

# GROUP 51

# EXTERIOR

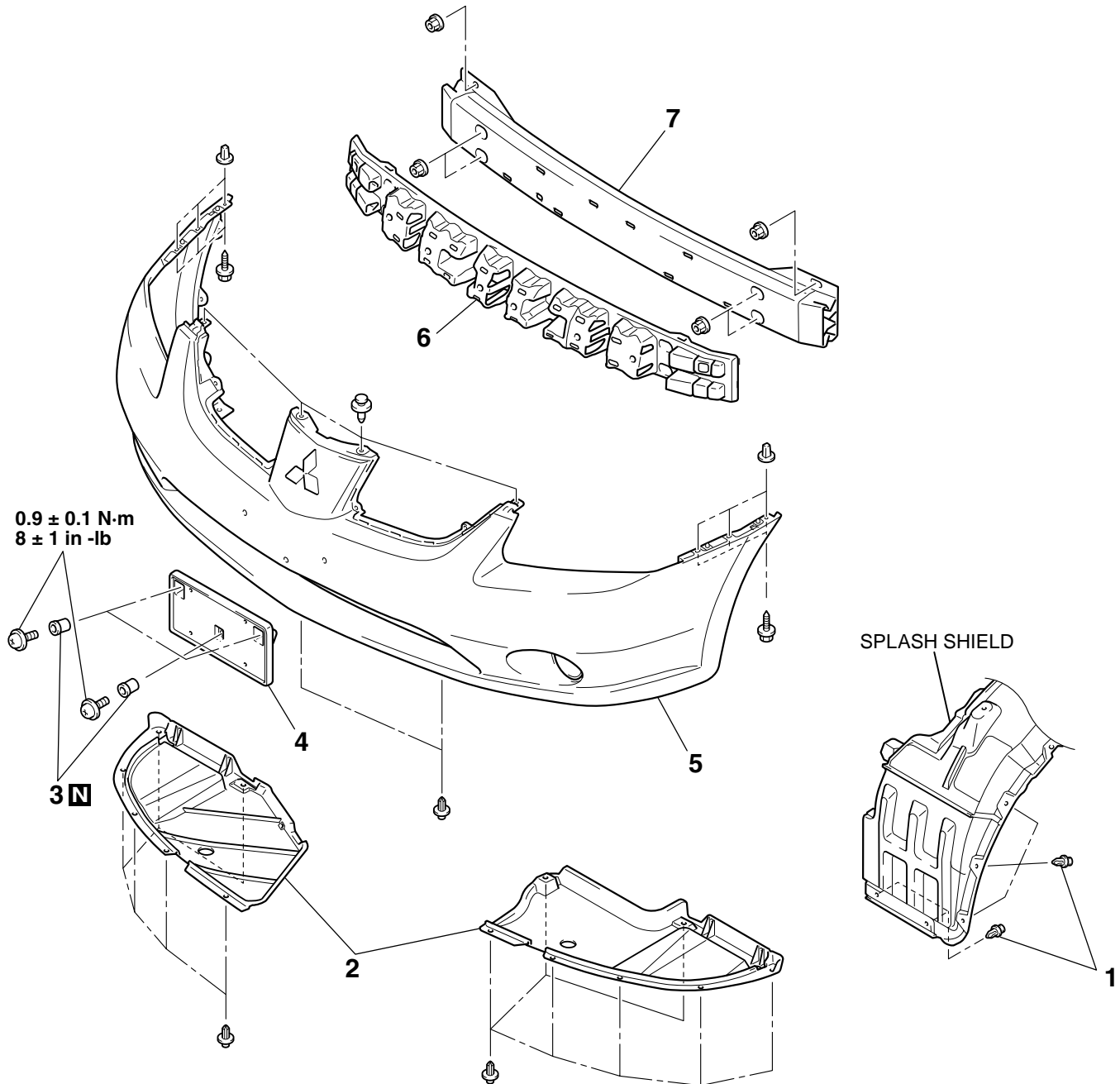
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## FRONT BUMPER ASSEMBLY

## REMOVAL AND INSTALLATION

M1511001400499



AC305875 AB

**REMOVAL STEPS**

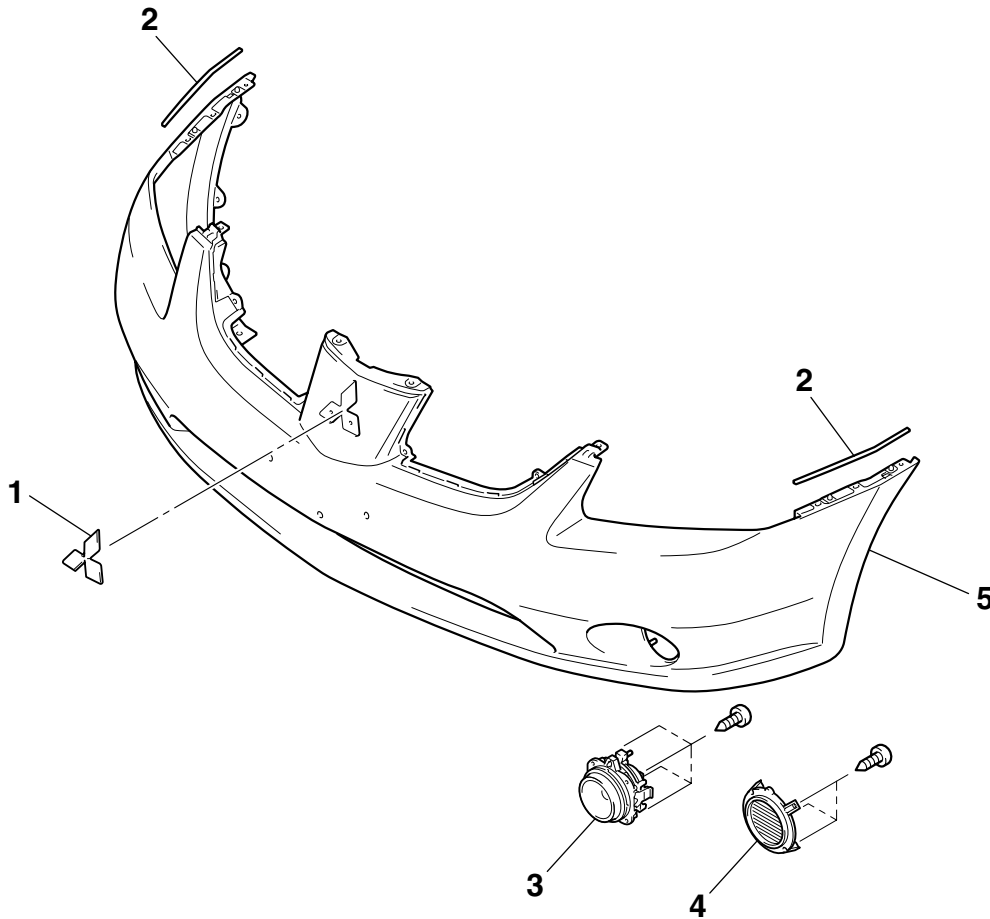
- RADIATOR GRILLE (REFER TO P.51-5).
- 1. SPLASH SHIELD MOUNTING CLIPS
- 2. FRONT BUMPER UNDER COVER
- 3. RUBBER NUT
- 4. LICENSE PLATE GARNISH

**REMOVAL STEPS (Continued)**

- FOG LIGHT CONNECTOR CONNECTION
- 5. FRONT BUMPER ASSEMBLY
- 6. FRONT BUMPER CORE
- 7. FRONT BUMPER REINFORCEMENT ASSEMBLY

DISASSEMBLY AND ASSEMBLY

M1511001600493



AC305876 AB

**DISASSEMBLY STEPS**

1. THREE-DIAMOND MARK
2. PAD
3. FOG LIGHT ASSEMBLY

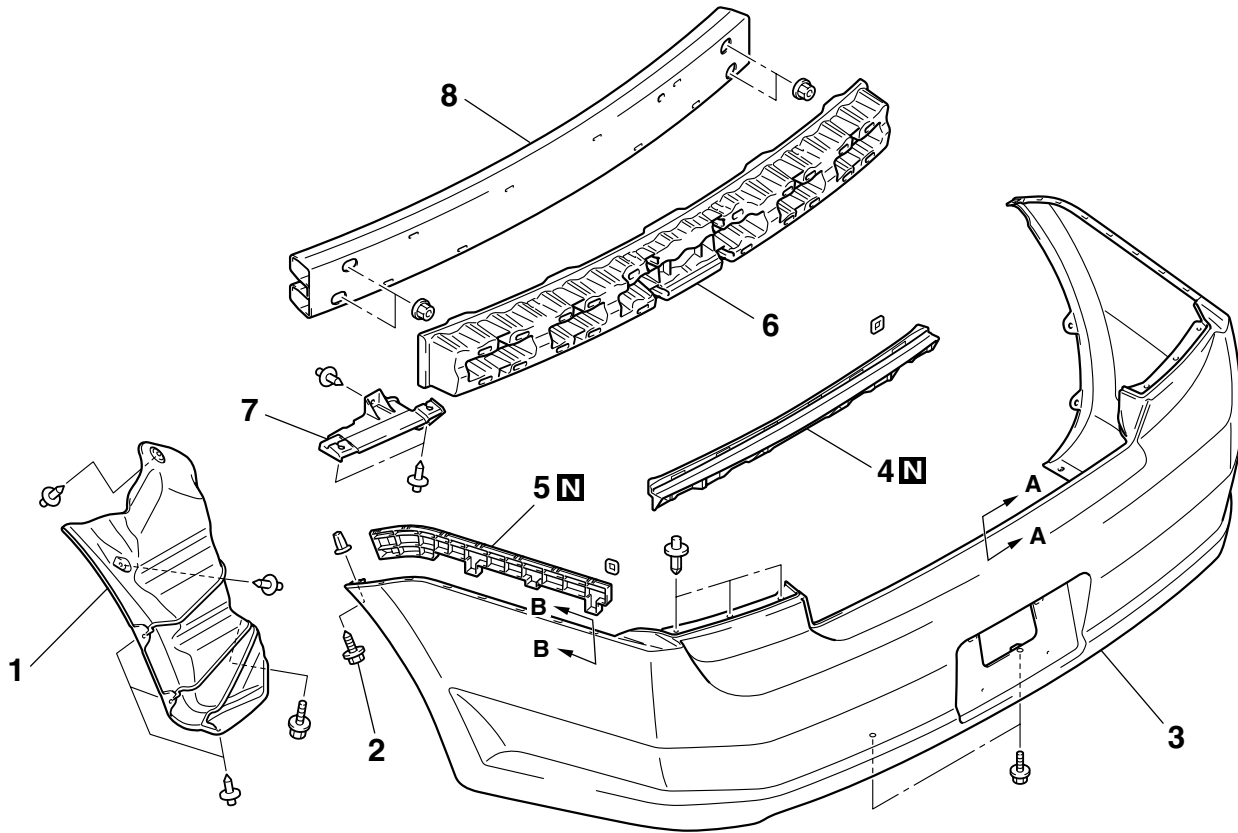
**DISASSEMBLY STEPS (Continued)**

4. FOG LIGHT HOLE COVER  
(VEHICLES WITHOUT FOG  
LIGHTS)
5. FRONT BUMPER FACE

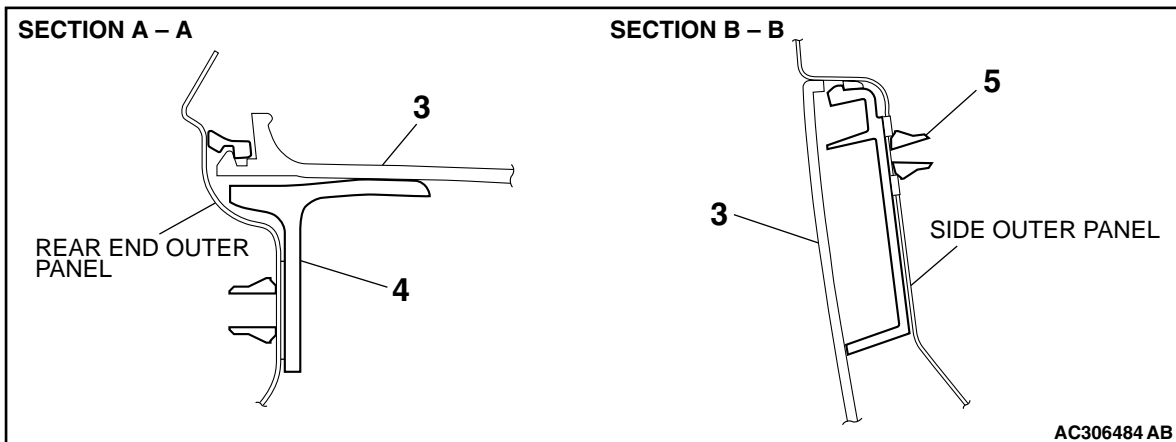
# REAR BUMPER ASSEMBLY

## REMOVAL AND INSTALLATION

M1511001900427



AC306448 AB



AC306484 AB

### REMOVAL STEPS

- REAR COMBINATION LIGHT (REFER TO GROUP 54A, REAR COMBINATION LIGHT P.54A-119).
  - REAR END TRIM REFER TO GROUP 52A, TRIMS P.52A-10).
1. REAR SPLASH SHIELD
  2. TAPPING SCREW

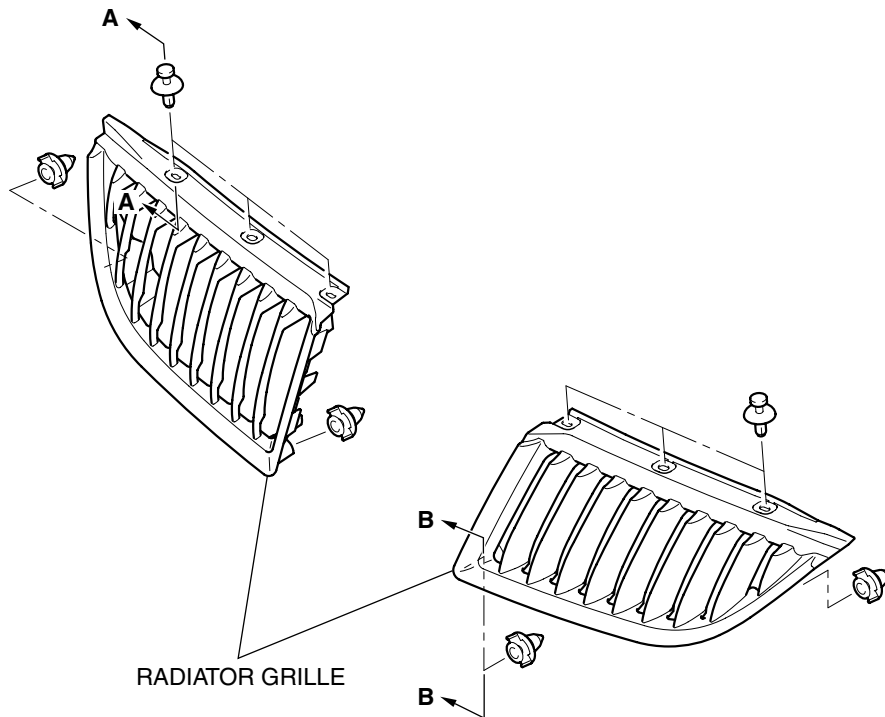
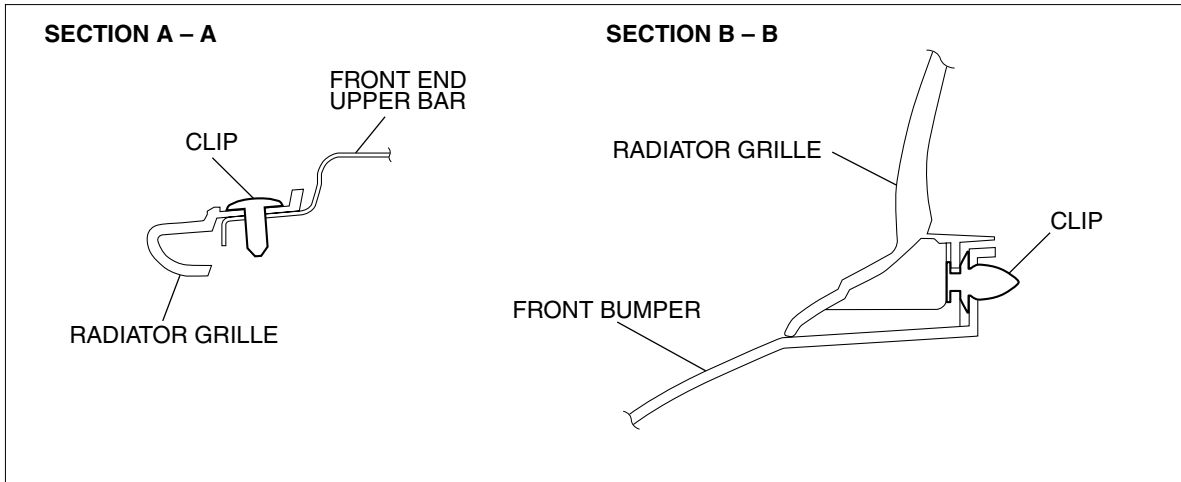
### REMOVAL STEPS (Continued)

3. REAR BUMPER ASSEMBLY
4. REAR BUMPER CENTER BRACKET
5. REAR BUMPER SIDE BRACKET
6. REAR BUMPER CORE
7. REAR END OUTER PLATE
8. REAR BUMPER REINFORCEMENT

# RADIATOR GRILLE

## REMOVAL AND INSTALLATION

M1511002900237

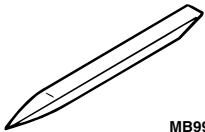


AC306184 AB

**GARNISHES AND MOLDINGS**

**SPECIAL TOOLS**

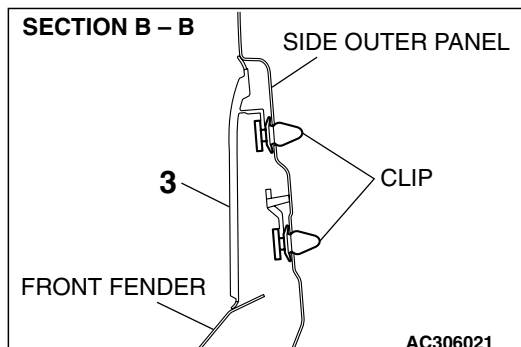
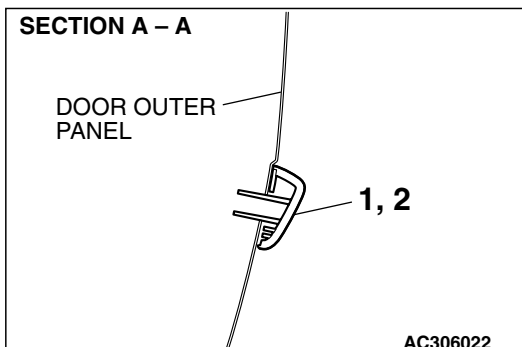
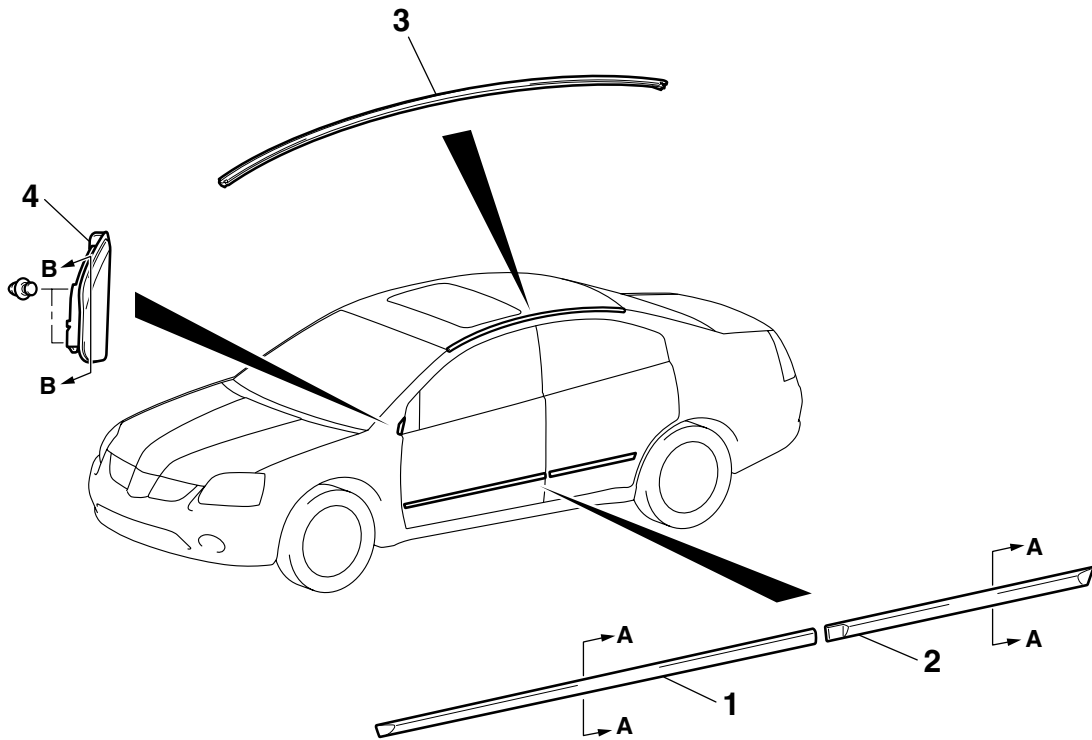
M1511000601158

TOOL	TOOL NUMBER AND NAME	SUPERSESSON	APPLICATION
 MB990784	MB990784 Ornament remover	General service tool	Side protector molding Roof drip molding

**MOLDINGS**

**REMOVAL AND INSTALLATION**

M1511004700165



AC306486 AB

AC307267 AB

**REMOVAL**

- <<A>> >>A<< 1. FRONT DOOR SIDE PROTECTOR MOLDING  
<<A>> >>A<< 2. REAR DOOR SIDE PROTECTOR MOLDING

**ROOF DRIP MOLDING REMOVAL STEPS**

- <<A>> >>A<< 3. ROOF DRIP MOLDING

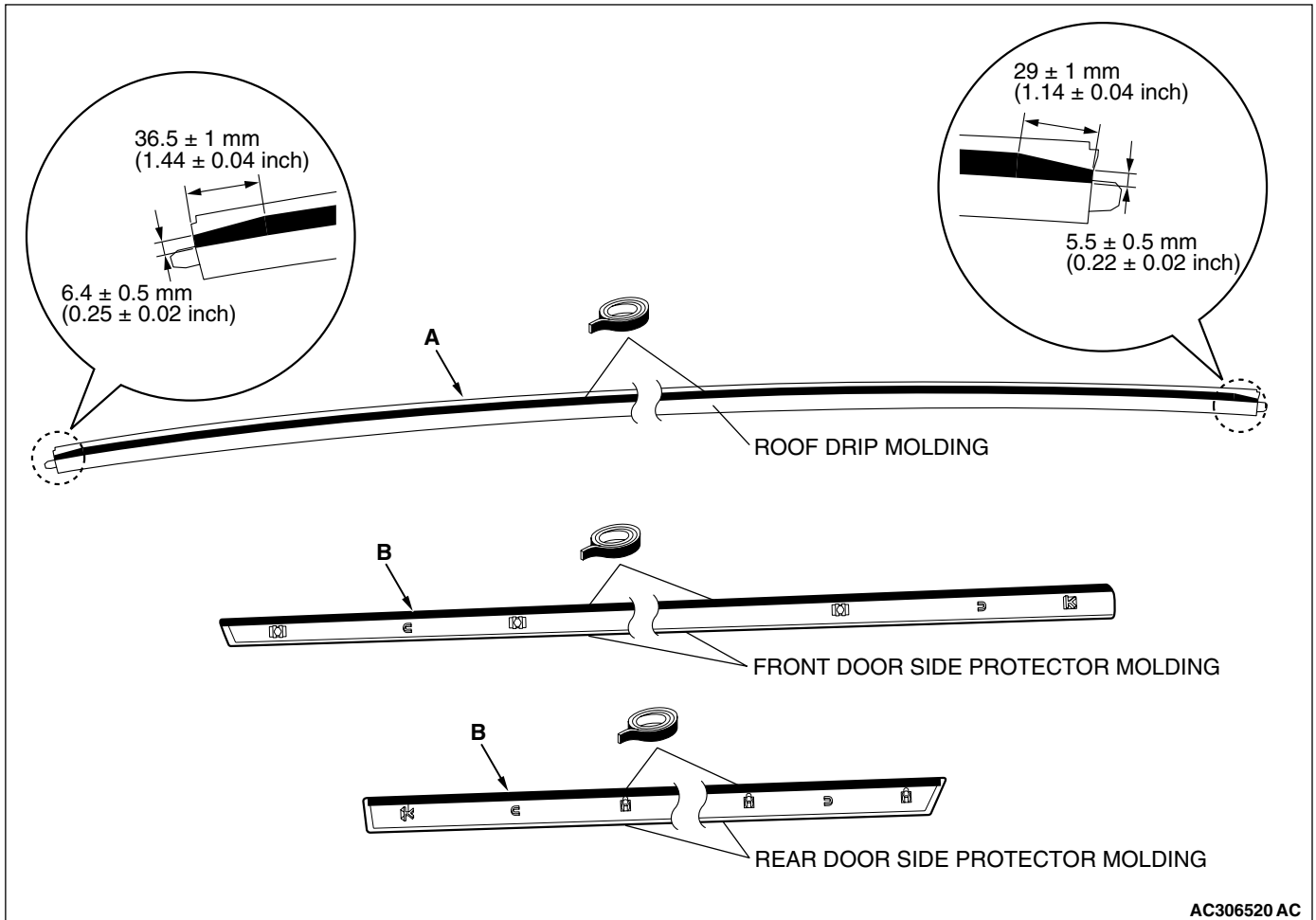
**FRONT DELTA GARNISH REMOVAL STEPS**

4. FRONT DELTA GARNISH

**Required Special Tools:**

- MB990784: Ornamment Remover

**ADHESIVE TAPE POSITION**



AC306520 AC

**ADHESIVE TAPE: DOUBLE-SIDED TAPE**

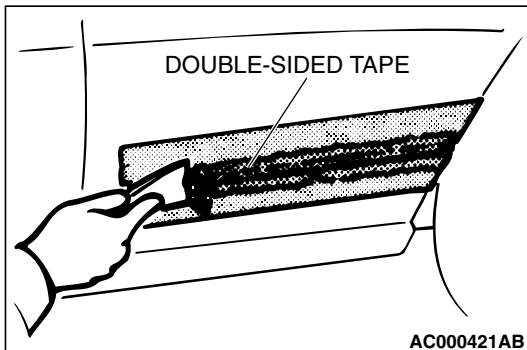
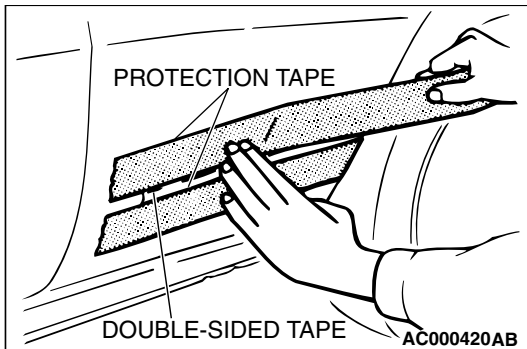
- A: 10.0 mm ( 0.39 in ) WIDTH AND 1.52 mm ( 0.06 in ) THICKNESS,  
B: 8.0 mm ( 0.32 in ) WIDTH AND 1.2 mm ( 0.05 in ) THICKNESS

**REMOVAL SERVICE POINTS**

**<<A>> SIDE PROTECTOR MOLDING/ROOF DRIP MOLDING REMOVAL**

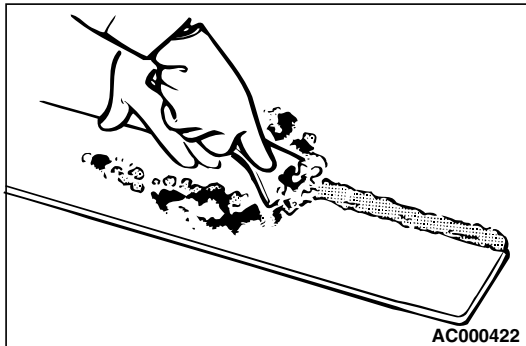
Gently lift and remove the side protector molding/roof drip molding. If there is any double-sided tape remaining on the side protector molding, remove according to the following instructions.

<Remove double-sided tape remaining on the body surface>



1. Attach protection tape all the way along the edges of the double-sided tape which is still adhering to the body.
2. Scrape off the double-sided tape with a resin spatula as much as possible.
3. Peel off the protection tape.
4. Use a shop towel moistened with 3M™ AAD Part number 8906 or equivalent to wipe the body.

<Remove double-sided tape remaining on SIDE PROTECTOR MOLDING/ROOF DRIP MOLDING and adhere double-sided tape (when re-using SIDE PROTECTOR MOLDING/ROOF DRIP MOLDING)>

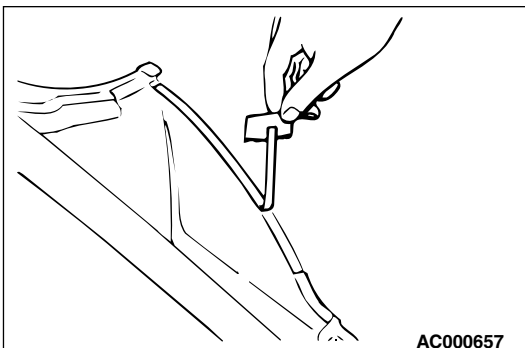


1. Scrape off the double-sided tape on the side protector molding with a resin spatula as much as possible.
2. Use a shop towel moistened with 3M™ AAD Part number 8906 or equivalent to wipe the side protector molding surface.
3. Remove only a small portion of the residual adhesive.
4. Apply primer to adherence area of the side protector molding, then adhere the double-sided tape as specified on the side protector molding (Refer to double-sided tape adherence location ).

## INSTALLATION SERVICE POINT

### >>A<< SIDE PROTECTOR MOLDING/ROOF DRIP MOLDING INSTALLATION.

1. Tear off the double-sided tape backing paper.  
*NOTE: If you attach the adhesive tape to the edge of the backing paper, it will be easy to tear off.*
2. Install the side protector molding/roof drip molding.  
*NOTE: If the double-sided tape is difficult to affix in cold temperature, etc., warm the bonding surfaces of the body and side protector molding to about 40 – 60 °C (104 – 140°F) before affixing the tape.*
3. Firmly press in the side protector molding.

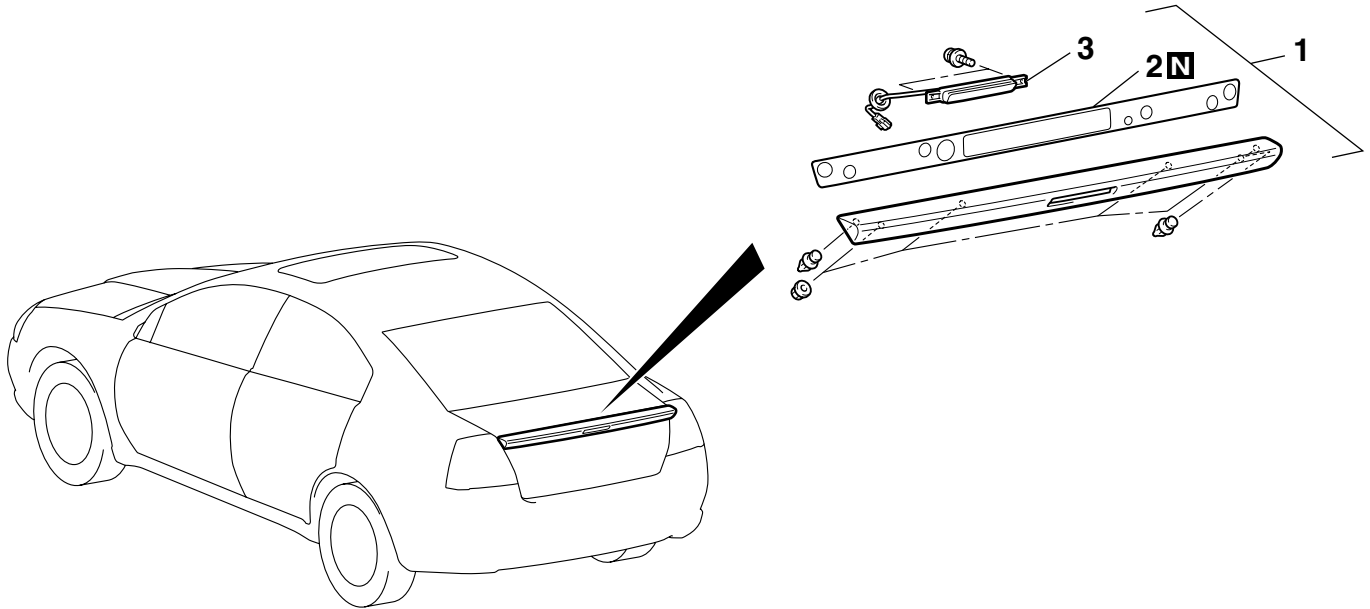




# REAR SPOILER

## REMOVAL AND INSTALLATION

M1511006100147



AC306525 AB

### REMOVAL STEPS

- TRUNK LID BUMPER (REFER TO GROUP 42, TRUNK LID [P.42-62](#)).
1. REAR SPOILER ASSEMBLY

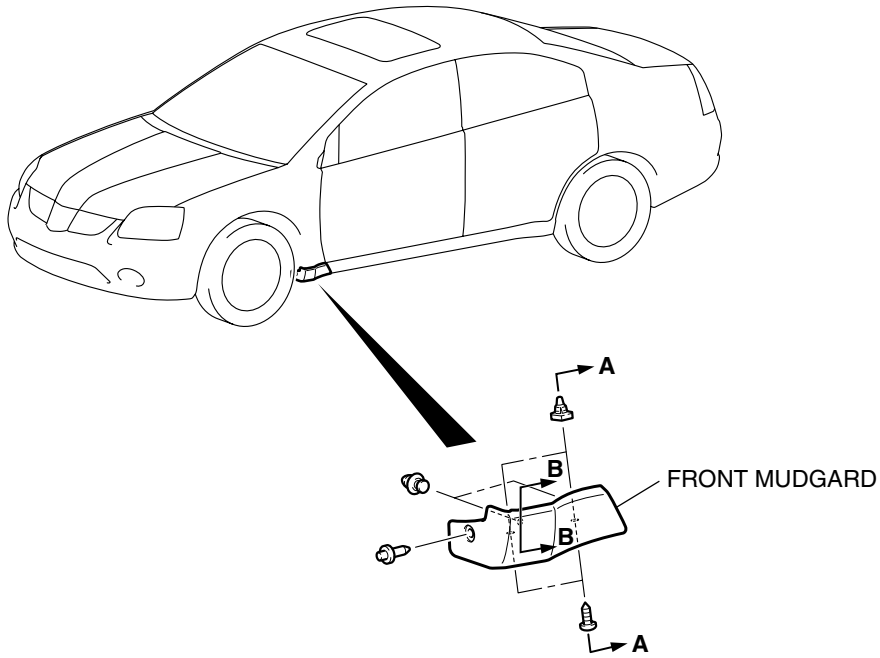
### REMOVAL STEPS (Continued)

- 2 HIGH-MOUNTED STOPLIGHT (REFER TO GROUP 54A, HIGH-MOUNTED STOPLIGHT [P.54A-123](#)).
- 3 PACKING

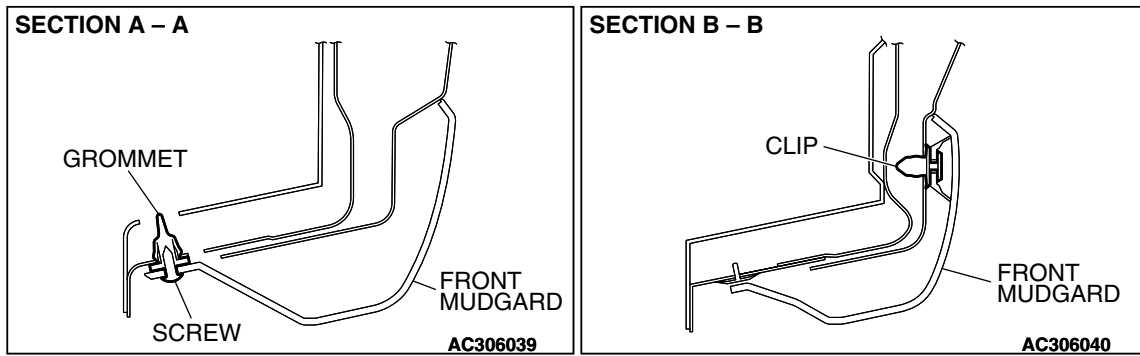
# MUD GUARD

## REMOVAL AND INSTALLATION

M1511011200065



AC306037 AB



AC306470 AB

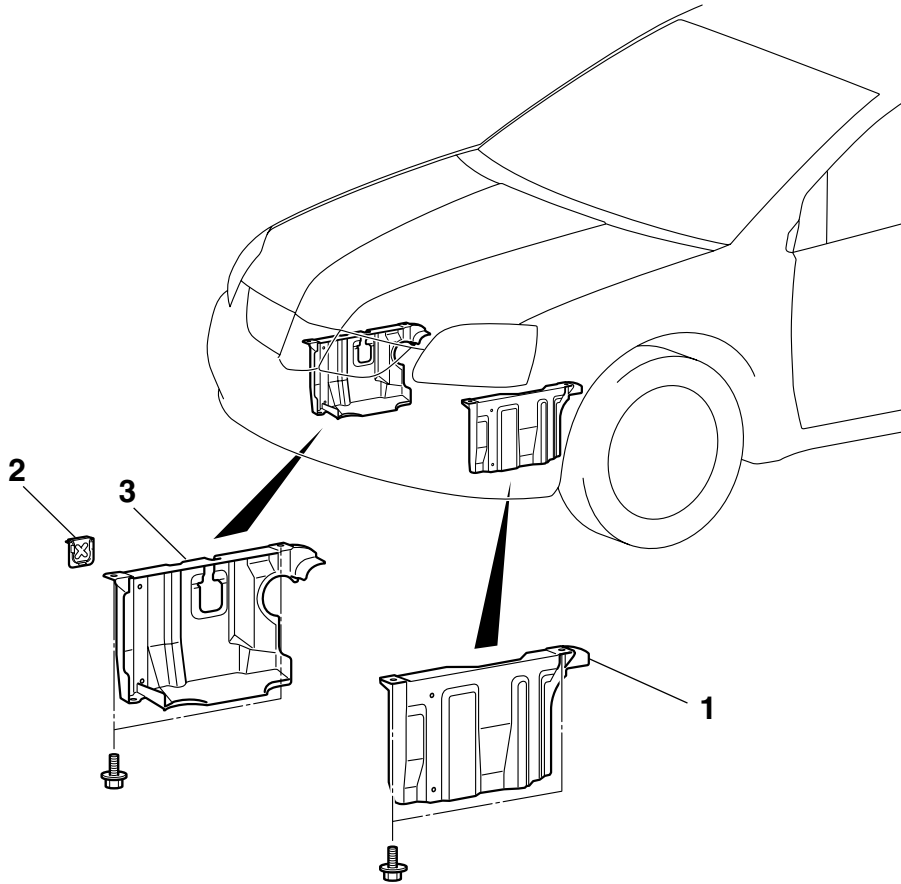
### Required Special Tools:

- MB990784: Ornament Remover

# UNDER COVER

## REMOVAL AND INSTALLATION

M1511019600119



AC306125 AB

### REMOVAL STEPS

- FRONT BUMPER UNDER COVER  
(REFER TO [P.51-2](#)).
1. SIDE UNDER COVER (LH)

### REMOVAL STEPS (Continued)

2. PLUG
3. SIDE UNDER COVER (RH)

# WINDSHIELD WIPER AND WASHER

## GENERAL DESCRIPTION

M1511000100558

## WINDSHIELD WIPER AND WASHER OPERATION

### WINDSHIELD LOW-SPEED (AND HIGH-SPEED) WIPER OPERATION

- If the windshield low-speed wiper switch is turned to the ON position with the ignition switch at the "ACC" or "ON" position, the column switch sends a low-speed wiper ON and high-speed wiper OFF signals to the front-ECU. This turns the wiper signal on and the wiper speed control relay off (low-speed), causing the wipers to operate at low-speed.
- If the windshield high-speed wiper switch is turned to the ON position, the column switch sends a low-speed wiper OFF and high-speed wiper ON signals to the front-ECU. This turns both the wiper signal and the wiper speed control relay on (high-speed), causing the wipers to operate at high-speed.

*NOTE: The windshield wiper speed is adjustable with the built-in wiper speed control relay.*

*High-speed operations take place when the wiper speed control relay is set to "ON" and low-speed operations take place when the wiper speed control relay is set to "OFF".*

### WINDSHIELD INTERMITTENT WIPER OPERATION

The ETACS-ECU calculates the wiper operation interval according to the voltage signal sent from the column switch. Then the ETACS-ECU sends a signal to the front-ECU. The front-ECU determines the wiper operation interval and turns on the wiper relay signal relay. This causes the wiper auto stop relay to turn on. Then the wiper auto stop relay will turn off after the wipers reach the park position. This causes the wiper signal relay and then the wipers to turn off. If the wiper signal relay remains off for the wiper operation interval, the relay turns on again, causing the wipers to operate in intermittent mode.

### WINDSHIELD WIPER AND WASHER DIAGNOSIS

The windshield wiper and washer are controlled by the Simplified Wiring System (SWS). For troubleshooting, refer to GROUP 54B, SWS Diagnosis [P.54B-10](#).

### WINDSHIELD MIST WIPER OPERATION

- If the windshield mist wiper switch is turned to the ON position with the ignition switch at the "ACC" or "ON" position, the mist wiper high-speed operation signal is sent to the front-ECU. This signal turns on the wiper speed control relay, causing the wipers to work at high-speed while the mist switch is on.
- While the windshield mist wiper switch remains turned on when the intermittent mode is still working, the wipers work as the mist wiper. However, the wipers return to the intermittent mode again when the switch is changed back to "INT" position.
- To prevent the windshield mist wiper from operating when the windshield wiper switch is turned OFF, the windshield mist wiper does not work for 0.5 second after the windshield intermittent wiper switch, the windshield low-speed wiper switch and the windshield high-speed wiper switch are turned OFF.

### WINDSHIELD WASHER OPERATION

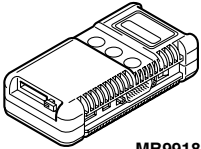
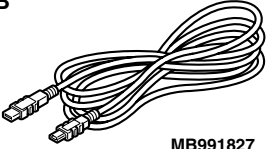
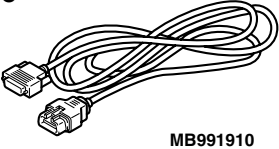
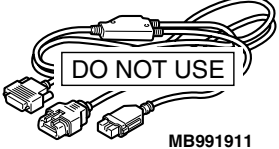
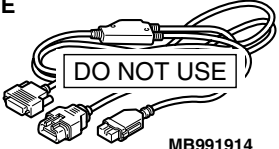
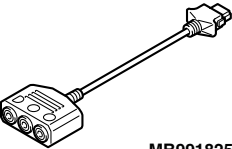
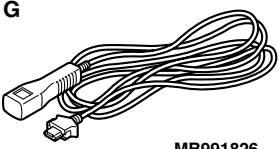
- If the windshield washer switch is turned to the ON position with the ignition switch at "ACC" or "ON" position, the windshield washer ON signal is sent to the front-ECU. After 0.3 second, the windshield wiper signal turns on. After the windshield washer switch signal turns off, the windshield wiper signal turns off in three seconds.
- If the windshield washer switch is turned on while the windshield wiper is at intermittent mode, and the windshield washer switch is turned OFF within 0.2 second, the wiper works only once to perform mist operation. When the windshield washer switch is turned on for more than 0.2 second, the wiper performs the same movement as normal condition from the time when 0.2 second has elapsed, and then returns to intermittent operation.

M1511000700389

*NOTE: Even when the ETACS-ECU has failed, the windshield wiper can work at low speed as fail-safe mode. (Normally, the windshield wiper operates when the ignition switch is at the "ACC" position. But, if it enters the fail-safe mode, the wiper can operate only when the ignition switch is at the "ON" position.)*

SPECIAL TOOLS

M1511000601170

TOOL	TOOL NUMBER AND NAME	SUPERSESSION	APPLICATION
<p>A</p>  <p>MB991824</p> <p>B</p>  <p>MB991827</p> <p>C</p>  <p>MB991910</p> <p>D</p>  <p>MB991911</p> <p>E</p>  <p>MB991914</p> <p>F</p>  <p>MB991825</p> <p>G</p>  <p>MB991826 MB991958</p>	<p>MB991958</p> <p>A: MB991824 B: MB991827 C: MB991910 D: MB991911 E: MB991914 F: MB991825 G: MB991826</p> <p>MUT-III sub assembly</p> <p>A: Vehicle Communication Interface (V.C.I.)</p> <p>B: MUT-III USB Cable</p> <p>C: MUT-III Main Harness A (Vehicles with CAN communication system)</p> <p>D: MUT-III Main Harness B (Vehicles without CAN communication system)</p> <p>E: MUT-III Main Harness C (for Chrysler models only)</p> <p>F: MUT-III Adapter Harness</p> <p>G: MUT-III Trigger Harness</p>		<p>Windshield intermittent wiper check</p> <p><b>CAUTION</b></p> <p>For vehicles with CAN communication, use MUT-III main harness A to send simulated vehicle speed. If you connect MUT-III main harness B instead, the CAN communication does not function correctly.</p>

ON-VEHICLE SERVICE

WINDSHIELD INTERMITTENT WIPER VOLUME CHECK

M1511018900043

Required Special Tools:

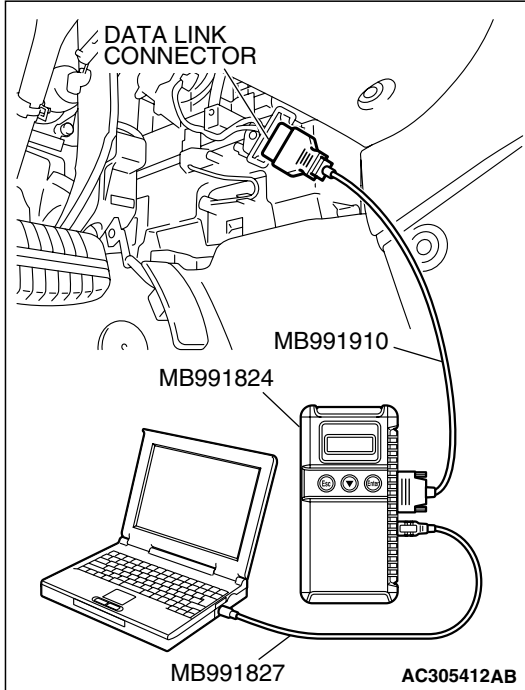
- MB991958: Scan Tool (MUT-III Sub Assembly)
  - MB991824: Vehicle Communication Interface (V.C.I.)
  - MB991827: MUT-III USB Cable
  - MB991910: MUT-III Main Harness A

If the windshield intermittent wiper interval control is operated, the wiper interval should change.

**⚠ CAUTION**

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

1. Connect scan tool MB991958 to the data link connector.
2. Turn the ignition switch to the "ON" position.
3. Operate scan tool MB991958 according to the procedure below to display "Simulated Vehicle Speed Output."
  - (1) Select "SYSTEM SELECT."
  - (2) Select "SWS."
  - (3) Select "Simulated Vehicle Speed Output."
4. Holding the windshield intermittent wiper interval control, input the simulated vehicle speed with scan tool MB991958 and check that the wiper interval changes as the vehicle speed changes.
5. If not, carry out the troubleshooting (Refer to GROUP 54B, SWS Diagnosis [P.54B-59](#)).

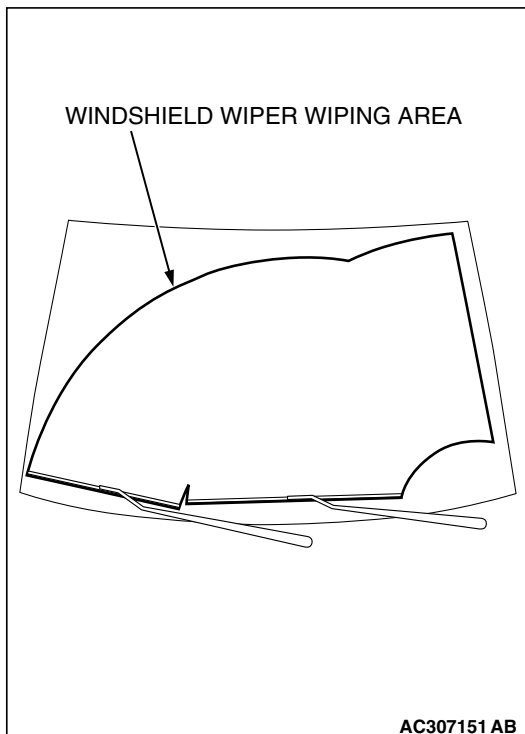


### WINDSHIELD WASHER FLUID EJECTION CHECK

M1511018400060

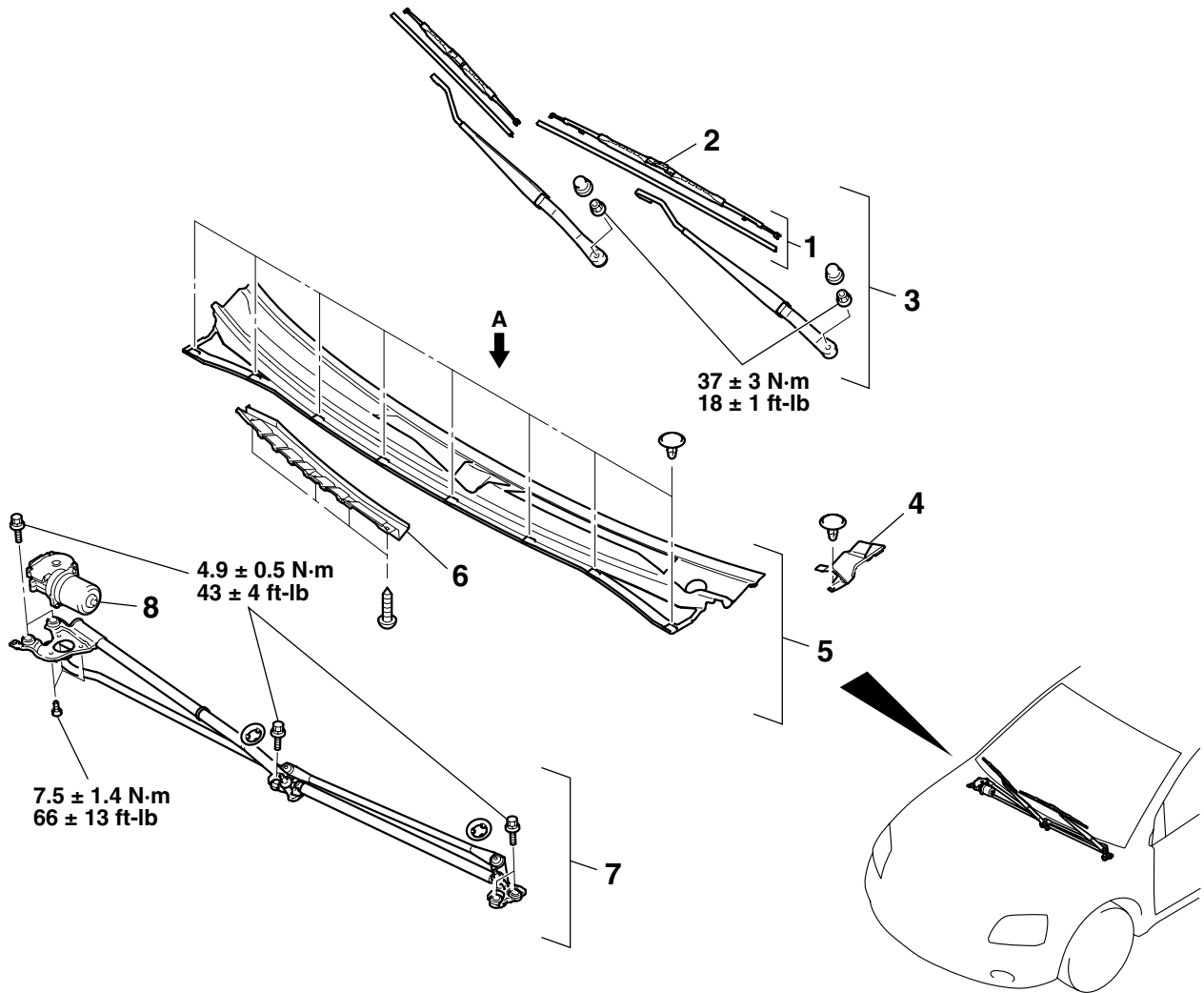
The windshield washer nozzle aiming cannot be adjusted. If the washer nozzles do not spray washer fluid within the windshield wiper wiping area, check the nozzles as follows:

1. Check that the windshield washer nozzles are fitted on the hood correctly, and reinstall them if necessary.
2. If the windshield washer nozzles are damaged, replace them (Refer to [P.51-21](#)).



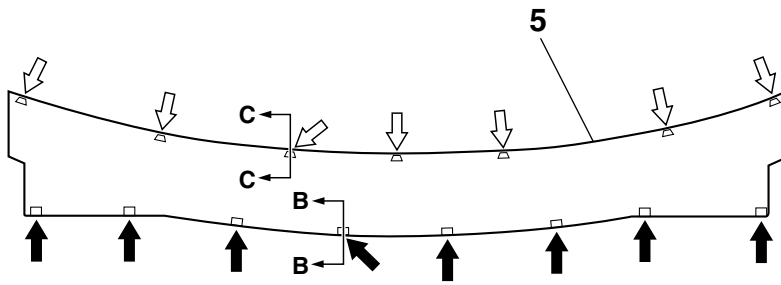
WINDSHIELD WIPER  
REMOVAL AND INSTALLATION

M1511007900168



AC306698 AB

VIEW A



**NOTE**

▲ : CLIP POSITION    ◀ : CLAW POSITION

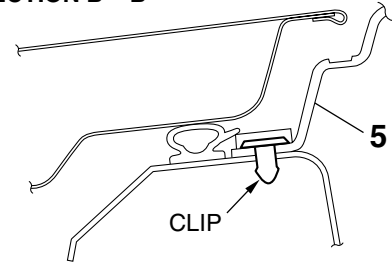
**WIPER BLADE REMOVAL STEPS**

- >>B<< 1. WIPER BLADE ASSEMBLY
- >>B<< 2. WIPER BLADE RUBBER
- >>A<< 3. WIPER ARM AND BLADE ASSEMBLY

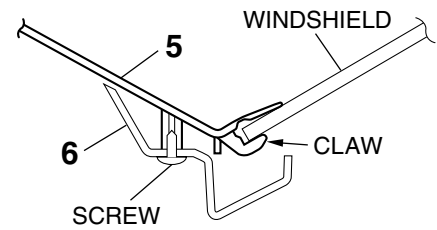
**WINDSHIELD WIPER MOTOR AND LINK ASSEMBLY REMOVAL STEPS**

- 4. FENDER HOLE COVER
- 5. FRONT DECK GARNISH ASSEMBLY

SECTION B - B



SECTION C - C



AC306703 AB

**WINDSHIELD WIPER MOTOR AND LINK ASSEMBLY REMOVAL STEPS**

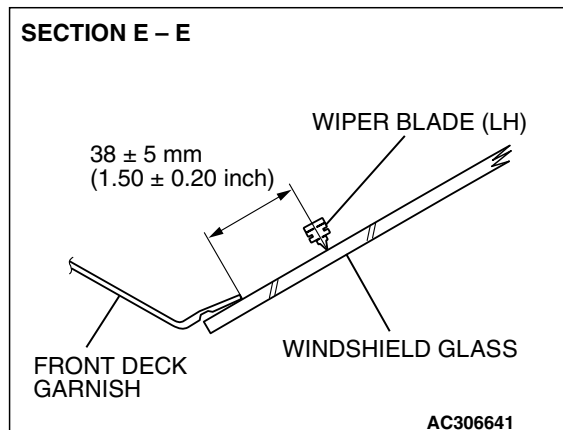
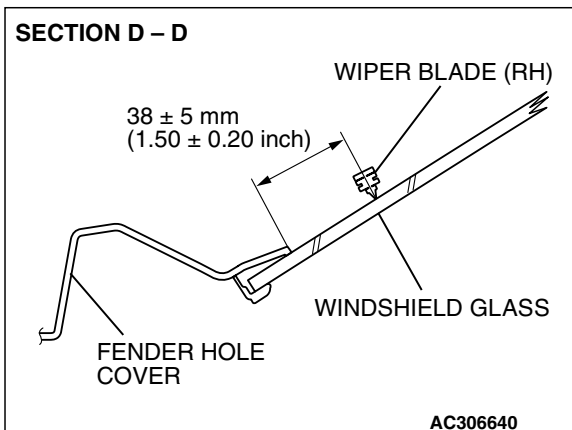
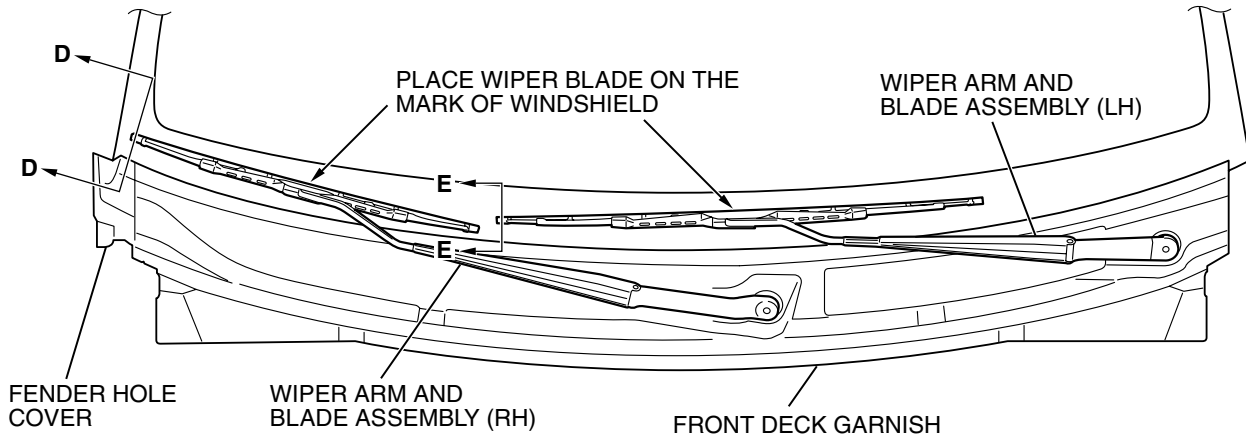
- 6. GUTTER
- 7. WINDSHIELD WIPER MOTOR AND LINK ASSEMBLY
- 8. FENDER COVER

*NOTE: For removal and installation of the wiper and washer switch, refer to GROUP 54A, Column switch P. 54A-128.*



INSTALLATION SERVICE POINTS

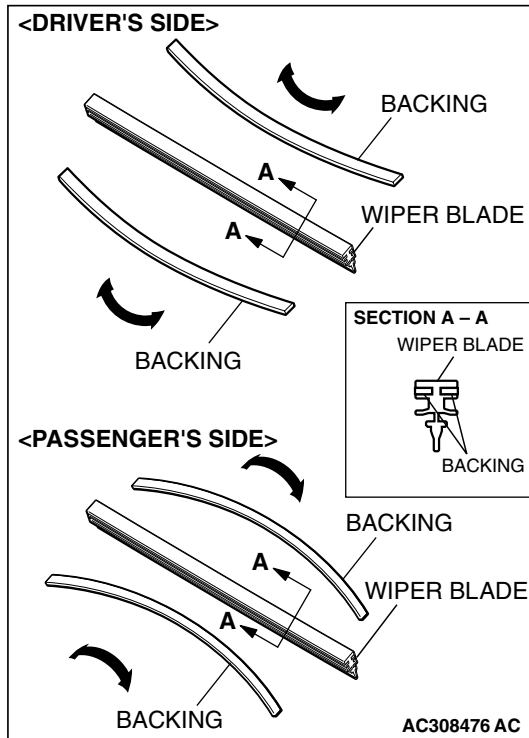
>>A<< WIPER ARM AND BLADE ASSEMBLY  
INSTALLATION



AC307178AC  
Install the wiper blade at the position specified above.

>>B<< WIPER BLADE RUBBER/ WIPER BLADE  
ASSEMBLY INSTALLATION**⚠ CAUTION**

Ensure that the backings are bent in the direction indicated, and then install the backings to the wiper blade rubber.

**INSPECTION**

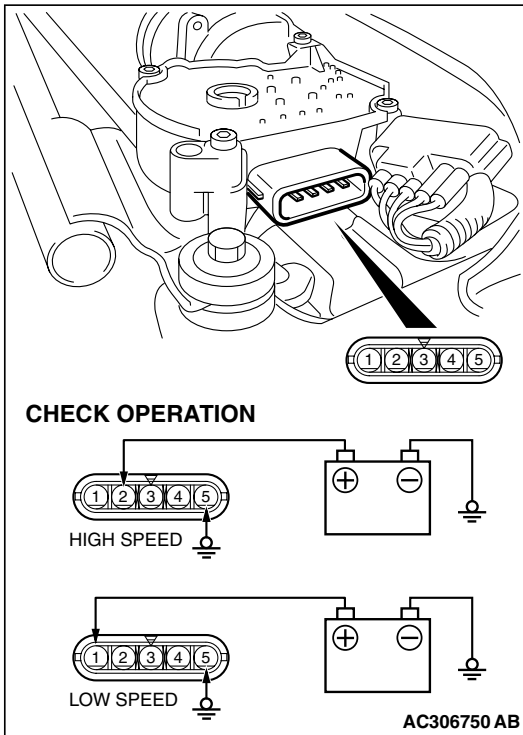
M1511008000146

**WINDSHIELD WIPER MOTOR CHECK**

Inspect the windshield wiper motor by removing the harness connector with the motor attached to the vehicle.

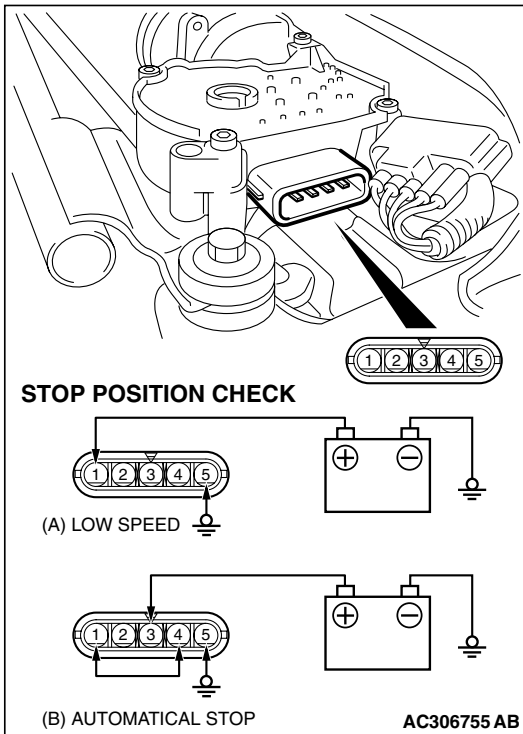
### Wiper Motor at Low-Speed and High-Speed Operation

Connect the battery to the windshield wiper motor to inspect the operation of motor rotation in low or high speed.



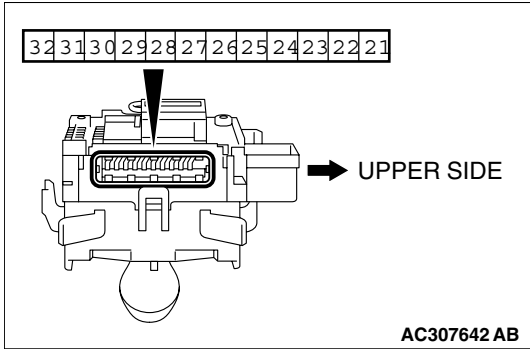
### Wiper Motor at Stop Position Operation

1. Connect the battery to the windshield wiper motor as shown in the illustration (A).
2. Run the windshield wiper motor at low speed, then disconnect the battery in the middle of the motor turning and check to see that the motor stops.
3. As shown in the illustration (B), connect the terminals of the windshield wiper motor connectors.
4. Check to see that the windshield wiper motor runs at low speed and then stops at the automatic stop position.



**WINDSHIELD WIPER SWITCH CHECK**

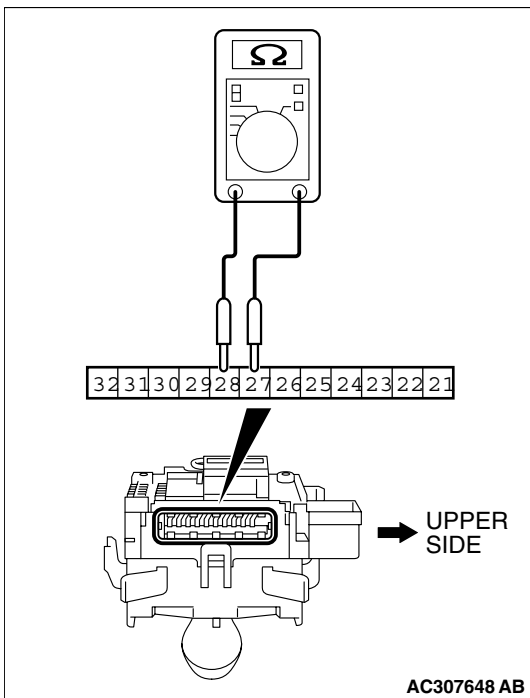
Check continuity between the switch terminals.



SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
OFF	23 – 32, 23 – 31, 23 – 30, 23 – 21	Open circuit
Windshield mist wiper switch	23 – 32	Less than 2 ohms
Windshield intermittent wiper switch	23 – 31	
Windshield low-speed wiper switch	23 – 30	
Windshield high-speed wiper switch	21 – 23	

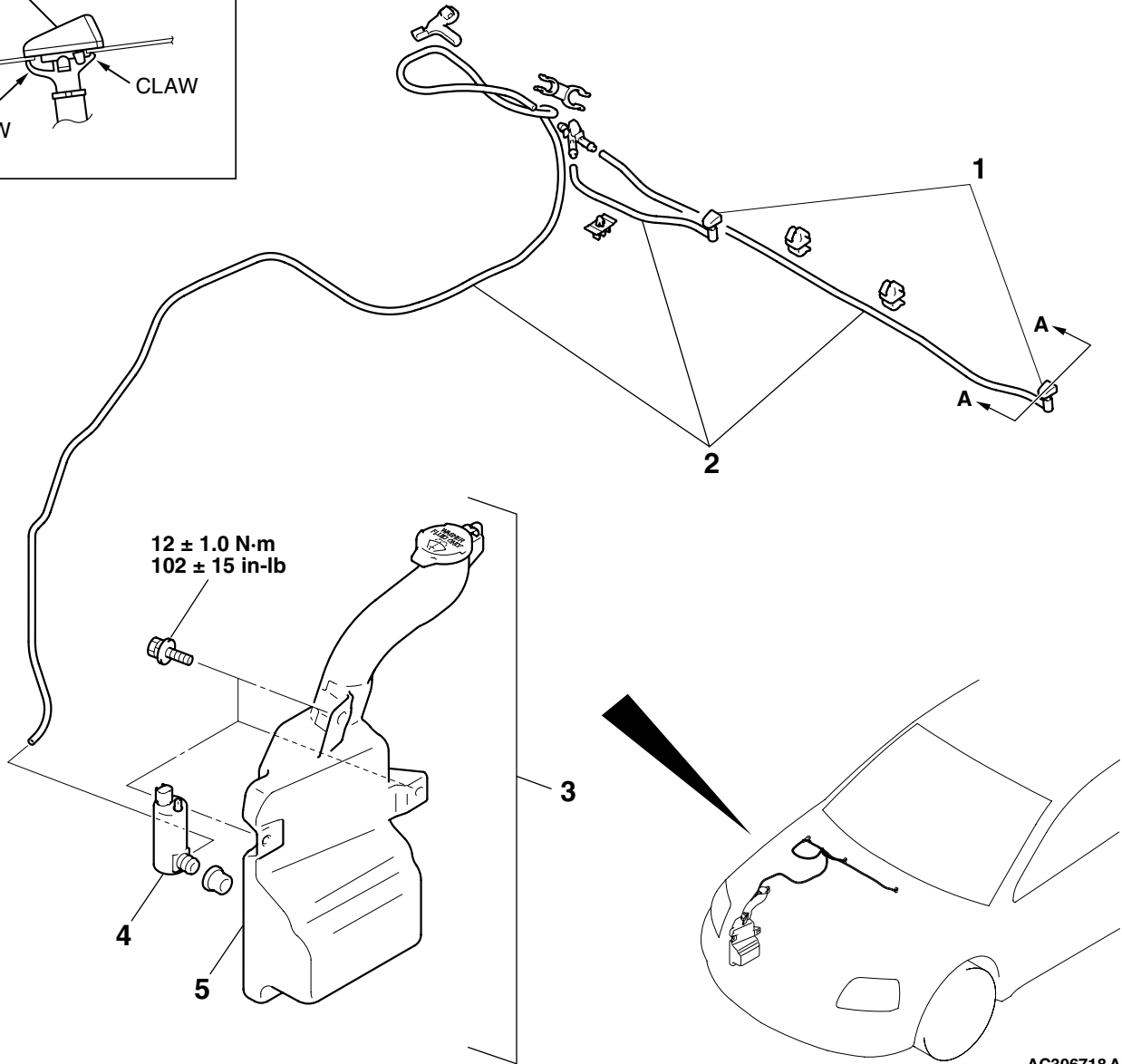
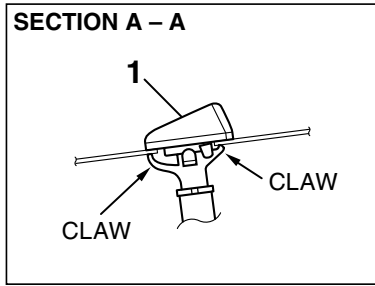
**WINDSHIELD INTERMITTENT WIPER INTERVAL CHECK**

Check that the resistance varies between 0 and 1 kilohm when the windshield intermittent interval is turned from FAST to SLOW by after measuring resistance between connector terminals 27 and 28 at the column switch.



**WINDSHIELD WASHER  
REMOVAL AND INSTALLATION**

M1511008200270



AC306718 AB

**WINDSHIELD WASHER NOZZLE  
REMOVAL STEPS**

- WINDSHIELD WASHER HOSE CONNECTION
- 1. WINDSHIELD WASHER NOZZLE

**WASHER HOSE REMOVAL STEPS**

- WINDSHIELD WASHER NOZZLE CONNECTION
- 2. WINDSHIELD WASHER HOSE

**WASHER TANK REMOVAL STEPS**

- FRONT UNDER COVER RH (REFER TO P.51-2).
- FRONT SPLASH SHIELD RH MOUNTING CLIPS (REFER TO GROUP 42, FENDER P.42-10).
- FRONT BUMPER (REFER TO P.51-2).
- HEAD LIGHT (REFER TO GROUP 54A, HEADLIGHT P.54A-113).
- FRONT WASHER HOSE CONNECTIONS
- 3. WASHER TANK ASSEMBLY

**WASHER TANK REMOVAL STEPS**

- 4. WINDSHIELD WASHER MOTOR
- 5. WASHER TANK

**WASHER MOTOR REMOVAL STEPS**

- FRONT UNDER COVER RH (REFER TO P.51-2).
- FRONT WASHER HOSE CONNECTIONS
- 4. WINDSHIELD WASHER MOTOR

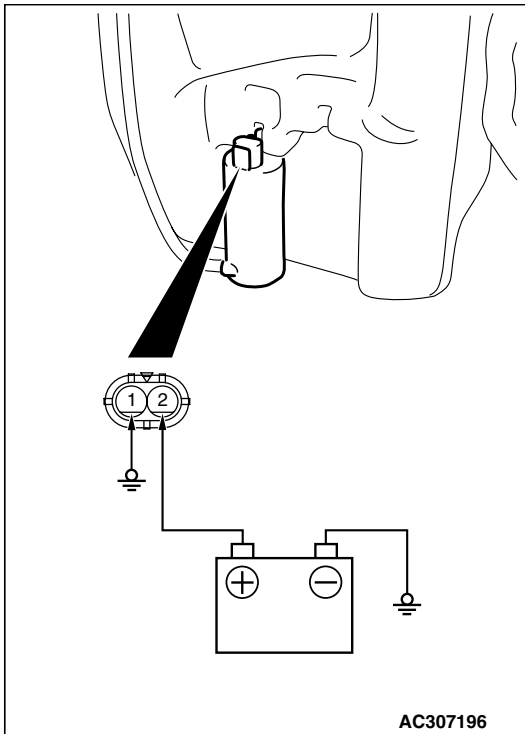
*NOTE: For removal and installation of the wiper and washer switch, refer to GROUP 54A, Column switch P.54A-128.*

**INSPECTION**

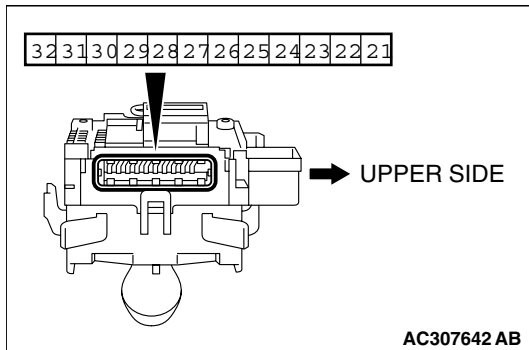
M1511008300147

**WINDSHIELD WASHER MOTOR CHECK**

1. Remove the washer tank assembly with the washer hose attached. Then fill the washer tank with water.
2. Check to see that the water is vigorously sprayed when connecting the positive battery terminal to terminal number 2 and terminal number 1 to ground.



**WINDSHIELD WASHER SWITCH CHECK**

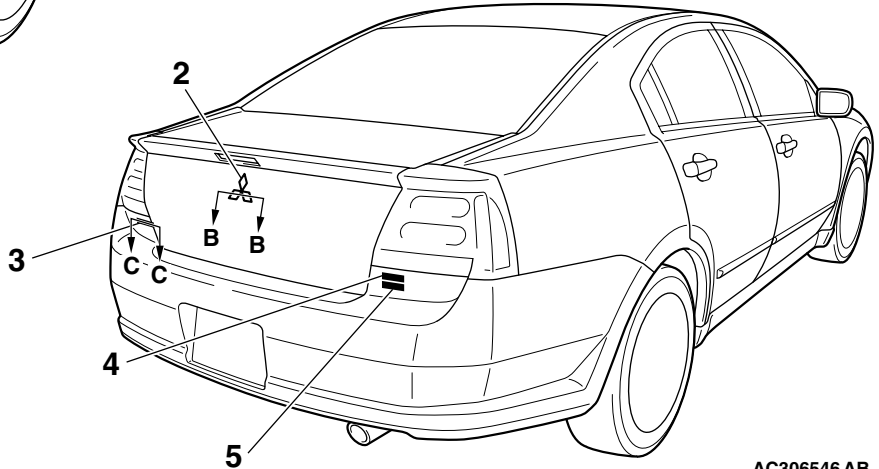
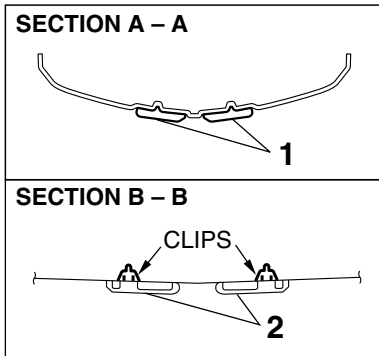
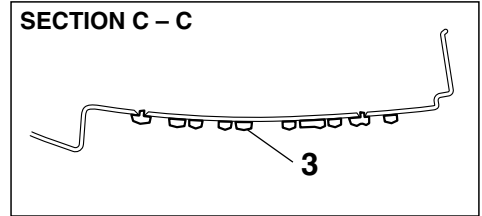
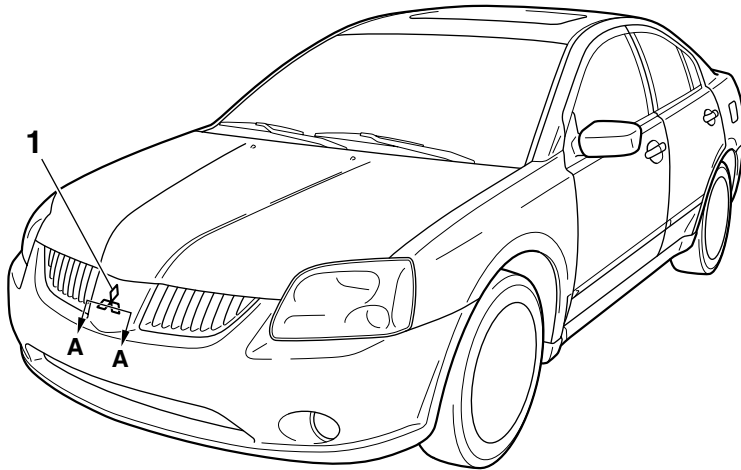


SWITCH POSITION	TESTER CONNECTION	SPECIFIED CONDITION
OFF	22 – 23	Open circuit
Windshield washer switch ON	22 – 23	Less than 2 ohms

MARK

REMOVAL AND INSTALLATION

M1511011800454



AC306546 AB

- 1. FRONT THREE-DIAMOND MARK
- 2. REAR THREE-DIAMOND MARK
- >>A<< 3. GALANT MARK

- >>A<< 4. GRADE MARK
- >>A<< 5. 3.8 V6 MARK

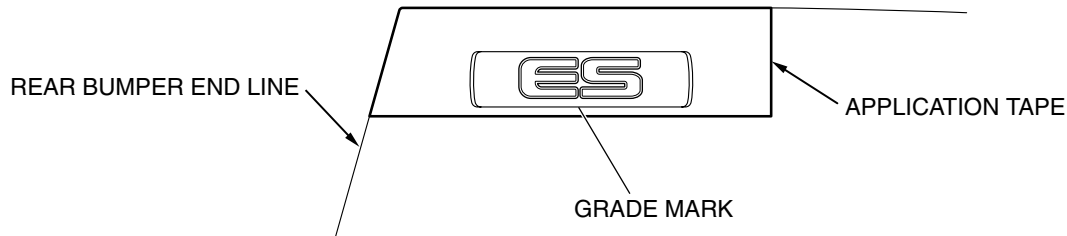
## INSTALLATION SERVICE POINT

## &gt;&gt;A&lt;&lt; MARK INSTALLATION

## 1. Installation position

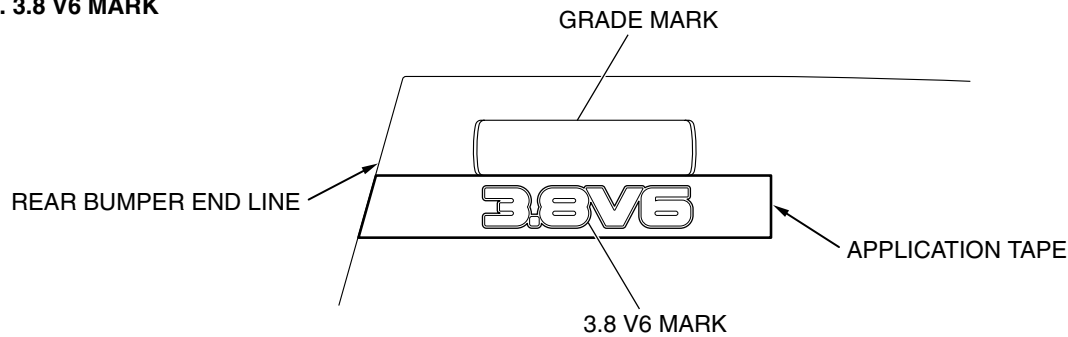
Attach each mark to the position shown in the illustration.

## 4. GRADE MARK



AC305982 AB

## 5. 3.8 V6 MARK



AC306556 AB

## 2. Installation procedure

- (1) Use 3M™ AAD Part number 8906 or equivalent to clean the mark installation surfaces on the body.

**⚠ CAUTION**

**When attaching the marks, the ambient temperature should be 20 – 38°C (60 – 100°F) and the air should be completely free of dust. If the ambient temperature is lower than 20°C (60°F), the marks and the places on the vehicle body where the marks are to be attached should be heated to 20 – 38°C (60 – 100°F).**

- (2) Peel off the protection sheet on the back of the marks to affix it in position.



## DOOR MIRROR

### GENERAL DESCRIPTION

### OPERATION DOOR MIRROR

#### Remote Controlled Mirror Operation

- The mirror on the door mirror moves up/down and left/right by operating the remote controlled door mirror switch when the ignition switch is in the "ON" or "ACC" position.

#### Heated Door Mirror operation

- The rear window defogger relay switch is activated (ON) by turning on the A/C-ECU built-in rear window defogger switch when the ignition switch is in the "ON" position. When the rear window defogger relay is turned ON, power is sup-

plied to the rear window defogger and door mirror, and the heater of the door mirror (heated door mirror) starts operations. The rear window defogger comes with a timer function and will automatically turn OFF the switch approximately 16 minutes after the rear window defogger switch is turned ON. The heated door mirror operations are also terminated along with the rear window defogger, at this time.

M1511000100570

### HEATED DOOR MIRROR DIAGNOSIS

#### TROUBLESHOOTING STRATEGY

Diagnosis should be carried out by the following procedures.

1. Gather the information from the customer.
2. Verify that the condition described by the customer exists.

3. Find the malfunction by the following Symptom Chart.
4. Verify the malfunction is eliminated.

M1511014600170

#### TROUBLE SYMPTOM CHART

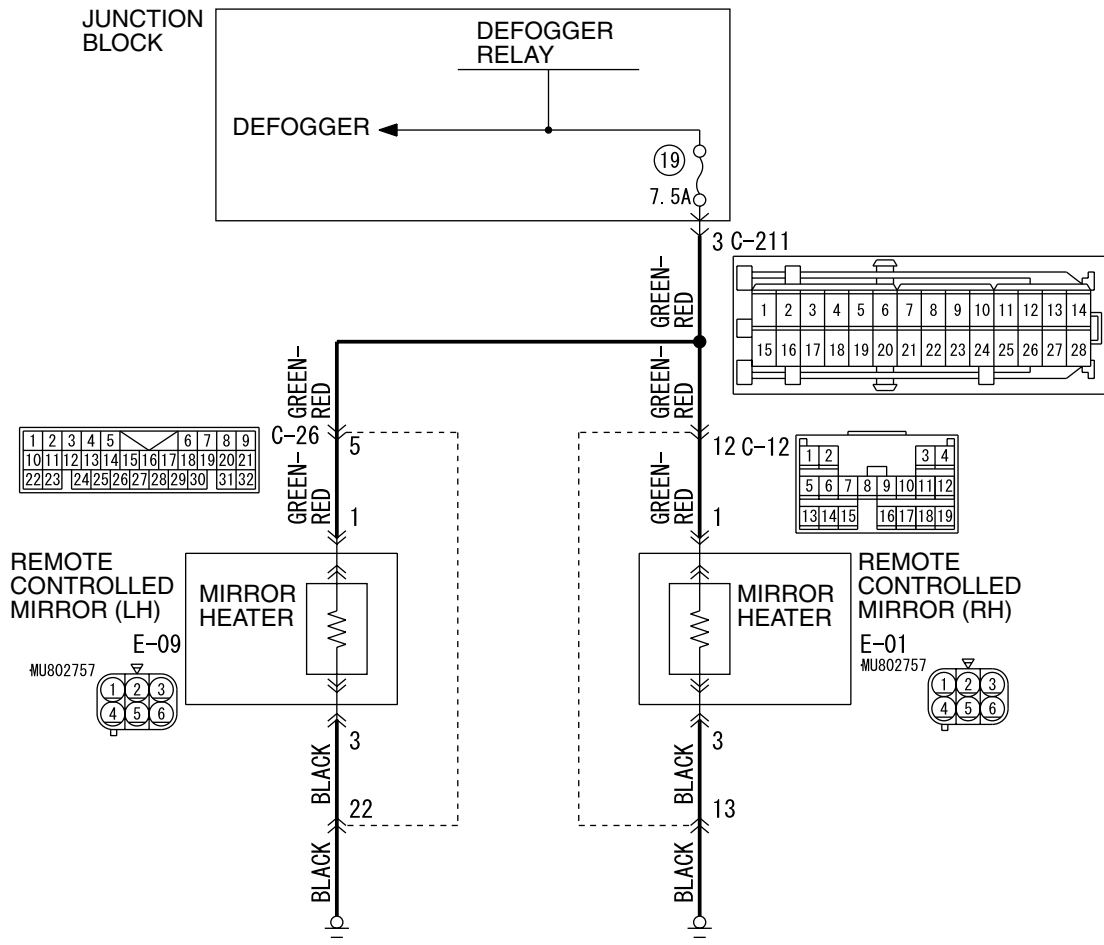
M1511015000171

SYMPTOMS	INSPECTION PROCEDURE	REFERENCE PAGE
All heated door mirrors do not operate	1	P.51-26
The right or left heated door mirror does not operate	2	P.51-31

SYMPTOM PROCEDURES

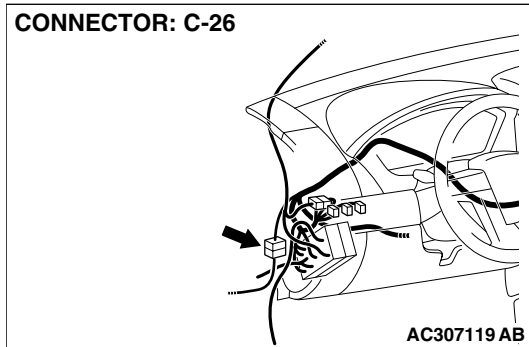
INSPECTION PROCEDURE 1: All Heated Door Mirrors do not Operate

Heated door mirror Circuit

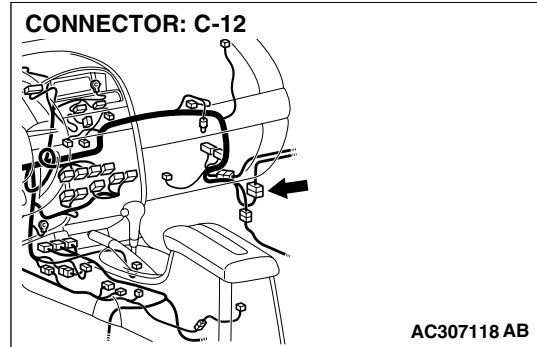


W4P51M00AA

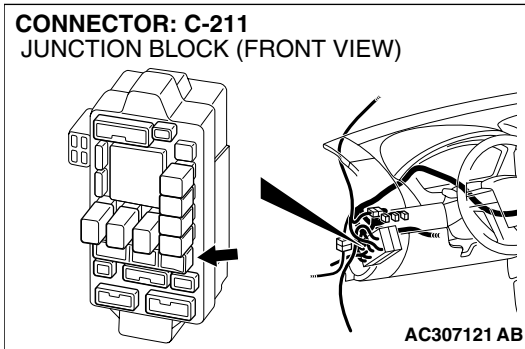
CONNECTOR: C-26



CONNECTOR: C-12

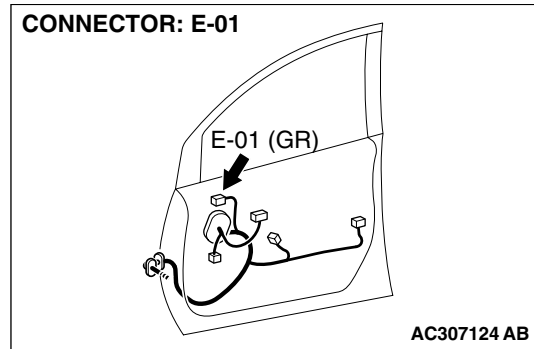


**CONNECTOR: C-211**  
JUNCTION BLOCK (FRONT VIEW)



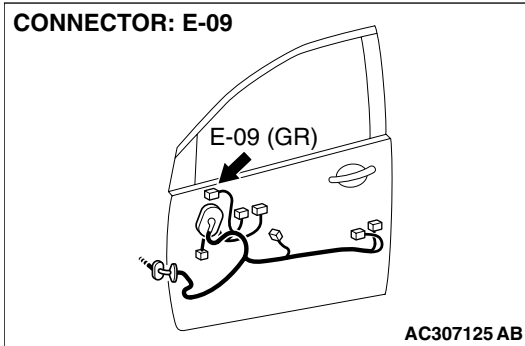
AC307121 AB

**CONNECTOR: E-01**



AC307124 AB

**CONNECTOR: E-09**



AC307125 AB

## CIRCUIT OPERATION

If both of the door mirror heaters do not operate normally it may be due to a malfunction in the rear window defogger system.

## TROUBLESHOOTING HINTS

- Malfunction of the rear window defogger system
- The wiring harness or connectors may have loose, corroded or damaged terminals, or terminals pushed back in the connector.

## DIAGNOSIS

### Required Special Tools:

- MB991223: Test Harness Set

### STEP 1. Check the rear window defogger.

Check that the rear window defogger works normally as follows.

- (1) Turn the ignition switch to the "ON" position.
- (2) Push the rear window defogger switch to operate the defogger.

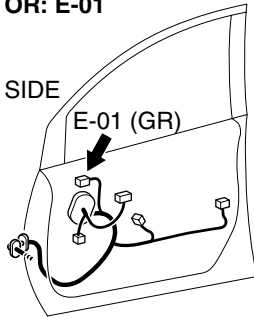
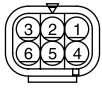
### Q: Does the defogger work normally?

**YES** : Go to Step 2.

**NO** : Because of malfunction of the rear window defogger, carry out the troubleshooting (Refer to GROUP 55A, Manual A/C Diagnosis [P.55A-110](#)).

**CONNECTOR: E-01**

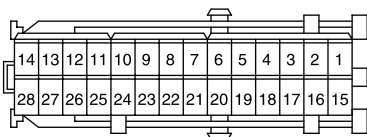
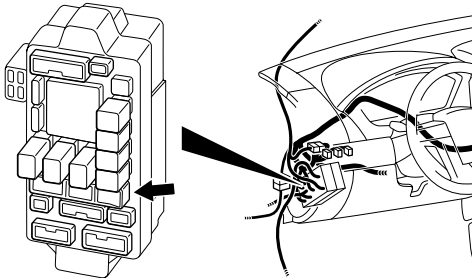
HARNES SIDE



AC307124 AC

**CONNECTOR: C-211**

JUNCTION BLOCK (FRONT VIEW)



AC307123 AB

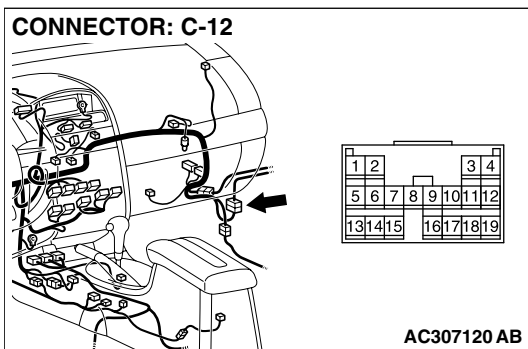
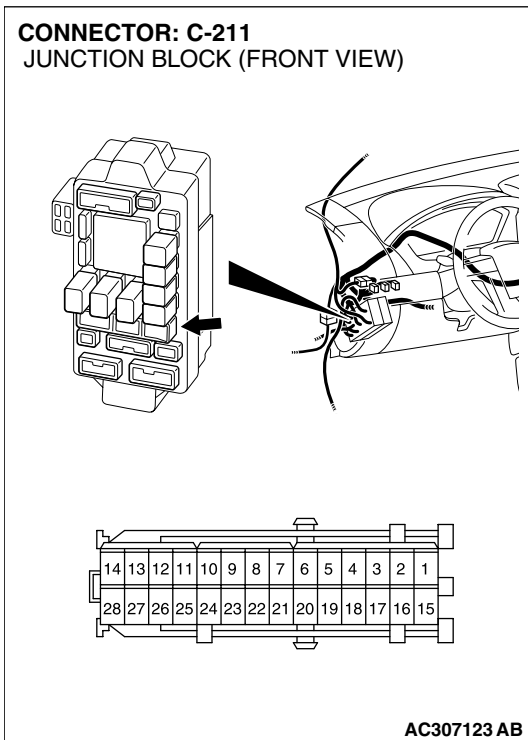
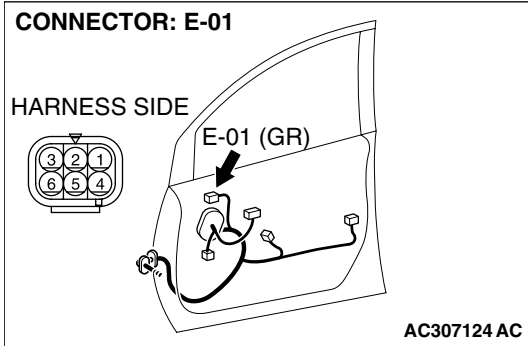
**STEP 2.** Check the remote controlled mirror (RH) connector E-01 and junction block connector C-211 for loose, corroded or damaged terminals, or terminals pushed back in the connector.

**Q:** Are the remote controlled mirror (RH) connector E-01 and junction block connector C-211 in good condition?

**YES :** Go to Step 3.

**NO :** Repair or replace the damaged component(s). Refer to GROUP 00E, Harness Connector Inspection [P.00E-2](#). Check if the door mirrors works normally.

**STEP 3.** Check the wiring harness between the remote controlled mirror (RH) connector E-01 (terminal 1) and junction block connector C-211 (terminal 3).

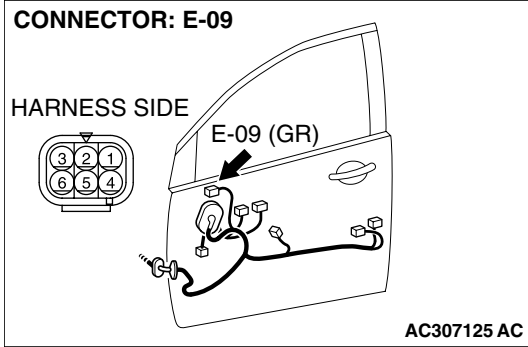


*NOTE: Also check intermediate connector C-12 for loose, corroded or damaged terminals, or terminals pushed back in the connector. If intermediate connector C-12 is damaged, repair or replace the damaged component(s) as described in GROUP 00E, Harness Connector Inspection P.00E-2.*

**Q:** Is the wiring harness between remote controlled mirror (RH) connector E-01 (terminal 1) and junction block connector C-211 (terminal 3) in good condition?

**YES :** Go to step 4.

**NO :** Repair the wiring harness as necessary. Check if the all heated door mirrors work normally.

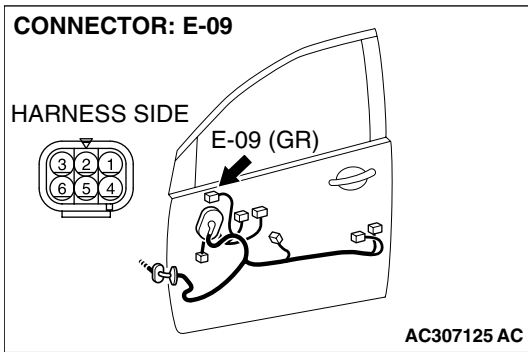


**STEP 4. Check remote controlled mirror (LH) connector E-09.**

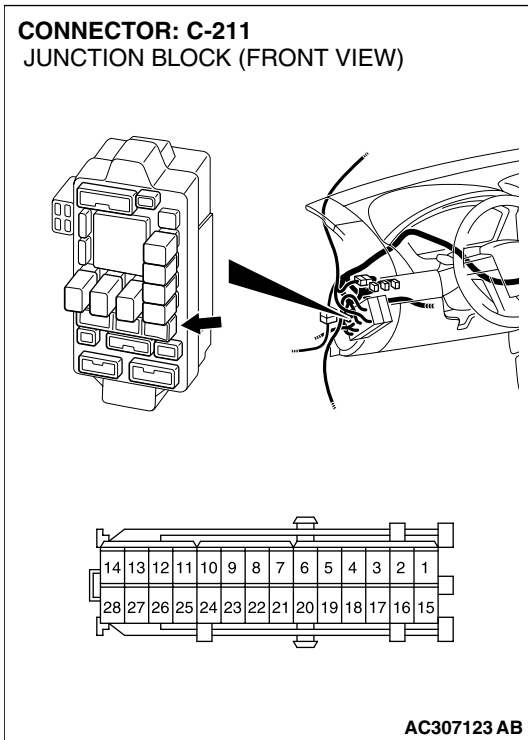
**Q: Is remote controlled mirror (LH) connector E-09 in good condition?**

**YES :** Go to Step 5.

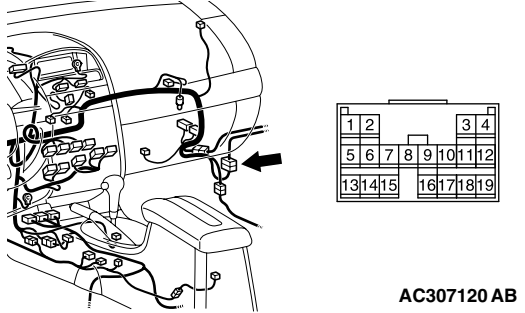
**NO :** Repair or replace the damaged component(s). Check if the all heated door mirrors works normally.



**STEP 5. Check the wiring harness between remote controlled mirror (LH) connector E-09 (terminal 1) and junction block connector C-211 (terminal 3).**



CONNECTOR: C-12



NOTE: Also check intermediate connector C-26 for loose, corroded or damaged terminals, or terminals pushed back in the connector. If intermediate connector C-26 is damaged, repair or replace the damaged component(s) as described in GROUP 00E, Harness Connector Inspection P.00E-2.

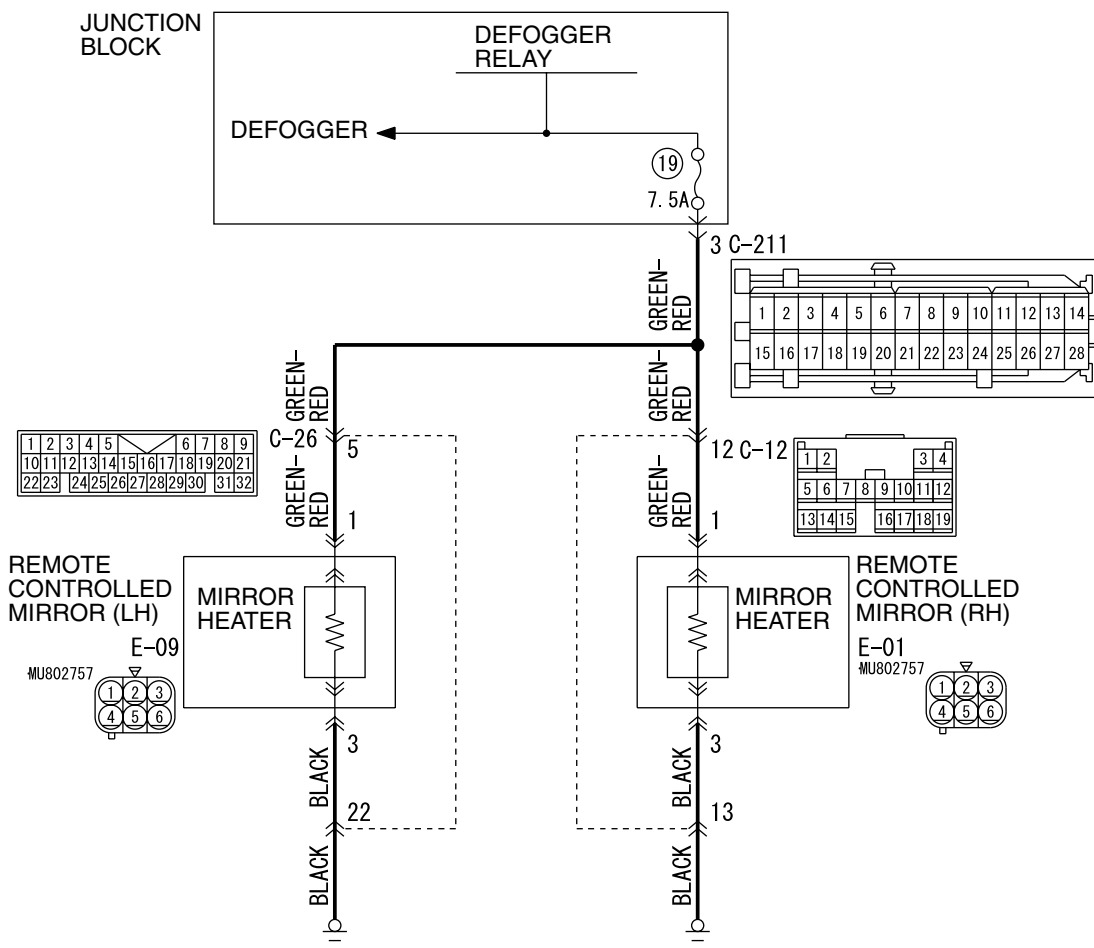
**Q:** Is the wiring harness between remote controlled mirror (RH) connector E-09 (terminal 1) and junction block connector C-211 (terminal 3) in good condition?

**YES :** The procedure is complete.

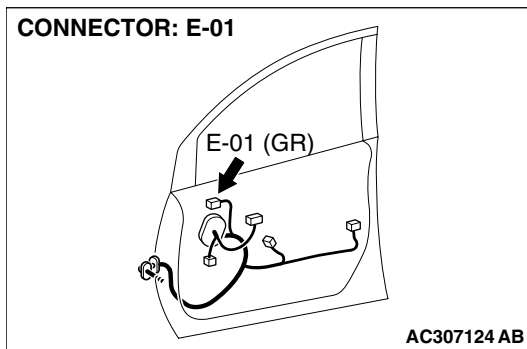
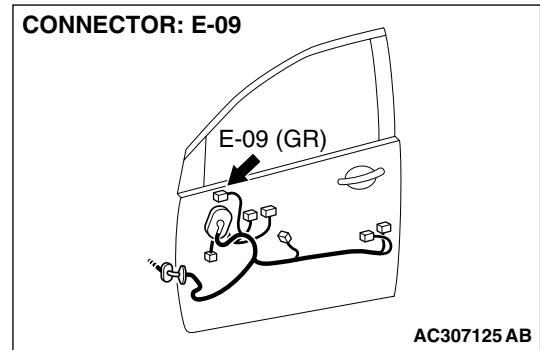
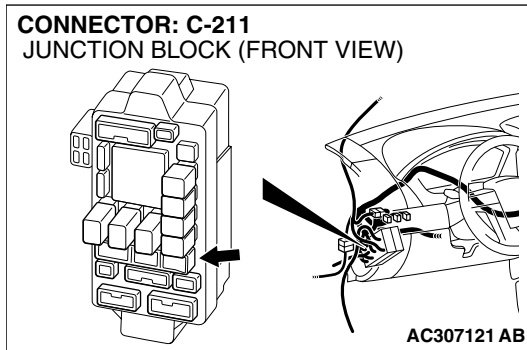
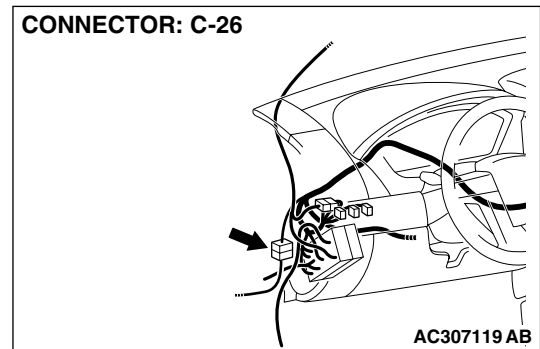
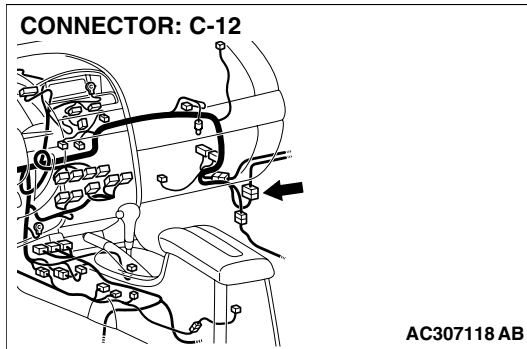
**NO :** Repair the wiring harness as necessary. Check if the all heated door mirrors work normally.

INSPECTION PROCEDURE 2: Right or Left Heated Door Mirror does not Operate

Heated door mirror Circuit



W4P51M00AA



## CIRCUIT OPERATION

If either of the heated door mirrors do not operate normally, it may be due to malfunctions in the heated door mirror circuit or door mirror.

## TROUBLESHOOTING HINTS

- Malfunction of the heated door mirror circuit
- Malfunction of the door mirror
- The wiring harness or connectors may have loose, corroded, or damaged terminals, or terminals pushed back in the connector.



DIAGNOSIS

STEP 1. Verify the operation of each heated door mirror.

Q: Which door mirror does not heat?

Door mirror (LH) : Go to Step 2.

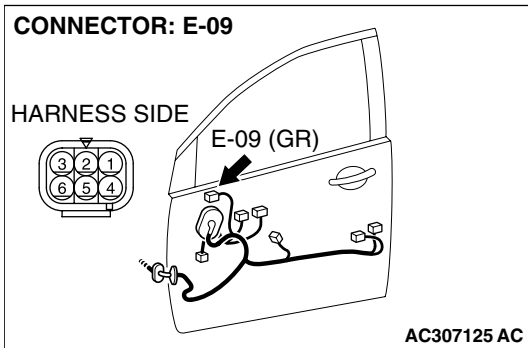
Door mirror (RH) : Go to Step 8.

STEP 2. Check remote controlled mirror (LH) connector E-09 for loose, corroded or damaged terminals, or terminals pushed back in the connector.

Q: Is remote controlled mirror (LH) connector E-09 in good condition?

YES : Go to Step 3.

NO : Repair or replace the damaged component(s). Refer to GROUP 00E, Harness Connector Inspection P.00E-2. And then check to see that the heater function of the door mirror (LH) operates normally.



STEP 3. Check the heater of the door mirror (LH).

**CAUTION**

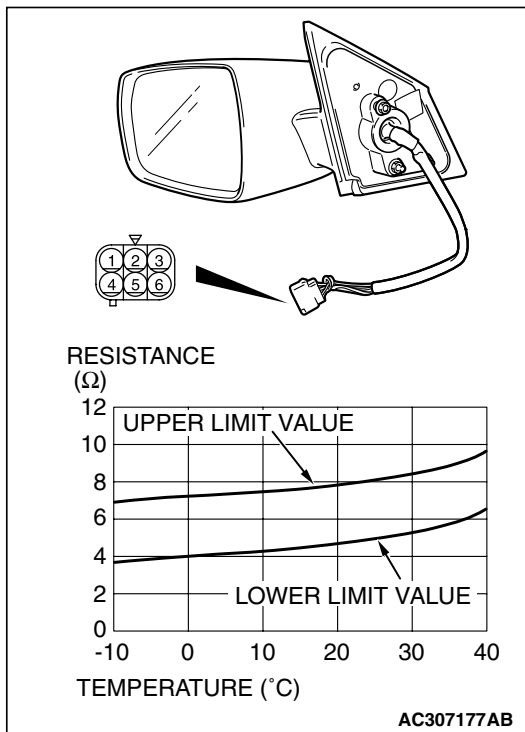
When relocating the car between locations of extremely different temperatures (warm and cold), leave the car in the location for a while to adapt to the temperature prior to checking it.

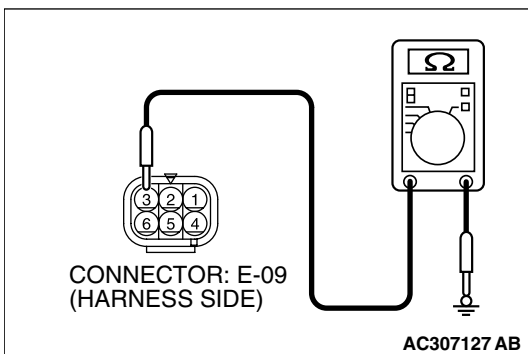
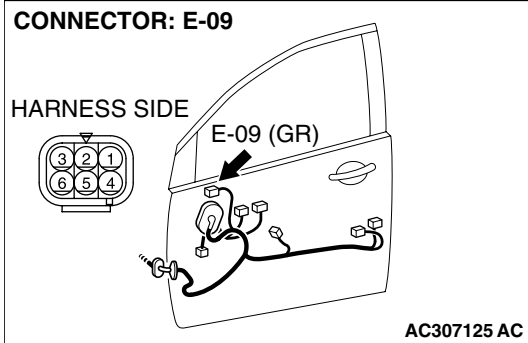
Check to see that the resistance shown in the graph is almost satisfied when measuring the resistance between terminal 1 and 3 of the remote controlled mirror (LH) connector E-09.

Q: Is the resistance normal?

YES : Go to Step 4.

NO : Replace the door mirror (LH). And then check to see that the heater function of the door mirror (LH) is operating normally.





**STEP 4. Check the ground circuit to between remote controlled mirror (LH) connector E-09 and ground for open circuit. Measure the resistance at remote controlled mirror (LH) connector E-09.**

(1) Disconnect remote controlled mirror (LH) connector E-09 and check at the wiring harness side connector.

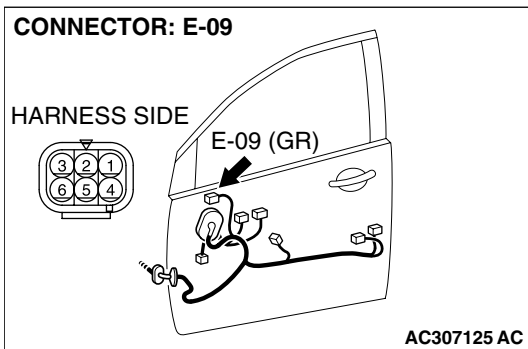
(2) Measure the resistance value between terminal 3 and ground.

- The resistance should equal 2 ohms or less.

**Q: Is the measured resistance 2 ohms or less?**

**YES :** Go to Step 6.

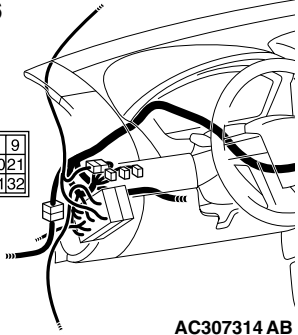
**NO :** Go to Step 5.



**STEP 5. Check the wiring harness between remote controlled mirror (LH) connector E-09 (terminal 3) and ground.**

CONNECTOR: C-26

1	2	3	4	5	6	7	8	9			
10	11	12	13	14	15	16	17	18	19	20	21
22	23	24	25	26	27	28	29	30	31	32	



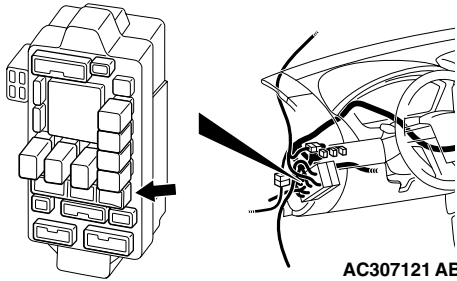
*NOTE: Also check intermediate connector C-26 for loose, corroded or damaged terminals, or terminals pushed back in the connector. If intermediate connector C-26 is damaged, repair or replace the damaged component(s) as described in GROUP 00E, Harness Connector Inspection P.00E-2.*

**Q: Is the wiring harness between remote controlled mirror (LH) connector E-09 (terminal 3) and ground in good condition?**

**YES :** No action is necessary and testing is complete.

**NO :** The wiring harness may be damaged. Repair the wiring harness as necessary. And then check to see that the heater function of the door mirror (LH) operates normally.

CONNECTOR: C-211  
JUNCTION BLOCK (FRONT VIEW)



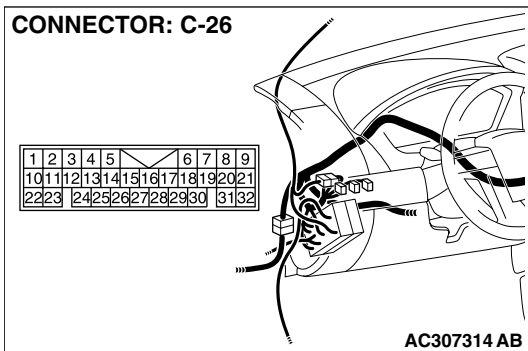
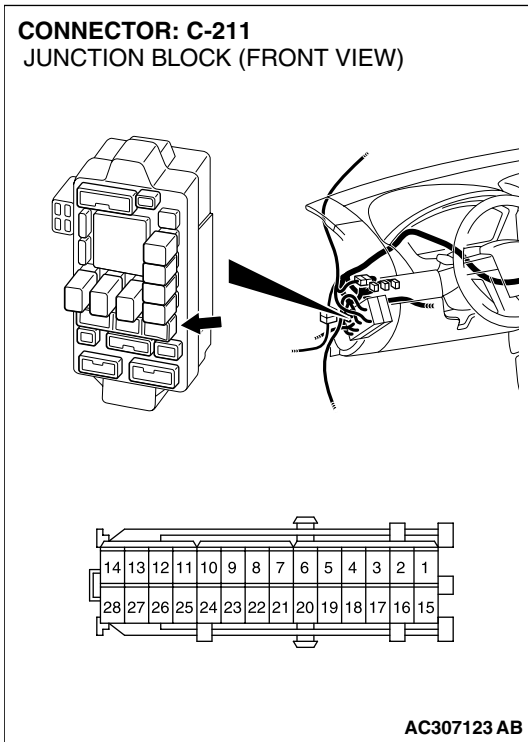
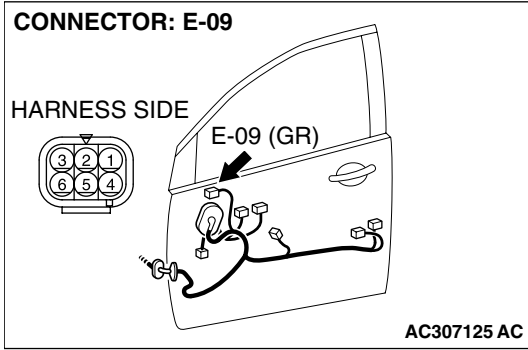
**STEP 6. Check junction block C-211 for loose, corroded damaged terminal, or terminals pushed back in the connector.**

**Q: Is junction block C-211 in good condition?**

**YES :** Go to Step 7.

**NO :** Repair or replace the damaged component(s). Refer to GROUP 00E, Harness Connector Inspection P.00E-2. And then check to see that the heater function of the door mirror (LH) operates normally.

**STEP 7. Check the wiring harness between remote controlled mirror (LH) connector E-09 (terminal 1) and junction block connector C-211 (terminal 3).**

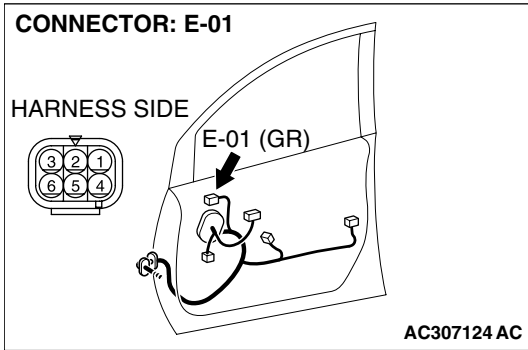


*NOTE: Also check intermediate connector C-26 for loose, corroded or damaged terminals, or terminals pushed back in the connector. If intermediate connector C-26 is damaged, repair or replace the damaged component(s) as described in GROUP 00E, Harness Connector Inspection P.00E-2.*

**Q: Is the wiring harness between remote controlled mirror (LH) connector E-09 (terminal 1) and junction block connector C-211 (terminal 3) in good condition?**

**YES :** No action is necessary and testing is complete.

**NO :** Repair the wiring harness as necessary. And then check to see that the heater function of the door mirror (LH) operates normally.



**STEP 8. Check the remote controlled mirror (RH) connector E-01 for loose, corroded or damaged terminals, or terminals pushed back in the connector.**

**Q: Is the remote controlled mirror (RH) connector E-01 in good condition?**

**YES :** Go to Step 9.

**NO :** Repair or replace the damaged component(s). Refer to GROUP 00E, Harness Connector Inspection [P.00E-2](#). And then check to see that the heater function of the door mirror (RH) operates normally.

**STEP 9. Check the heater function of the door mirror (RH).**

**⚠ CAUTION**

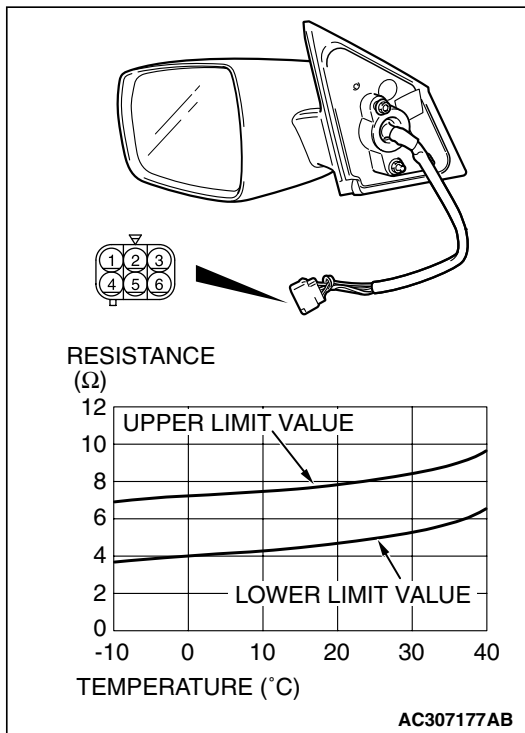
When relocating the car between locations of extremely different temperatures (warm and cold), leave the car in the location for a while to adapt to the temperature prior to checking it.

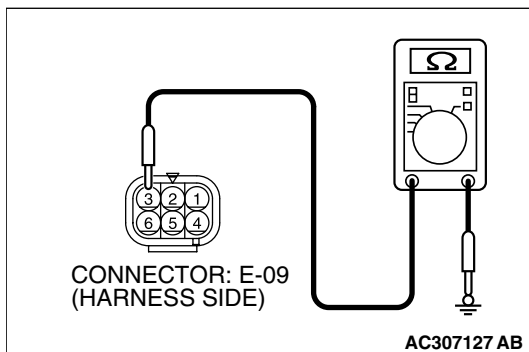
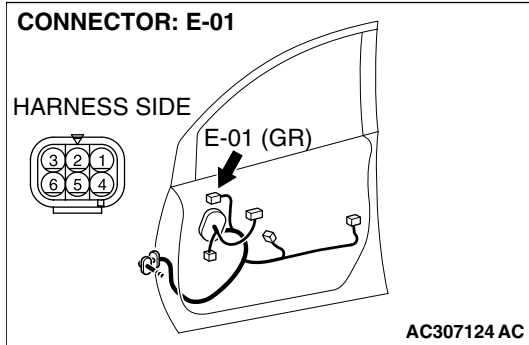
Check to see that the resistance shown in the graph is almost satisfied when measuring the resistance between terminal 1 and 3 of the door mirror (RH) connector E-01.

**Q: Is the resistance normal?**

**YES :** Go to Step 10.

**NO :** Replace the door mirror (RH). And then check to see that the heater function of the door mirror (RH) operates normally.





**STEP 10. Check the ground circuit between remote controlled mirror (RH) connector E-01 and ground for open circuit. Measure the resistance at remote controlled mirror (RH) connector E-01.**

(1) Disconnect remote controlled mirror (RH) connector E-01, and check at the wiring harness side connector.

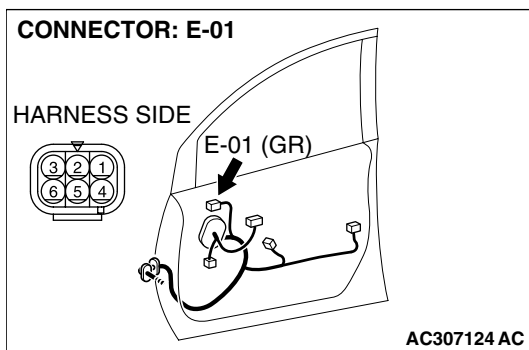
(2) Measure the resistance value between terminal 3 and ground.

- The resistance should equal 2 ohms or less.

**Q: Is the measured resistance 2 ohms or less?**

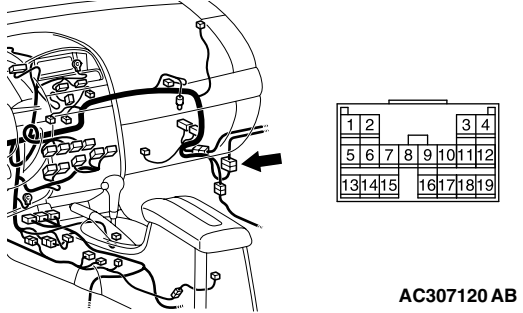
**YES :** Go to Step 12.

**NO :** Go to Step 11.



**STEP 11. Check the wiring harness between remote controlled mirror (RH) connector E-01 (terminal 3) and ground.**

**CONNECTOR: C-12**



*NOTE: Also check intermediate connector C-12 for loose, corroded or damaged terminals, or terminals pushed back in the connector. If intermediate connector C-12 is damaged, repair or replace the damaged component(s) as described in GROUP 00E, Harness Connector Inspection P.00E-2.*

**Q: Is the wiring harness between remote controlled mirror (RH) connector E-01 (terminal 3) and ground in good condition?**

**YES :** No action is necessary and testing is complete.

**NO :** The wiring harness may be damaged. Repair the wiring harness as necessary. And then check to see that the heater function of the door mirror (RH) operates normally.

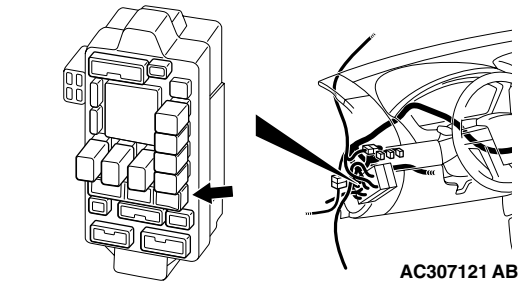
**STEP 12. Check junction block C-211 for loose, corroded damaged terminal, or terminals pushed back in the connector.**

**Q: Is junction block C-211 in good condition?**

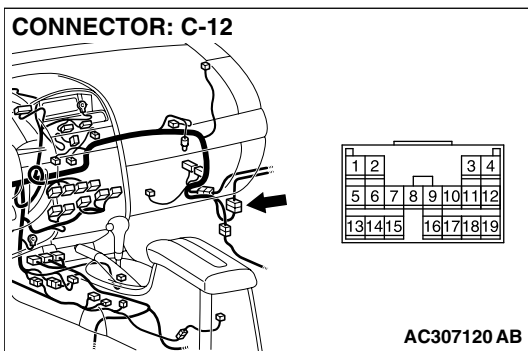
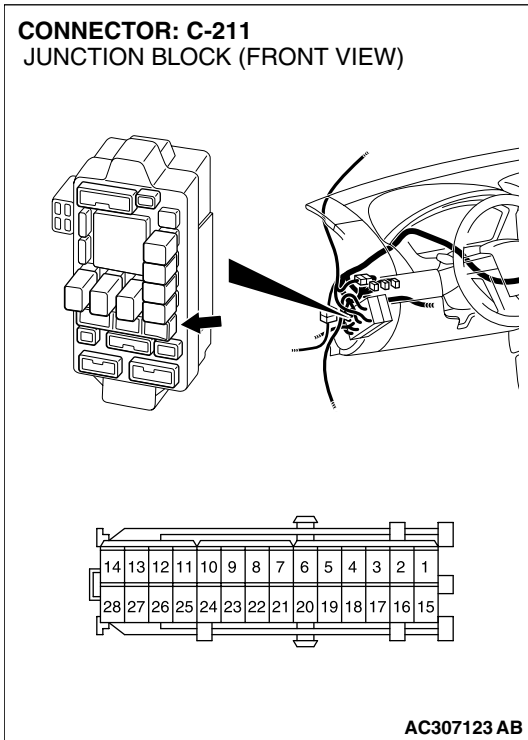
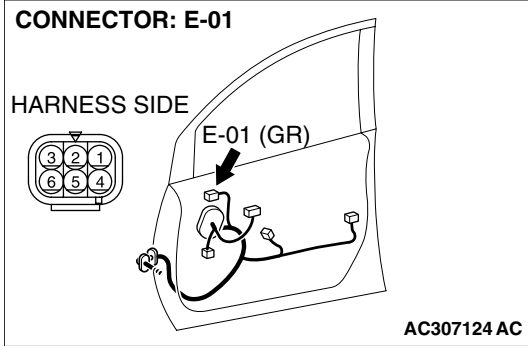
**YES :** Go to Step 13.

**NO :** Repair or replace the damaged component(s). Refer to GROUP 00E, Harness Connector Inspection P.00E-2. And then check to see that the heater function of the door mirror (RH) operates normally.

**CONNECTOR: C-211  
JUNCTION BLOCK (FRONT VIEW)**



**STEP 13.** Check the wiring harness between remote controlled mirror (RH) connector E-01 (terminal 1) and junction block connector C-211 (terminal 3).



*NOTE: Also check intermediate connector C-12 for loose, corroded or damaged terminals, or terminals pushed back in the connector. If intermediate connector C-12 is damaged, repair or replace the damaged component(s) as described in GROUP 00E, Harness Connector Inspection P.00E-2.*

**Q: Is the wiring harness between remote controlled mirror (RH) connector E-01 (terminal 1) and junction block connector C-211 (terminal 3) in good condition?**

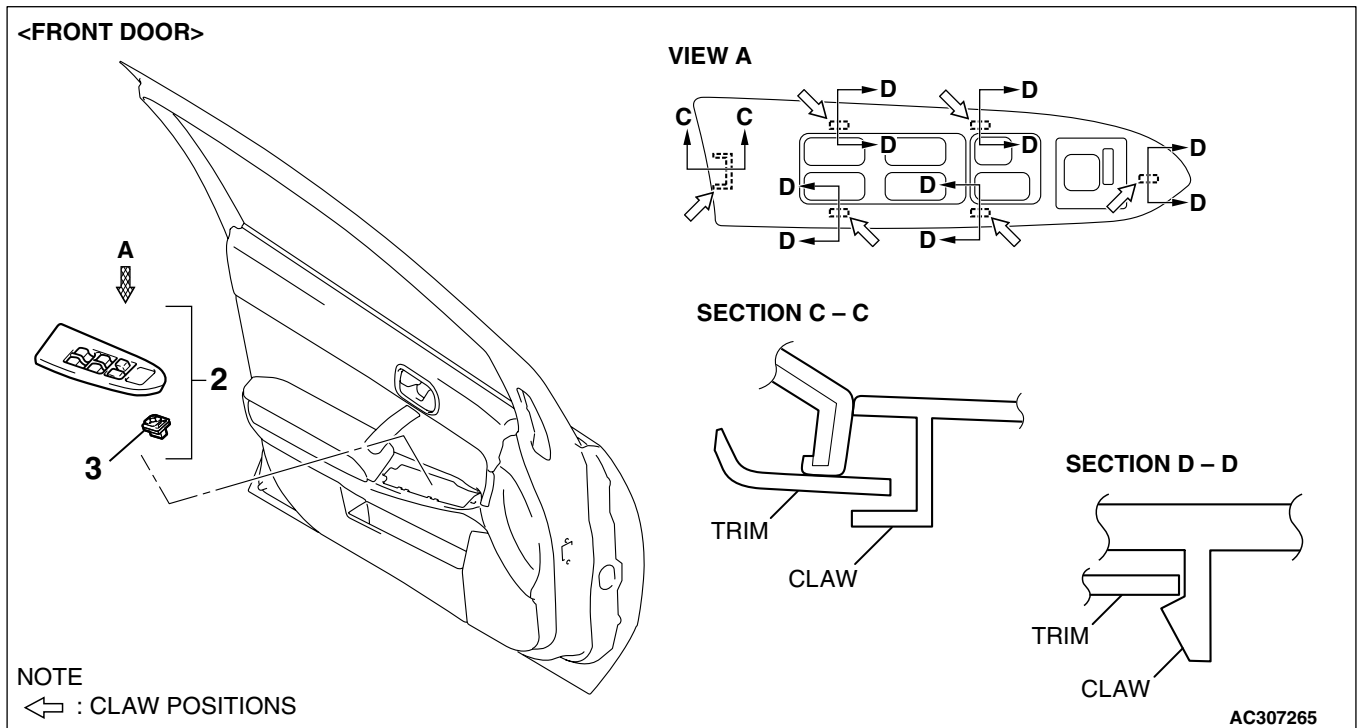
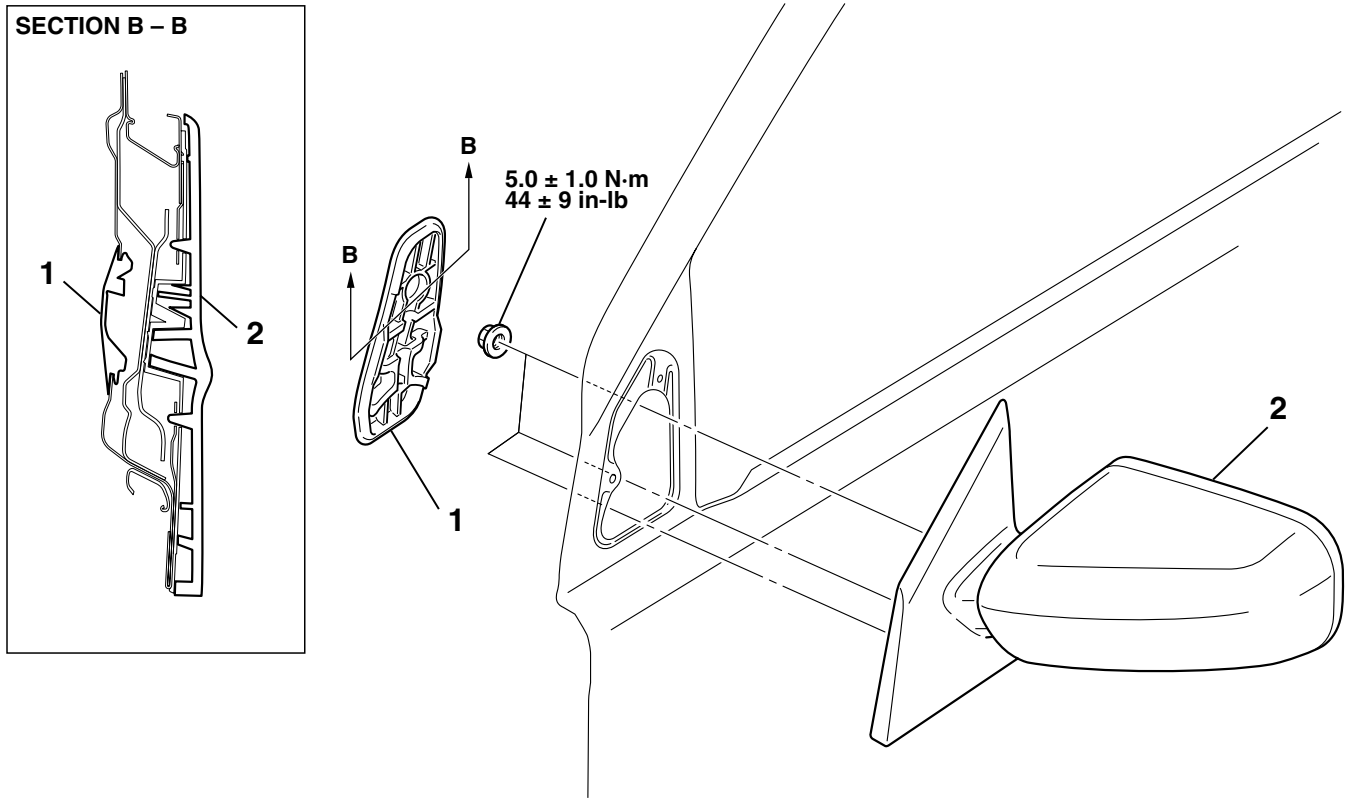
**YES :** No action is necessary and testing is complete.

**NO :** Repair the wiring harness as necessary. And then check to see that the heater function of the door mirror (RH) operates normally.



DOOR MIRROR  
REMOVAL AND INSTALLATION

M1511006400331



AC307158 AB

**REMOTE CONTROLLED MIRROR  
REMOVAL STEPS**

- FRONT DOOR TRIM (REFER TO GROUP 52A, DOOR TRIMS P.52A-13).
- 1. DOOR MIRROR COVER
- 2. REMOTE CONTROLLED MIRROR ASSEMBLY

<<A>>

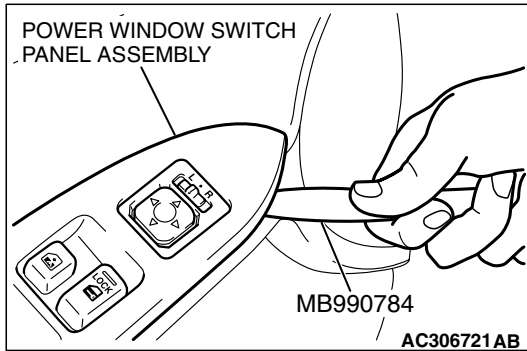
**REMOTE CONTROLLED MIRROR  
SWITCH REMOVAL STEPS**

3. POWER WINDOW SWITCH PANEL ASSEMBLY
4. REMOTE CONTROLLED MIRROR SWITCH

**REMOVAL SERVICE POINT**

**<<A>> POWER WINDOW SWITCH PANEL  
ASSEMBLY REMOVAL**

Insert special tool MB990784 as shown to remove the power window switch panel assembly.

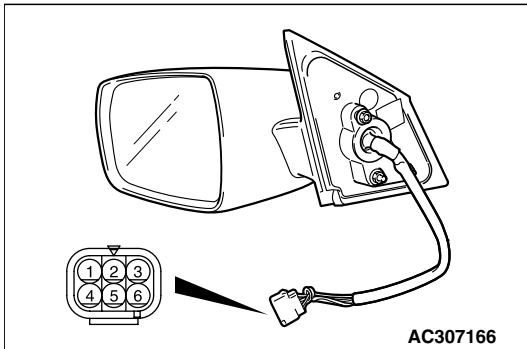


**INSPECTION**

M1511006500305

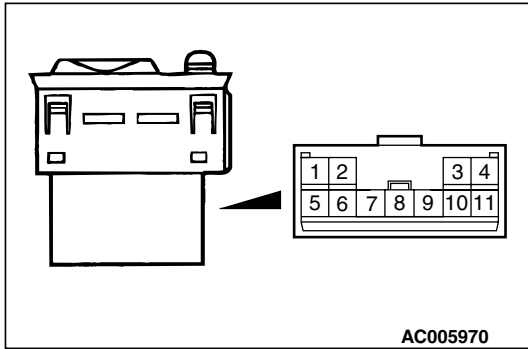
**ELECTRIC REMOTE CONTROL MIRROR  
OPERATION CHECK**

Check that the mirror moves as described in the table when each terminal is connected to the battery.



BATTERY CONNECTION	DIRECTION OPERATION
<ul style="list-style-type: none"> <li>• Connect terminal 6 to the negative battery terminal.</li> <li>• Connect terminal 4 to the positive battery terminal.</li> </ul>	Up
<ul style="list-style-type: none"> <li>• Connect terminal 6 to the positive battery terminal.</li> <li>• Connect terminal 4 to the negative battery terminal.</li> </ul>	Down
<ul style="list-style-type: none"> <li>• Connect terminal 6 to the negative battery terminal.</li> <li>• Connect terminal 5 to the positive battery terminal.</li> </ul>	Right
<ul style="list-style-type: none"> <li>• Connect terminal 6 to the positive battery terminal.</li> <li>• Connect terminal 5 to the negative battery terminal.</li> </ul>	Left

DOOR MIRROR CONTROL SWITCH CONTINUITY CHECK



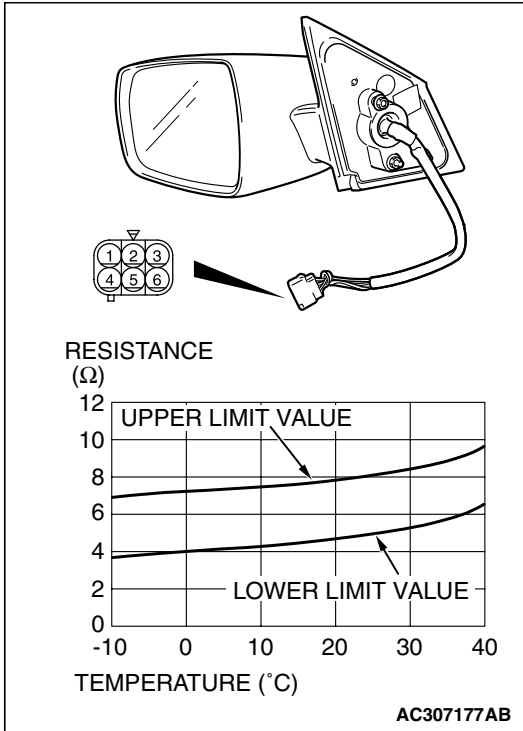
SWITCH POSITION		TESTER CONNECTION	SPECIFIED CONDITION
OFF		9 - 2, 9 - 3, 9 - 6, 9 - 10, 9 - 11, 1 - 2, 1 - 3, 1 - 6, 1 - 10, 1 - 11	Open circuit
Left side	OFF	9 - 6, 9 - 10, 9 - 11, 1 - 6, 1 - 10, 1 - 11	Open circuit
	Up	1 - 6, 9 - 11	Less than 2 ohms
	Down	1 - 11, 6 - 9	
	Right	1 - 6, 9 - 10	
	Left	1 - 10, 6 - 9	
Right side	OFF	9 - 2, 9 - 3, 9 - 6, 1 - 2, 1 - 3, 1 - 6	Open circuit
	Up	1 - 6, 3 - 9	Less than 2 ohms
	Down	1 - 3, 6 - 9	
	Right	1 - 6, 2 - 9	
	Left	1 - 2, 6 - 9	

## HEATED DOOR MIRROR CHECK

**⚠ CAUTION**

When relocating the car between locations with extremely different temperatures (warm and cold), leave the car in the location for a while to adapt to the temperature prior to checking it.

Check to see that the resistance shown in the graph is almost satisfied when measuring the resistance of terminal 1 and 3 of the door mirror connectors.



## SPECIFICATIONS

### FASTENER TIGHTENING SPECIFICATIONS

M1511015300279

ITEM	SPECIFICATION
<b>Front bumper</b>	
License plate screw	0.9 ± 0.1 N·m (8 ± 1 in-lb)
<b>Windshield wiper and washer</b>	
Wiper arm and blade assembly nut	25 ± 3.0 N·m (18 ± 1 ft-lb)
Wiper link assembly bolt	4.9 ± 0.5 N·m (43 ± 4 in-lb)
Wiper motor screw	7.5 ± 1.4 N·m (66 ± 13 in-lb)
Washer tank bolt	12 ± 1.0 N·m (102 ± 15 in-lb)
<b>Door mirror</b>	
Remote controlled mirror assembly bolt	5.0 ± 1.0 N·m (44 ± 9 in-lb)

### SERVICE SPECIFICATIONS

M1511000300358

ITEM	STANDARD VALUE
Windshield wiper blade (RH) park position	38 ± 5 mm (1.50 ± 0.20 inches)
Windshield wiper blade (LH) park position	38 ± 5 mm (1.50 ± 0.20 inches)

### ADHESIVE

M1511000500448

ITEM	SPECIFICATION
Door side protector molding	Adhesive tape: Double-sided tape 8.0 mm (0.32 inch) width and 1.2 mm (0.05 inch) thickness
Roof drip molding	Adhesive tape: Double-sided tape 10.0 mm (0.39 inch) width and 1.52 mm (0.06 inch) thickness

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## NOTES