulator wire installation procedure.



TSB Revision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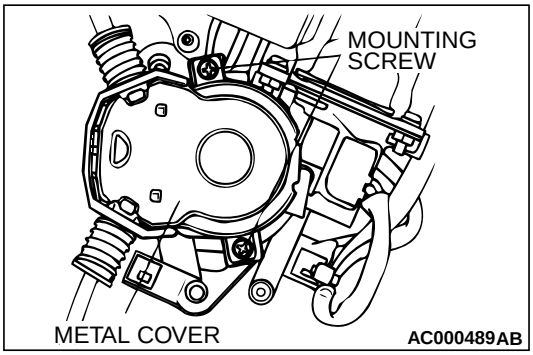
(5) Align the guide and the opening of the motor housing, and slide the guide into the motor housing while holding the guide and drum.



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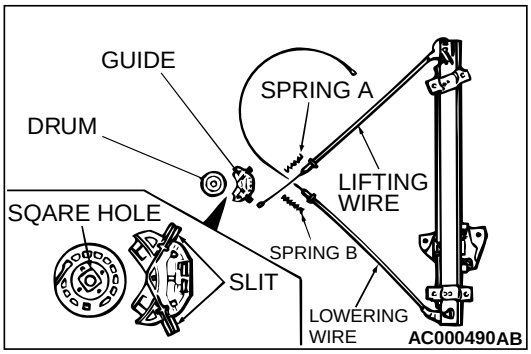
⚠ CAUTION

Make sure that the metal cover is installed securely and does not move, in order to stop the drum from vibrating. If the drum vibrates, the glass may not slide up and down smoothly, or it may fall down.

(6) install the metal cover securely to housing.



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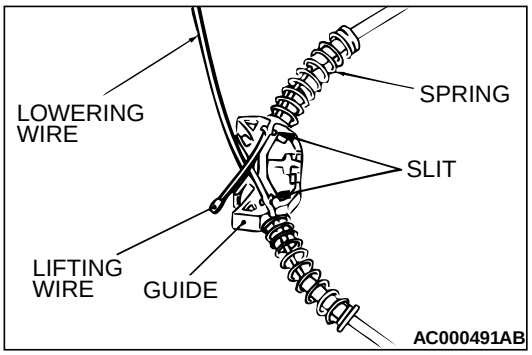
2. Drum and regulator wire installation procedure

(1) Place the drum, guide and regulator on a work bench as shown in the illustration.

a. Place the drum so that the square hole is facing upward.

b. Place the guide so that the slits are facing upward.

c. Place the regulator so that the glass bracket is facing downward. Position the glass bracket so that glass is in the fully-open position.



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(2) Pass the springs over the wires, and then install the lowering wire to the guide first, followed by the lifting wire. (The lifting wire should be on top of the lowering wire.)

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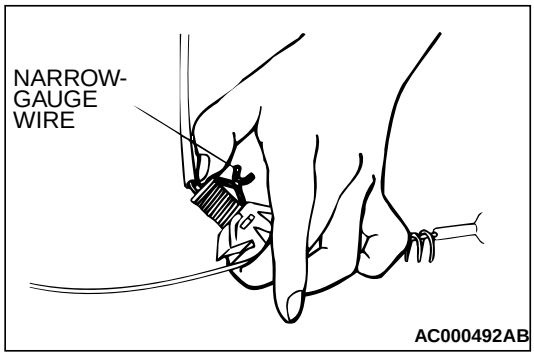
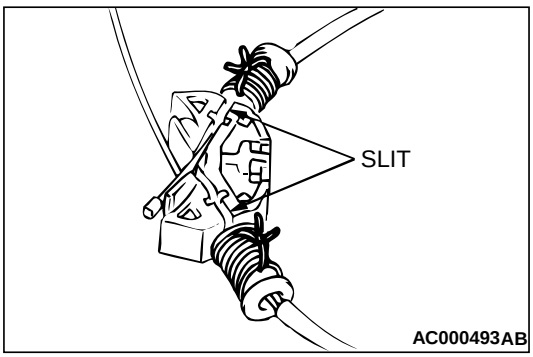
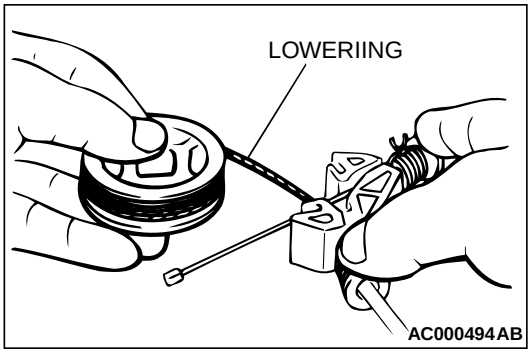
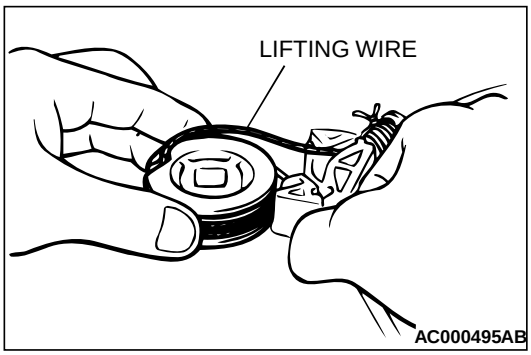


(3) Use some narrow-gauge wire [approximately 0.5 mm (0.02 inches) diameter] to compress the springs, and then tie the narrow-gauge wire a to the slits in the guide.



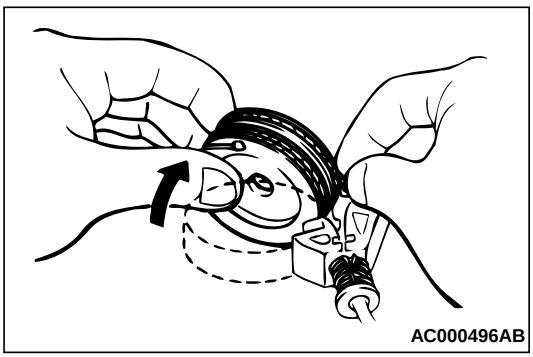


(4) Insert the end of the lowering wire into the wire hole at the bottom of the drum, and then wrap the bottom so that there is no slackness in the wire.



(5) Install the lifting wire to the drum as following:

a. Insert the end of the lifting wire into the wire hole at the top of the drum.



b. Raise the front of the drum until the drum is vertical, and then position the lifting wire in the groove of the drum.

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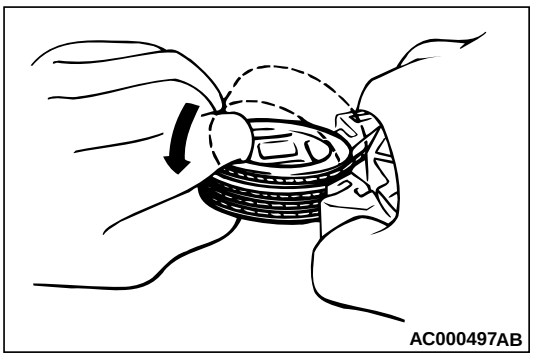
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c. Return the drum to its original position while holding the wires to make sure that they do not pull out.

(6) After installing the power window motor assembly to the window regulator assembly, cut and remove the wires witch are compressing the springs.

3. Operation check

⚠ CAUTION

- **Do not operate the window regulator assembly before installing the window glass, otherwise the limit switch will be set.**
- **Window glass safety mechanism does not operate when the window glass is closed fully at first time.**

(1) Install the window glass to the window regulator assembly.

(2) Close the window glass completely.

NOTE: Closing the window glass completely will finish the adjustment of the limit switch.

(3) Check that the limit switch operates correctly.

>>B<< DOOR WINDOW GLASS INSTALLATION

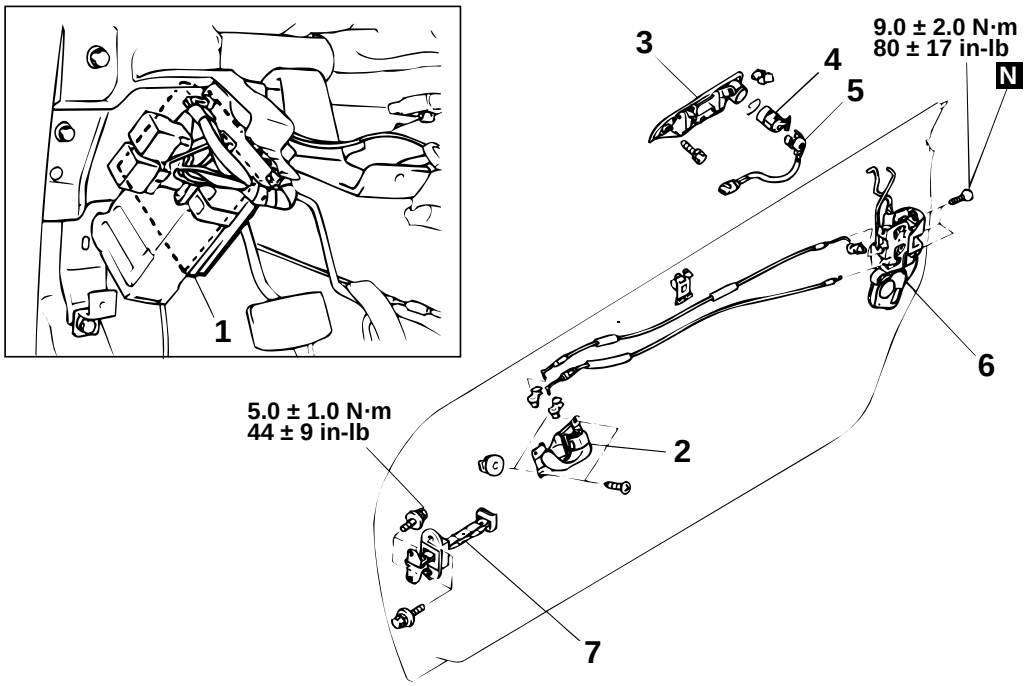
1. Temporarily secure the door window glass to the door window regulator.
2. After raising the door window glass as far as it will go, fully secure the door window glass to the door window regulator assembly.

DOOR HANDLE AND LATCH

REMOVAL AND INSTALLATION

M1423004600083

Pre-removal Operation	Post-installation Operation
• Door Trim Removal (Refer to P.42-71.)	• Door Inside Handle Play Check (Refer to P.42-69.) • Door Outside Handle Play Check (Refer to P.42-69.) • Door Trim Installation (Refer to P.42-71.) • Door Fit Adjustment (Refer to P.42-64.)



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DOOR HANDLE AND DOOR LATCH ASSEMBLY REMOVAL STEPS

1. ETACS-ECU
2. DOOR INSIDE HANDLE
   - WATERPROOF FILM (REFER TO P.42-71.)
3. DOOR OUTSIDE HANDLE
4. DOOR LOCK KEY CYLINDER

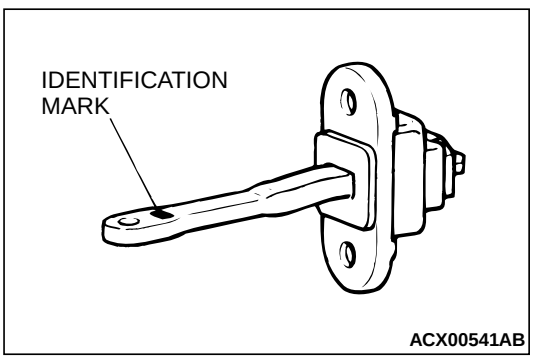
DOOR HANDLE AND DOOR LATCH ASSEMBLY REMOVAL STEPS

5. DOOR LOCK KEY CYLINDER SWITCH
6. DOOR LATCH ASSEMBLY

DOOR CHECK REMOVAL STEPS

- WATERPROOF FILM (REFER TO P.42-71.)

>>A<< 7. DOOR CHECK



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INSTALLATION SERVICE POINT

>>A<< DOOR CHECK INSTALLATION

Install the door check so that the identification mark faces upwards.

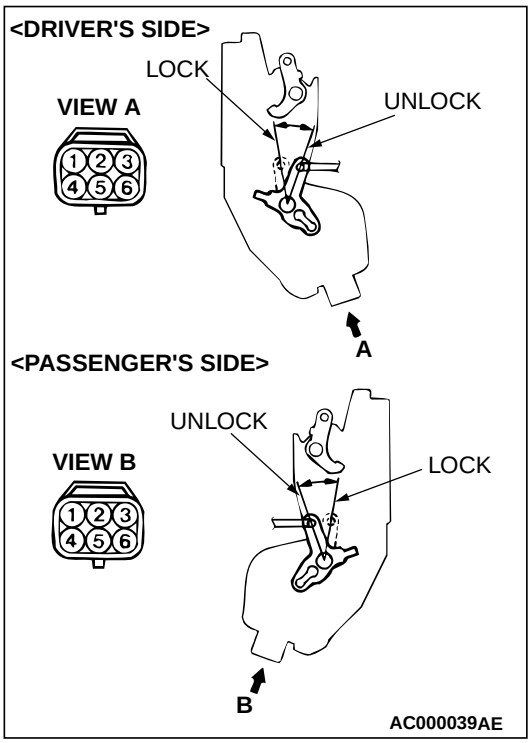
ITEM	IDENTIFICATION MARK
Left door	1L
Right door	1R

TSB Revision

INSPECTION

M1423004700109

DOOR LOCK ACTUATOR CHECK



<DRIVER'S SIDE>

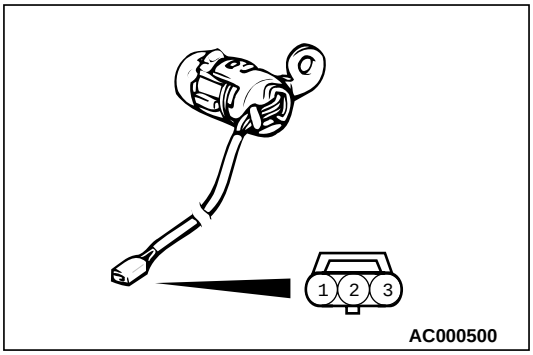
SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	4-Battery(-) → 6-Battery(+), 1 – 3	Lock position → Unlock position, Continuity
UNLOCK	4-Battery(+) → 6-Battery(-), 1 – 2	Unlock position → Lock position, Continuity

<PASSENGER'S SIDE>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	4-Battery(+) → 6-Battery(-), 1 – 3	Lock position → Unlock position, Continuity
UNLOCK	4-Battery(-) → 6-Battery(+), 2 – 3	Unlock position → Lock position, Continuity

TSB Revision

DOOR LOCK KEY CYLINDER SWITCH CHECK



<DRIVER'S SIDE>

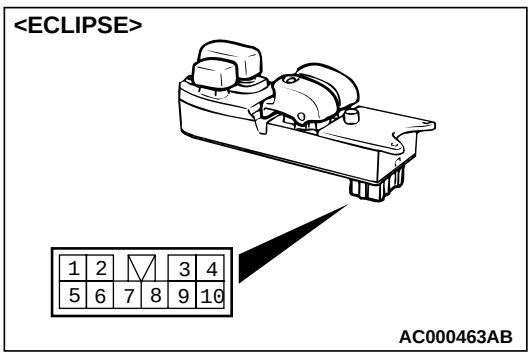
SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	2 – 3	Continuity
NEUTRAL (OFF)	-	No Continuity
UNLOCK	1 – 2	Continuity

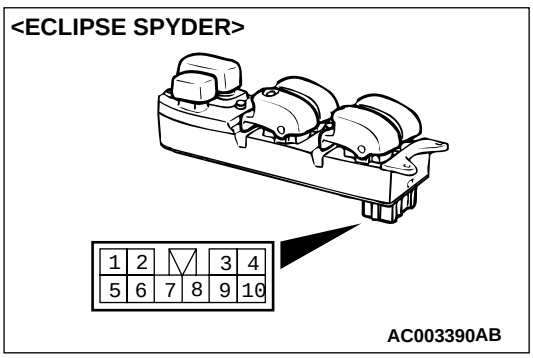
<PASSENGER'S SIDE>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	1 – 2	Continuity
NEUTRAL (OFF)	-	No Continuity
UNLOCK	2 – 3	Continuity

CENTER DOOR LOCK SWITCH CONTINUITY CHECK

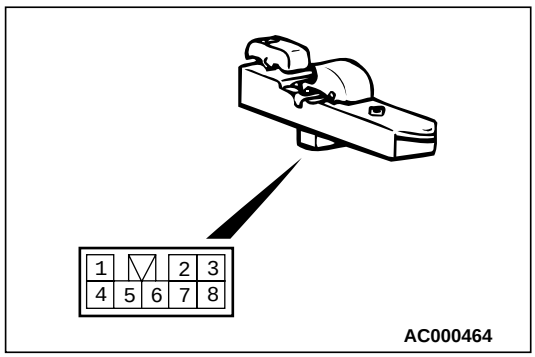
Remove the power window switch. (Refer to P.42-71.)





<DRIVER'S SIDE>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	3 – 9	Continuity
OFF	-	No Continuity
UNLOCK	9 – 10	Continuity



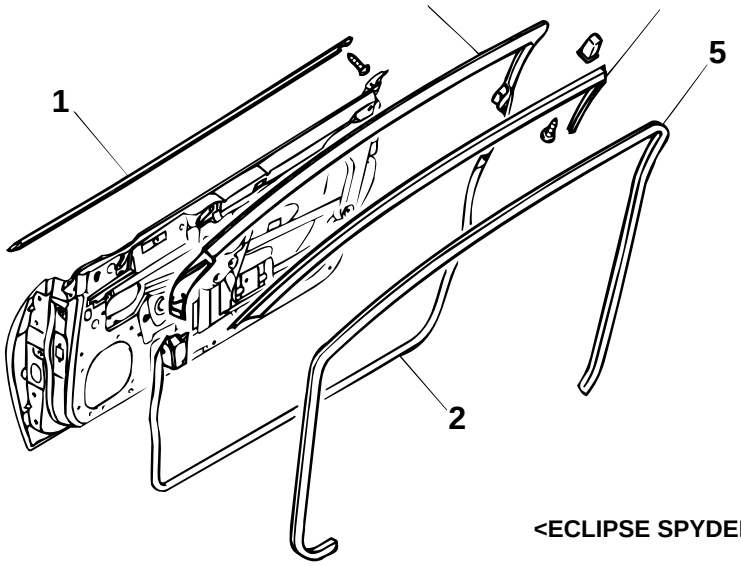
<PASSENGER'S SIDE>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	1 – 2	Continuity
OFF	-	No Continuity
UNLOCK	2 – 3	Continuity

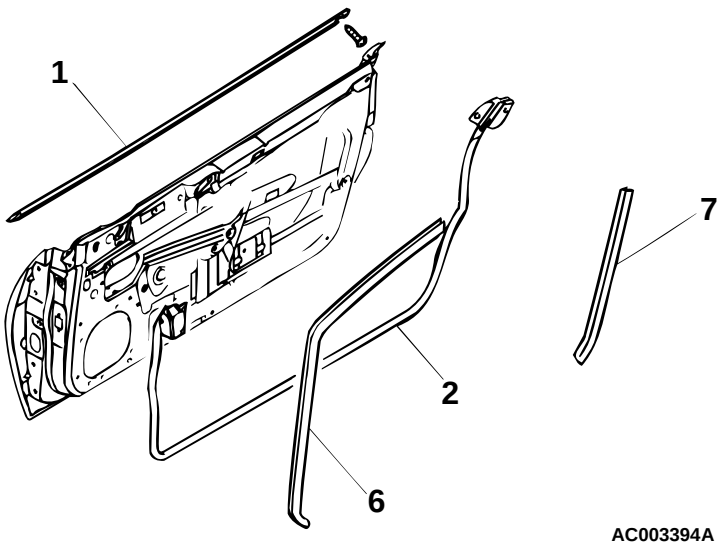
WINDOW GLASS RUNCHANNEL AND DOOR OPENING WEATHERSTRIP

REMOVAL AND INSTALLATION

M1423003100063



<ECLIPSE SPYDER>



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DOOR OUTER OPENING WEATHER-STRIP REMOVAL STEPS

- DOOR TRIM (REFER TO P.42-71.)
- DOOR DELTA SASH (REFER TO P.42-74.)

1. BELT LINE MOULDING
2. DOOR OUTER OPENING WEATH-ERSTRIP

<<A>> >>A<<

DRIP LINE WEATHERSTRIP REMOVAL STEPS

3. DRIP LINE WEATHERSTRIP
4. DRIP LINE WEATHERSTRIP HOLDER

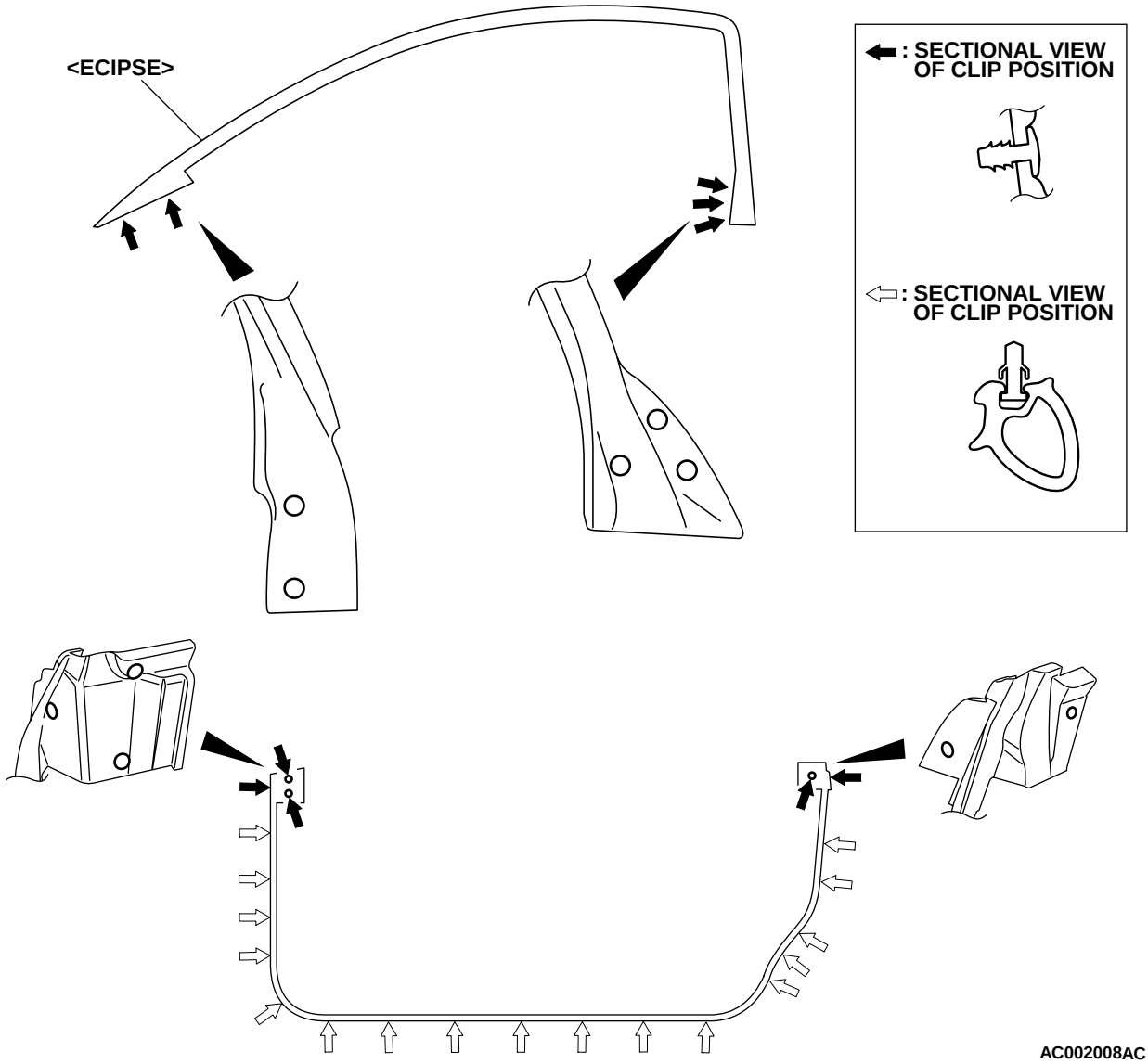
DOOR INNER OPENING WEATHER-STRIP REMOVAL STEPS

- SCUFF PLATE (REFER TO GROUP 52A P.52A-10.)

5. DOOR INNER OPENING WEATHER-STRIP
6. DOOR INNER FRONT OPENING WEATHERSTRIP
7. DOOR INNER REAR OPENING WEATHERSTRIP

TSB Revision

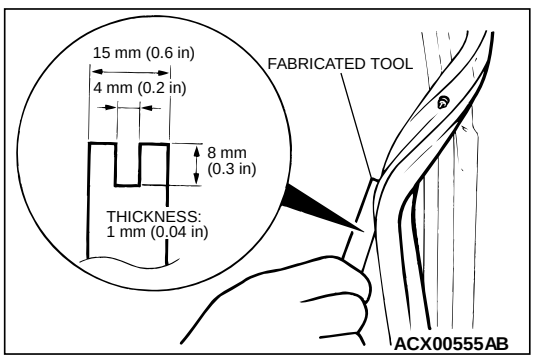
CLIP AND CLAW POSITIONS



REMOVAL SERVICE POINT

<<A>> DOOR OUTER OPENING WEATHERSTRIP REMOVAL

Make a tool as shown and remove the door opening weatherstrip.



TSB Revision

INSTALLATION SERVICE POINT

>>A<< DOOR OUTER OPENING WEATHERSTRIP INSTALLATION

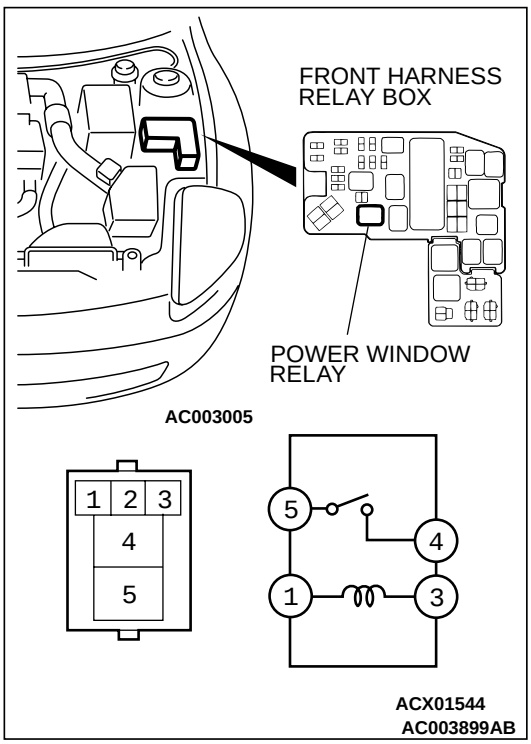
The clip color identifies the left and right weatherstrips.

APPLICABLE SIDE	IDENTIFICATION COLOR
Left door	Natural (White)
Right door	Orange

INSPECTION

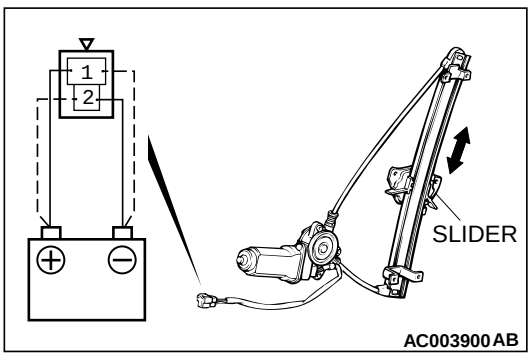
M1429001400077

POWER WINDOW RELAY CONTINUITY CHECK



BATTERY VOLTAGE	TESTER CONNECTION	SPECIFIED CONDITION
Not applied	1 – 3	Continuity
1-Battery (-) terminal,3-battery (+)terminal	4 – 5	Continuity

POWER WINDOW MOTOR CHECK



1. Connect a battery directly to the motor terminals and check that the motor runs smoothly.
2. Check that the motor runs in the opposite direction when the battery is connected with the polarity reversed.
3. If defect is found, replace the window regulator as an assembly.

TSB Revision

LIFTGATE

LIFTGATE DIAGNOSIS

INTRODUCTION TO LIFTGATE DIAGNOSIS

M1424002500050

Difficult locking and unlocking and uneven clearance, and generation of wind noise from the liftgate may be improper adjustment of the liftgate.

LIFTGATE DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1424002600057

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 liftgate 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

M1424002700054

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
Difficult locking and unlocking	1	P.42-86
Uneven body clearance	2	P.42-86

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Difficult locking and unlocking

DIAGNOSIS

STEP 1. Check the release cable routing condition.

Q: Is the release cable routing condition good?
YES : Go to Step 3.
NO : Repair it, then go to Step 2.

STEP 2. Check the engagement of the liftgate latch and liftgate striker.

Q: Are the liftgate latch and liftgate striker engaged correctly?
YES : Adjust it. Refer to P.42-88.
NO : Then go to Step 3.

STEP 3. Check symptoms.

Q: Does the liftgate lock operate easily?
YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 2: Uneven body clearance

DIAGNOSIS

STEP 1. Check the liftgate installation condition.

Q: Is the liftgate installation in good condition?
YES : Adjust it. Refer to P.42-88.
NO : Then go to Step 2.

STEP 2. Check symptoms.

Q: Is the clearance with the body even?
YES : This diagnosis is complete.
NO : Return to Step 1.

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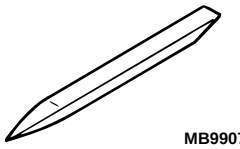
SPECIAL TOOL

M1424000600040

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 MB990784	MB990784 Ornament remover	General service tool	Removal of liftgate trim.

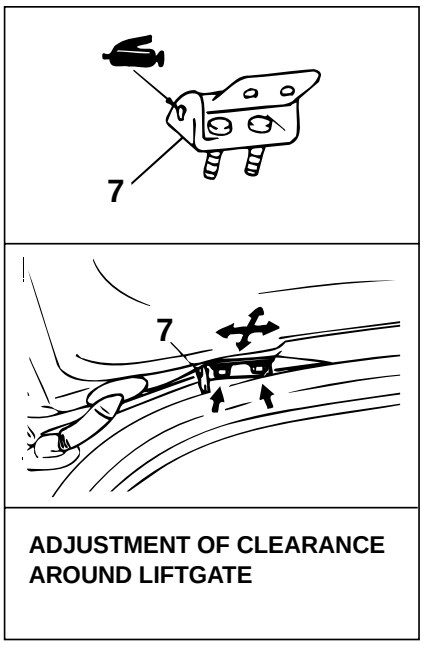
LIFTGATE

REMOVAL AND INSTALLATION

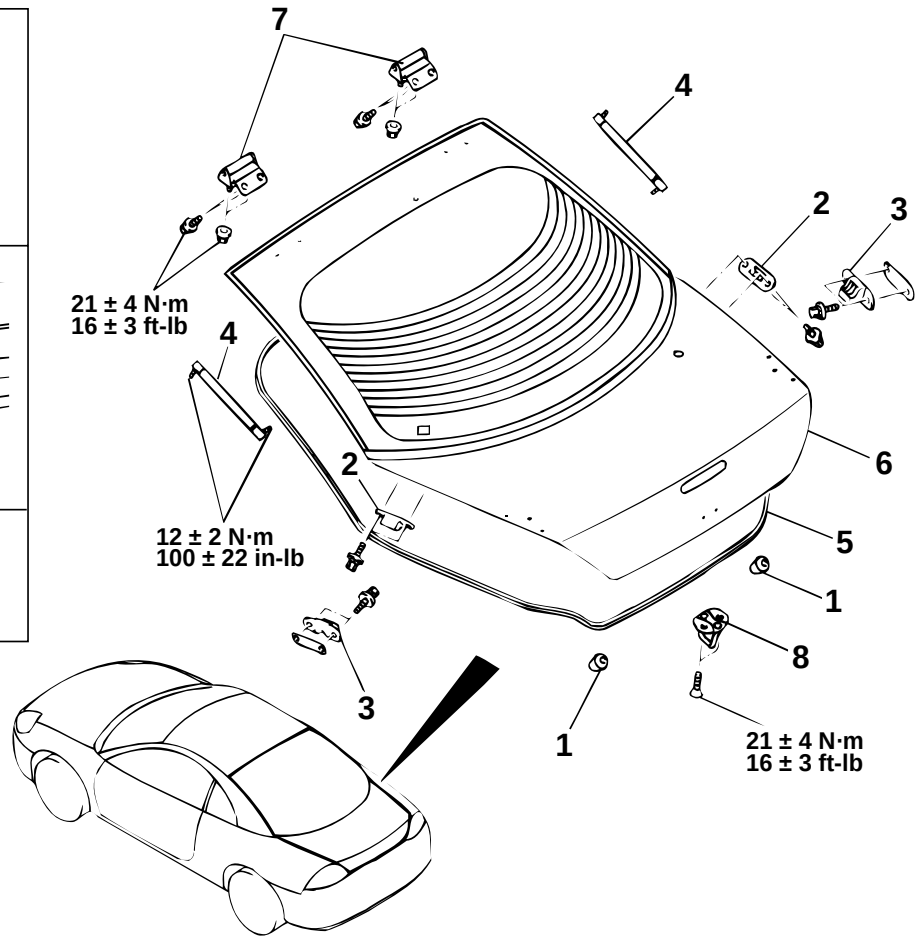
M1424001100048

⚠ CAUTION

1. **Never try to disassemble liftgate gas spring.**
2. **Always bore a hole in the gas spring to release the interior gas before the spring is discarded.**
3. **Keep the liftgate gas spring away from fire or flame.**



ADJUSTMENT OF CLEARANCE AROUND LIFTGATE



AC000503AB

REMOVAL STEPS

1. BUMPER
2. LIFTGATE DAMPER (UPPER)
3. LIFTGATE DAMPER (LOWER)
4. LIFTGATE GAS SPRING

LIFTGATE OPENING WEATHER-STRIP REMOVAL STEPS

- REAR END TRIM (REFER TO GROUP 52A P.52A-10.)

5. LIFTGATE OPENING WEATHER-STRIP

LIFTGATE AND LIFTGATE HINGE REMOVAL STEPS

- REAR WIPER MOTOR (REFER TO GROUP 51 P.51-20.)
- REAR SPOILER (REFER TO GROUP 51 P.51-13.)

LIFTGATE AND LIFTGATE HINGE REMOVAL STEPS (Continued)

- HIGH MOUNTED STOPLIGHT (REFER TO GROUP 54A P.54A-83.)
- REAR END TRIM (REFER TO GROUP 52A P.52A-10.)
- CONNECTION FOR LIFTGATE WIRING HARNESS

4. LIFTGATE GAS SPRING
6. LIFTGATE
   - HEADLINING
7. LIFTGATE HINGE

LIFTGATE STRIKER REMOVAL STEPS

- LIFTGATE LOWER TRIM (REFER TO P.42-91.)

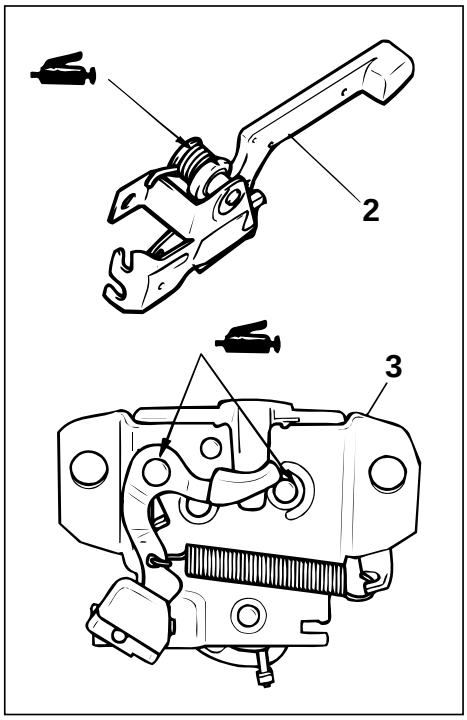
8. LIFTGATE STRIKER

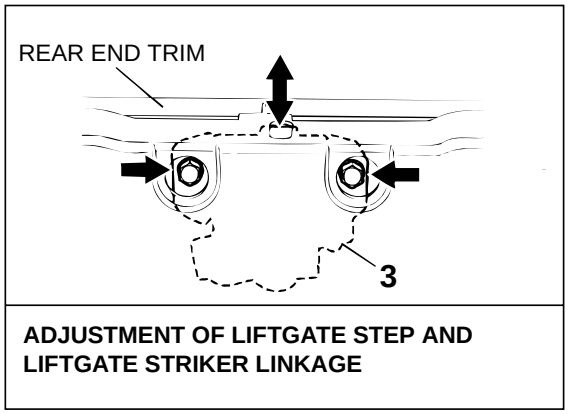
TSB Revision

LIFTGATE HANDLE AND LATCH

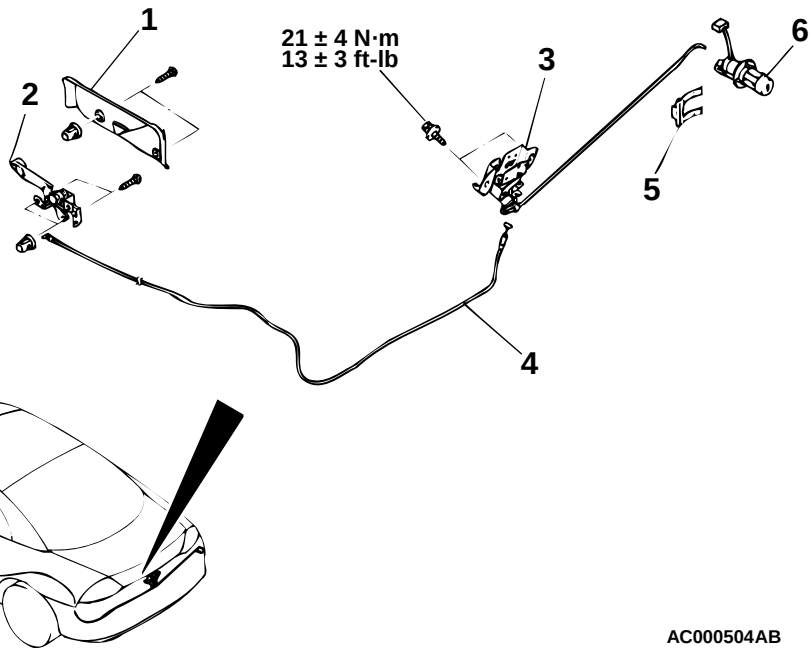
REMOVAL AND INSTALLATION

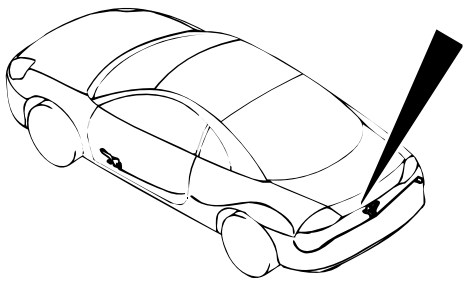
M1424001700039





ADJUSTMENT OF LIFTGATE STEP AND LIFTGATE STRIKER LINKAGE





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LIFTGATE LOCK RELEASE CABLE AND HANDLE REMOVAL STEPS

- SCUFF PLATE (DRIVER'S SIDE) (REFER TO GROUP 52A P.52A-10.)

1. RELEASE HANDLE COVER
2. LIFTGATE LOCK RELEASE HANDLE

- REAR END TRIM (REFER TO GROUP 52A P.52A-10.)

3. LIFTGATE LATCH
4. LIFTGATE LOCK RELEASE CABLE

LIFTGATE LATCH REMOVAL STEPS

- REAR END TRIM (REFER TO GROUP 52A P.52A-10.)

3. LIFTGATE LATCH

LIFTGATE LOCK CYLINDER REMOVAL STEPS

- REAR END TRIM (REFER TO GROUP 52A P.52A-10.)
- REAR COMBINATION LIGHT (PASSENGER'S SIDE) (REFER TO GROUP 54A P.54A-80.)

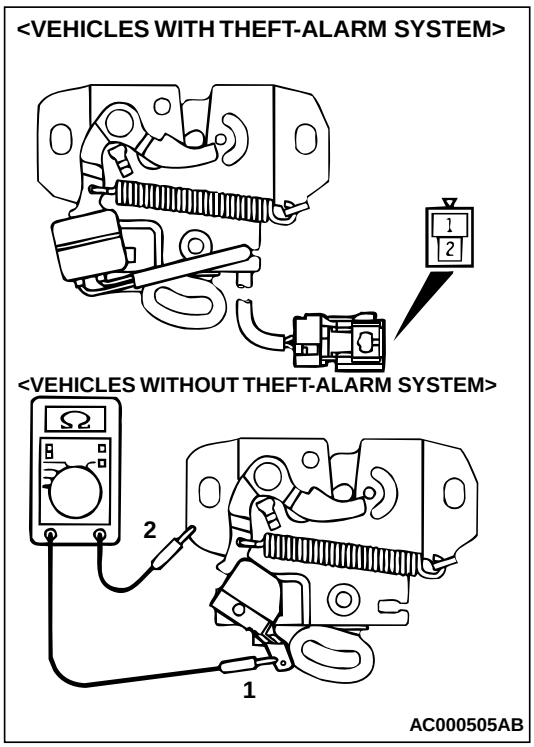
5. RETAINER
6. LIFTGATE LOCK CYLINDER

TSB Revision

INSPECTION

M1424001200056

LIFTGATE LATCH SWITCH CHECK



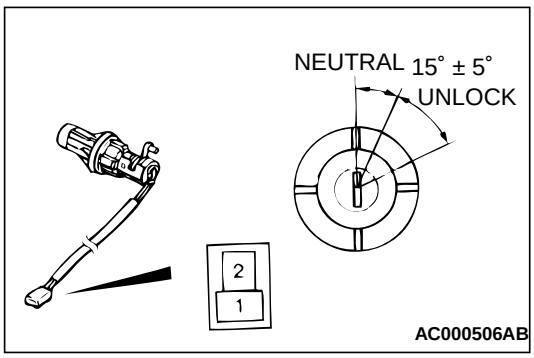
<VEHICLES WITH THEFT-ALARM SYSTEM>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	1 – 2	Continuity
UNLOCK	-	No continuity

<VEHICLES WITHOUT THEFT-ALARM SYSTEM>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	-	No continuity
UNLOCK	1 – 2	Continuity

LIFTGATE LOCK KEY CYLINDER SWITCH CONTINUTY CHECK



<VEHICLES WITH THEFT-ALARM SYSTEM>

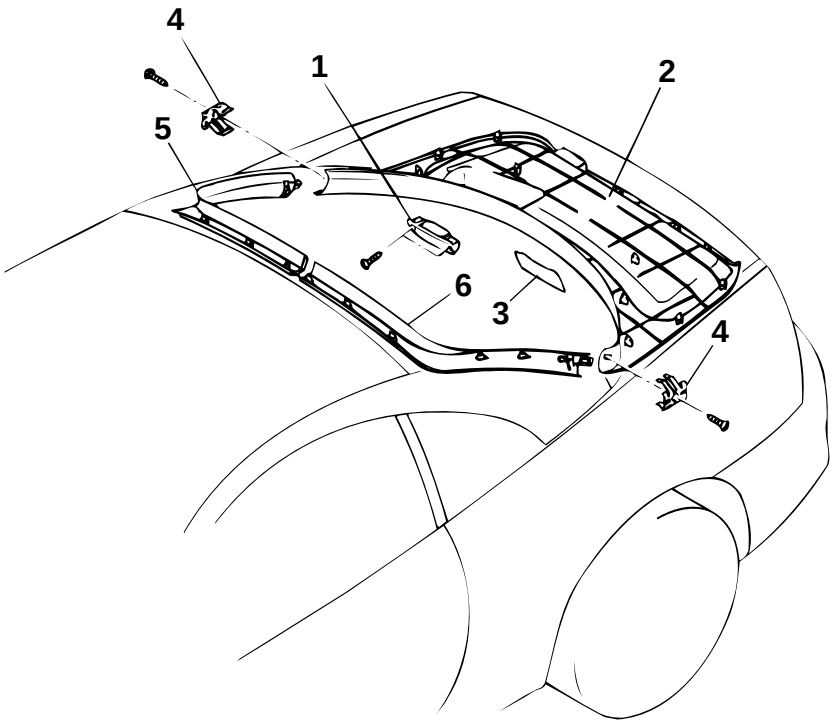
SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
UNLOCK	1 – 2	Continuity
NEUTRAL (OFF)	-	No continuity

TSB Revision

LIFTGATE TRIM AND WATERPROOF FILM

REMOVAL AND INSTALLATION

M1424001400049



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REMOVAL STEPS
1. LIFTGATE GRIP
2. LIFTGATE LOWER TRIM
3. HIGH MOUNTED STOPLIGHT LID
4. CLIP
5. LIFTGATE UPPER TRIM (LH)

REMOVAL STEPS (Continued)
6. LIFTGATE UPPER TRIM (RH)
7. LIFTGATE SIDE TRIM

Required Special Tool:
- MB990784: Remover

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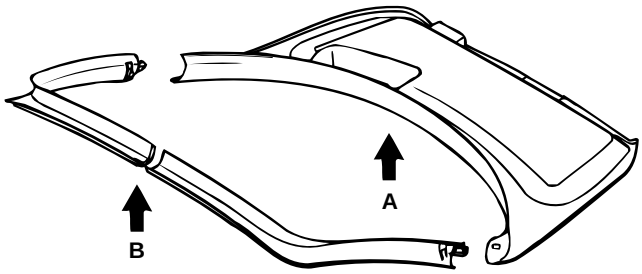
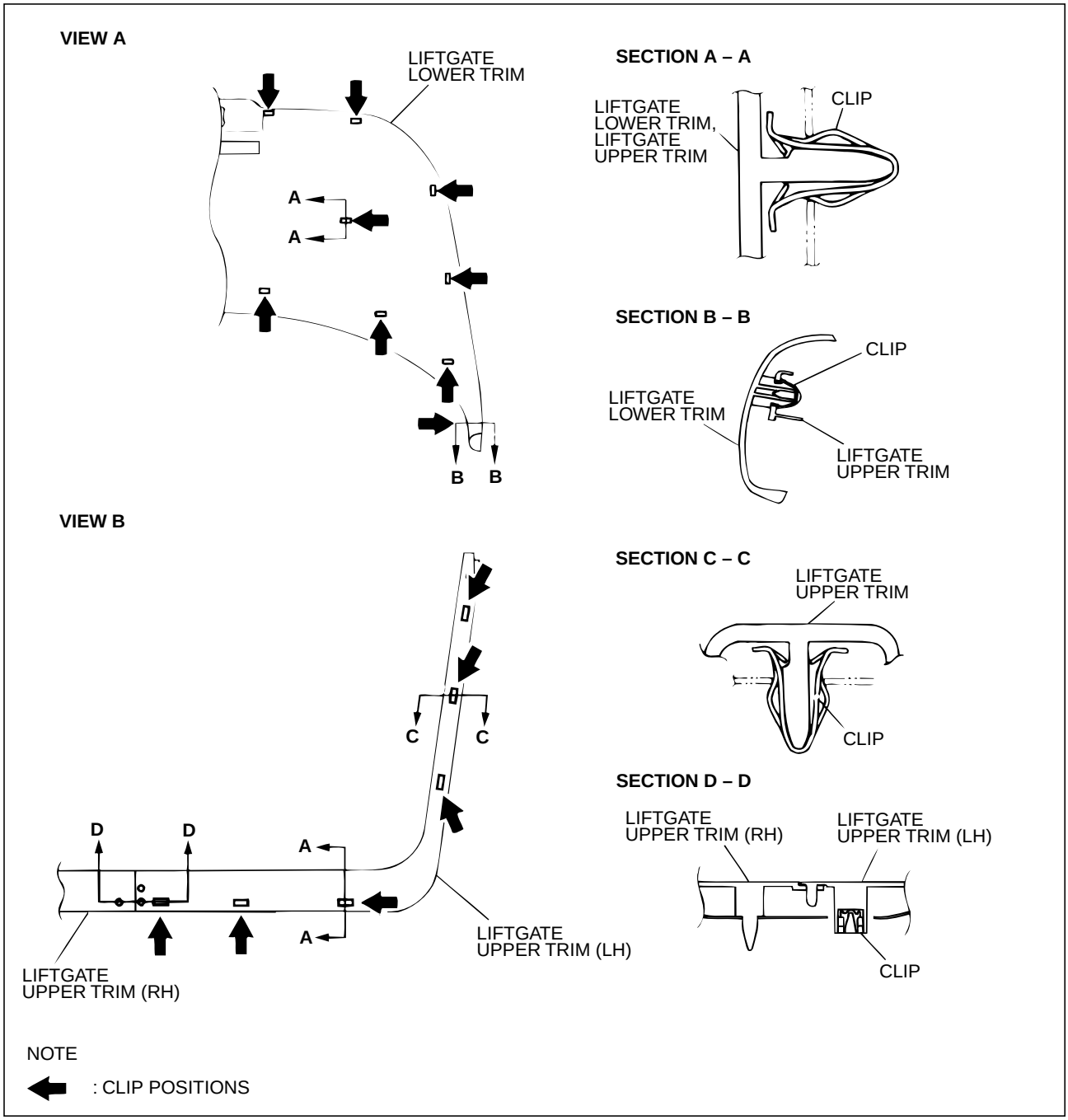
CLIP AND POSITIONS





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TRUNK LID

TRUNK LID DIAGNOSIS

INTRODUCTION TO TRUNK LID DIAGNOSIS

M1421005800125

Difficult locking and unlocking and uneven clearance, and generation of wind noise from the trunk lid may be caused by improper adjustment of the trunk lid.

TRUNK LID DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1421005900100

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 trunk lid 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

M1421006000081

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
Difficult locking and unlocking	1	P.42-93
Uneven body clearance	2	P.42-94
Uneven height	3	P.42-94

SYMPTOM PROCEDURES

INSPECTION PROCEDURE 1: Difficult locking and unlocking

DIAGNOSIS

STEP 1. Check the release cable routing condition.

Q: Is the release cable routing condition good?
YES : Go to Step 2.
NO : Repair it, then go to Step 3.

STEP 2. Check the engagement of the trunk lid latch and trunk lid striker.

Q: Are the trunk lid latch and trunk lid striker engaged correctly?
YES : Adjust it. Refer to P.42-95.
NO : Then go to Step 3.

STEP 3. Check symptoms.

Q: Does the trunk lid lock operate easily?
YES : This diagnosis is complete.
NO : Return to Step 1.

INSPECTION PROCEDURE 2: Uneven body clearance

DIAGNOSIS

STEP 1. Check the trunk lid installation condition.

Q: Is the trunk lid installation in good condition?
YES : Adjust it. Refer to P.42-95.
NO : Then go to Step 2.

STEP 2. Check symptoms.

Q: Is the clearance with the body even?
YES : This diagnosis is complete.
NO : Return to Step 1.

Inspection Procedure 3: Uneven height

DIAGNOSIS

STEP 1. Check the trunk lid bumper height.

Q: Is the trunk lid bumper height proper?
YES : Adjust it. Refer to P.42-95.
NO : Then go to Step2.

STEP 2. Check symptoms.

Q: Are the trunk lid and body height even?
YES : This diagnosis is complete.
NO : Return to Step 1.

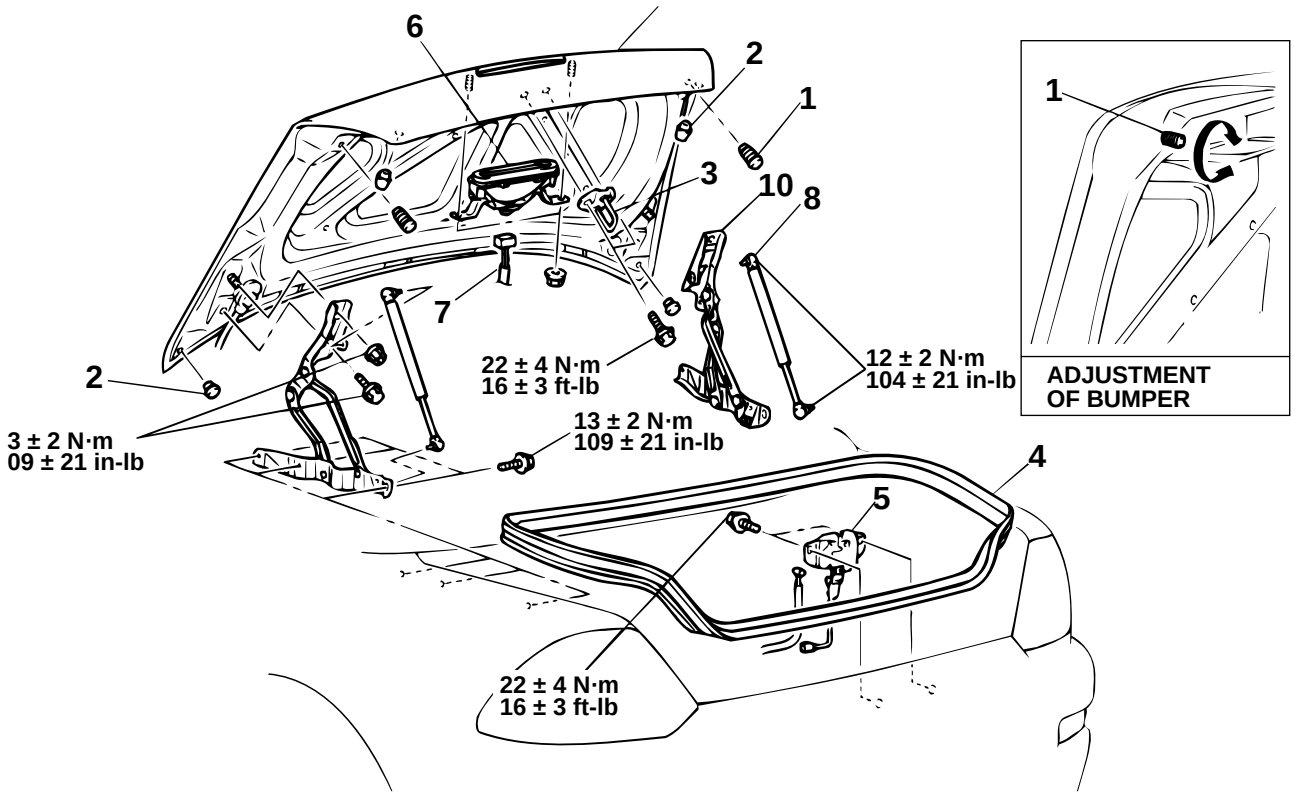
TRUNK LID

REMOVAL AND INSTALLATION

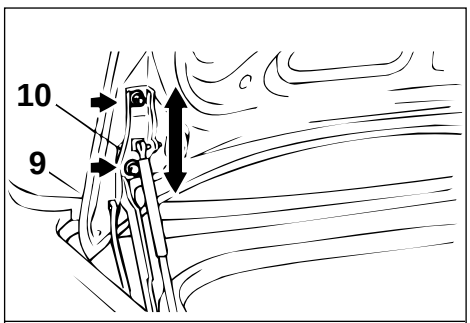
M1421002200049

⚠ CAUTION

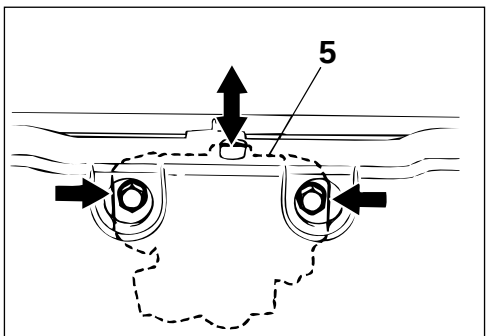
1. **Never try to disassemble trunk lid gas spring.**
2. **Always bore a hole in the gas spring to release the interior gas before the spring is discarded.**
3. **Keep the trunk lid gas spring away from fire or flame.**



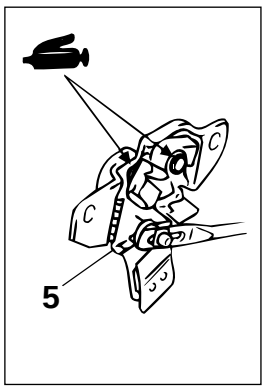
ADJUSTMENT OF BUMPER



ADJUSTMENT OF CLEARANCE AROUND TRUNK LID



ADJUSTMENT OF CLEARANCE AROUND TRUNK LID



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REMOVAL STEPS

>>C<< 1. BUMPER
2. BUMPER
3. TRUNK LID STRIKER
>>B<< 4. TRUNK LID OPENING WEATHER-STRIP

TRUNK LID LATCH REMOVAL STEPS

- REAR END TRIM (REFER TO GROUP 52A – TRIMS P.52A-10.)

5. TRUNK LID LATCH

TRUNK LID GAS SPRING REMOVAL STEPS

>>B<< 4. TRUNK LID OPENING WEATHERSTRIP
8. TRUNK LID GAS SPRING

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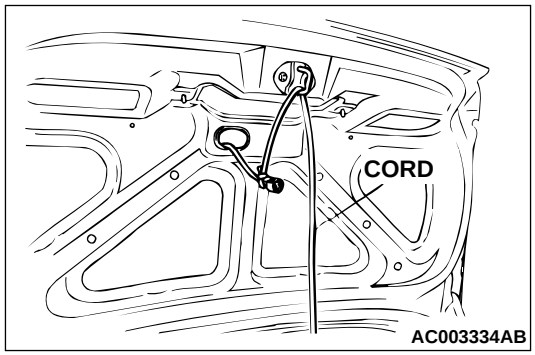
TRUNK LID REMOVAL STEPS

6. HIGH MOUNTED STOPLIGHT
<<A>> >>A<< 7. HARNESS CONNECTOR
8. TRUNK LID HINGE
9. TRUNK LID
10. TRUNK LID HINGE

REMOVAL SERVICE POINTS

<<A>> HARNESS CONNECTOR REMOVAL

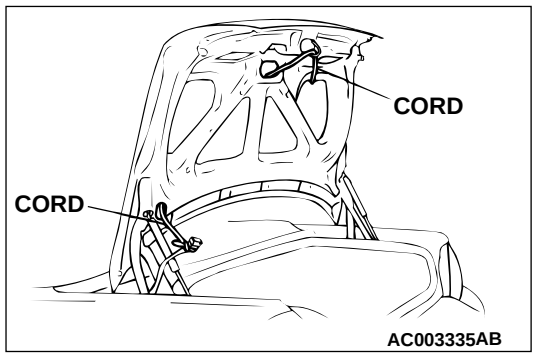
Removal the grommet Tie a cord to the end of the harness connector, wind plastic tape around it so that there is no other side.



INSTALLATION SERVICE POINTS

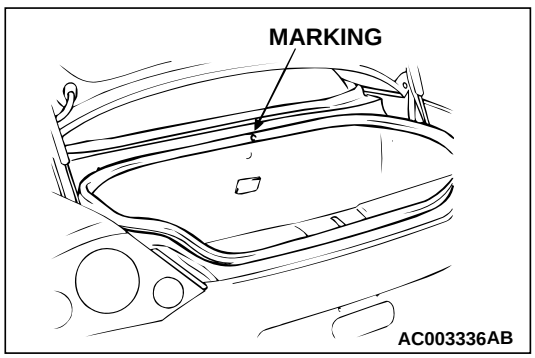
>>A<< HARNESS CONNECTOR INSTALLATION

1. Tie the cord that was used during removal to the end of the harness connector, wind plastic tape around it so that there is no unevenness.
2. Pull the cord to pull through the harness connector.
3. Install the grommet.



>>B<< TRUNK LID OPENING WEATHERSTRIP INSTALLATION

Install the trunk lid opening weatherstrip so that its marking is positioned at the center of the vehicle.



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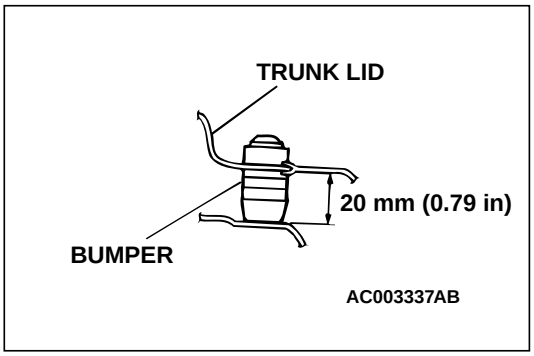


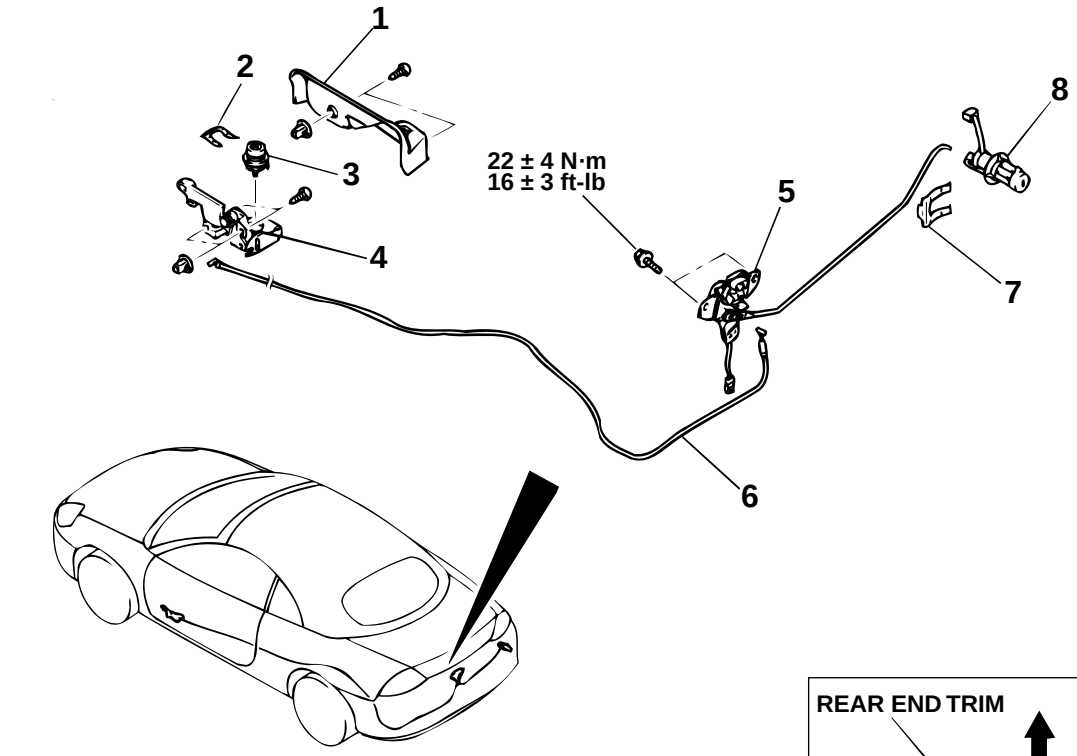
>>C<< BUMPER INSTALLATION

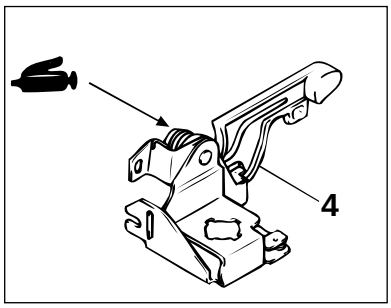
Install the bumper as shown in figure.
Be sure they are adjusted so the trunk lid is even with the rear fenders and body on all sides.

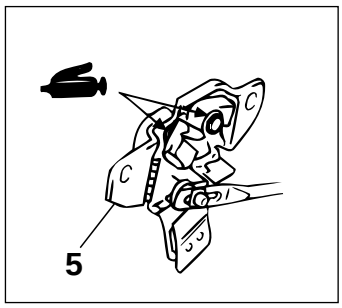
TRUNK LID LOCK RELEASE HANDLE AND CABLE

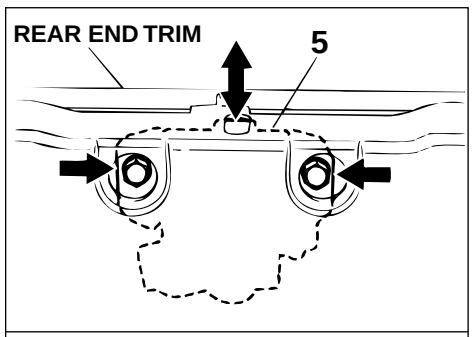
REMOVAL AND INSTALLATION

M1421004500024









ADJUSTMENT OF TRUNK LID STEP AND TRUNK LID STRIKER LINKAGE

AC003338AB

TRUNK LID LOCK RELEASE HANDLE REMOVAL STEPS

1. RELEASE HANDLE COVER
2. RETAINER
3. RELEASE HANDLE LOCK CYLINDER
- SCUFF PLATE (DRIVER'S SIDE) (REFER TO GROUP 52A P.52A-10.)
- FRONT SEAT (DRIVER'S SIDE) (REFER TO GROUP 52A P.52A-17.)
4. TRUNK LID RELEASE HANDLE

TRUNK LID LOCK RELEASE CABLE REMOVAL STEPS

1. RELEASE HANDLE COVER
- SCUFF PLATE (DRIVER'S SIDE) (REFER TO GROUP 52A P.52A-10.)
- FRONT SEAT (DRIVER'S SIDE) (REFER TO GROUP 52AP.52A-17.)
4. TRUNK LID RELEASE HANDLE
- QUARTER TRIM, REAR END TRIM AND LUGGAGE COMPARTMENT TRIM (REFER TO GROUP 52A P.52A-10.)
5. TRUNK LID LATCH
6. TRUNK LID LOCK RELEASE CABLE
7. RETAINER
8. TRUNK LID LOCK CYLINDER

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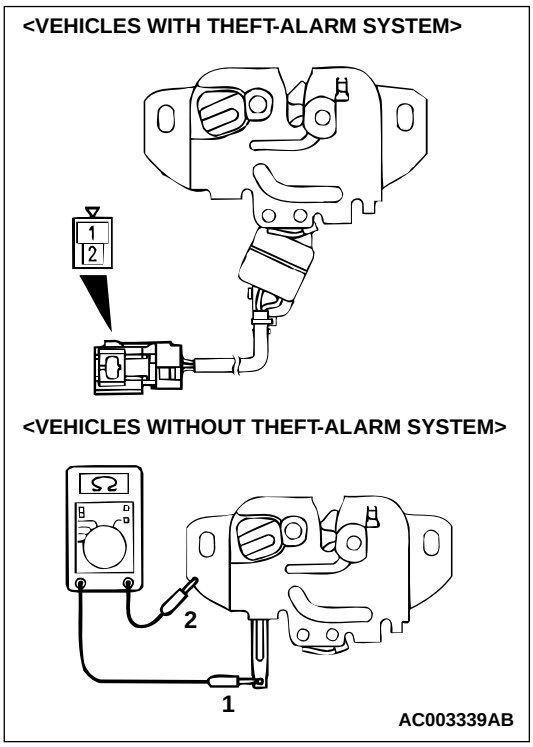
INSPECTION

M1421004800025

TRUNK LID LATCH SWITCH CHECK



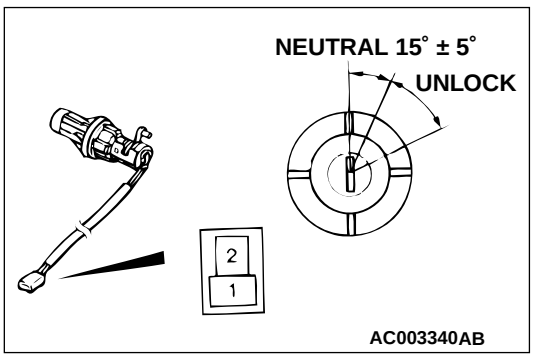
<VEHICLES WITH THEFT-ALARM SYSTEM>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	1 – 2	Continuity
UNLOCK	-	No continuity

<VEHICLES WITHOUT THEFT-ALARM SYSTEM>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
LOCK	-	No continuity
UNLOCK	1 – 2	Continuity

TRUNK LID LOCK KEY CYLINDER SWITCH CONTINUTYCHECK



<VEHICLES WITH THEFT-ALARM SYSTEM>

SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
UNLOCK	1 – 2	Continuity
NEUTRAL (OFF)	-	No continuity

KEYLESS ENTRY SYSTEM

OGENERAL DESCRIPTION

M1428000100058

Some models are equipped with a radio-controlled keyless entry system. The main features are:

- Antenna and receiver are incorporated in the ETACS-ECU.
- ID code can be registered by using the scan tool (MUT-II).
- Transmitter is a key holder type, which incorporates lock switch, unlock switch, and panic switch.
- The signal causes the room light to flash twice when the door is locked, or light for 15 seconds when the door is unlocked.
- The signal causes the turn signal light to flash twice when the door is locked, or flash four times when the door is unlocked.

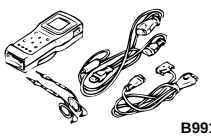
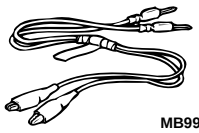
KEYLESS ENTRY SYSTEM DIAGNOSIS

M1428000700050

The keyless entry system is controlled by the Smart Wiring System (SWS). For troubleshooting, refer to Group 54B, DiagnosisP.54B-6.

SPECIAL TOOLS

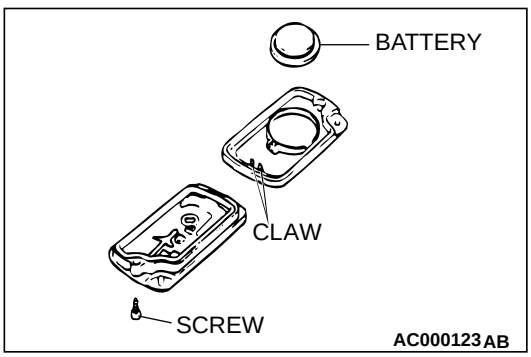
M1428000600053

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
 B991502	MB991502 Scan tool (MUT-II)	MB991496-OD	For checking of keyless entry system [Input signal check]
 MB991529	MB991529 Diagnostic trouble code check harness	Tool not necessary if scan tool (MUT-II) is available	For checking of keyless entry system [Input signal check]

ON-VEHICLE SERVICE

HOW TO REPLACE THE TRANSMITTER BATTERY

M1428000900054



⚠ CAUTION

- **Do not allow water or dust to enter the inside of the transmitter when it is open. Also, do not touch the precision electronic device.**

1. Remove the set screw to remove the battery from the transmitter.
2. Install a battery with its (+) side face-down.

   Battery required for replacement: Coin type battery CR2032
3. Insert the claw first, and assemble the transmitter.
4. Verify that the keyless entry system operates.

TSB Revision

ENABLING/DISABLING THE ANSWERBACK FUNCTION

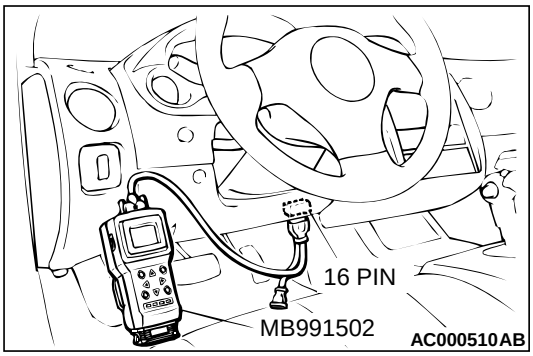
M1428003200043

If the keyless entry system locks or unlocks the doors, the dome light flashes or illuminates, the hazard warning light flashes (hazard answerback function) and the horn sounds (horn answerback function). The hazard and horn answerback functions can be enabled or disabled according to the following procedure:

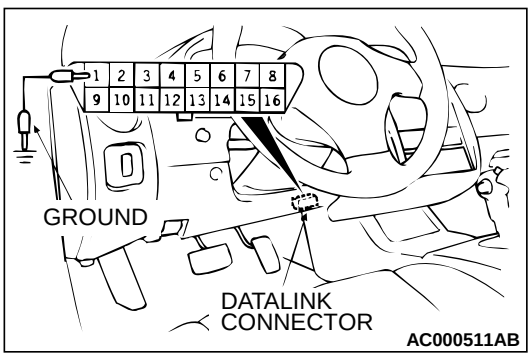
ENABLING/DISABLING THE HAZARD ANSWERBACK FUNCTION

The hazard answerback function can be enabled or disabled by one of the two following procedures.

<When the transmitter is used after connecting scan tool MB991502 to the data link connector or grounding data link connector terminal (1)>



1. Enter the hazard answerback customize mode by observing one of the following steps. If the ETACS-ECU enters the customize mode, its tone alarm will sound once.



   (1) Connect scan tool MB991502 to the data link connector terminal (1).
   (2) Turn the ignition switch to "LOCK" (OFF) position.
   (3) Close the driver's side door.
   (4) Leave the windshield washer switch on for at least ten seconds. Then the ETACS-ECU tone alarm will sound once.
2. If the transmitter "LOCK" switch is pushed consecutively twice (within two seconds), the ETACS-ECU tone alarm will sound, indicating that the hazard answerback function can be enabled or disabled when the doors are locked.
   - **Enable the hazard answerback function when the doors are locked: The ETACS-ECU tone alarm will sound once.**
   - **Disable the hazard answerback function when the doors are locked: The ETACS-ECU tone alarm will sound twice.**
3. If the transmitter "UNLOCK" switch is pushed consecutively twice (within two seconds), the ETACS-ECU tone alarm will sound, indicating that the hazard answerback function can be enabled or disabled when the doors are unlocked.
   - **Enable the hazard answerback function when the doors are unlocked: The ETACS-ECU tone alarm will sound once.**
   - **Disable the hazard answerback function when the doors are unlocked: The ETACS-ECU tone alarm will sound twice.**

TSB Revision

4. Exit the hazard answerback customize mode by observing one of the following steps.
   (1) Disconnect scan tool MB991502 from the data link connector, or disconnect data link connector terminal (1) form the ground.
   (2) Turn the ignition switch to position other then "LOCK" (OFF), or remove the ignition key.
   (3) Open the driver's side door,

NOTE: If any operation is not done for at least three minutes after the ETACS-ECU has entered the customize mode, the hazard answerback customize mode will be canceled automatically.

<When only the transmitter is used>

1. Remove the ignition key.
2. Push the "LOCK" switch while holding the "UNLOCK" switch pushed for four to ten seconds.
3. If the "LOCK" switch and "UNLOCK" switch are released in that order, the ETACS-ECU tone alarm will sound, indicating that the hazard answerback function can be enabled or disabled when the doors are locked.
   - **Enable the hazard answerback function when the doors are locked: The ETACS-ECU tone alarm will sound once.**
   - **Disable the hazard answerback function when the doors are locked: The ETACS-ECU tone alarm will sound twice.**
4. If the "UNLOCK" switch and "LOCK" switch are released in that order, the ETACS-ECU tone alarm will sound, indicating that the hazard answerback function can be enabled or disabled when the door are unlocked.
   - **Enable the hazard answerback function when the doors are unlocked: The ETACS-ECU tone alarm will sound once.**
   - **Disable the hazard answerback function when the doors are unlocked: The ETACS-ECU tone alarm will sound twice.**

ENABLING/DISABLING THE HORN ANSWERBACK FUNCTION

1. Remove the ignition key.
2. Push the "UNLOCK" switch while holding the "LOCK" switch pushed for four to ten seconds.
3. If the "LOCK" switch and "UNLOCK" switch are released at the same time, the ETACS-ECU tone alarm will sound, indicating that the horn answerback function can be enabled or disabled.
   - **Enable the horn answerback function: The ETACS-ECU tone alarm will sound once.**
   - **Disable the horn answerback function: The ETACS-ECU tone alarm will sound twice.**

TSB Revision

SECRET CODE REGISTRATION METHOD

M1428001000054

Each individual secret code is registered inside the transmitter, and so it is necessary to resister these codes with the EEPROM inside the receiver in the following cases.

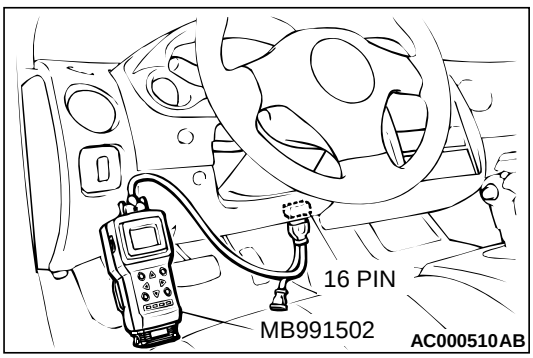
- When the transmitter or ETACS-ECU is replaced
- If more transmitters are to be used
- If it appears that a problem is occurring because of faulty registration of a code.

A maximum of four different codes can be stored in the EEPROM memory (four different transmitters can be used). When the code for the first transmitter is registered, the previously registered codes for all transmitters are cleared. Therefore, if you are using four transmitters or are adding more transmitters, the codes for all transmitters must be registered at the same time.

1. Check that the doors lock normally when the key is used.
2. Insert the ignition key.

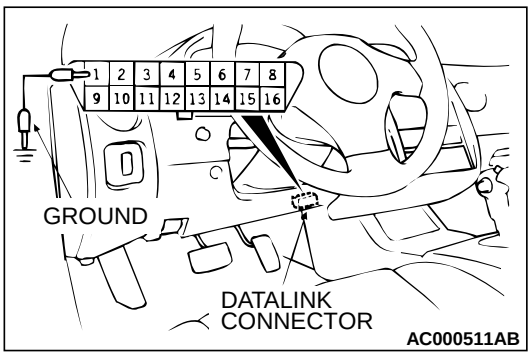
⚠ CAUTION

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



3. Connect the scan tool to the data link connector. If the scan tool is not used, ground terminal (1) of the data link connector.

   NOTE: This will connect terminal (1) of the data link connector to ground, and the system will be in secret code registration standby mode.

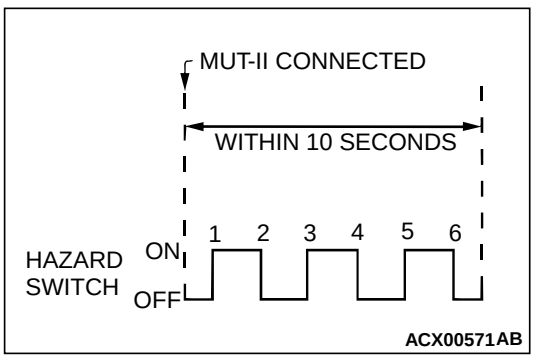


4. Press the hazard switch six times within 10 seconds.

   NOTE: At this time the code registration monitor request is output (all doors locked and unlocked) and becomes registration mode.

   NOTE: The hazard warning light switch is turned on and off alternately whenever it is pushed.

5. Press the transmitter switch, and then press it two times within 10 seconds of the first press. This will register the code.
6. When registration is completed, the code registration monitor request is output (all doors locked and unlocked).



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7. If you are using two or more transmitters or have added a second transmitter, the same registration procedure should be carried out within one minute after registering the code for the first transmitter. After the second registration is completed, the code registration monitor request is output (all doors locked and unlocked).
8. Registration mode will be canceled under the following conditions:
   - When the secret code for four transmitters has been registered;
   - When one minute has been passed after registration mode started;
   - When scan tool MB991502 is disconnected (the ground connection is broken);
   - When the key is removed from the key cylinder;
9. After the registration is completed, carry out the following work, and then check that the keyless entry system operates normally.
   - Remove the ignition key.
   - Close all of the doors.

SUNROOF ASSEMBLY

GENERAL DESCRIPTION

M1426000100063

A motor-driven outer slide-type glass sunroof with a tilt-up mechanism is adopted in some models as optional equipment.Even when the sunroof is fully closed, a sufficient amount of light and a feeling of openness can still be obtained by opening the sunroof sunshade.

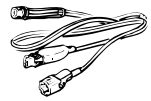
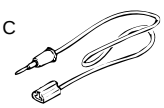
SUNROOF DIAGNOSIS

M1426000700043

The sunroof system is controlled by the Simplified Wiring System (SWS). For troubleshooting, refer to GROUP 54B, Diagnosis P.54B-9.

SPECIAL TOOLS

M1426000600057

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
A  B  C  D  MB991223AD	MB991223 Harness set A: MB991219 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

TSB Revision

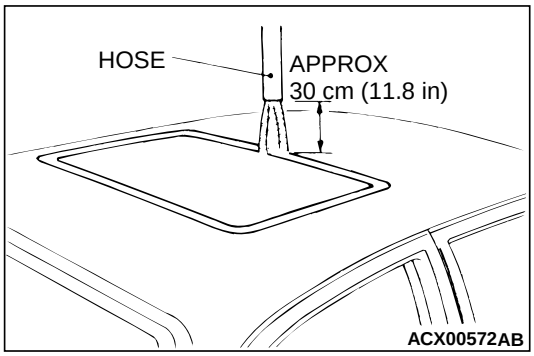
ON-VEHICLE SERVICE

WATER TEST

M1426000900069

Check if there are any leaks in the sunroof by the following procedure.

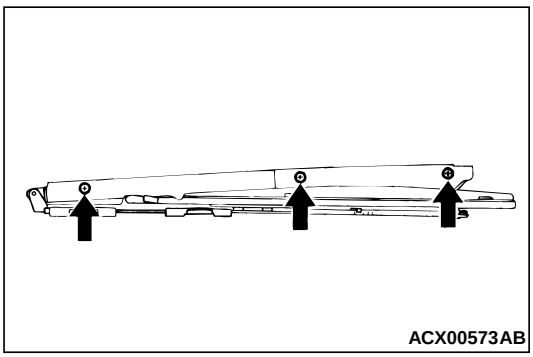
1. Fully close the roof lid glass.
2. Adjust the water pressure so that water comes out of the hose to a height of approximately 50 cm (19.7 inches) when the hose is held vertically facing upwards.
3. Hold the end of the hose approximately 30 cm (11.8 inches) above the roof and let the water run onto the weatherstrip for 5 minutes or more.
4. Check if any water leaks can be found in the room while watering. Even though there are any water leaks around the roof lid glass, it can be acceptable as long as water is caught in the drip area.



SUNROOF FIT ADJUSTMENT

M1426001000069

1. Fully close the roof lid glass.
2. Fully open the sunshade.
3. Loosen the roof lid glass assembly mounting screws (four), and then slide the roof lid glass assembly along the slot in the roof lid glass assembly to adjust the height of the roof lid glass. Ensure that uniform space between the roof lid glass and the body is secured in circumference.
4. After adjustment, check to be sure that the sunroof operates smoothly.



OPERATION CHECK

M1426002600075

Check that the following items. If faulty, replace the sunroof-ECU (sunroof motor assembly).

⚠ CAUTION

Check that the following items are normal before carrying out this operation check.

1. **Installation condition of the sunroof assembly**
2. **Installation condition, deforms and foreign material of the sunroof drive cable**
3. **Unfitted sunroof lid glass**
4. **Sunroof switch and sunroof motor assembly**

TSB Revision

NO.	SUNROOF INITIAL POSITION	SWITCH OPERATION	JUDGMENT (NORMAL)
01	Fully closed	Ignition switch: ON • Sunroof switch: OPEN	The sunroof automatically opens.
02	Fully open	Ignition switch: ON • Sunroof switch: CLOSE	The sunroof closes while the sunroof switch is pushed to the CLOSE position.
03	Fully closed (tilt down)	Ignition switch: ON • Sunroof switch: TILT UP	The sunroof will automatically tilt up.
04	Tilt up	Ignition switch: ON • Sunroof switch: CLOSE	The sunroof closes while the sunroof switch is pushed to the CLOSE position.
05	Fully closed, tilt up or fully tilted	Ignition switch: ON 1. Sunroof switch: OPEN 2. Sunroof switch: CLOSE (The sunroof switch is pushed to the CLOSE position while the sunroof is automatically opening. The time of pushing: Within 2 seconds)	The sunroof stops the automatic open operation.
06	Fully tilted	Ignition switch: ON • Sunroof switch: TILT UP	The sunroof dose not move.
07	Fully closed, tilt up or fully tilted	Ignition switch: ON 1. Sunroof switch: OPEN 2. Sunroof switch: CLOSE (The sunroof switch is pushed to the CLOSE position while the sunroof is automatically opening. The time of pushing: More than 2 seconds)	The sunroof stops the automatic open operation, and the sunroof closes while the sunroof switch is pushed to the CLOSE position.
08	Fully closed (tilt down)	Ignition switch: ON 1. Sunroof switch: TILT UP 2. Sunroof switch: OPEN, CLOSE (Each direction switch of the sunroof switch is pushed while the sunroof is conducting the automatic tilt up operation.)	The sunroof will continue automatic operation until tilted up.
09	Fully closed or while opening	Ignition switch: ON • Sunroof switch: OPEN. Block the sunroof before the sunroof is fully open.	The sunroof stop.
10	Fully opened or while closing	Ignition switch: ON • Sunroof switch: CLOSE Block the sunroof before the sunroof is fully closed.	The sunroof moves back toward open and stops.
11	Fully opened or while opening	Ignition switch: ON 1. Sunroof switch: CLOSE Block the sunroof before the sunroof is fully closed. 2. Sunroof switch: TILT UP, OPEN or CLOSE	The sunroof moves back toward open and stops when any switch is pushed.

TSB Revision

NO.	SUNROOF INITIAL POSITION	SWITCH OPERATION	JUDGMENT (NORMAL)
12	Fully closed	Ignition switch: ON 1. Ignition switch: LOCK (OFF) 2. Sunroof switch: OPEN [Within 30 seconds after the ignition switch is turned LOCK (OFF).]	The sunroof automatic opens 30 seconds after the ignition switch is turned LOCK (OFF).
13	Fully opened or while closing	Ignition switch: ON 1. Sunroof switch: CLOSE 2. Ignition switch: LOCK (OFF) 3. Sunroof switch: TILT UP, OPEN or CLOSE [Within 30 seconds after the ignition switch is turned LOCK (OFF).]	The sunroof closes while the sunroof switch is pushed to the CLOSE position. Then, the sunroof does not move when any switch is pushed.
14	Fully closed (tilt down)	Ignition switch: ON 1. Sunroof switch: TILT UP 2. Ignition switch: LOCK (OFF) [The ignition switch is turned LOCK (OFF) while the sunroof switch is automatically opening.]	The sunroof automatic opens only 30 seconds after the ignition switch is turned LOCK (OFF).
15	Fully opened or while closing	Ignition switch: ON 1. Sunroof switch: CLOSE 2. Ignition switch: LOCK (OFF) [The ignition switch is turned LOCK (OFF) while the sunroof switch is pushed to the CLOSE position.]	The sunroof closes while the sunroof switch is pushed to the CLOSE position.
16	Fully closed	Ignition switch: ON 1. Ignition switch: LOCK (OFF) 2. Sunroof switch: OPEN [Within 30 seconds after the ignition switch is turned LOCK (OFF).] 3. Door switch: ON [Within 30 seconds after the ignition switch is turned LOCK (OFF).]	The sunroof automatic opens and stops when the door switch is LOCK (OFF).
17	Fully closed	Ignition switch: ON 1. Ignition switch: LOCK (OFF) 2. Sunroof switch: OPEN [Within 30 seconds after the ignition switch is turned LOCK (OFF).] 3. Door switch: ON [Within 30 seconds after the ignition switch is turned LOCK (OFF).]	The sunroof closes while the sunroof switch is pushed to the CLOSE position. Then, the sunroof does not move when the door switch is ON.
18	Fully closed (tilt down)	Ignition switch: ON 1. Ignition switch: LOCK (OFF) 2. Sunroof switch: TILT UP [Within 30 seconds after the ignition switch is turned LOCK (OFF).] 3. Door switch: ON [Within 30 seconds after the ignition switch is turned LOCK (OFF).]	The sunroof automatic opens and stops when the door switch is ON.

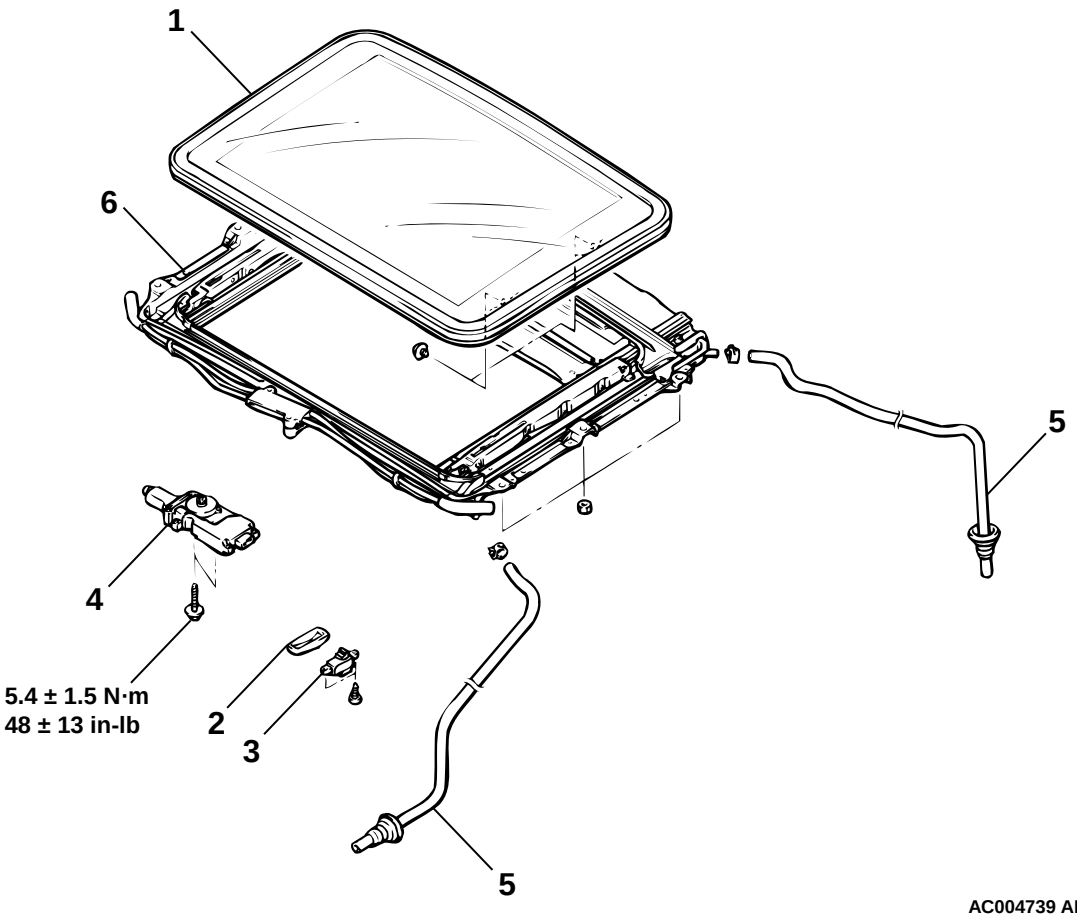
TSB Revision

SUNROOF ASSEMBLY

REMOVAL AND INSTALLATION

M1426001200063

Post-installation Operation <Roof lid glass assembly, Sunroof assembly>
- Sunroof Fit Adjustment (Refer to P.42-105.)
- Sunroof Water Test (Refer to P.42-105.)



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1. ROOF LID GLASS ASSEMBLY

SUNROOF SWITCH REMOVAL STEPS

2. SUNROOF SWITCH COVER
- HEADLINING (REFER TO GROUP 52A P.52A-14.)

3. SUNROOF SWITCH

SUNROOF MOTOR REMOVAL STEPS
- HEADLINING (REFER TO GROUP 52A P.52A-14.)

<<A>> >>B<< 4. SUNROOF MOTOR ASSEMBLY

DRAIN HOSE REMOVAL STEPS
- FRONT SIDE AIR DAM (FRONT DRAIN HOSE.) (REFER TO P.42-9.)
- HEADLINING (REFER TO GROUP 52A P.52A-14.)
- SPLASH SHIELD (FRONT DRAIN HOSE.) (REFER TO P.42-9.)

<<B>> >>A<< 5. DRAIN HOSE

SUNROOF ASSEMBLY REMOVAL STEPS

2. SUNROOF SWITCH COVER
- HEADLINING (REFER TO GROUP 52A P.52A-14.)

<<A>> >>B<< 4. SUNROOF MOTOR ASSEMBLY
5. DRAIN HOSE CONNECTION
6. SUNROOF ASSEMBLY

TSB Revision

REMOVAL SERVICE POINTS

<<A>> SUNROOF MOTOR REMOVAL

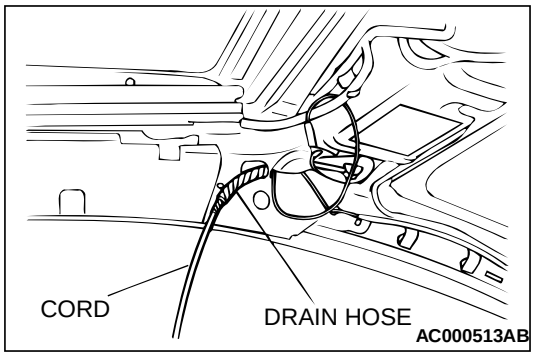
⚠ CAUTION

Always close the roof lid glass fully before removing the sunroof motor. If the fully-closed positions of the roof lid glass and the sunroof motor are not the same, the sunroof will not operate properly.

NOTE: If there is a problem with the sunroof motor so that the roof lid glass cannot close fully, use an Allen wrench to turn the gear section of the sunroof motor to fully close the roof lid glass.

<<B>> DRAIN HOSE REMOVAL

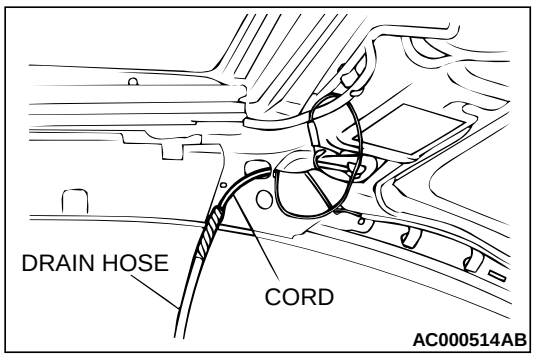
Tie a cord to the end of the drain hose, and wind tape around the tie until it is smooth. Then pull the drain hose out into the wheel housing.



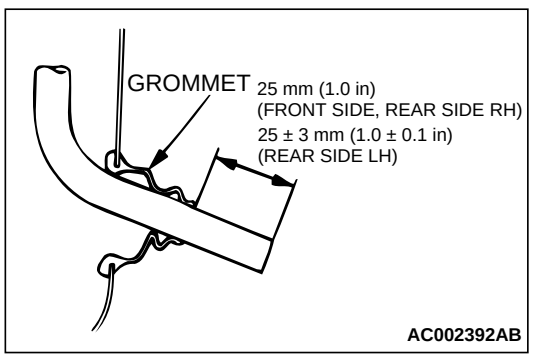
INSTALLATION SERVICE POINTS

>>A<< DRAIN HOSE INSTALLATION

1. Tie the cord that was used during removal to the end of the drain hose, and wind tape around it until it is smooth.
2. Pull the cord to pull through the drain hose.



3. Install the grommet, and then position the drain hose so that it protrudes from the grommet as shown in the illustration.



TSB Revision

>>B<< SUNROOF MOTOR ASSEMBLY INSTALLATION

If the sunroof motor assembly is out of its fully closed position, adjust the motor position by the following steps before installment.

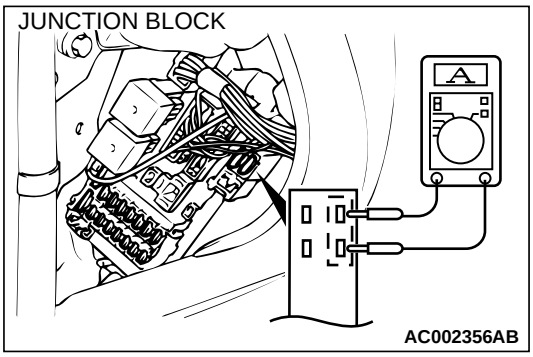
1. Remove the sunroof motor assembly without disconnecting the sunroof motor assembly connector.
2. Close the sunroof lid glass fully.
3. Push the sunroof close switch until the sunroof motor assembly stops turning. Repeat this operation until the motor does not turn at all. Then install the motor assembly to the roof.

   NOTE: When the sunroof motor assembly does not turn at all, the sunroof-ECU will return to its default condition.

INSPECTION

M1426001300071

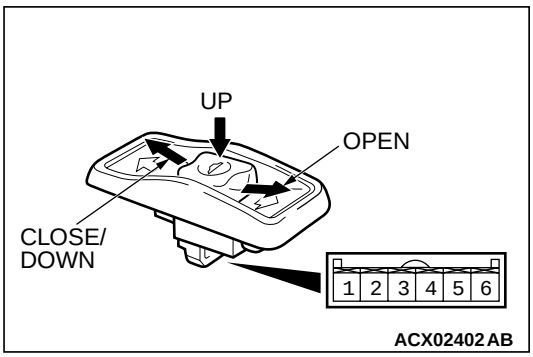
ROOF LID GLASS OPERATION CURRENT CHECK



1. Remove the sunroof fuse and connect an ammeter as shown in the illustration.
2. Press the sunroof switch to operate the sunroof, and then measure the operation current while the roof lid glass is moving (except when the sunroof starts to operate, when it is fully open, when it is fully closed and when it is fully tilted up).

   Standard value: 10 A or less [at 20°C (68°F)]
3. If the operation current is outside the standard value, check the following points.
   - Installation condition, warping or jamming of sunroof assembly
   - Sticking of drive cable
   - Tilt of roof lid glass

SUNROOF SWITCH CONTINUITY CHECK

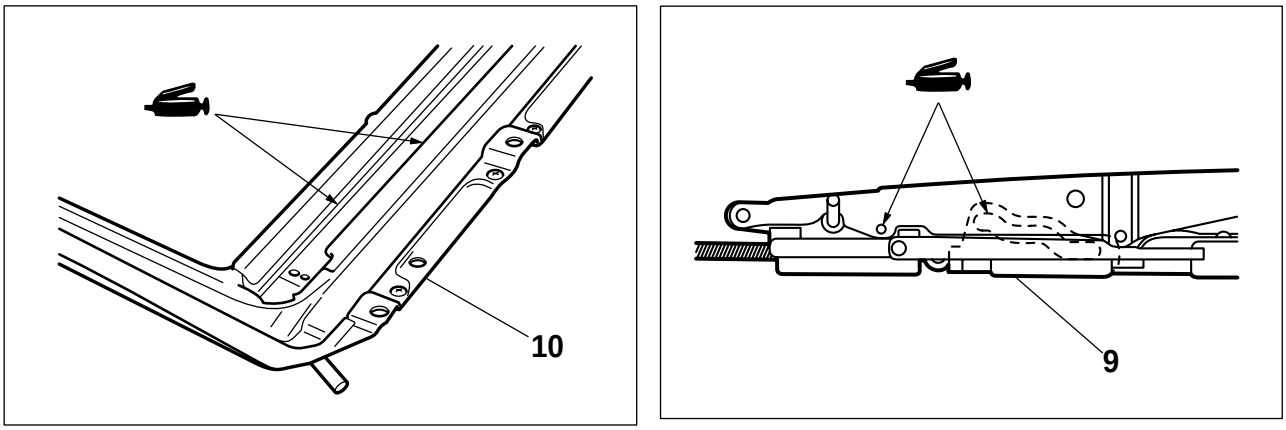


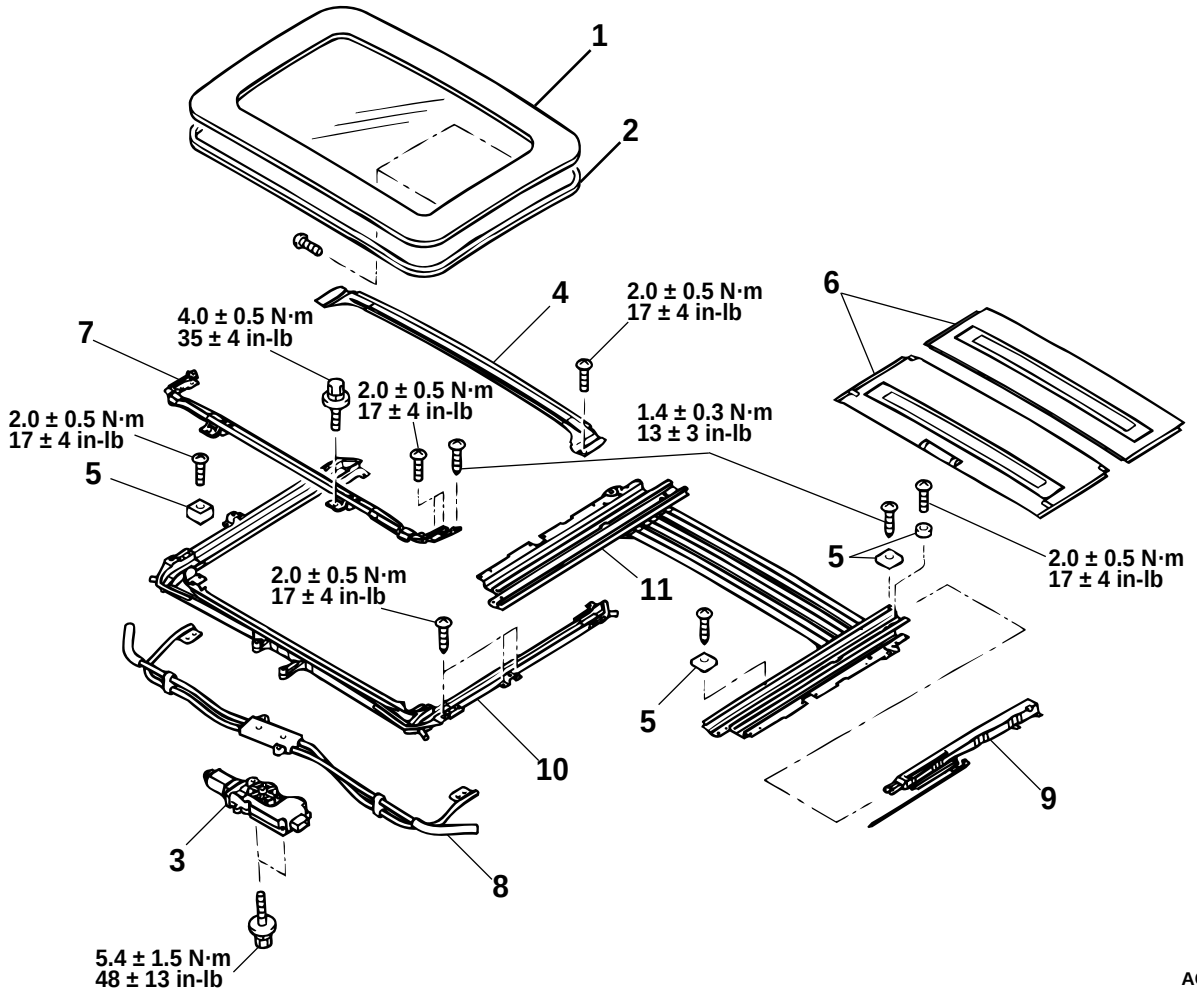
SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
Open	4 – 5	Continuity
Off	–	No Continuity
Tilt up	3 – 4	Continuity
Slide closed, Tilt down	4 – 6	Continuity

TSB Revision

DISASSEMBLY AND ASSEMBLY

M1426001400056





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DISASSEMBLY STEPS

1. ROOF LID GLASS ASSEMBLY
2. WEATHERSTRIP

>>B<< • CHECK OPERATION

3. SUNROOF MOTOR ASSEMBLY
4. SUNROOF DRIP RAIL
5. STOPPER

DISASSEMBLY STEPS (Continued)

6. SUN SHADE ASSEMBLY

>>A<< 7. ROOF LID SLIDER

8. SUNROOF DEFLECTOR
9. SLIDING ROOF OPERATING UNIT
10. SUNROOF HOUSING, UPPER
11. SUNROOF HOUSING, LOWER

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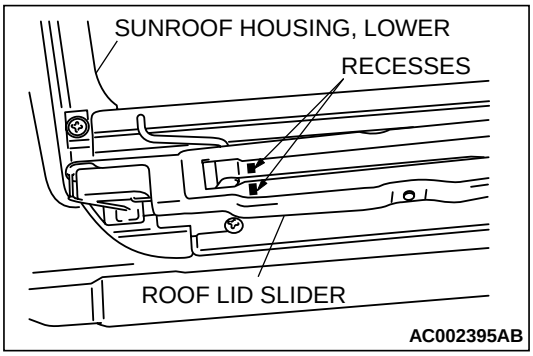

INSTALLATION SERVICE POINT

>>A<< ROOF LID SLIDER INSTALLATION

Align the recesses to set the roof lid slider to its fully closed position.

>>B<< CHECK OPERATION

⚠ CAUTION

Roof lid slider recesses position error must be kept within 2.5 mm (0.01 inch) or less.

When roof lid slider is set to its fully closed position, it must be at the recesses position.

If roof lid slider is positioned at the rear of recesses, carry out the following procedure.

1. Remove sunroof motor assembly.
2. Fit sunroof motor firmly.
3. Install sunroof motor assembly
4. Check recesses position again.

CONVERTIBLE TOP

GENERAL DESCRIPTION

M1421000100024

The electric convertible top can be opened/closed by means of electric power. For safety, the convertible top control module disables opening and closing of the convertible top in response to signals from the vehicle speed sensor when the vehicle speed exceeds 3km/h (1.9 mph).

CONVERTIBLE TOP DIAGNOSIS

INTRODUCTION TO ELECTRIC CONVERTIBLE TOP DIAGNOSIS

M1426203900028

The electric convertible top is controlled by the convertible top control module. When the convertible top switch is operated at the vehicle speed of less than 3 km/h (1.9 mph), all the door windows automatically lower and then all the quarter windows. After all the door windows and the quarter windows are fully lowered, the top stack drive motor operates to open or close the electric convertible top.

Incidentally, the door windows will automatically lower during the operation of the convertible top switch even when the lock switch of the power window main switch is locked.

If the following types of symptom occur, there may be a fault.

- The electric convertible top does not open or close.

ELECTRIC CONVERTIBLE TOP DIAGNOSTIC TROUBLESHOOTING STRATEGY

M1426204000028

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 the electric convertIble top fault.

1. Gather information from 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.

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SYMPTOM CHART

M1426204100025

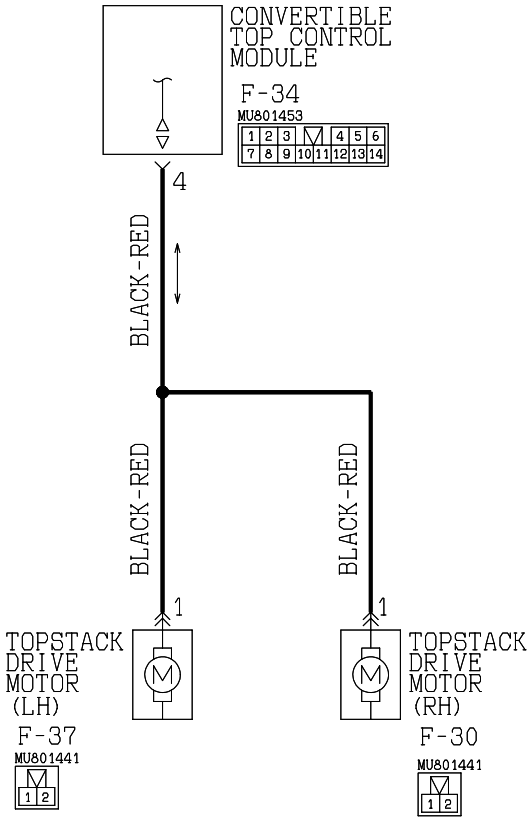
SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
The electric convertible top does not open or close at the vehicle speed of less than 3 km/h (1.9 mph). (The door windows and the quarter windows automatically lower when the convertible top switch is operated.)	1	P.42-114
The electric convertible top does not open or close at the vehicle speed of less than 3 km/h (1.9 mph). (The door windows and the quarter windows do not automatically lower when the convertible top switch is operated. However, the door windows and the quarter windows lower and raise when the power window main switch is operated.)	2	P.42-116
The electric convertible top does not open or close at the vehicle speed of less than 3 km/h (1.9 mph). (The door windows and the quarter windows do not automatically lower when the convertible top switch is operated. Also, the quarter windows do not operate when the power window main switch is operated.)	3	P.42-120
The electric convertible top opens or closes even at the vehicle speed of 3 km/h (1.9 mph) or more.	4	P.42-123

SYMPTOM PROCEDURES

M1426204300029

INSPECTION PROCEDURE 1: The electric convertible top does not open or close at the vehicle speed of less than 3 km/h (1.9 mph). (The door windows and the quarter windows automatically lower when the convertible top switch is operated.)

Electric Convertible Top Drive Motor Circuit



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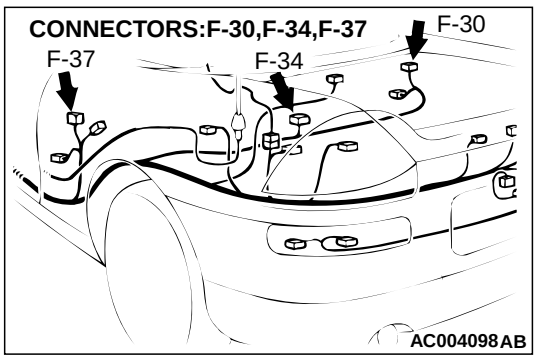
AC004097 AB



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CIRCUIT OPERATION

When the convertible top switch is operated, a signal is sent to the convertible top control module. The convertible top control module sends convertible top switch "ON" signal to the power window main switch to lower the door windows automatically. The power window main switch lowers the door windows and simultaneously sends the "AUTO DOWN" signal to the convertible top control module. When the "AUTO DOWN" signal is received, the convertible top control module drives the quarter window regulator motor to lower the quarter windows and simultaneously drives the topstack drive motor assembly to operate the electric convertible top.

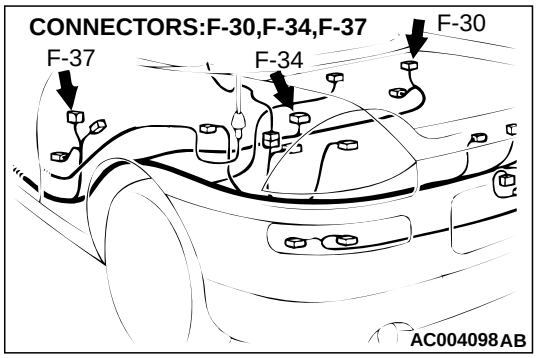
TECHNICAL DESCRIPTION (COMMENT)

The cause may be a malfunction of the topstack drive motor circuit.

TROUBLESHOOTING HINTS

- Malfunction of the topstack drive motor assembly
- Damaged harness wires or connectors

DIAGNOSIS

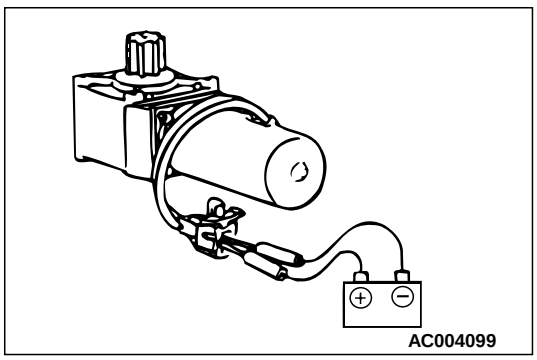


STEP 1. Check the harness wires between convertible top control module connector F-34 and topstack drive motor connector F-37<LH>,F-30<RH>.

Q: Are the harness wires between convertible top control module connector F-34 and topstack drive motor connector F-37<LH>,F-30<RH> in good condition?

YES : Go to Step 2.

NO : Repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 3.



STEP 2. Check the topstack drive motor assembly.

Q: Are topstack drive motor assembly in good condition?

YES : Go to Step 3.

NO : Replace the topstack drive motor assembly P.42-132.

STEP 3. Check symptoms.

Q: Does the electric convertible top open and close normally?

YES : This diagnosis is complete.

NO : Return to Step 1.

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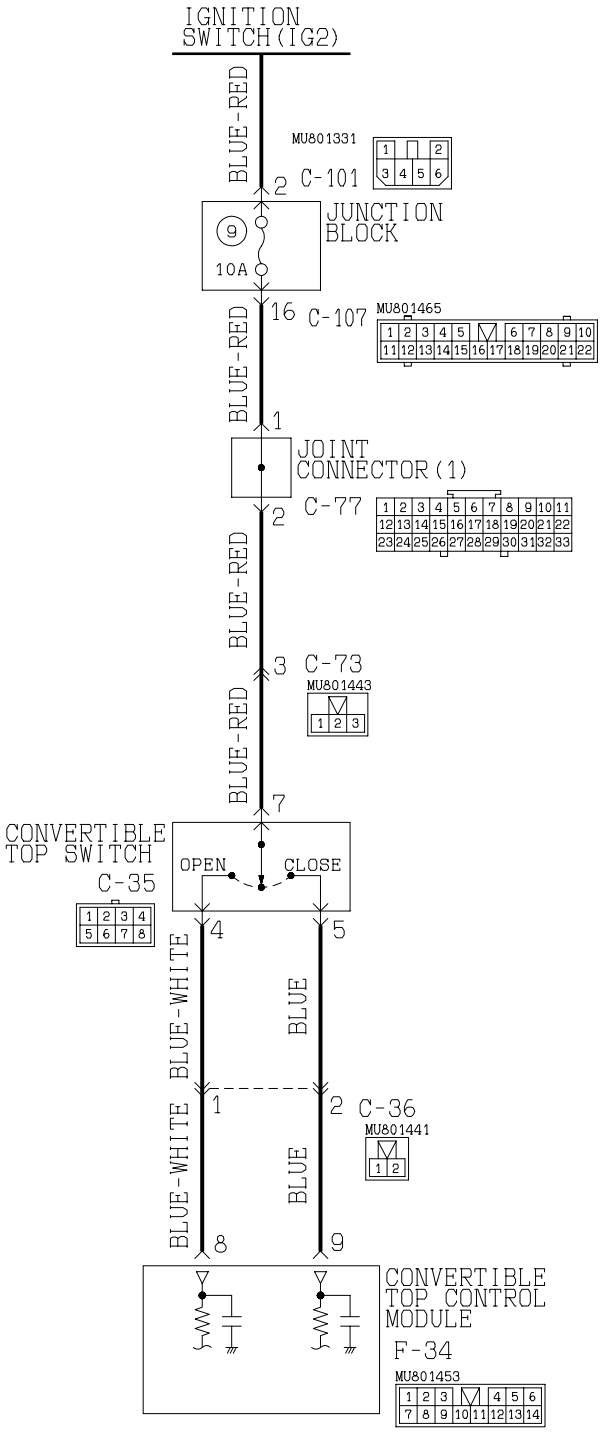
INSPECTION PROCEDURE 2: The electric convertible top does not open or close at the vehicle speed of less than 3 km/h (1.9 mph). (The door windows and the quarter windows do not automatically lower when the convertible top switch is operated. However, the door windows and the quarter windows lower and raise when the power window main switch is operated.)

Convertible Top Switch Circuit



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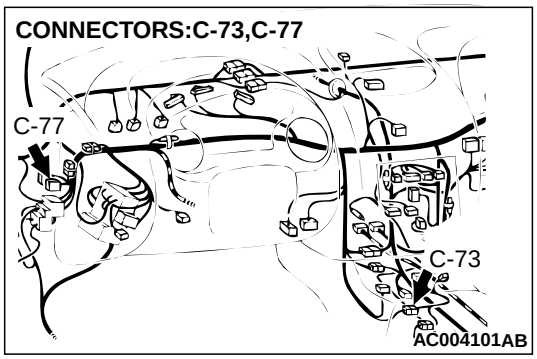

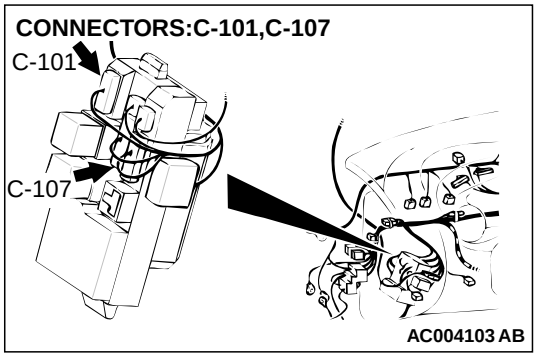

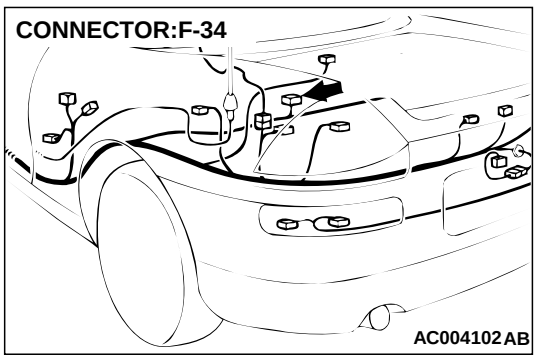

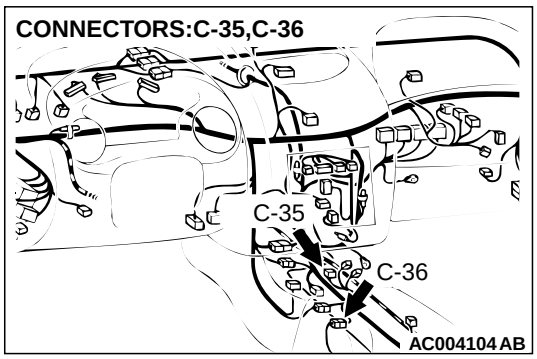

CIRCUIT OPERATION

When the convertible top switch is operated, signal is sent to the convertible top control module. The convertible top control module sends convertible top switch "ON" signal to the power window main switch to lower the door windows automatically. The power window main switch lowers the door windows and simultaneously sends the "AUTO DOWN" signal to the convertible top control module. When the "AUTO DOWN" signal is received, the convertible top control module drives the quarter window regulator motor to lower the quarter windows and simultaneously drives the topstack drive motor assembly to operate the electric convertible top.

TECHNICAL DESCRIPTION (COMMENT)

The cause may be a malfunction of the topstack control module circuit.

TROUBLESHOOTING HINTS

- Malfunction of the topstack drive motor assembly
- Malfunction of the power window main switch
- Damaged harness wires or connectors

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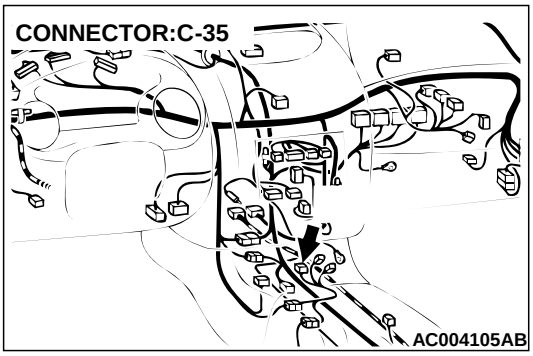
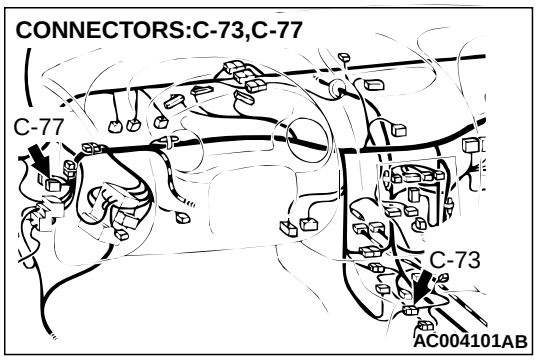
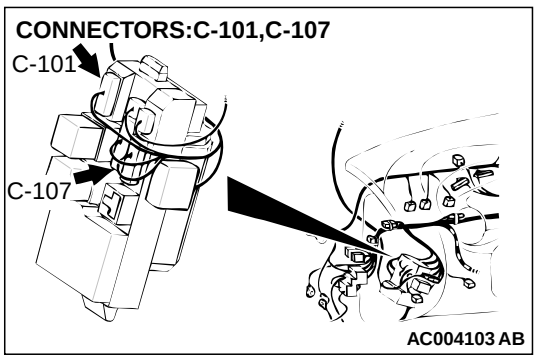
DIAGNOSIS







STEP 1. Check the harness wires between ignition switch (IG2) and convertible top switch connector C-35.

NOTE: After inspecting intermediate connector C-73,C-77,C-101, C-107 inspect the wire. If intermediate connector C-73,C-77,C-101, C-107 are damaged, repair or replace it. Refer to GROUP 00E P.00E-2, Harness Connector Inspection. Then go to Step 5.

Q: Are the harness wires between ignition switch (IG2) and convertible top switch connector C-35 in good condition?

YES : Go to Step 2.

NO : Repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 5.

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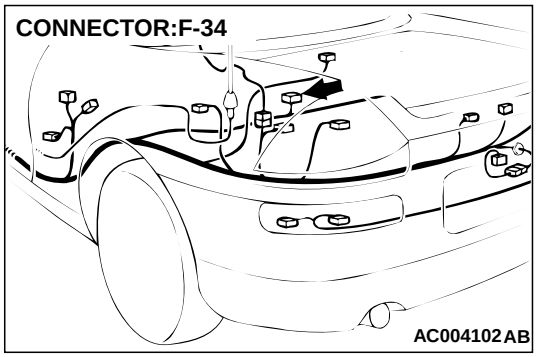
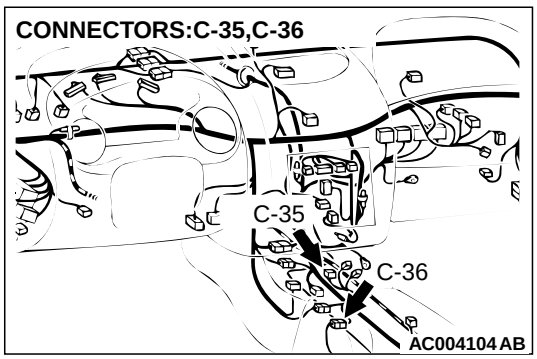


STEP 2. Check the harness wires between convertible top control module connector F-34 and convertible top switch connector C-35.

NOTE: After inspecting intermediate connector C-36 inspect the wire. If intermediate connector C-36 is damaged, repair or replace it. Refer to GROUP 00E P.00E-2, Harness Connector Inspection. Then go to Step 5.

Q: Are the harness wires between convertible top control module connector F-34 and convertible top switch connector C-35 in good condition?

YES : Go to Step 3.
NO : Repair or replace them. Refer to GROUP 00E, Harness Connector Inspection P.00E-2. Then go to Step 5.



STEP 3. Check the convertible top switch

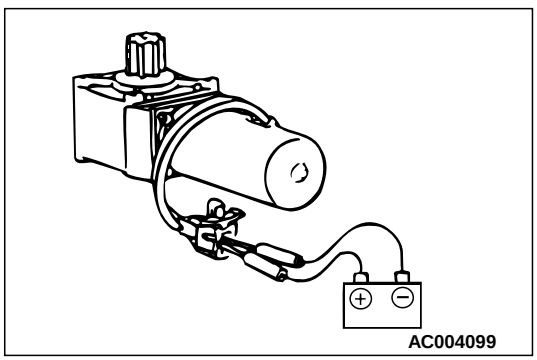
Q: Are convertible top switch in good condition?

YES : Go to Step 4.
NO : Replace the convertible top switch P.42-156.

STEP 4. Check the topstack drive motor assembly.

Q: Are topstack drive motor assembly in good condition?

YES : Go to Step 5.
NO : Replace the topstack drive motor assembly P.42-132.



STEP 5. Check symptoms.

Q: Does the electric convertible top open and close normally?

YES : This diagnosis is complete.
NO : Return to Step 1.

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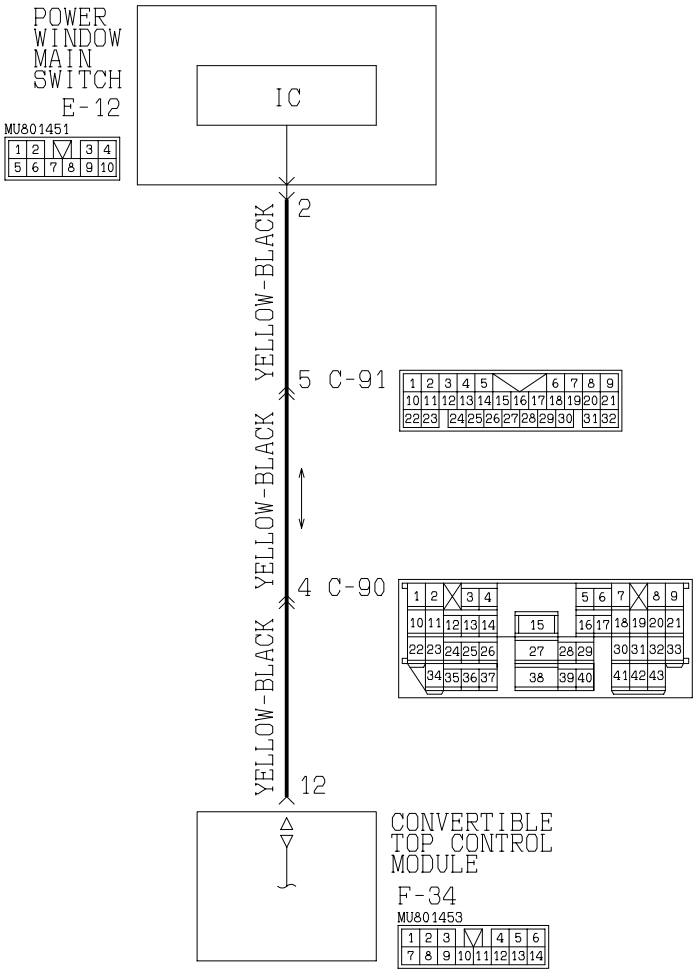
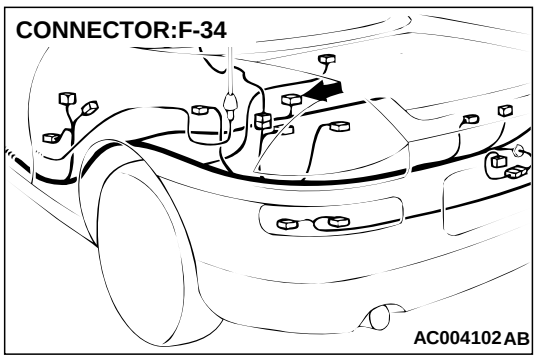
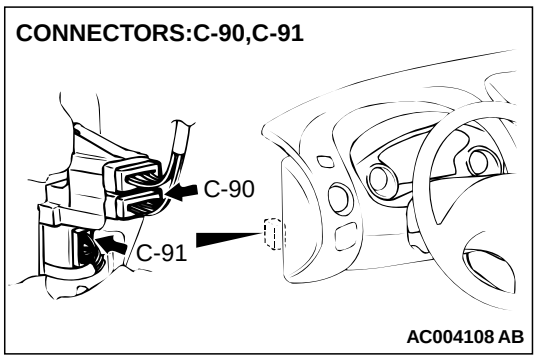
INSPECTION PROCEDURE 3: The electric convertible top does not open or close at the vehicle speed of less than 3 km/h (1.9 mph). (The door windows and the quarter windows do not automatically lower when the convertible top switch is operated. Also, the quarter windows do not operate when the power window main switch is operated.)

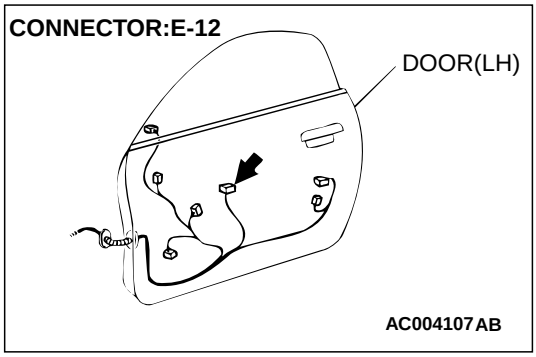
Convertible Top Control Module Circuit







TSB Revision



CIRCUIT OPERATION

When the convertible top switch is operated, a signal is sent to the convertible top control module. The convertible top control module sends convertible top switch "ON" signal to the power window main switch to lower the door windows automatically. The power window main switch lowers the door windows and simultaneously sends the "AUTO DOWN" signal to the convertible top control module. When the "AUTO DOWN" signal is received, the convertible top control module drives the quarter window regulator motor to lower the quarter windows and simultaneously drives the topstack drive motor assembly to operate the electric convertible top.

TECHNICAL DESCRIPTION (COMMENT)

The cause may be a malfunction of the topstack control module circuit.

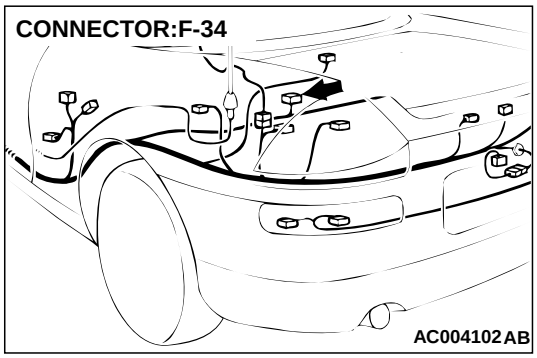
TROUBLESHOOTING HINTS

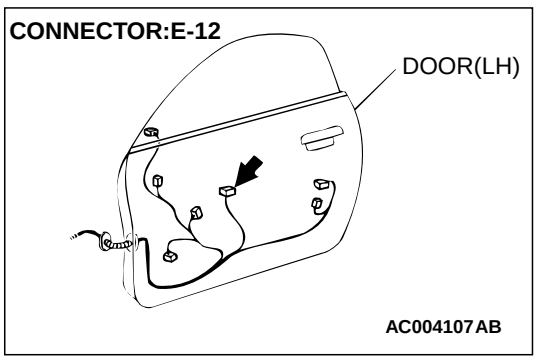
- Malfunction of the power window main switch
- Damaged harness wires or connectors

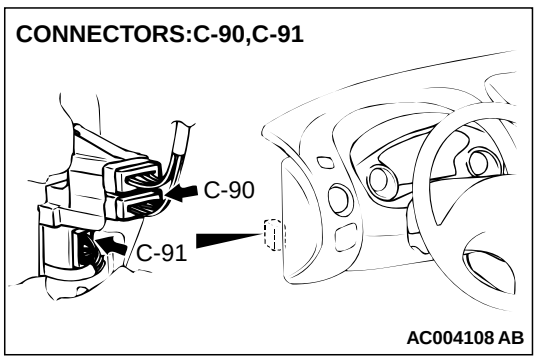
DIAGNOSIS

STEP 1. Check harness wires between convertible top control module connector F-34 and power window main switch connector E-12.

NOTE: After inspecting intermediate connector C-90,C-91 inspect the wire. If connector block connector C-90,C-91 are damaged, repair or replace it. Refer to GROUP 00E P.00E-2, Harness Connector Inspection. Then go to Step 3.







Q: Are there any damaged wires between convertible top control module connector F-34 and power window main switch connector E-12?

YES : Replace it, then go to Step 3.
NO : Go to Step 2.

STEP 2. Check the power window main switch

Furthermore, check that the power window main switch with the one in good condition to check that the quarter window glass operates properly. (Refer to P.42-73.)

Q: Is the power window main switch damaged?

YES : Replace it, then go to Step 3.
NO : Go to Step 3.

STEP 3. Check the Check symptoms.

Q: Does the electric convertible top open and close normally?

YES : This diagnosis is complete.
NO : Return to Step 1.

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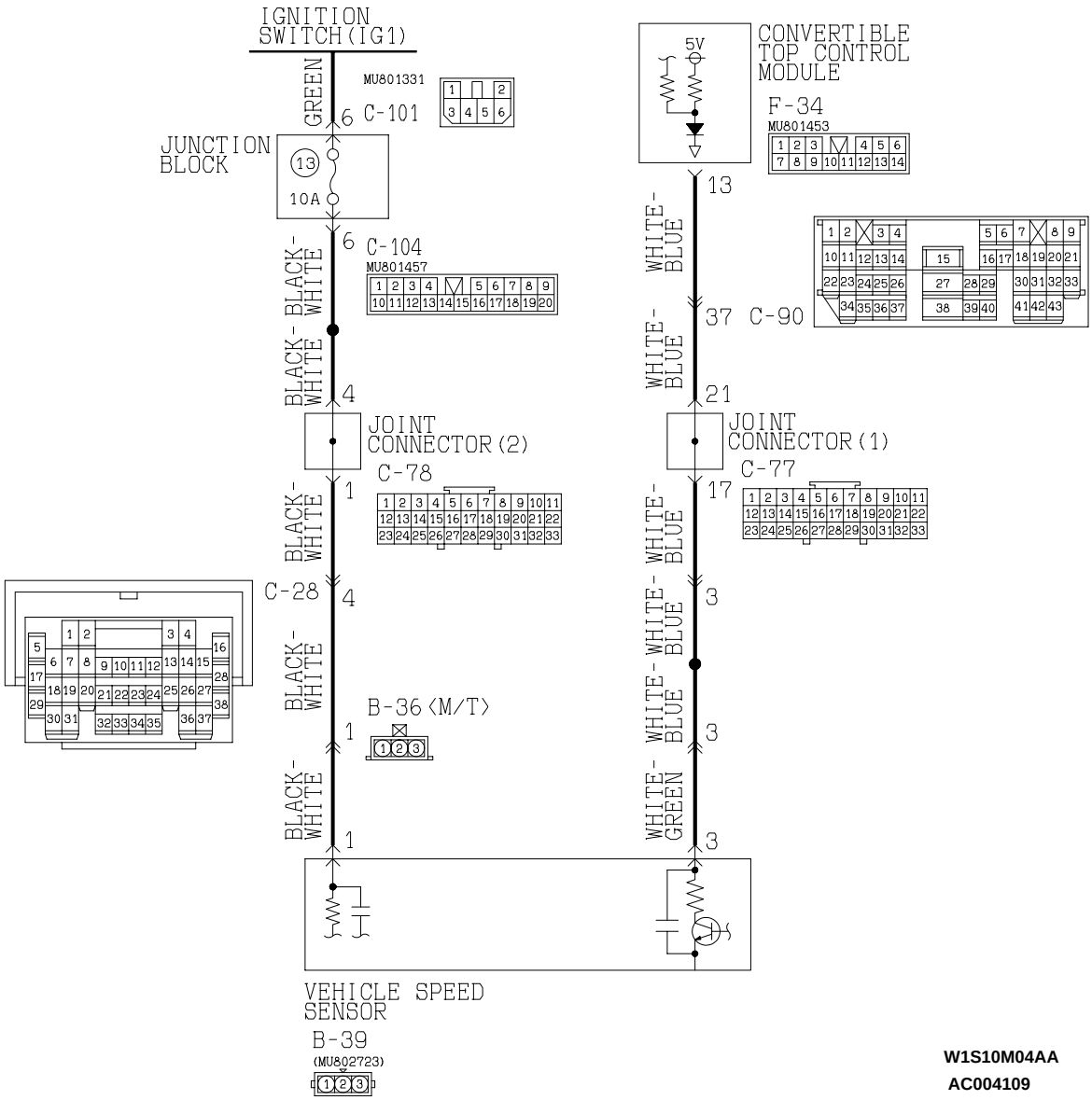
INSPECTION PROCEDURE 4: The electric convertible top opens or closes even at the vehicle speed of 3 km/h (1.9 mph) or more.

Vehicle Speed Sensor Circuit



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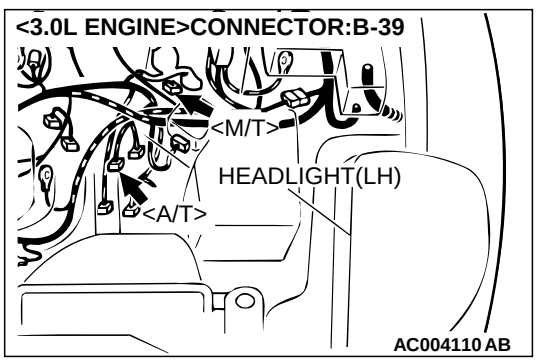

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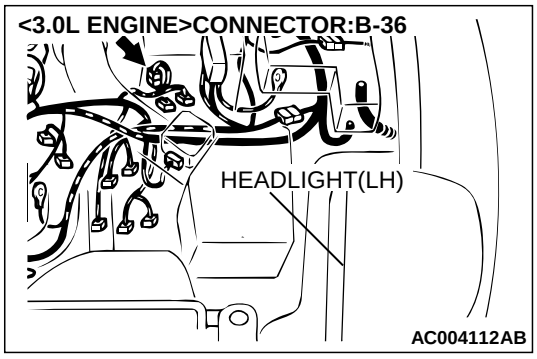

AC004112AB

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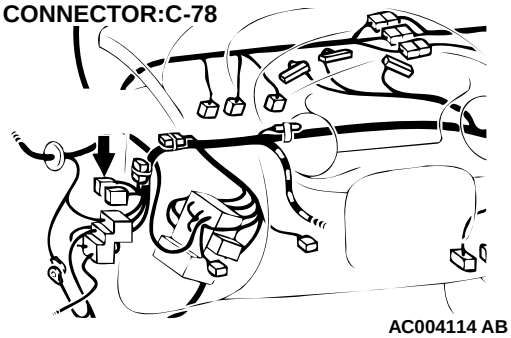
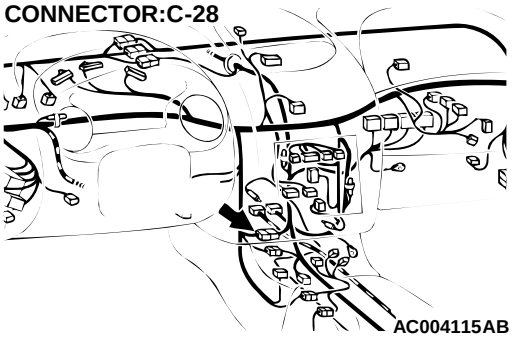
CONNECTOR:C-78



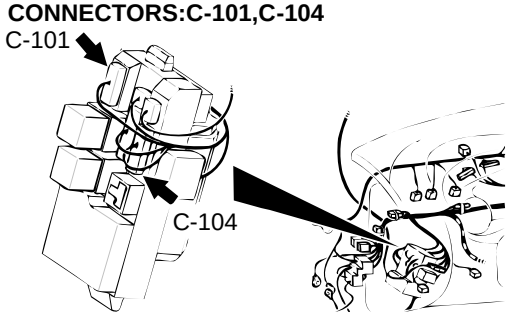
AC004114 AB

CONNECTOR:C-28



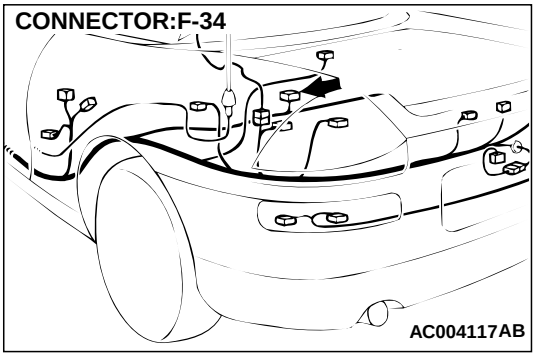
AC004115AB

CONNECTORS:C-101,C-104



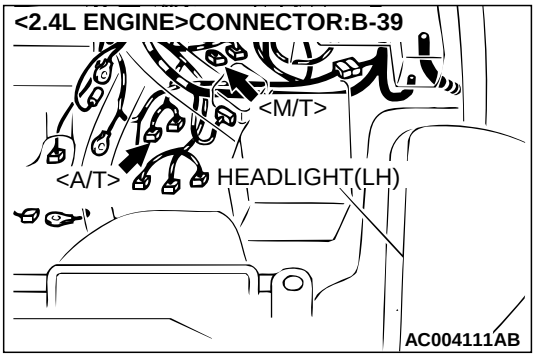
AC004116 AB

CONNECTOR:F-34



AC004117AB

<2.4L ENGINE>CONNECTOR:B-39



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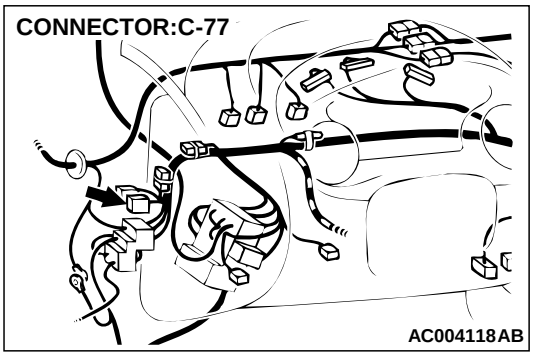
CONNECTOR:C-77



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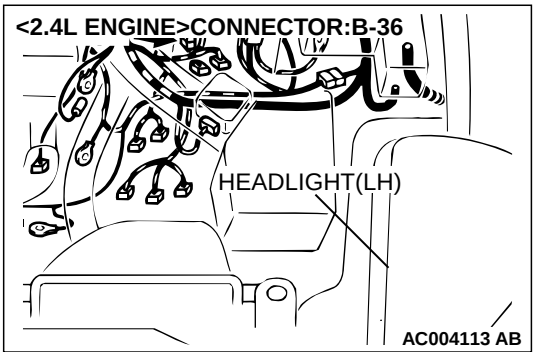
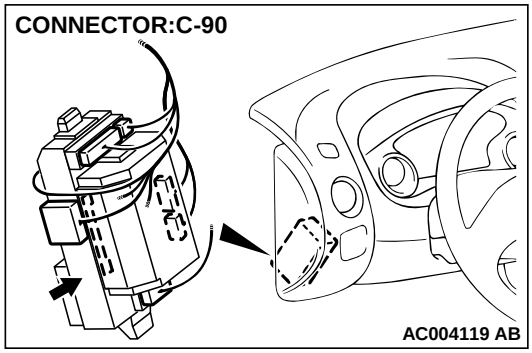


AC004113 AB

CONNECTOR:C-90



AC004119 AB

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CIRCUIT OPERATION

When the convertible top switch is operated, a signal is sent to the convertible top control module. The convertible top control module sends convertible top switch "ON" signal to the power window main switch to lower the door windows automatically. The power window main switch lowers the door windows and simultaneously sends the "AUTO DOWN" signal to the convertible top control module. When the "AUTO DOWN" signal is received, the convertible top control module drives the quarter window regulator motor to lower the quarter windows and simultaneously drives the topstack drive motor assembly to operate the electric convertible top.

TECHNICAL DESCRIPTION (COMMENT)

The cause may be a malfunction of the vehicle speed sensor.

TROUBLESHOOTING HINTS

- Malfunction of the vehicle speed sensor
- Damaged harness wires or connectors

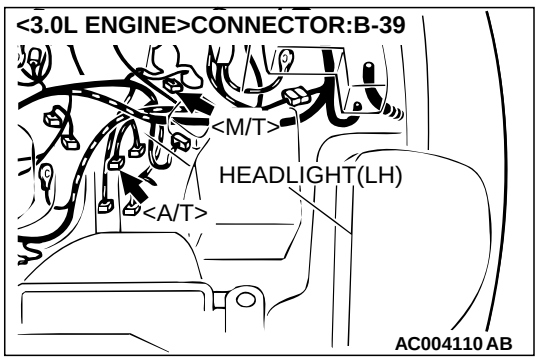
DIAGNOSIS

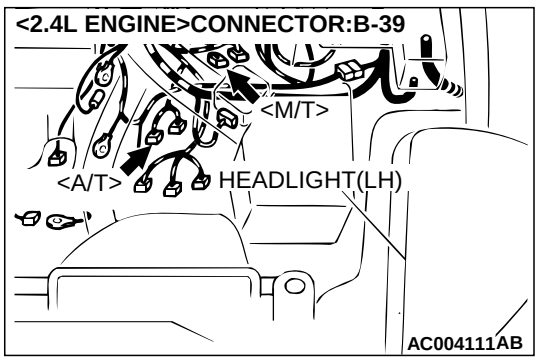
STEP 1. Check harness wires between ignition switch (IG1) and vehicle speed sensor connector B-39.

NOTE: After inspecting intermediate connector B-36<M/T>, C-28,C-78, C-101,C-104 inspect the wire. If intermediate connector B-36 <M/T>, C-28,C-78, C-101,C-104 are damaged, repair or replace it. Refer to GROUP 00E P.00E-2, Harness Connector Inspection. Then go to Step 4.

Q: Are there any damaged wires between ignition switch (IG1) and vehicle speed sensor connector B-39?

YES : Replace it, then go to Step 4.
NO : Go to Step 2.





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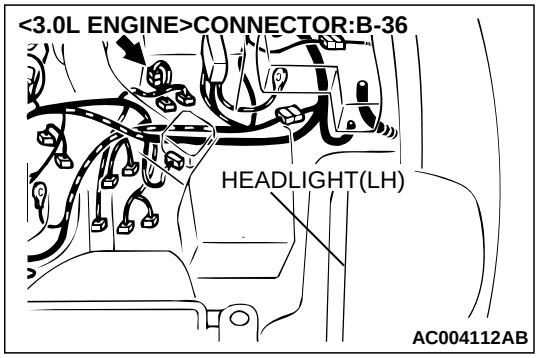
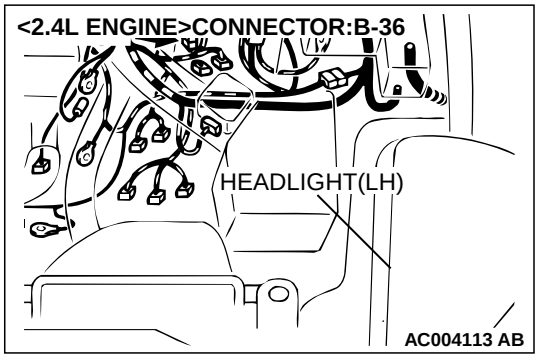
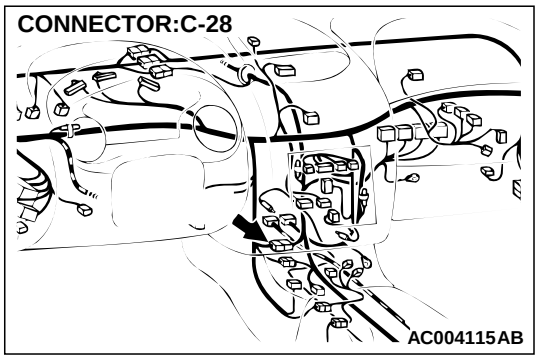
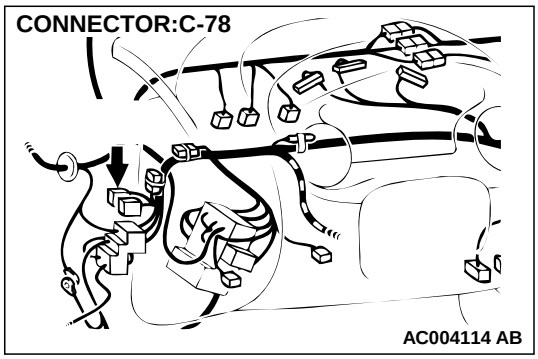
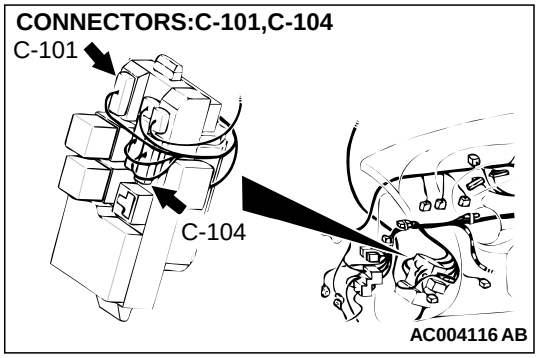








TSB Revision

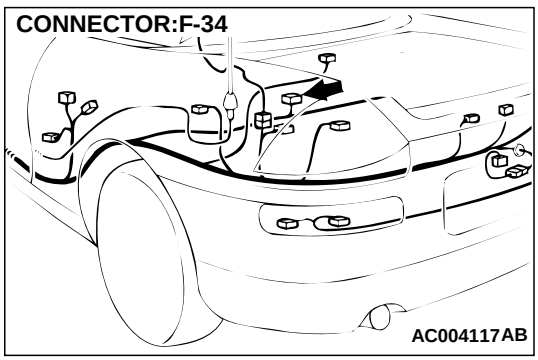


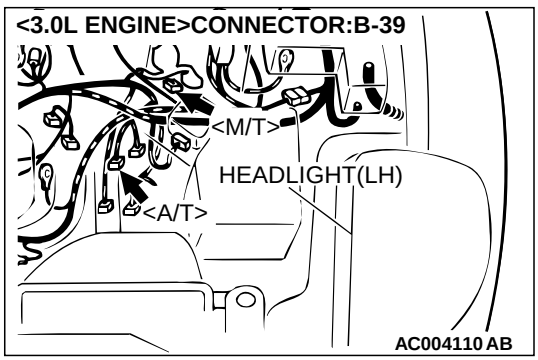
STEP 2. Check harness wires between convertible top control module connector F-34 and vehicle speed sensor connector B-39.

NOTE: After inspecting intermediate connector B-36<M/T>, C-28,C-77, C-90 inspect the wire. If intermediate connector B-36<M/T>, C-28,C-77, C-90 are damaged, repair or replace it. Refer to GROUP 00E P.00E-2, Harness Connector Inspection. Then go to Step 4.

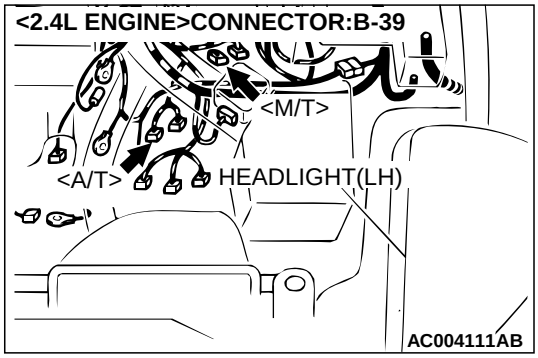
Q: Are there any damaged wires between convertible top control module connector F-34 and vehicle speed sensor connector B-39?

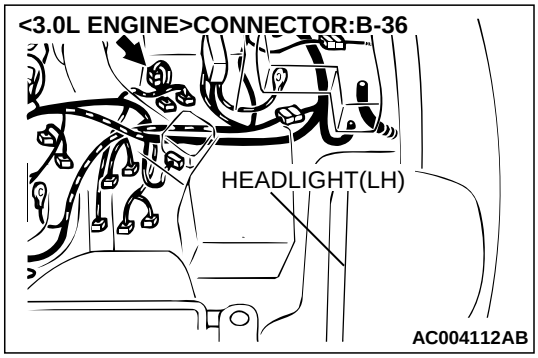
YES : Replace it, then go to Step 4.
NO : Go to Step 3.

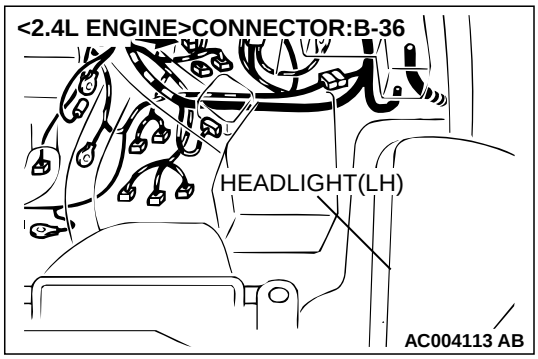


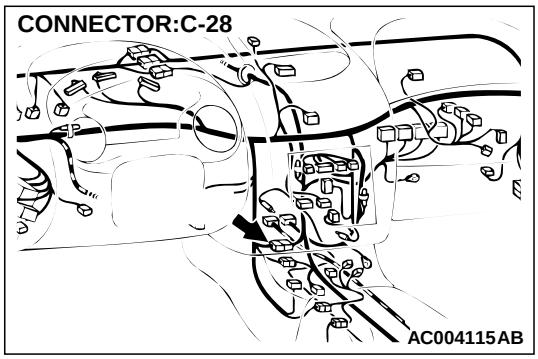


TSB Revision

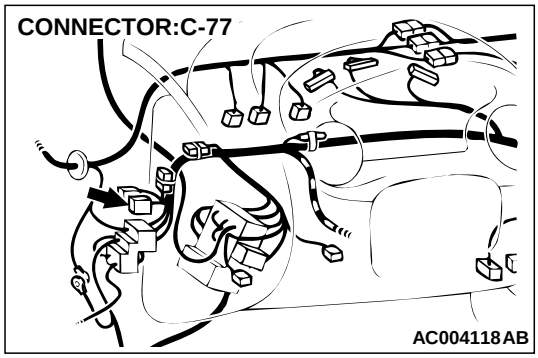


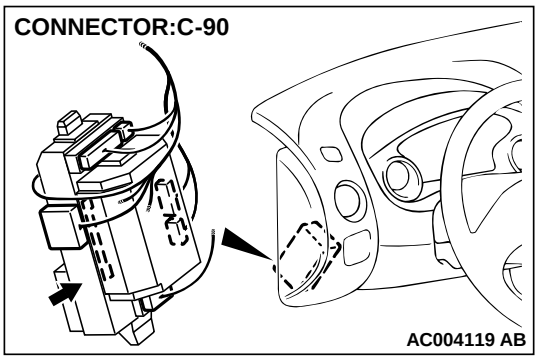






TSB Revision





STEP 3. Check the vehicle speed sensor

Furthermore, check that the vehicle speed sensor operates properly. (Refer to P.42-40.)

Q: Is the vehicle speed sensor damaged?

YES : Replace it, then go to Step 4.
NO : Go to Step 4.

STEP 4. Check the Check symptoms.

Q: Does the electric convertible top open and close normally?

YES : This diagnosis is complete.
NO : Return to Step 1.

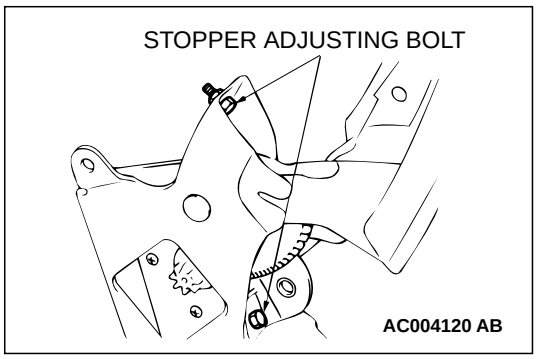
TSB Revision

ON-VEHICLE SERVICE

CONVERTIBLE TOP FIT ADJUSTMENT

M1426200900029

1. Remove the quarter trim, lower (Refer to GROUP 52A - TrimsP.52A-10.)
2. Fully open or close the top, then adjust the stopper adjusting bolt so it contacts the flange as shown in the illustration.



WATER LEAK TEST

M1426208400028

DEFINITION OF TERMS

Leakage: Defined as water that spills over weatherstripping and causes the interior to become wet in a short period of time.
Seepage: Defined as water that runs down the inside of the door and or quarter glass but does not build up or drip onto any interior trim components. By nature of their design, convertible tops normally display some water seepage under certain ambient conditions. Water leakage/seepage characteristics for the convertible are:

- Normal-Under normal conditions, the convertible top should never display seepage of more than a total of three moisture weeps of more than 5 mm (0.2 inch) wide at any or all of the convertible top roof joints. As with any convertible top, leakage may occur under abnormal conditions such as the flooding of the weatherstrip roof joints with large quantities of water as might happen in an automatic car wash.
- Service Required-Vehicle service is required if leakage occurs under normal conditions. (Some adjustments may help reduce leakage which occurs under abnormal conditions).

TEST PROCEDURES

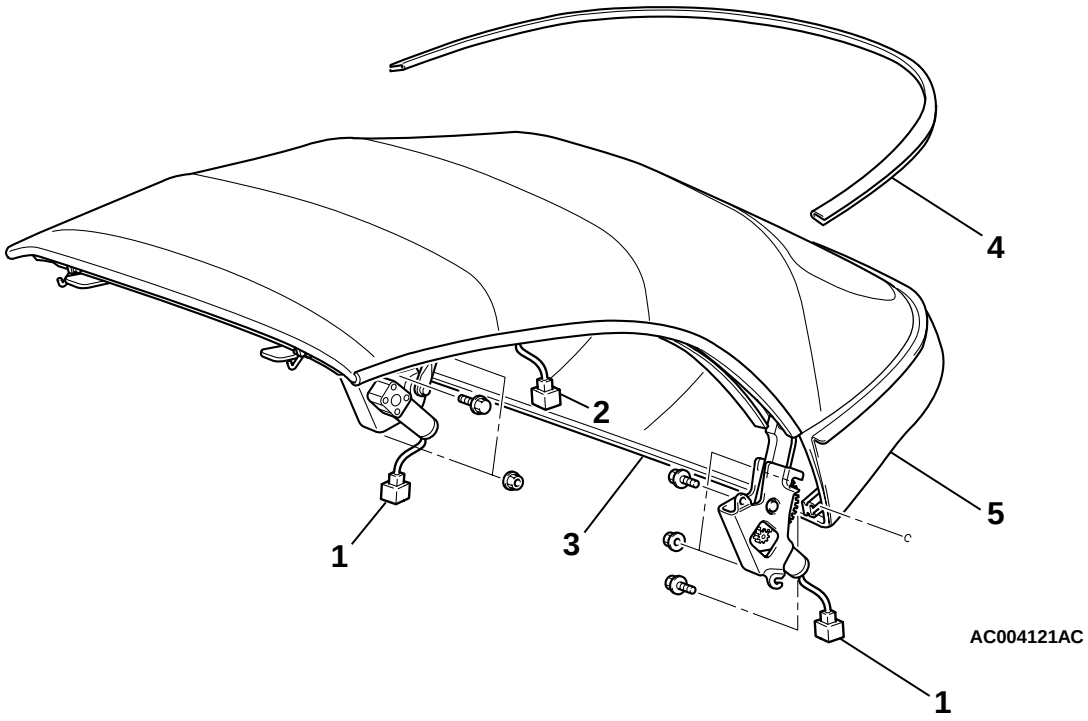
1. Interview the customer to get a detailed description of the leak and the conditions under which the leak occurred.
2. Open the part of the vehicle to be tested for the water leak, door, windows, convertible top, etc.
3. Use a clean cloth and wipe clean and dry the sealing surfaces for the suspected area.
4. Close the doors, windows, etc. of the vehicle to prevent water from accidentally getting into the vehicle.
5. Turn off A/C, heater and ventilation blower. Otherwise, if the blower is on this will pressurize the cabin, preventing water from entering back through a bad seal condition.
6. Evaluate the customer's description of the leak in question then use the method of water testing (angle, distance, pressure, etc.) which closely simulates or duplicates the leak condition the customer's vehicle experienced.
7. Most leaks can be corrected by glass and/or weatherstrip adjustments so the glass achieves proper insertion into the weatherstrip. Proper insertion of the glass into the weatherstrip is necessary for proper leak prevention. Weatherstrip replacement may be necessary if proper insertion cannot be attained by adjustments.

CONVERTIBLE TOP ASSEMBLY

REMOVAL AND INSTALLATION

M1426201100026

Pre-removal Operation	Post-installation Operation
• Completely open the convertible top.	• Convertible Top Fit Adjustment (Refer to P.42-130.)



REMOVAL STEPS
- QUARTER BELT SIDE MOULDING / BACK BELT MOULDING (REFER TO GROUP 51 - MOULDINGS P.51-9.)
- QUARTER TRIM (REFER TO GROUP 52A – TRIMS P.52A-10.)
- REAR SPEAKER BRACKET (REFER TO GROUP 54 – SPEAKER P.54A-181.)

REMOVAL STEPS (Continued)
1. TOPSTACK DRIVE MOTOR HARNESS CONNECTOR
2. DEFOGGER HARNESS CONNECTOR (LH ONLY)
3. TOPSTACK WELL AND BODY PANEL CONNECTION

>>A<< 4. DRAIN TROUGH RETAINER

5. CONVERTIBLE TOP ASSEMBLY

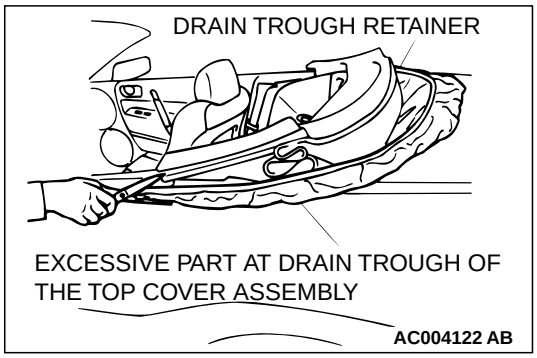
INSTALLATION SERVICE POINT

>>A<< DRAIN TROUGH RETAINER INSTALLATION

When the top cover assembly is replaced, cut out the rear end of the top cover assembly.

1. Install the drain trough retainer so that the drain trough around the rear end of the top cover assembly covers a suitable dimension.

TSB Revision



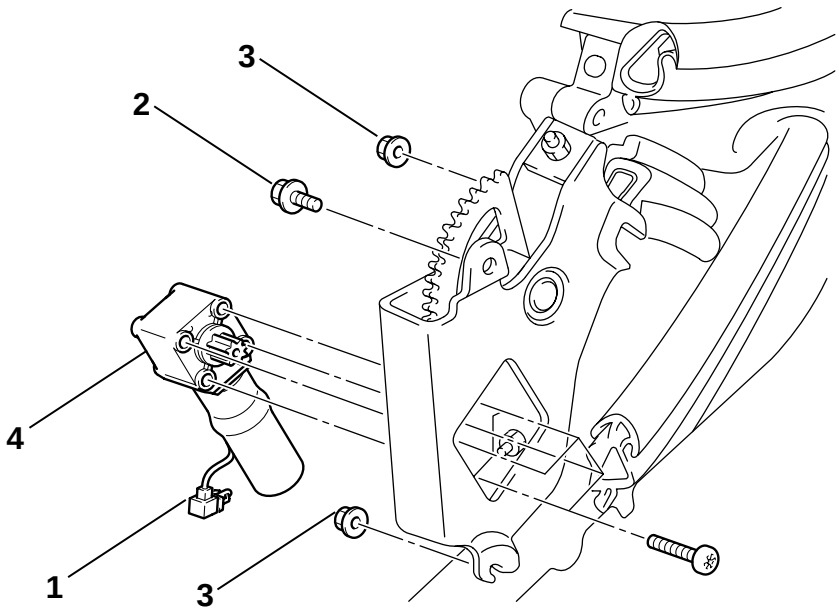
2. Cut out an excessive part at the rear end of the top cover assembly as shown.

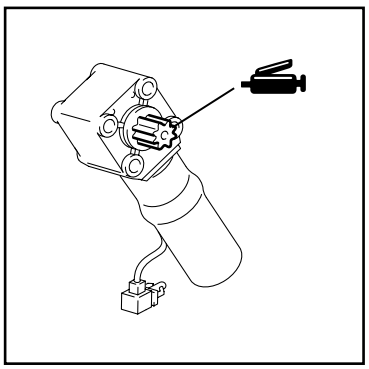
TOPSTACK DRIVE MOTOR

REMOVAL AND INSTALLATION

M1426201700028

Pre-removal Operation
- Completely down the quarter window glass





REMOVAL STEPS
- QUARTER BELT MOULDING (REFER TO GROUP 51 – MOULDING P.51-9.)
- QUARTER TRIM (REFER TO GROUP 52A -TRIMS P.52A-10.)
- REAR SPEAKER BRACKET (REFER TO GROUP 54 – SPEAKER P.54A-181.)

1. TOPSTACK DRIVE MOTOR HARNESS CONNECTOR

<<A>> >>A<<

2. MAIN PIVOT BASE ASSEMBLY MOUNTING BOLT
3. MAIN PIVOT BASE ASSEMBLY MOUNTING NUT
4. TOPSTACK DRIVE MOTOR ASSEMBLY

TSB Revision

REMOVAL SERVICE POINT

<<A>> TOPSTACK DRIVE MOTOR ASSEMBLY REMOVAL

1. Lift the main pivot base assemblies at the same time as a set.
2. Remove the topstack drive motor.

INSTALLATION SERVICE POINT

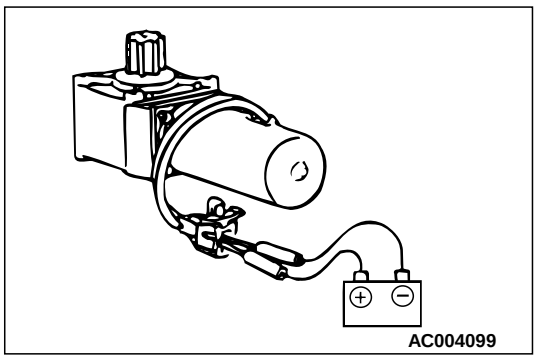
>>A<< TOPSTACK DRIVE MOTOR ASSEMBLY INSTALLATION

1. Lift the main pivot base assemblies at the same time as a set.
2. Open the convertible top fully, and install the topstack drive motor.

INSPECTION

M1426201800025

TOPSTACK DRIVE MOTOR ASSEMBLY CHECK



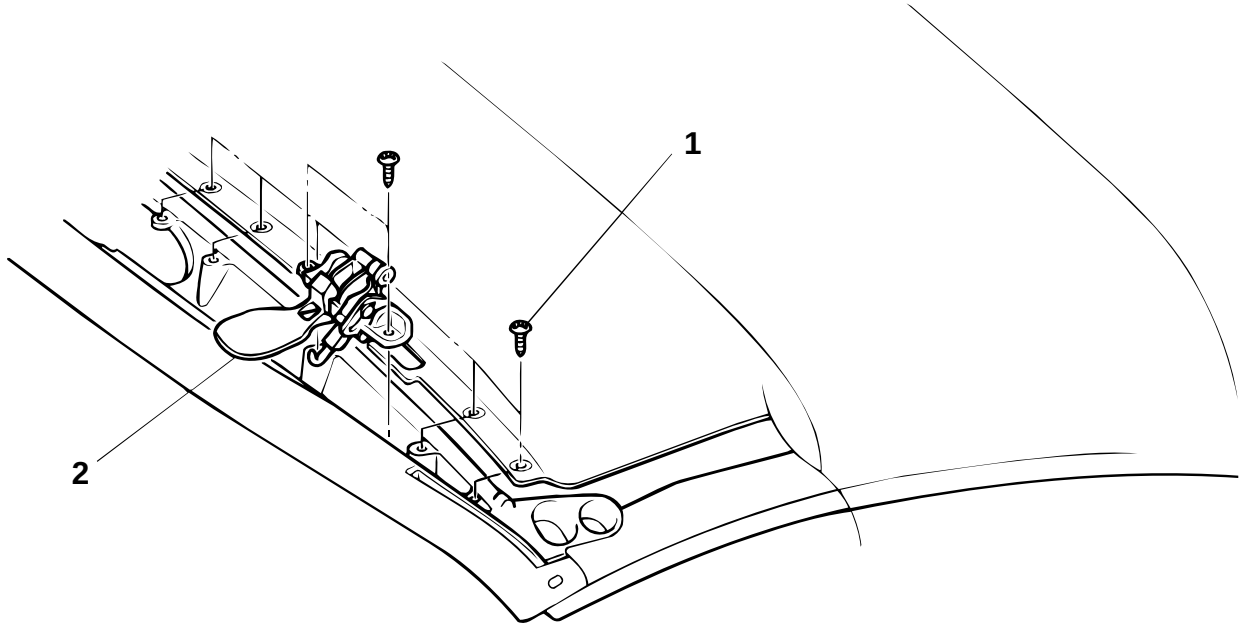
1. Check that the topstack drive motor assembly runs smoothly when the battery is connected directly to the motor terminals.
2. Furthermore, check that the topstack drive motor assembly operates in reverse when the terminal connections are switched.

TOPSTACK LATCH ASSEMBLY

REMOVAL AND INSTALLATION

M1426208800015

Pre-removal Operation	Post-installation Operation
• Completely open the convertible top.	• Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004124AB

REMOVAL STEPS
- NO.1 BOW GARNISH (REFER TO P.42-135.)

REMOVAL STEPS (Continued)
1. HEADLINER SCREW (REFER TO P.42-150.)
2. TOPSTACK LATCH ASSEMBLY

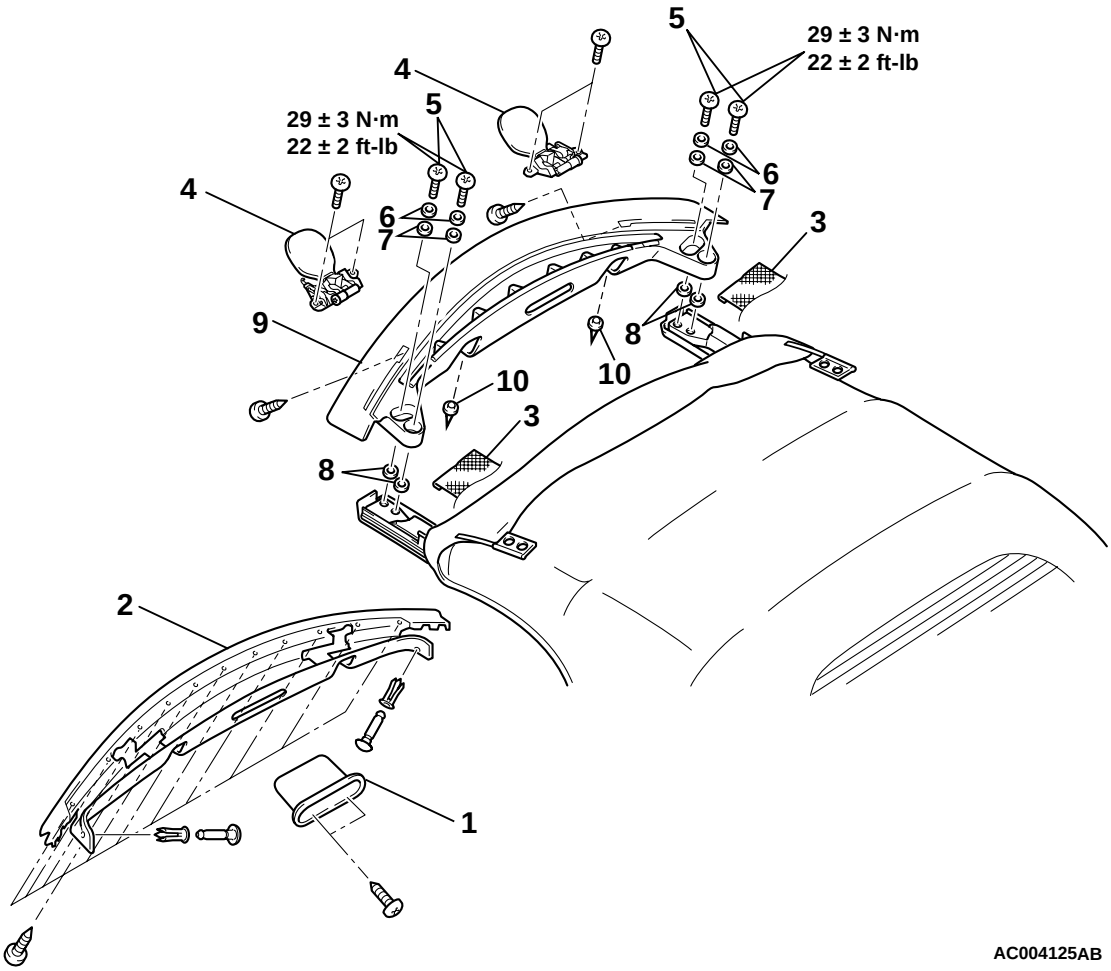
TSB Revision

TOPSTACK No.1 BOW

REMOVAL AND INSTALLATION

M1426206000024

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004125AB

REMOVAL STEPS
1. TOPSTACK PULL HANDLE BOX BEZEL
2. NO.1 BOW GARNISH
- TOP COVER ASSEMBLY (REFER TO P.42-147.)
3. TOPSTACK SIDE STAY PAD ASSEMBLY FROM NO.1 BOW (REFER TO P.42-145.)
- HEADLINER FROM NO.1 BOW (REFER TO P.42-150.)

REMOVAL STEPS (Continued)
4. TOPSTACK LATCH ASSEMBLY (REFER TO P.42-134.)
5. BOLT
6. WASHER
7. WASHER
8. WASHER
9. NO.1 BOW
10. DOWEL PIN

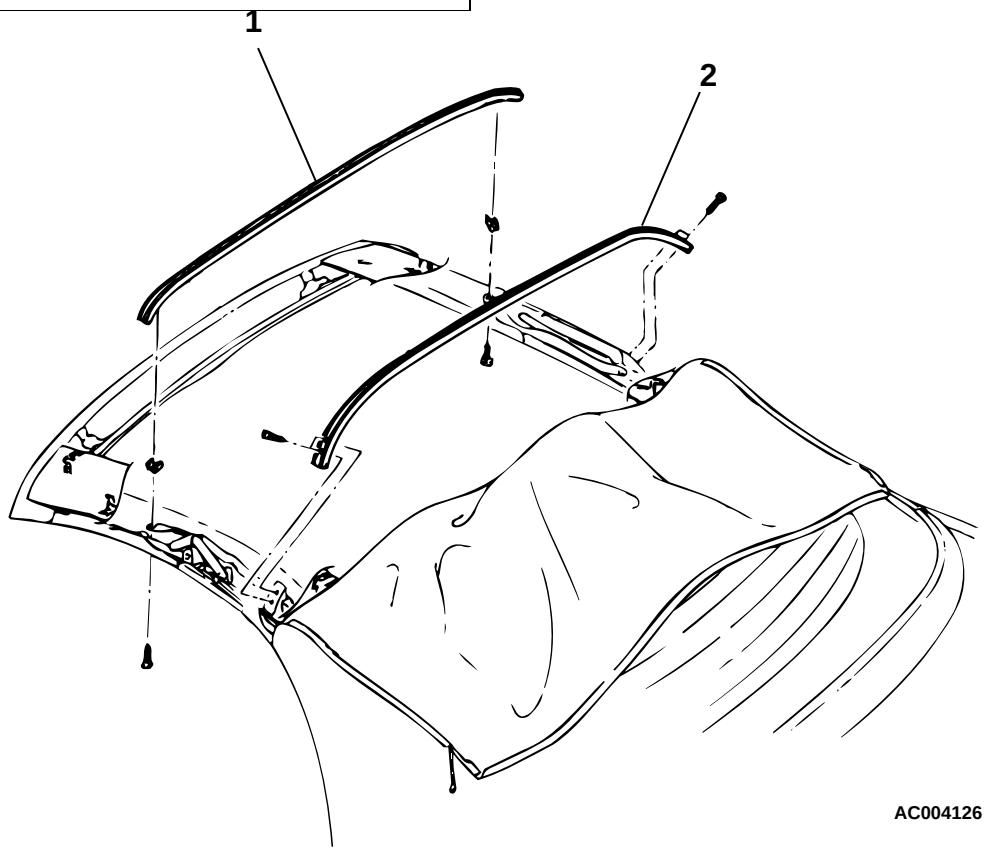
TSB Revision

TOPSTACK No.2 AND No.3 BOWS

REMOVAL AND INSTALLATION

M1426206300025

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004126 AB

REMOVAL STEPS
- HEADLINER (REFER TO P.42-150. NOTE: ONLY REMOVE THE HEADLINER FROM THE NO.1,2 AND/OR 3 BOWS AS REQUIRED)
- TOP COVER ASSEMBLY (REFER TO P.42-147. NOTE: ONLY REMOVE THE TOP COVER FROM THE NO.1,2 AND/OR 3 BOWS AS REQUIRED)

REMOVAL STEPS (Continued)
- TOPSTACK SIDE STAY PAD ASSEMBLY (REFER TO P.42-145. NOTE: ONLY REMOVE THE TOP COVER FROM THE NO.1,2 AND/OR 3 BOWS AS REQUIRED)

1. TOPSTACK NO.2 BOW
2. TOPSTACK NO.3 BOW

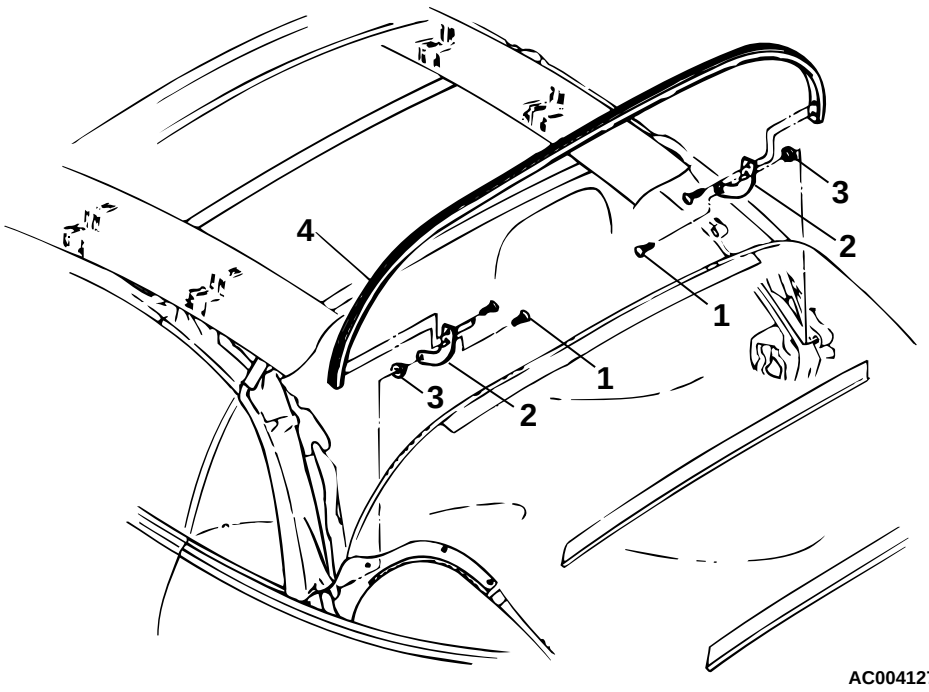
TSB Revision

TOPSTACK No.4 BOW

REMOVAL AND INSTALLATION

M1426206600026

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004127AB

REMOVAL STEPS
- HEADLINER (REFER TO P.42-150. NOTE: ONLY REMOVE THE HEADLINER FROM THE NO.1, 2 AND/OR 3 BOWS AS REQUIRED)
- TOP COVER ASSEMBLY (REFER TO P.42-147. NOTE: ONLY REMOVE THE TOP COVER FROM THE NO.1, 2 AND/OR 3 BOWS AS REQUIRED)

REMOVAL STEPS (Continued)
- TOPSTACK SIDE STAY PAD ASSEMBLY (REFER TO P.42-145. NOTE: ONLY REMOVE THE TOP COVER FROM THE NO.1, 2 AND/OR 3 BOWS AS REQUIRED)

1. BOLT
2. SLAT
3. BUSHING
4. NO.4 BOW

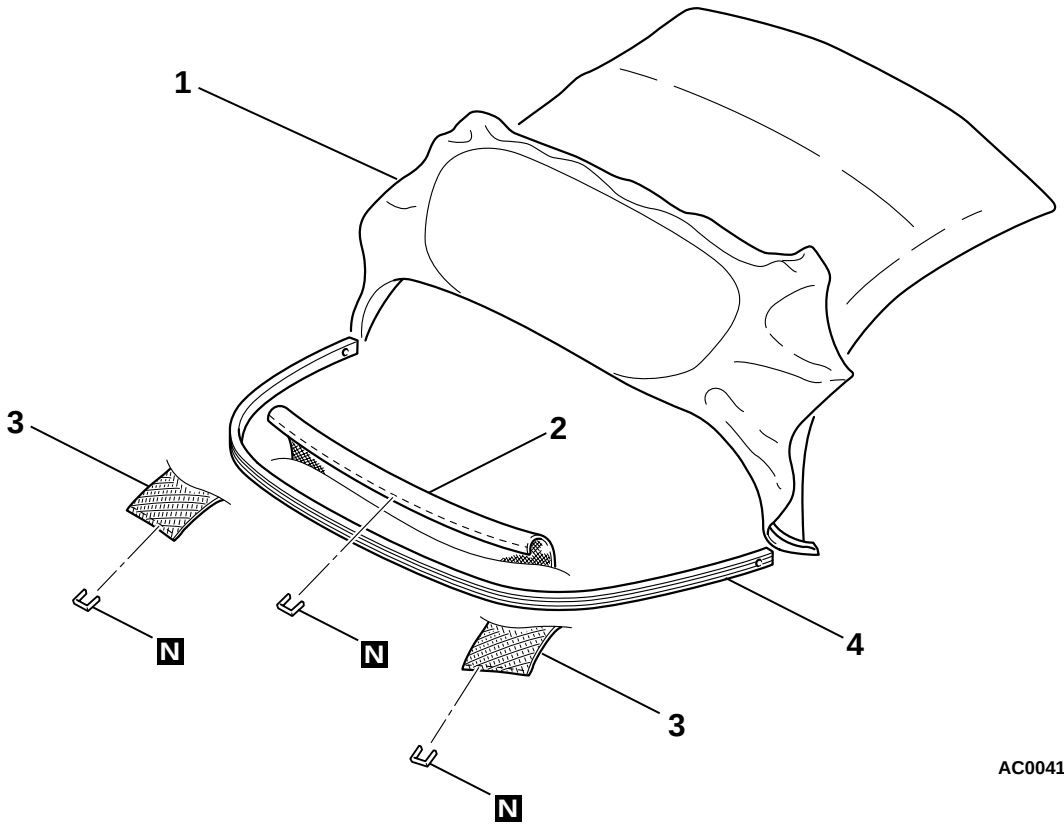
TSB Revision

TOPSTACK No.5 BOW

REMOVAL AND INSTALLATION

M1426205700020

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



REMOVAL STEPS
- CONVERTIBLE TOP ASSEMBLY (REFER TO P.42-131.)

1. TOP COVER ASSEMBLY AT NO.5 BOW CONNECTION

REMOVAL STEPS (Continued)

2. TOPSTACK WELL AT NO.5 BOW CONNECTION
3. SIDE STAY PAD AT NO.5 BOW CONNECTION
4. NO.5 BOW

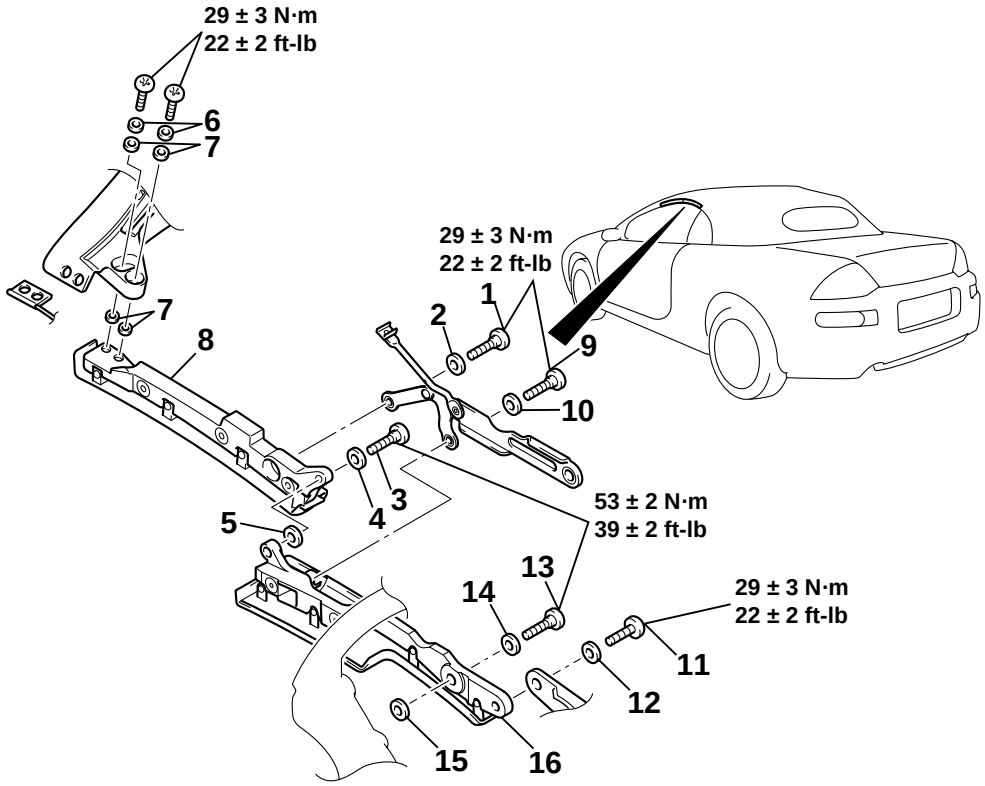
TSB Revision

TOPSTACK FRONT RAIL AND CENTER RAIL

REMOVAL AND INSTALLATION

M1426207500022

Pre-removal Operation
- Topstack open 1/2 way.



AC004129 AB

TOPSTACK FRONT RAIL ASSEMBLY REMOVAL STEPS
- TOPSTACK FRONT RAIL WEATHERSTRIP HOLDER (REFER TO P.42-155.)
- CONVERTIBLE TOP ASSEMBLY (REFER TO P.42-131.)

1. BOLT
2. WASHER
3. BOLT
4. BUSHING
5. BUSHING
- TOPSTACK SIDE STAY PAD ASSEMBLY (REFER TO P.42-145.)

6. BOLT
7. WASHER
8. TOPSTACK FRONT RAIL ASSEMBLY

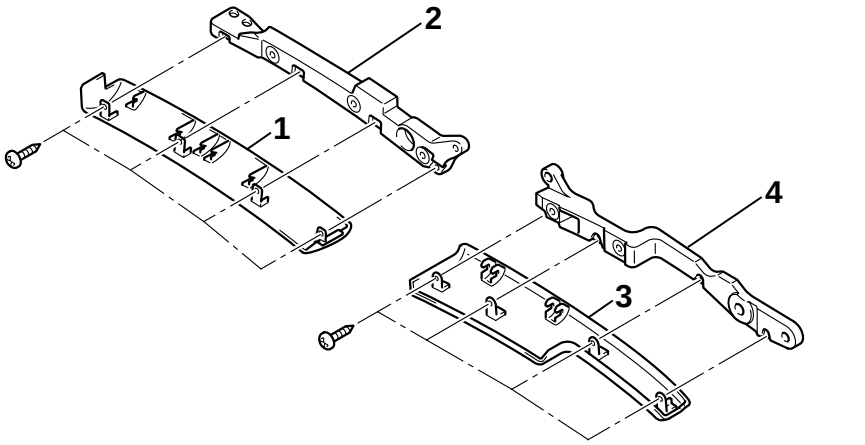
TOPSTACK CENTER RAIL ASSEMBLY REMOVAL STEPS
- TOPSTACK CENTER RAIL WEATHERSTRIP HOLDER (REFER TO P.42-155.)
- CONVERTIBLE TOP ASSEMBLY (REFER TO P.42-131.)

9. BOLT
10. WASHER
11. BOLT
12. BUSHING
13. BOLT
14. BUSHING
15. BUSHING
16. TOPSTACK CENTER RAIL ASSEMBLY

TSB Revision

DISASSEMBLY AND REASSEMBLY

M1426209300013



AC004130AB

TOPSTACK FRONT RAIL
DISASSEMBLY STEPS
1. TOPSTACK FRONT RAIL GARNISH.
2. TOPSTACK FRONT RAIL

TOPSTACK CENTER RAIL
DISASSEMBLY STEPS
3. TOPSTACK CENTER RAIL GARNISH.
4. TOPSTACK CENTER RAIL

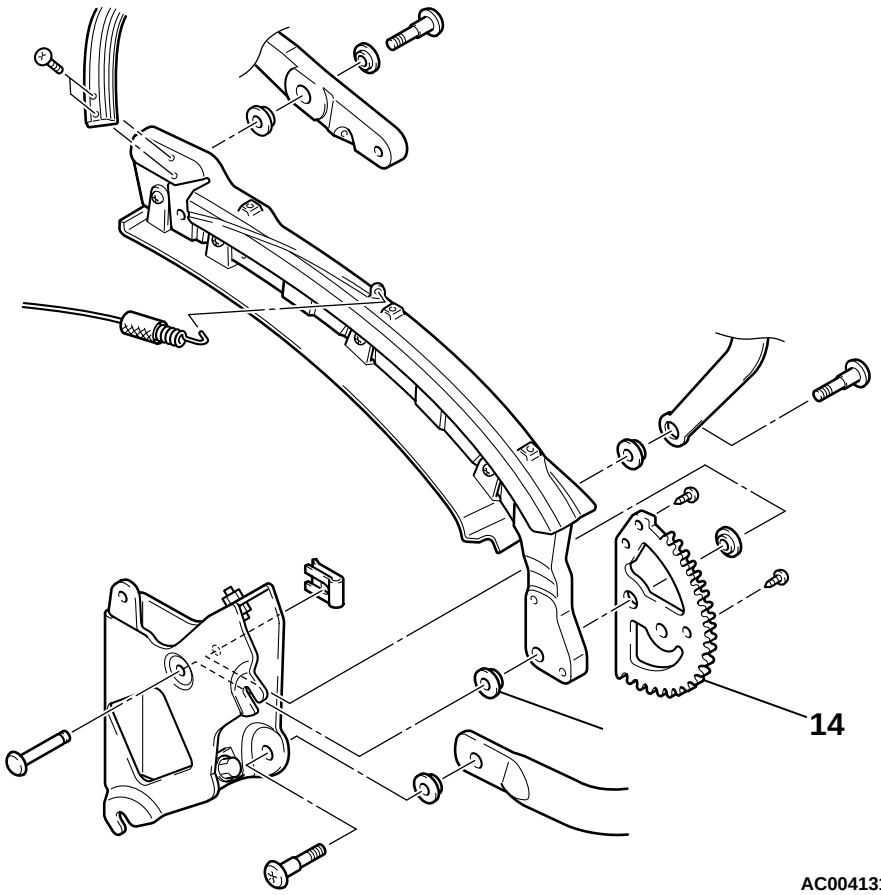
TSB Revision

TOPSTACK REAR RAIL

REMOVAL AND INSTALLATION

M1426208100027

Pre-removal Operation	Post-installation Operation
• Completely open the convertible top. • Completely down the quarter window glass.	• Convertible top fit Adjustment (Refer to P.42-130.)



REMOVAL STEPS
- TOPSTACK REAR RAIL WEATHERSTRIP HOLDER (REFER TO P.42-155.)
- CONVERTIBLE TOP ASSEMBLY (REFER TO P.42-131.)
- TOP COVER ASSEMBLY (REFER TO P.42-147.)

1. NO.3 BOW (REFER TO P.42-136.)
2. SIDE CABLE ASSEMBLY
3. BOLT
4. BUSHING
5. BOLT
6. WASHER

REMOVAL STEPS (Continued)

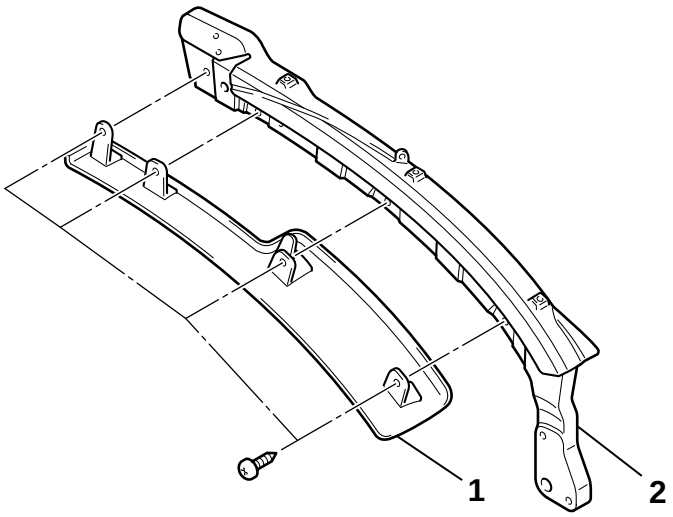
7. BOLT
8. BUSHING
9. BUSHING
- TOPSTACK DRIVE MOTOR ASSEMBLY (REFER TO P.42-132.)

10. RETAINER CLIP
11. PIN
12. MAIN PIVOT BASE ASSEMBLY
13. BUSHING
14. TOPSTACK DRIVE GEAR
15. BUSHING
16. TOPSTACK REAR RAIL ASSEMBLY

TSB Revision

DISASSEMBLY AND REASSEMBLY

M1426209400010



AC004132 AB

DISASSEMBLY STEPS

1. TOPSTACK REAR RAIL GARNISH
2. TOPSTACK REAR RAIL

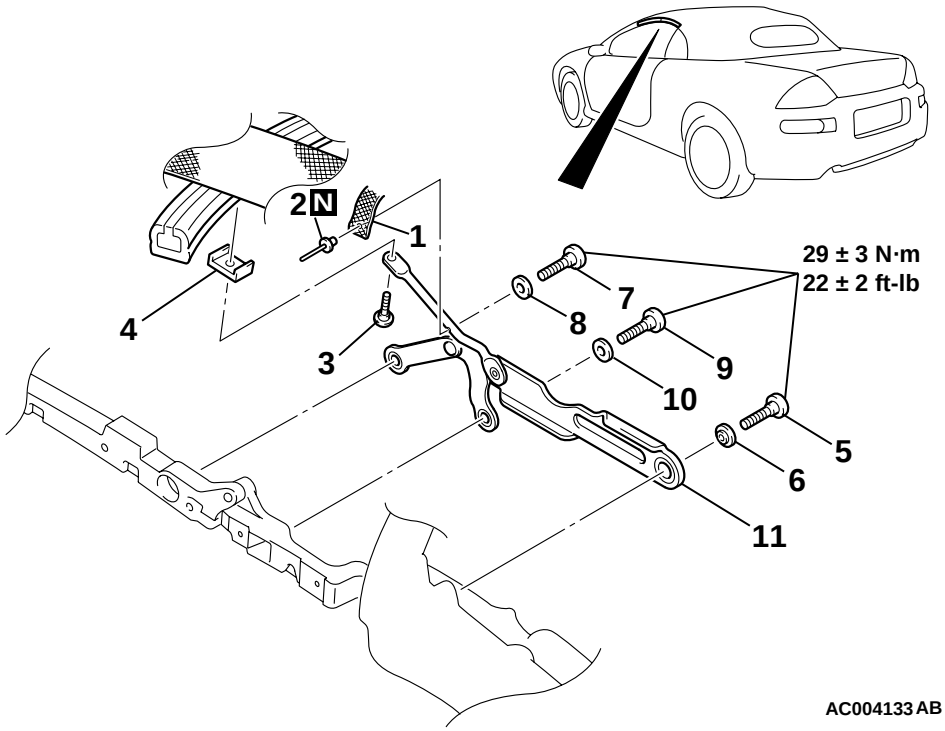
TSB Revision

TOPSTACK CONTROL LINK ASSEMBLY

REMOVAL AND INSTALLATION

M1426207800023

Pre-removal Operation	Post-installation Operation
• Completely open the convertible top. • Completely down the quarter window glass.	• Convertible top fit Adjustment (Refer to P.42-130.)



REMOVAL STEPS
- TOPSTACK CENTER RAIL WEATHERSTRIP HOLDER (REFER TO P.42-155.)

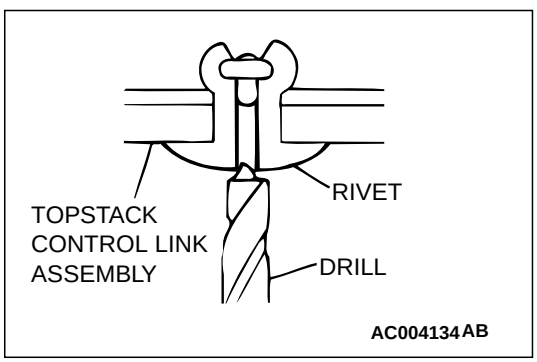
<<A>> >>A<<
1. TOP COVER SIDE STRAP
2. RIVET
3. SCREW
4. NO.2 BOW BUSHING

REMOVAL STEPS (Continued)
5. BOLT
6. WASHER
7. BOLT
8. WASHER
9. BOLT
10. WASHER
11. TOPSTACK CONTROL LINK

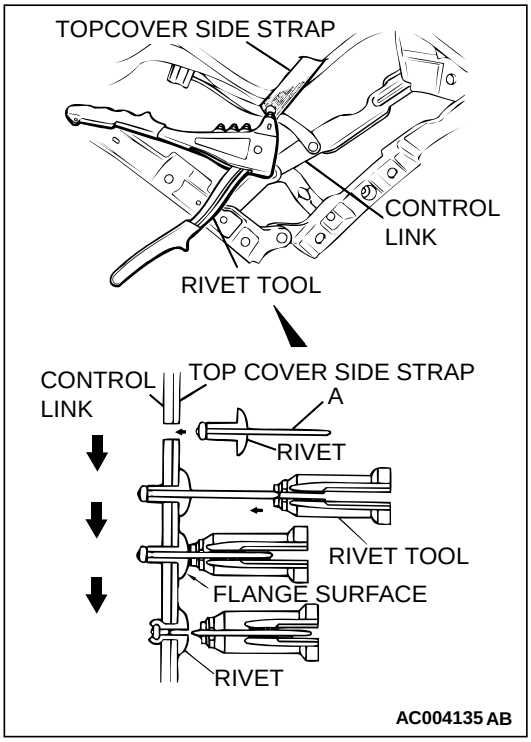
REMOVAL SERVICE POINT

<<A>> RIVET REMOVAL

Use a drill [ϕ4.0 – 4.5 mm (ϕ0.16 – 0.18 inch)] to break the rivet by drilling a hole, and remove the rivet.



TSB Revision



INSTALLATION SERVICE POINT

>>A<< RIVET INSTALLATION

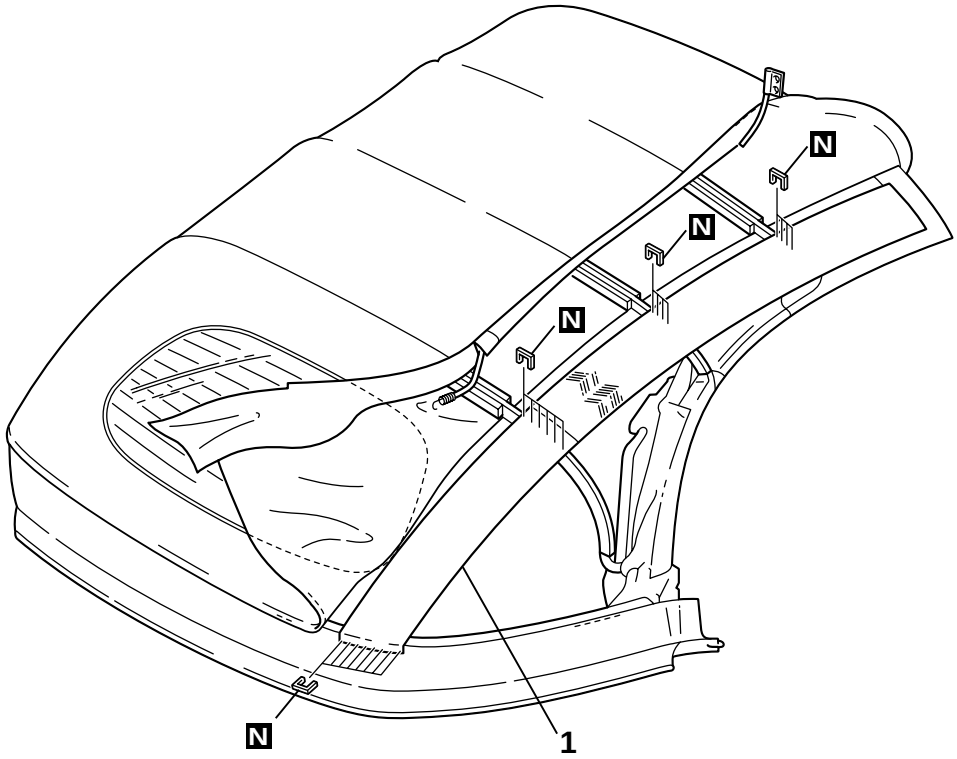
1. Insert the rivet [ϕ4.8 mm (ϕ0.19 inch)] into the top cover side strap and control link.
2. Insert "A" of the rivet into the rivet tool.
3. Pressing the flange surface of the rivet, move the handle of the rivet tool.
4. The thinnest point of "A" is cut and the rivet is held in the position.

TOPSTACK SIDE STAY PADS

REMOVAL AND INSTALLATION

M1426205400029

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004136AB

REMOVAL STEPS
- DEFOGGER HARNESS CONNECTOR (REFER TO P.42-131.)

<<A>> >>A<<

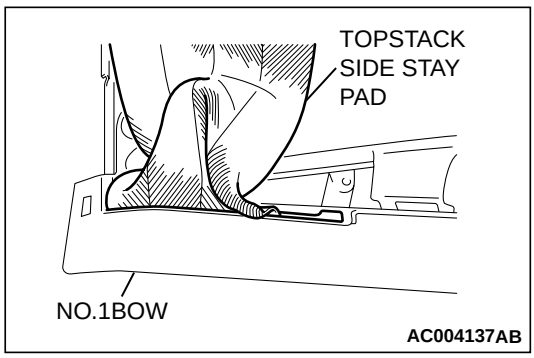
REMOVAL STEPS (Continued)
- TOP COVER ASSEMBLY (REFER TO P.42-147.)

1. TOPSTACK SIDE STAY PAD ASSEMBLY

REMOVAL SERVAICE POINT

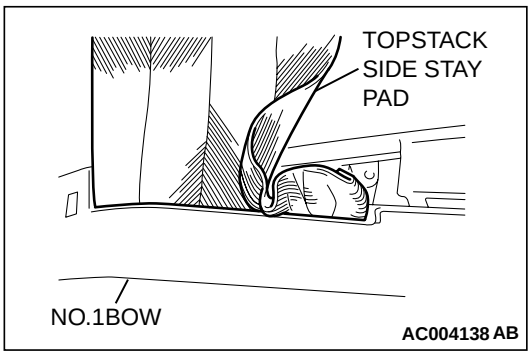
<<A>> TOPSTACK SIDE STAY PAD ASSEMBLY REMOVAL

1. Move the No.1 bow side topstack side stay pad to the outer side of the vehicle.

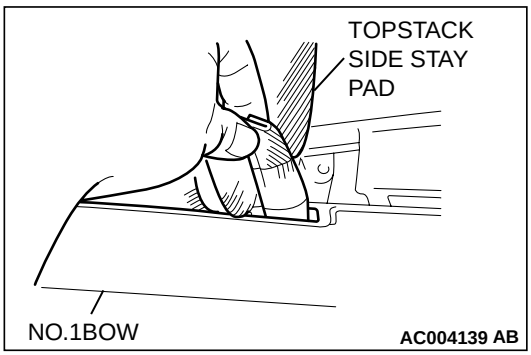


AC004137AB

TSB Revision



2. Guide the (folded) end of the topstack side stay pad out of the wider slit of the No.1 bow.

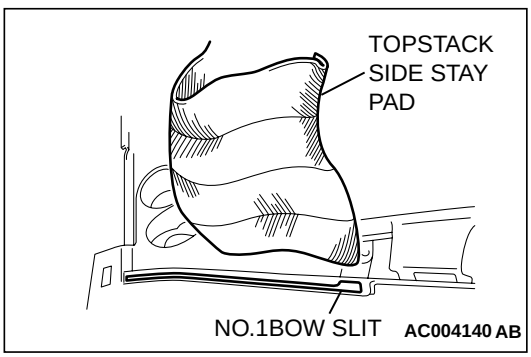


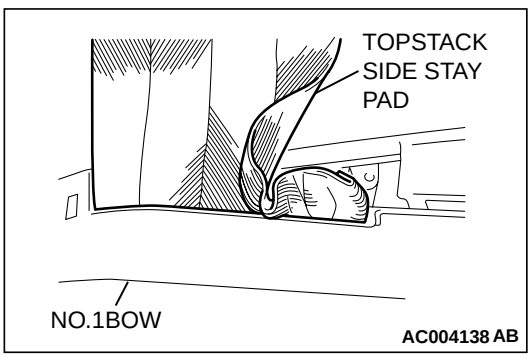
3. Pull out the folded end of the topstack side stay, and disconnect the topstack side stay pad from the No.1 bow.
4. Disconnect the topstack side stay pad from the No.2. No.3 No.4, and No.5 bows.

INSTALLATION SERVICE POINT

>>A<< TOPSTACK SIDE STAY PAD ASSEMBLY INSTALLATION

1. Face the folded end of the topstack side stay pad downward, and then position it to the No.1 bow side.
2. Connect the topstack side stay pad to the No.5, No.4, No.3, No.2 bows.
3. Insert the folded end of the topstack side stay pad through the wider part of the No.1 bow slit as shown.





4. Working from inside the vehicle, pull out the folded end of the topstack side stay pad, and then install the topstack side stay pad to the No.1 bow.

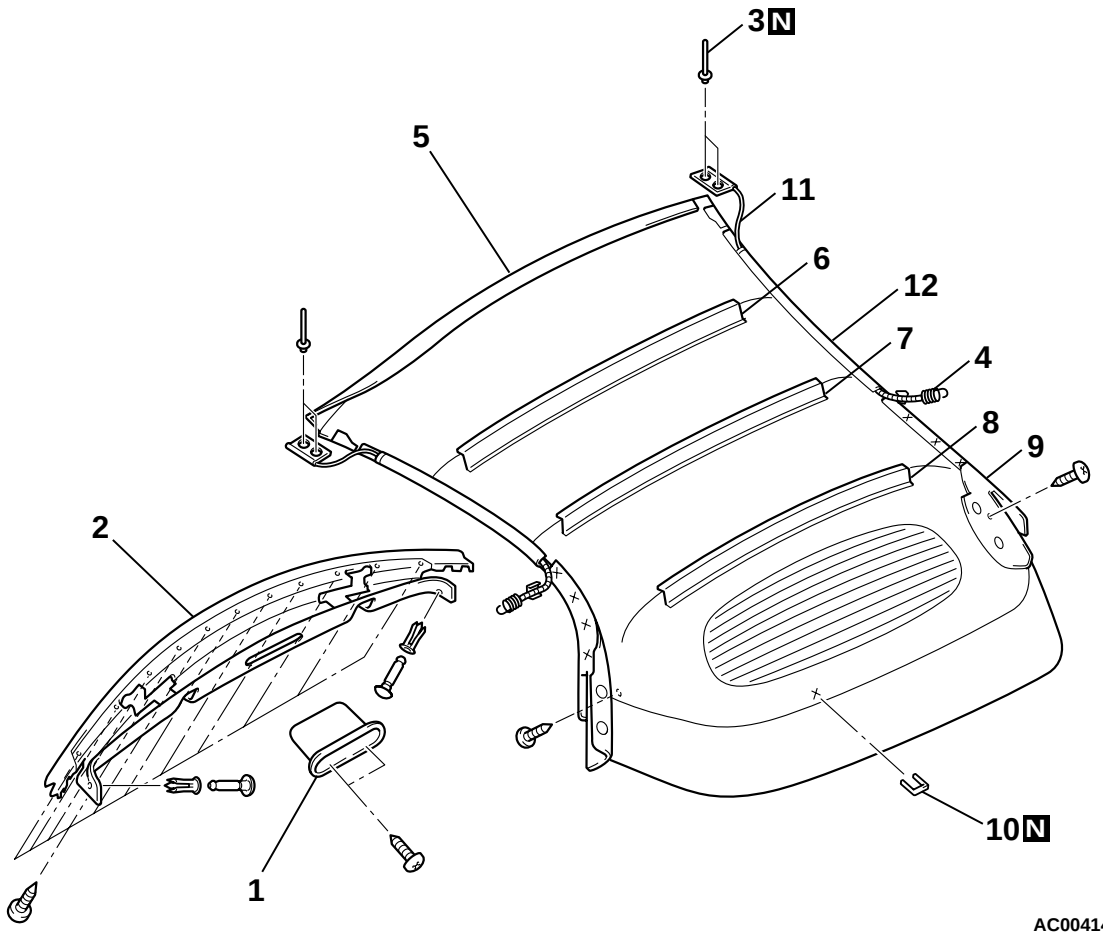
TSB Revision

TOP COVER ASSEMBLY

REMOVAL AND INSTALLATION

M1426205100028

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004142AB

REMOVAL STEPS
- CONVERTIBLE TOP ASSEMBLY (REFER T0 P.42-131.)
- HEADLINER (REFER TO P.42-150.)

1. TOP STACK PULL HANDLE BOX BEZEL
2. NO.1 BOW GARNISH

<<A>> >>B<< 3. RIVET

4. TOP STACK REAR RAIL AND SIDE CABLE ASSEMBLY CONNECTION

REMOVAL STEPS (Continued)

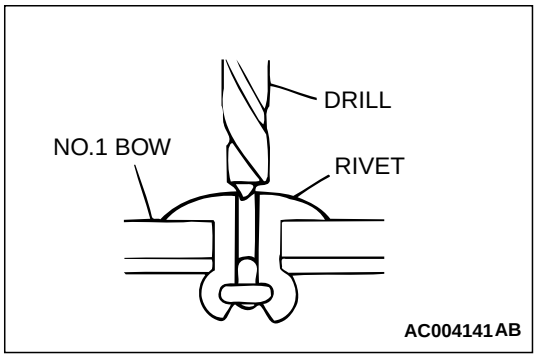
5. TOP COVER FROM NO.1 BOW
6. NO.2 BOW LISTING STRAP
7. NO.3 BOW LISTING STRAP
8. NO.4 BOW LISTING STRAP
9. REAR RAIL SAIL PANEL FLAP
10. TOP COVER FROM NO.5 BOW

>>A<< 11. SIDE CABLE ASSEMBLY

12. TOP COVER ASSEMBLY

TSB Revision

REMOVAL SERVICE POINT



<<A>> RIVET REMOVAL

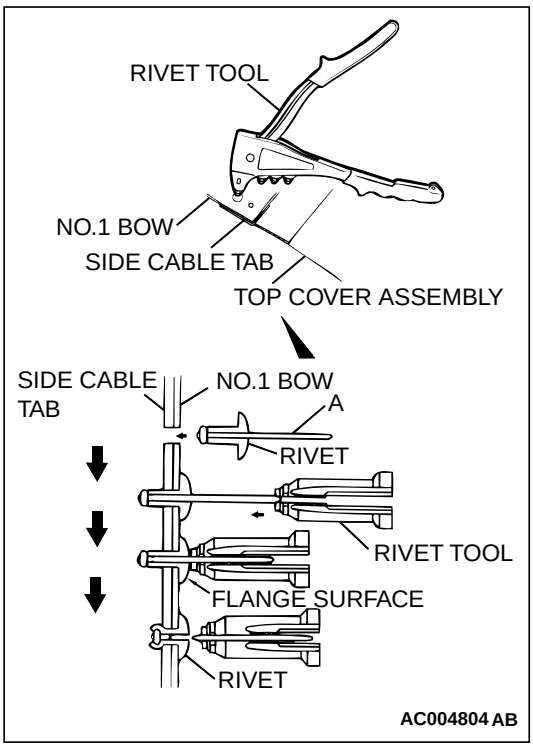
Use a drill [ϕ4.0 – 4.5 mm (ϕ0.16 – 0.18 inch)] to break the rivet by drilling a hole, and remove the rivet.

INSTALLATION SERVICE POINTS

>>A<< SIDE CABLE ASSEMBLY INSTALLATION

1. Feed a wire through the hollow part at the side of the top cover assembly.
2. Tie the rear end of the wire to the front end of the side cable assembly, pull out the front end of the wire, and then feed the side cable assembly through the hollow part.
3. Remove the wire.

>>B<< RIVET INSTALLATION



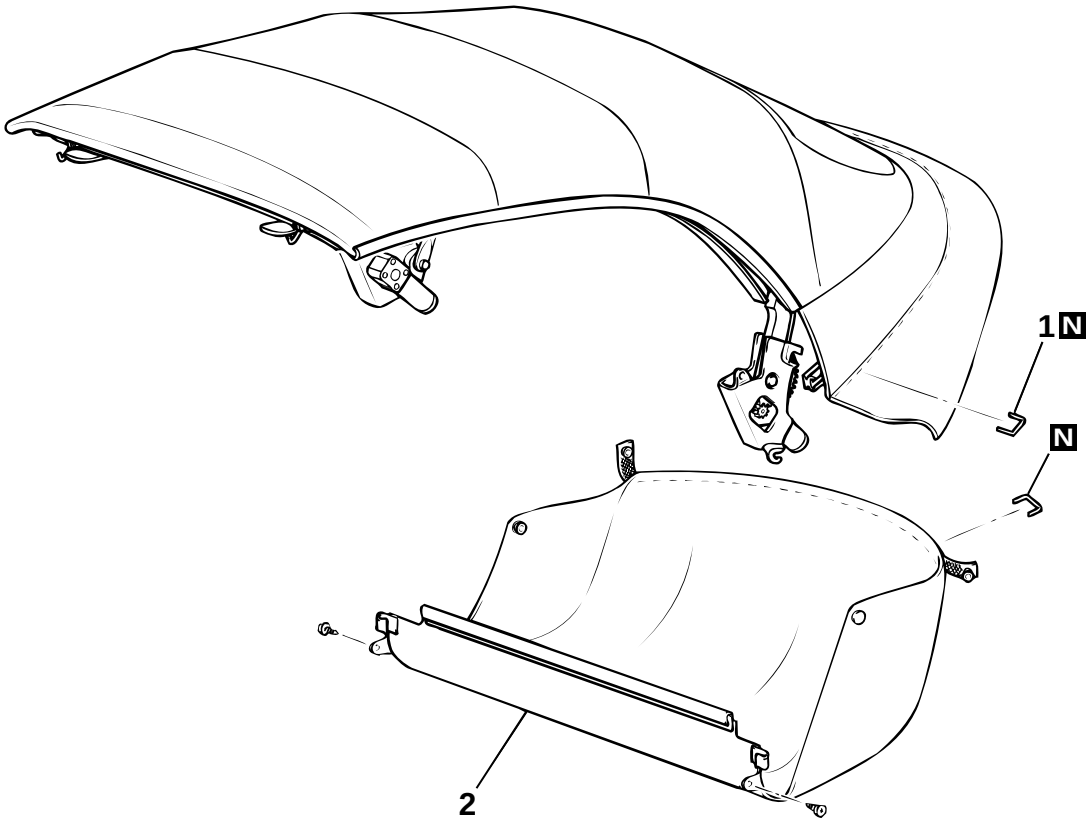
1. Insert the rivet [ϕ4.8 mm (ϕ0.19 inch)] into the No.1 bow and side cable tab.
2. Insert "A" of the rivet into the rivet tool.
3. Pressing the flange surface of the rivet, move the handle of the rivet tool.
4. The thinnest point of "A" is cut and the rivet is held in the position.

TOPSTACK WELL

REMOVAL AND INSTALLATION

M1426204500023

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004143AB

REMOVAL STEPS
- CONVERTIBLE TOP ASSEMBLY (REFER TO P.42-131.)

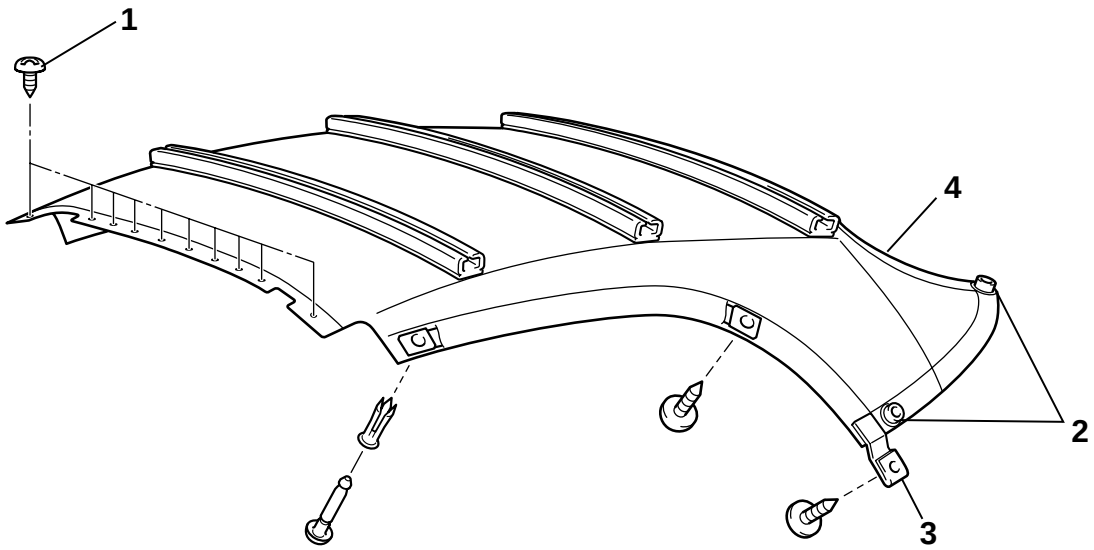
REMOVAL STEPS (Continued)
1. TOPSTACK WELL TO NO.5 BOW CONNECTION
2. TOPSTACK WELL

TSB Revision

HEADLINER

REMOVAL AND INSTALLATION

M1426201500024



AC004144 AB

REMOVAL STEPS
- NO.1 BOW GARNISH (REFER TO P.42-135.)

1. SCREW
2. SNAPS
3. HEADLINER ATTACHING STRAP
4. HEADLINER

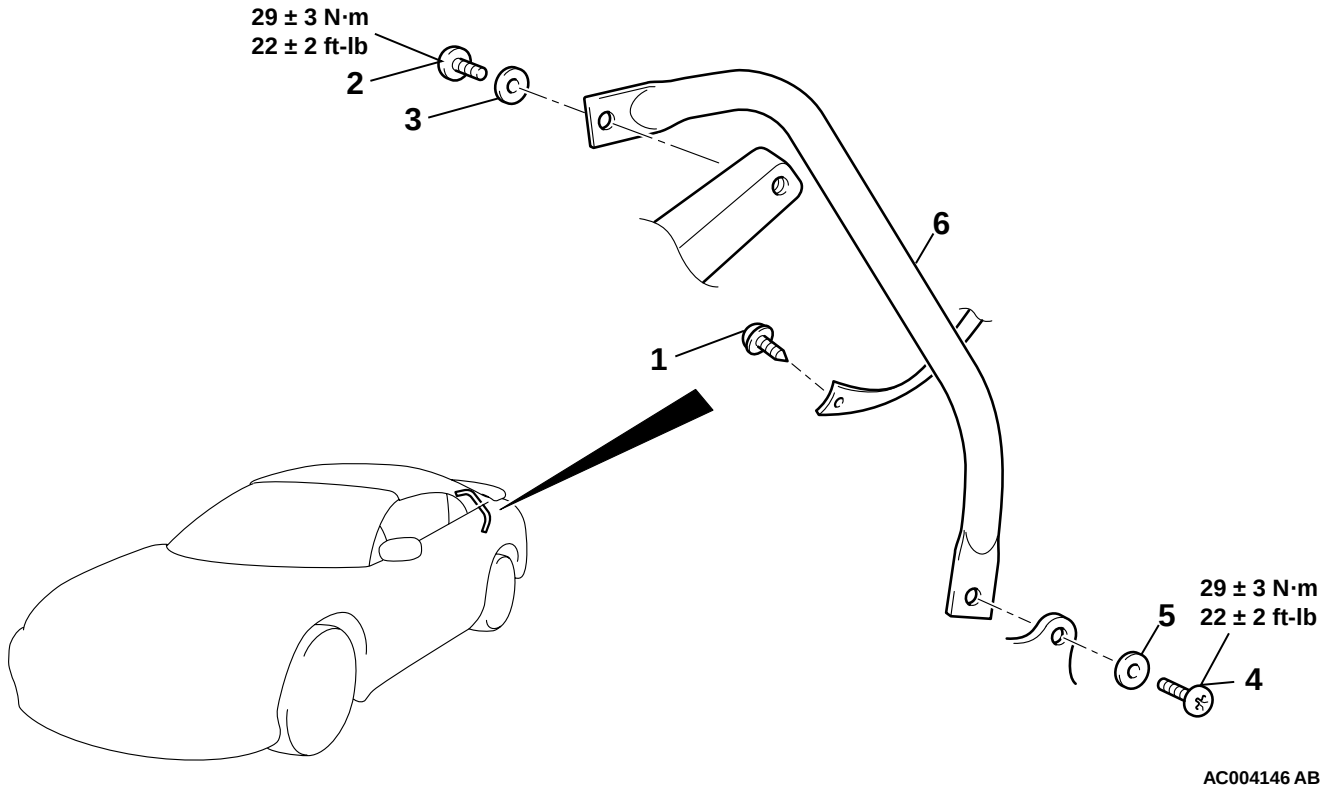
TSB Revision

BALANCE LINK

REMOVAL AND INSTALLATION

M1426202200026

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



REMOVAL STEPS
- QUARTER TRIM (REFER TO GROUP 52A – TRIMS P.52A-10.)

1. SCREW
2. BOLT

REMOVAL STEPS (Continued)
3. WASHER
4. BOLT
5. WASHER
6. BALANCE LINK

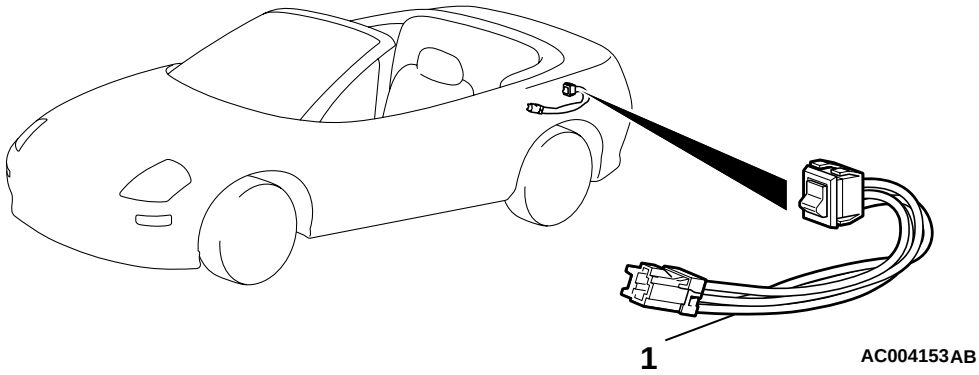
TSB Revision

CONVERTIBLE TOP BYPASS SWITCH

REMOVAL AND INSTALLATION

M1426202700021

Post-installation Operation
- Convertible Top Fit Adjustment (Refer to P.42-130.)



REMOVAL STEPS
- TRUNK ROOM TRIM (REFER TO GROUP 52A – TRIMSP.52A-10.)

<<A>> 1. CONVERTIBLE TOP BYPASS SWITCH

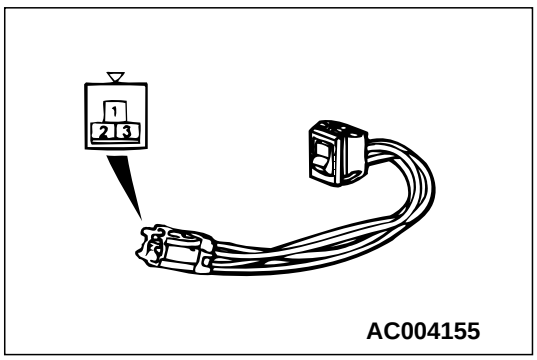
REMOVAL SERVICE POINT

<<A>> CONVERTIBLE TOP BYPASS SWITCH REMOVAL

1. Depress lower clips.
2. While holding lower clip, push the lower front of the switch past the lower clip [approximately 5 mm (0.2 inch)].
3. Depress upper clip.
4. While holding upper clip, jiggle and slide switch out.

CONVERTIBLE TOP BYPASS SWITCH CONTINUITY CHECK

M1426202800028



SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
OFF	1 – 2 – 3	Continuity
MANUAL	-	No continuity

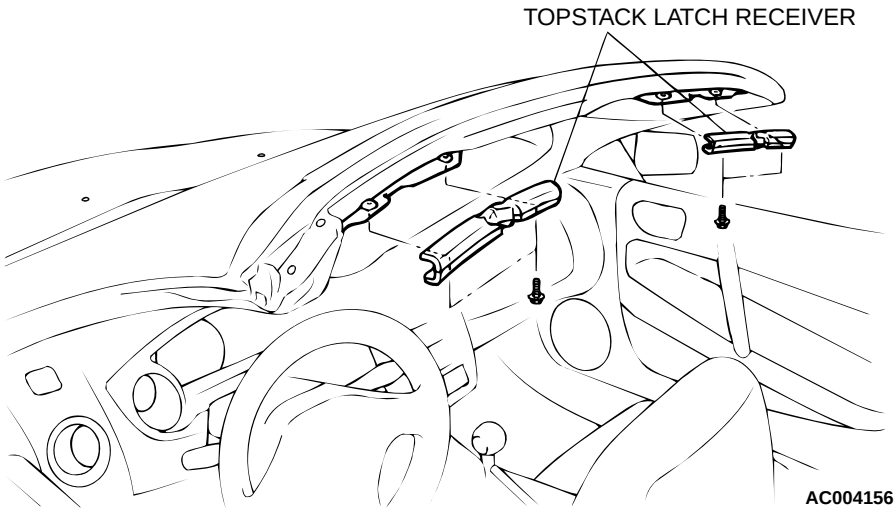
TSB Revision

TOPSTACK FRONT HEADER LATCH RECEIVER

REMOVAL AND INSTALLATION

M1426207200021

Pre-removal Operation
- Completely open the convertible top.



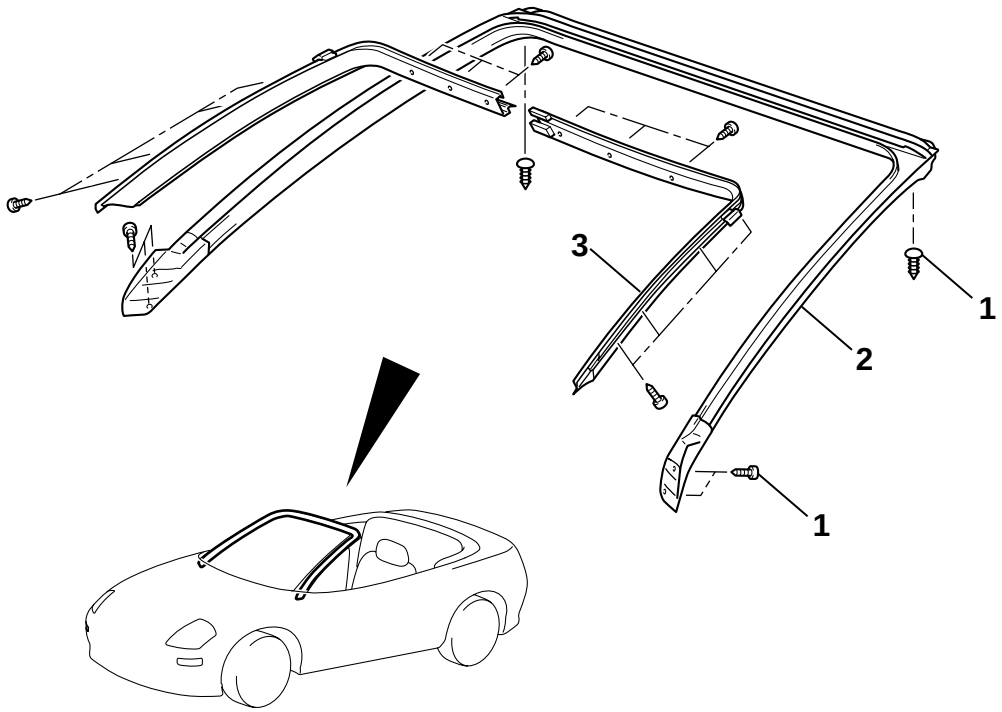
TSB Revision

FRONT ROOF WEATHER-STRIP

REMOVAL AND INSTALLATION

M1426202000022

Pre-removal Operation	Post-installation Operation
• Completely Open the Convertible Top.	• Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004157 AB

REMOVAL STEPS
- TOPSTACK LATCH RECEIVER (REFER TO P.42-134.)

1. CLIP

REMOVAL STEPS (Continued)
2. FRONT ROOF WEATHERSTRIP
3. FRONT ROOF WEATHERSTRIP HOLDER

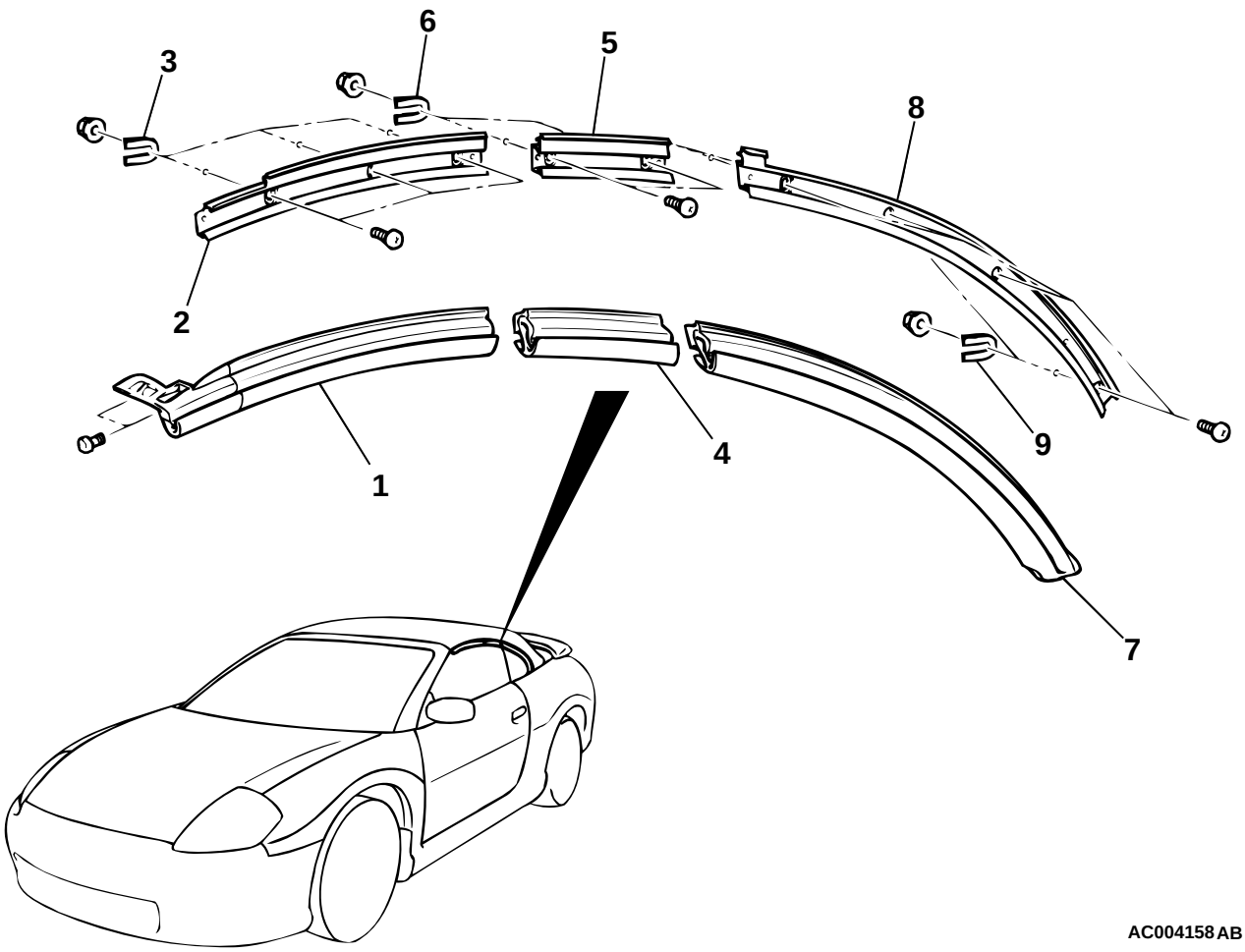
TSB Revision

TOPSTACK RAIL WEATHERSTRIP

REMOVAL AND INSTALLATION

M1426208600011

Pre-removal Operation	Post-installation Operation
• Completely open the convertible top. • Completely down the quarter window glass.	• Convertible Top Fit Adjustment (Refer to P.42-130.)



AC004158 AB

REMOVAL STEPS
1. TOPSTACK FRONT RAIL WEATHERSTRIP
2. TOPSTACK FRONT RAIL WEATHERSTRIP HOLDER
3. SHIM
4. TOPSTACK CENTER RAIL WEATHERSTRIP

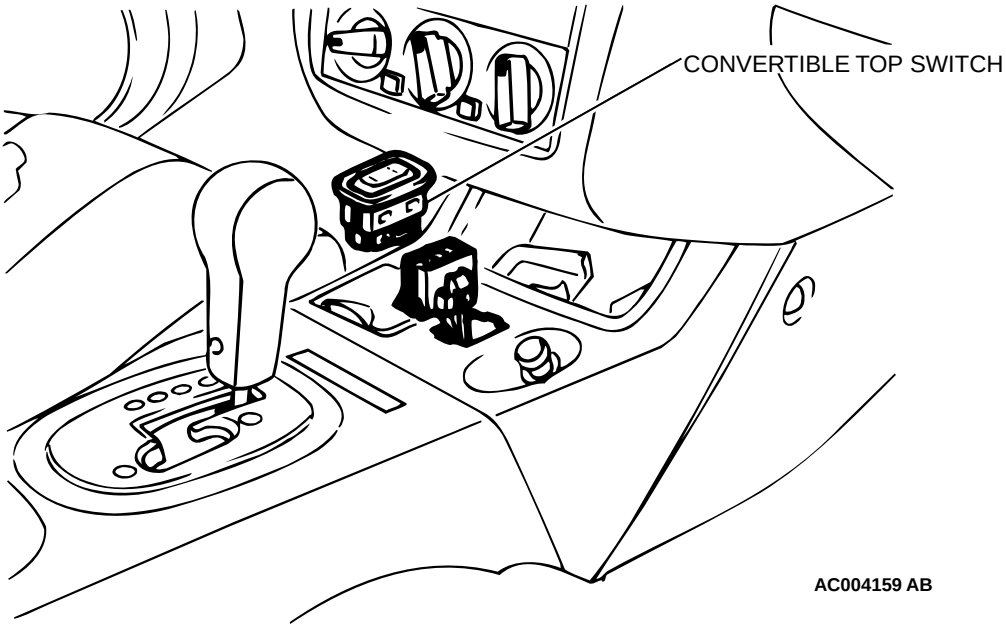
REMOVAL STEPS (Continued)
5. TOPSTACK CENTER RAIL WEATHERSTRIP
6. SHIM
7. TOPSTACK REAR RAIL WEATHERSTRIP
8. TOPSTACK REAR RAIL WEATHERSTRIP HOLDER
9. SHIM

TSB Revision

CONVERTIBLE TOP SWITCH

REMOVAL AND INSTALLATION

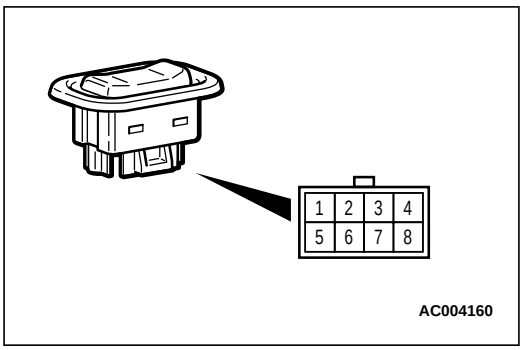
M1426202400020



INSPECTION

M1426202500027

CONVERTIBLE TOP SWITCH CONTINUITY CHECK



SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
CLOSE	4 – 7	Continuity
OPEN	5 – 7	Continuity

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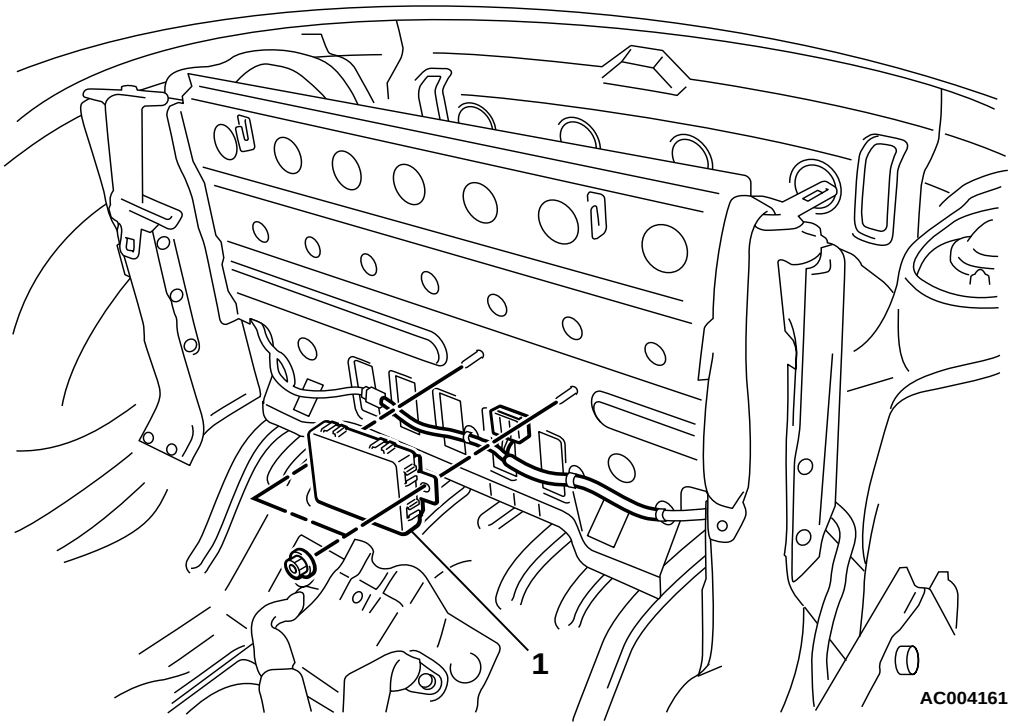
CONVERTIBLE TOP CONTROL MODULE

REMOVAL AND INSTALLATION

M1426203000025



REMOVAL STEPS

- REAR SEAT BACK (REFER TO GROUP 52A – REAR SEAT P.52A-23.)

1. CONVERTIBLE TOP CONTROL MODULE

TSB Revision

SPECIFICATIONS

FASTENER TIGHTENING SPECIFICATIONS

M1426003000032

ITEMS		SPECIFICATIONS
Hood	Hood hinge bolt (hood side)	12 ± 2 N·m (100 ± 22 in-lb)
	Hood hinge bolt (body side)	12 ± 2 N·m (100 ± 22 in-lb)
	Hood latch bolt	8.9 ± 1.9 N·m (78 ± 17 in-lb)
	Hood support rod bolt	4.9 ± 1.0 N·m (44 ± 8 in-lb)
	Hood switch bolt	4.9 ± 1.0 N·m (44 ± 8 in-lb)
Quarter window regulator	Quarter window regulator bolt	8 ± 1.5 N·m (71 ± 13 in-lb)
Door	Door check bolt	5.0 ± 1.0 N·m (44 ± 9 in-lb)
	Door hinge bolt (door side)	21 ± 4 N·m (16 ± 3 ft-lb)
	Door hinge bolt (body side)	26 ± 5 N·m (19 ± 3 ft-lb)
	Door latch assembly screw	9.0 ± 2.0 N·m (80 ± 17 in-lb)
	Striker screw	20 ± 4 N·m (15 ± 2 in-lb)
Liftgate	Liftgate gas spring bolt	12 ± 2 N·m (100 ± 2 in-lb)
	Liftgate hinge bolt	21 ± 4 N·m (16 ± 3 in-lb)
	Liftgate latch assembly screw	21 ± 4 N·m (16 ± 3 in-lb)
	Striker bolt	21 ± 4 N·m (16 ± 3 in-lb)
Trunk lid	Striker bolt	22 ± 4 N·m (16 ± 3 ft-lb)
	Trunk lid gas spring bolt	12 ± 2 N·m (104 ± 21 in-lb)
	Trunk lid hinge bolt (trunk lid side)	13 ± 2 N·m (109 ± 21 in-lb)
	Trunk lid hinge bolt (body side)	13 ± 2 N·m (109 ± 21 in-lb)
	Trunk lid hinge nut	13 ± 2 N·m (109 ± 21 in-lb)
	Trunk lid latch assembly bolt	22 ± 4 N·m (16 ± 3 ft-lb)
Sunroof	Guide block screw	2.0 ± 0.5 N·m (18 ± 4 in-lb)
	Guide rail stopper screw	2.0 ± 0.5 N·m (18 ± 4 in-lb)
	Sunroof motor assembly bolt	5.4 ± 1.5 N·m (48 ± 13 in-lb)
	Sunroof drip rail screw	2.0 ± 0.5 N·m (18 ± 4 in-lb)
	Sunshade stopper screw	1.4 ± 0.3 N·m (13 ± 3 in-lb)
		2.0 ± 0.5 N·m (18 ± 4 in-lb)
Electric convertible top	Balance link bolt	29 ± 3 N·m (22 ± 2 ft-lb)
	Main pivot base assembly bolt	29 ± 3 N·m (22 ± 2 ft-lb)
	No.1 bow bolt	29 ± 3 N·m (22 ± 2 ft-lb)
	Topstack center rail assembly bolt	29 ± 3 N·m (22 ± 2 ft-lb)
		53 ± 2 N·m (39 ± 2 ft-lb)
	Topstack control link bolt	29 ± 3 N·m (22 ± 2 ft-lb)
	Topstack front rail assembly bolt	29 ± 3 N·m (22 ± 2 ft-lb)
	Topstack rear rail assembly bolt	53 ± 2 N·m (39 ± 2 ft-lb)

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SERVICE SPECIFICATIONS

M1426000300034

<DOOR>

ITEMS	STANDARD VALUE
Door inside handle play mm (in)	3.2 (0.13) or more
Door outside handle play mm (in)	2.4 (0.09) or more

<SUNROOF>

ITEMS	STANDARD VALUE
Roof lid glass operation current A	10 or more [20°C (68°F)]

SEALANTS

M1426000500038

<DOOR>

ITEMS	SPECIFIED SEALANT	REMARK
Waterproof film	3 M™AAD Part No. 8625 or equivalent	Ribbon sealer

<FENDER>

ITEMS	SPECIFIED SEALANT	REMARK
Fender	3 M™AAD Part No. 8625 or equivalent	Ribbon sealer

<WINDOW GLASS>

ITEMS	SPECIFIED SEALANT
Liftgate door <ECLIPSE>	3 M™AAD Part No. 8609 Super Fast Urethane and 3 M™AAD Part No. 8608 Super Fast Urethane Primer or equivalent
Quarter window glass <ECLIPSE>	
Windshield	

COMPONENT IDENTIFICATIONS

M1421005400075

<DOOR CHECK>

APPLICABLE LOCATION	IDENTIFICATION MARK
Left door	1L
Right door	1R

<DOOR OUTER OPENING WEATHERSTRIP>

APPLICABLE SIDE	IDENTIFICATION COLOR
Left door	Natural (White)
Right door	Orange

<ROOF DRIP MOULDING CLIP>

APPLICABLE LOCATION	IDENTIFICATION COLOR
Drip molding clip A	Gray
Drip molding clip B	Green
Front drip molding clip A <LH>	Gray
Front drip molding clip A <RH>	Yellow
Front drip molding clip B	Violet

NOTES