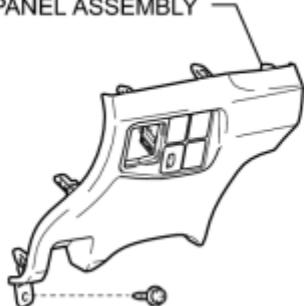


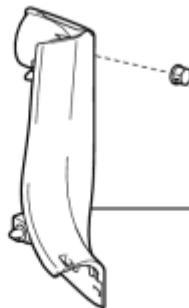
COMPONENTS

ILLUSTRATION

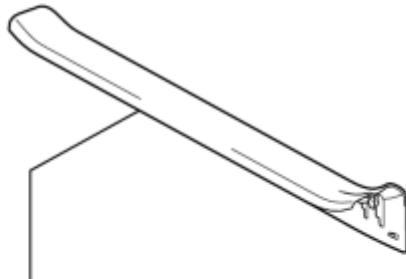
LOWER INSTRUMENT PANEL FINISH PANEL ASSEMBLY



OUTER MIRROR
SWITCH ASSEMBLY



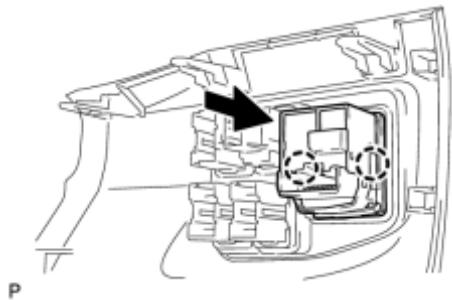
COWL SIDE TRIM SUB-ASSEMBLY LH



FRONT DOOR SCUFF PLATE LH

REMOVAL

1. REMOVE FRONT DOOR SCUFF PLATE LH [INFO](#)
2. REMOVE COWL SIDE TRIM SUB-ASSEMBLY LH [INFO](#)
3. REMOVE LOWER INSTRUMENT PANEL FINISH PANEL ASSEMBLY [INFO](#)
4. REMOVE OUTER MIRROR SWITCH ASSEMBLY



(a) Disengage the 2 claws and remove the outer mirror switch assembly.

INSPECTION

1. INSPECT OUTER MIRROR SWITCH ASSEMBLY

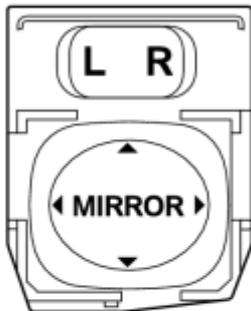
(a) Inspect the outer mirror switch.

(1) Measure the resistance according to the value(s) in the table below when the switch is operated.

HINT:

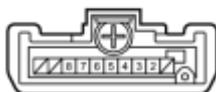
Select "L" on the left/right adjustment switch.

Standard Resistance:



Tester Connection	Switch Condition	Specified Condition
4 - 8	Up	Below 1 Ω
6 - 7		
4 - 7	Down	
6 - 8		
5 - 8	Left	
6 - 7		
5 - 7	Right	
6 - 8		

HINT:



Select "R" on the left/right adjustment switch.

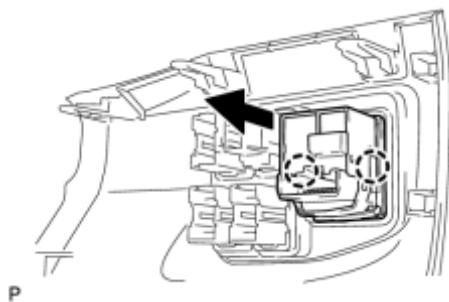
Standard Resistance:

Tester Connection	Switch Condition	Specified Condition
3 - 8	Up	Below 1 Ω
6 - 7		
3 - 7		
6 - 8		
2 - 8		
6 - 7		
2 - 7		
6 - 8		

If the result is not as specified, replace the outer mirror switch assembly.

INSTALLATION

1. INSTALL OUTER MIRROR SWITCH ASSEMBLY



(a) Engage the 2 claws to install the outer mirror switch assembly.

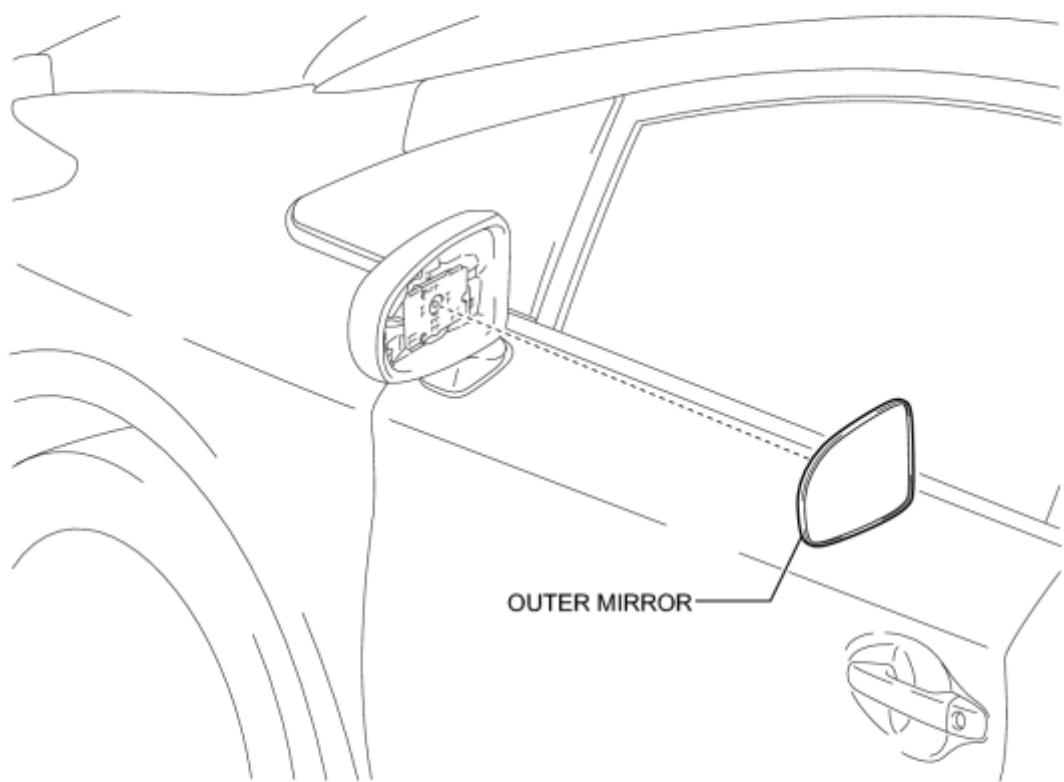
2. INSTALL LOWER INSTRUMENT PANEL FINISH PANEL ASSEMBLY INFO

3. INSTALL COWL SIDE TRIM SUB-ASSEMBLY LH INFO

4. INSTALL FRONT DOOR SCUFF PLATE LH INFO

COMPONENTS

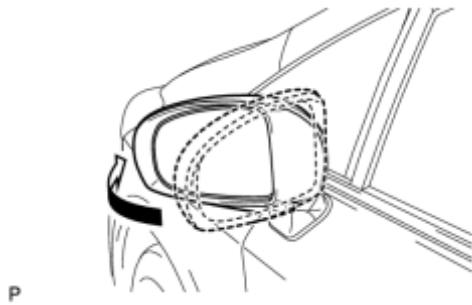
ILLUSTRATION



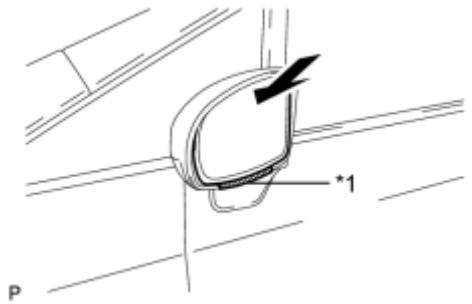
P

REMOVAL

1. REMOVE OUTER MIRROR



(a) Push the outside part of the outer mirror assembly and tilt it as show in the illustration.



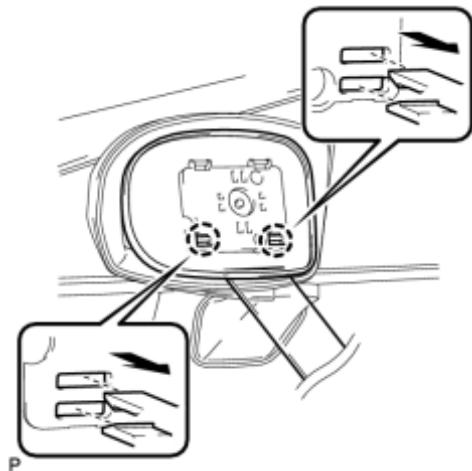
(b) Push the upper part of the mirror surface and tilt it.

(c) Apply protective tape as shown in the illustration.

Text in Illustration

*1

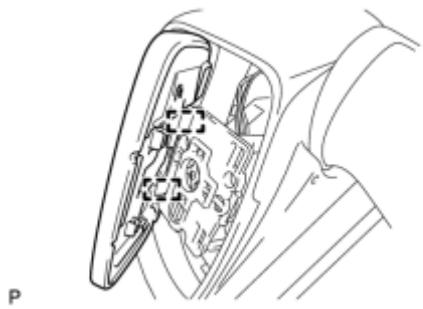
Protective Tape



(d) Using a moulding remover, disengage the 2 claws at the lower part of the outer rear view mirror, and separate the outer rear view mirror glass.

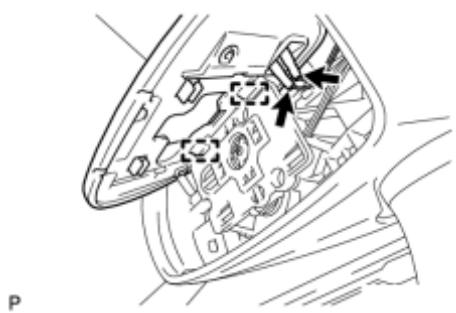
(e) w/o Mirror Heater:

(1) Disengage the 2 guides at the upper part of the outer mirror.



(2) Remove the outer mirror.

(f) w/ Mirror Heater:



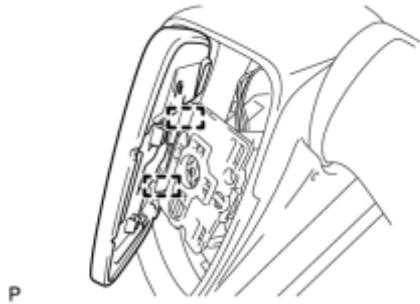
(1) Disengage the 2 guides at the upper part of the outer mirror.

(2) Disconnect the 2 connectors and remove the outer mirror.

INSTALLATION

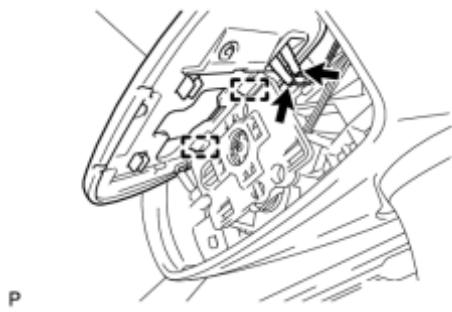
1. INSTALL OUTER MIRROR

(a) w/o Mirror Heater:



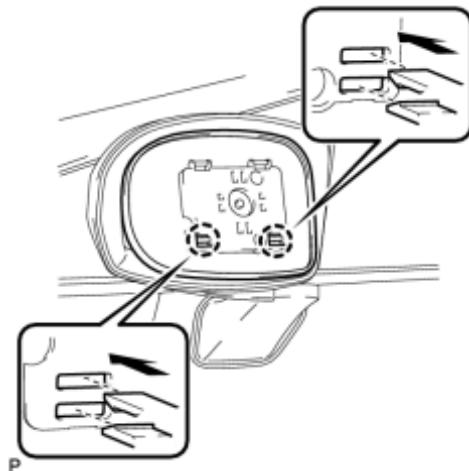
(1) Engage the 2 guides on the upper part of the outer mirror to the outer rear view mirror.

(b) w/ Mirror Heater:



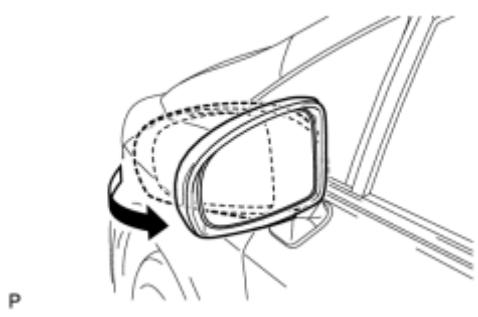
(1) Connect the 2 connectors.

(2) Engage the 2 guides on the upper part of the outer mirror to the outer rear view mirror.



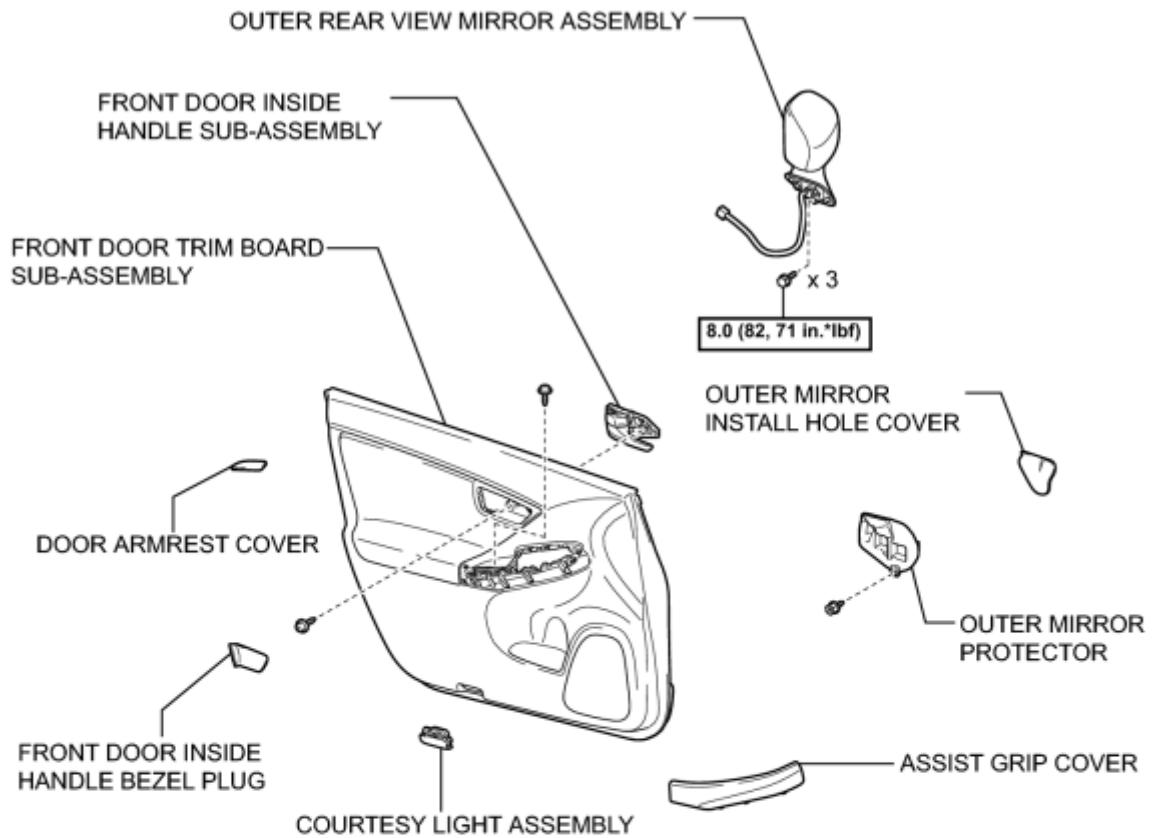
(c) Engage the 2 claws on the lower part of the outer mirror to the outer rear view mirror as shown in the illustration.

(d) Push the outside part of the outer mirror assembly and tilt it as shown in the illustration.



COMPONENTS

ILLUSTRATION



for Driver Side:



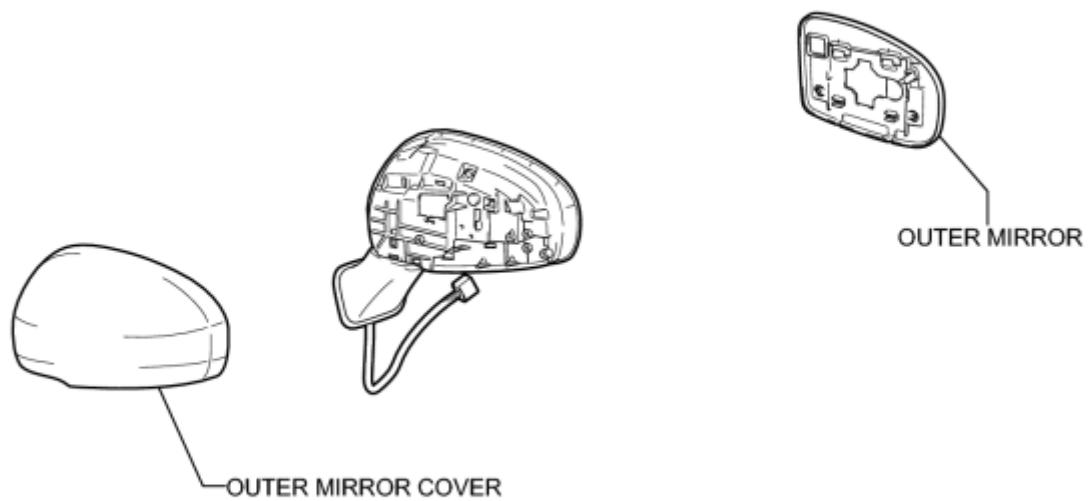
POWER WINDOW REGULATOR MASTER
SWITCH ASSEMBLY WITH FRONT DOOR
ARMREST BASE PANEL

for Front Passenger Side:



POWER WINDOW REGULATOR
SWITCH ASSEMBLY WITH FRONT
DOOR ARMREST BASE PANEL

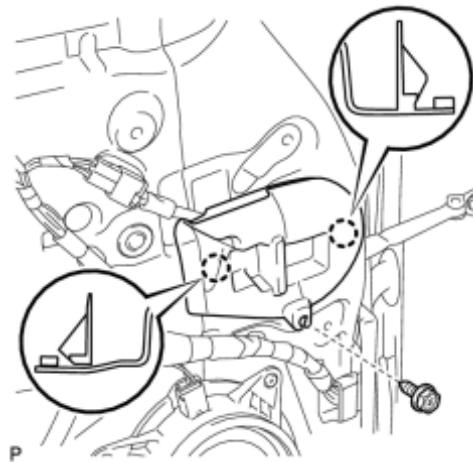
ILLUSTRATION



P

REMOVAL

1. REMOVE FRONT DOOR INSIDE HANDLE BEZEL PLUG [INFO](#)
2. REMOVE ASSIST GRIP COVER [INFO](#)
3. REMOVE DOOR ARMREST COVER [INFO](#)
4. REMOVE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Driver Side) [INFO](#)
5. REMOVE POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Front Passenger Side) [INFO](#)
6. REMOVE COURTESY LIGHT ASSEMBLY [INFO](#)
7. REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY [INFO](#)
8. REMOVE FRONT DOOR INSIDE HANDLE SUB-ASSEMBLY [INFO](#)
9. REMOVE OUTER MIRROR PROTECTOR

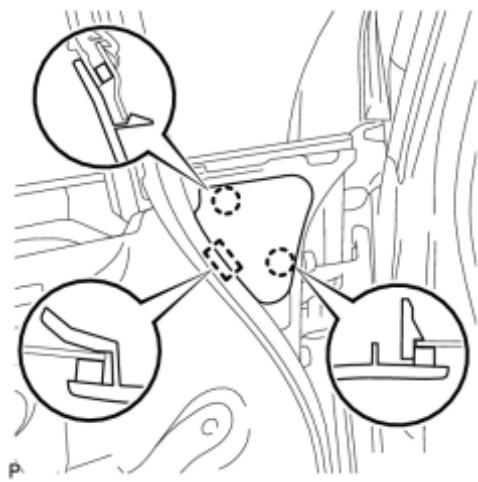


(a) Remove the screw.

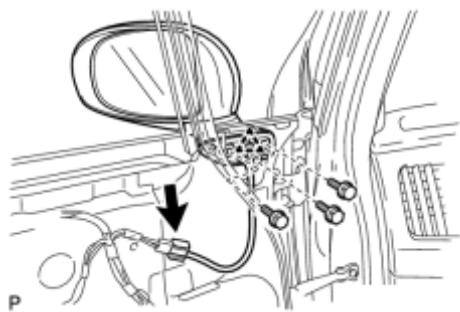
(b) Disengage the 2 claws and remove the outer mirror protector.

10. REMOVE OUTER MIRROR INSTALL HOLE COVER

(a) Disengage the 2 claws and guide, remove the outer mirror install hole cover.



11. REMOVE OUTER REAR VIEW MIRROR ASSEMBLY



(a) Disconnect the connector.

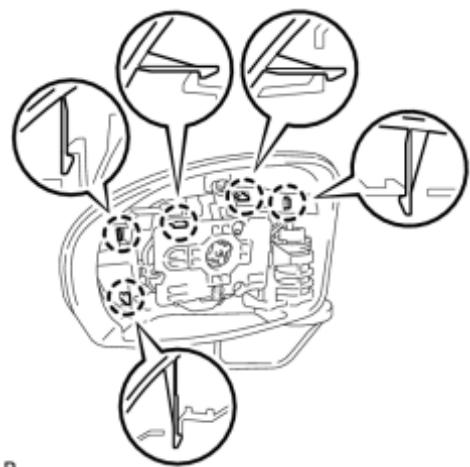
(b) Remove the 3 bolts.

(c) Disengage the clip and remove the outer rear view mirror assembly.

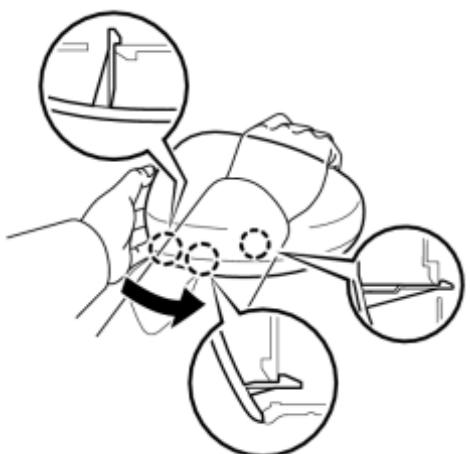
12. REMOVE OUTER MIRROR INFO

13. REMOVE OUTER MIRROR COVER

(a) Disengage the 5 claws.



P



P

(b) Disengage the 3 claws and remove the outer mirror cover as shown in the illustration.

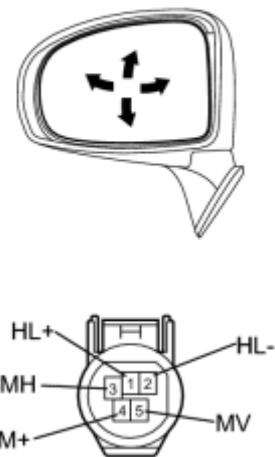
INSPECTION

1. INSPECT OUTER REAR VIEW MIRROR ASSEMBLY LH

(a) Inspect outer mirror motor operation.

(1) Apply battery voltage and check the operation of the mirror face, as shown in the table and illustration.

OK:



Connection	Result
Battery positive (+) → Terminal 5 (MV)	Turns upward
Battery negative (-) → Terminal 4 (M+)	Turns downward
Battery positive (+) → Terminal 4 (M+)	Turns left
Battery negative (-) → Terminal 5 (MV)	Turns right
Battery positive (+) → Terminal 3 (MH)	
Battery negative (-) → Terminal 4 (M+)	
Battery positive (+) → Terminal 4 (M+)	
Battery negative (-) → Terminal 3 (MH)	

Text in Illustration

	Front view of wire harness connector
*1	(to Outer Rear View Mirror Assembly LH)

If the result is not specified, replace the outer rear view mirror assembly.

(b) Check the mirror heater (w/ Mirror heater).

(1) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
Terminal 1 (HL+) - Terminal 2 (HL-)	25°C (77°F)	7.6 to 11.4 Ω

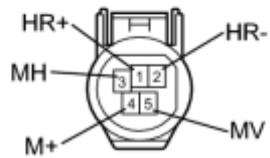
If the result is not specified, replace the outer rear view mirror assembly.

2. INSPECT OUTER REAR VIEW MIRROR ASSEMBLY RH

(a) Inspect outer mirror motor operation.

(1) Apply battery voltage and check the operation of the mirror face, as shown in the table and illustration.

OK:



Connection	Result
Battery positive (+) → Terminal 5 (MV)	Turns upward
Battery negative (-) → Terminal 4 (M+)	
Battery positive (+) → Terminal 4 (M+)	Turns downward
Battery negative (-) → Terminal 5 (MV)	
Battery positive (+) → Terminal 3 (MH)	Turns left
Battery negative (-) → Terminal 4 (M+)	
Battery positive (+) → Terminal 4 (M+)	Turns right
Battery negative (-) → Terminal 3 (MH)	

Text in Illustration

*1	Front view of wire harness connector (to Outer Rear View Mirror Assembly RH)
----	---

If the result is not specified, replace the outer rear view mirror assembly.

(b) Check the mirror heater (w/ Mirror heater).

(1) Measure the resistance according to the value(s) in the table below.

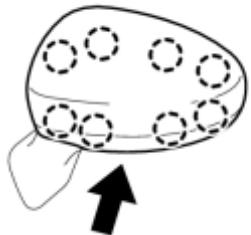
Standard Resistance:

Tester Connection	Condition	Specified Condition
Terminal 1 (HR+) - Terminal 2 (HR-)	25°C (77°F)	7.6 to 11.4 Ω

If the result is not specified, replace the outer rear view mirror assembly.

INSTALLATION

1. INSTALL OUTER MIRROR COVER



(a) Engage the 8 claws to install the outer mirror cover.

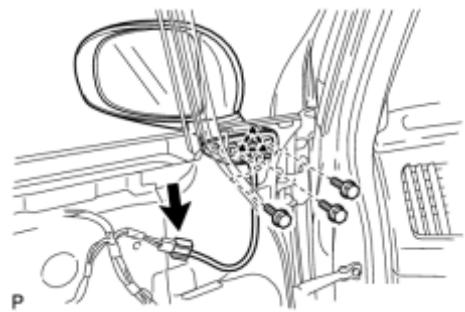
NOTICE:

Securely engage the 8 claws.

P

2. INSTALL OUTER MIRROR INFO

3. INSTALL OUTER REAR VIEW MIRROR ASSEMBLY



(a) Engage the clip to install the outer rear view mirror assembly.

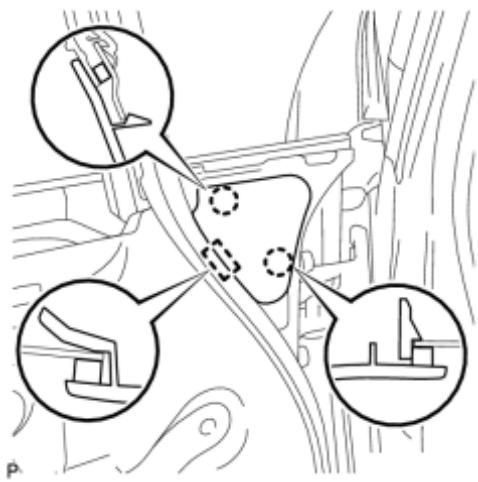
(b) Install the outer rear view mirror assembly with the 3 bolts.

Torque: **8.0 N·m (82 kgf·cm, 71 in·lbf)**

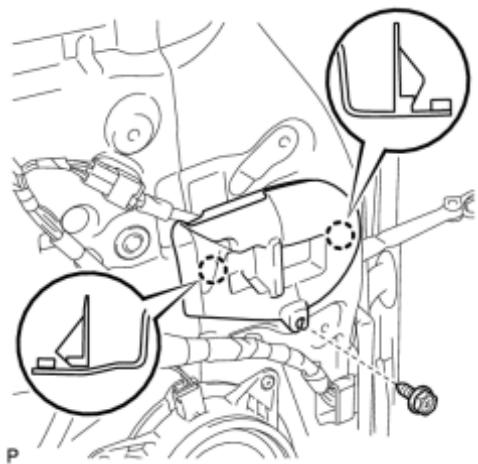
(c) Connect the connector.

4. INSTALL OUTER MIRROR INSTALL HOLE COVER

(a) Engage the guide and 2 claws to install the outer mirror install hole cover.



5. INSTALL OUTER MIRROR PROTECTOR



(a) Engage the 2 claws.

(b) Install the outer mirror protector with the screw.

6. INSTALL FRONT DOOR INSIDE HANDLE SUB-ASSEMBLY INFO

7. INSTALL FRONT DOOR TRIM BOARD SUB-ASSEMBLY INFO

8. INSTALL COURTESY LIGHT ASSEMBLY INFO

9. INSTALL POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Driver Side) INFO

10. INSTALL POWER WINDOW REGULATOR SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL (for Front Passenger Side) INFO

11. INSTALL DOOR ARMREST COVER INFO

12. INSTALL ASSIST GRIP COVER INFO

13. INSTALL FRONT DOOR INSIDE HANDLE BEZEL PLUG 

PRECAUTION

1. NOTICE FOR INITIALIZATION

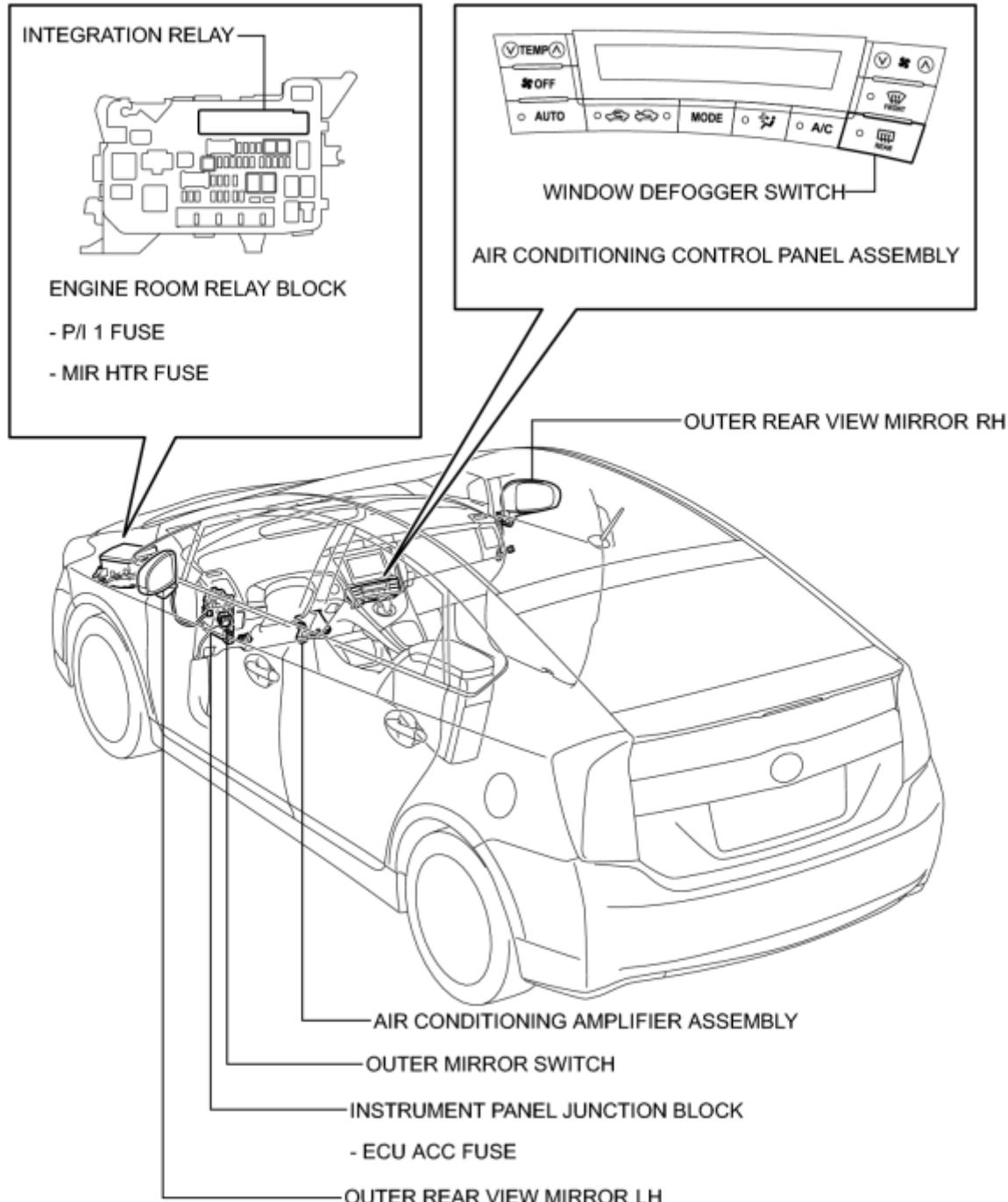
NOTICE:

When disconnecting the cable from the negative (-) battery terminal, initialize the following systems after the cable is reconnected.

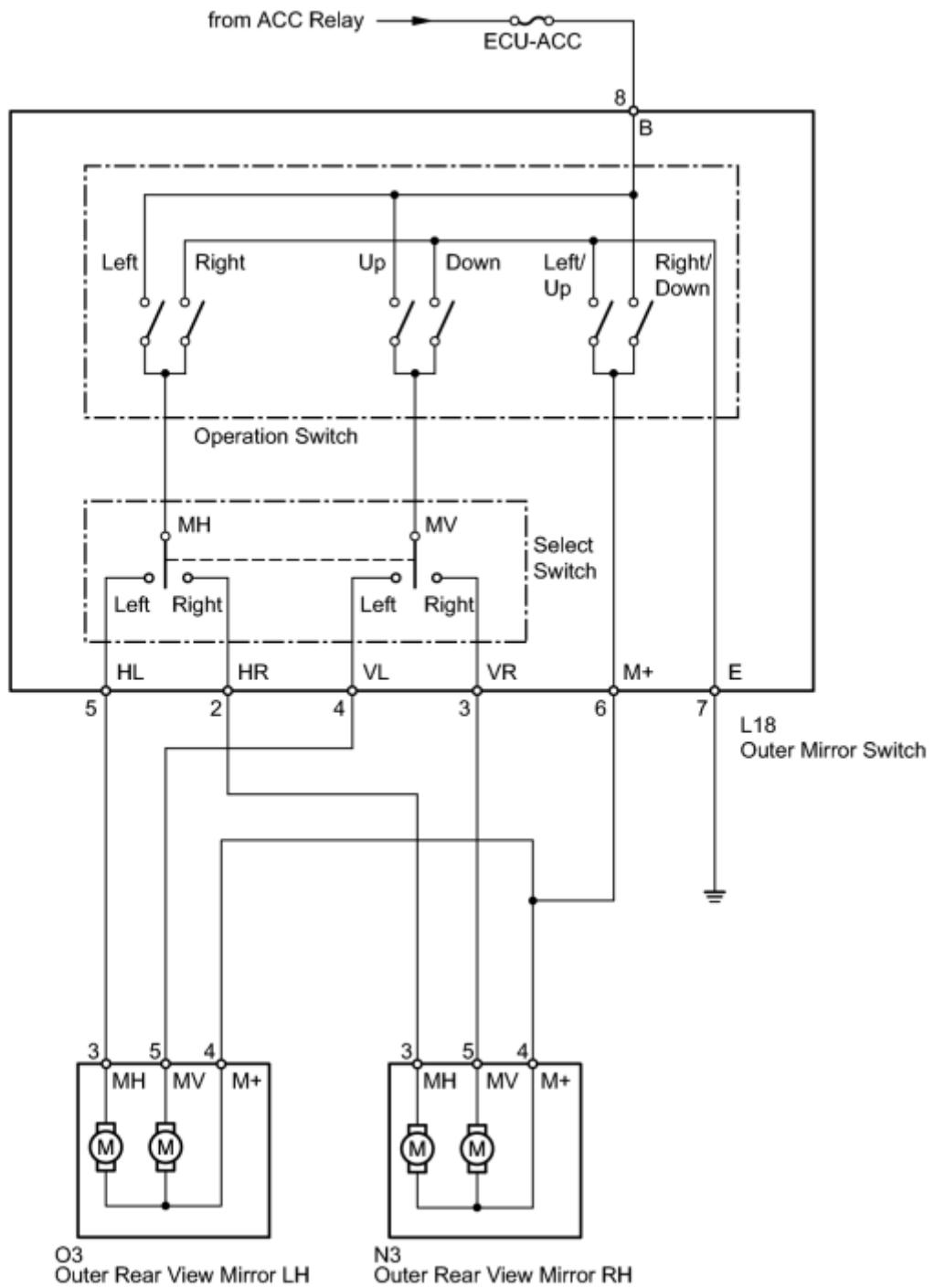
System Name	See Procedure
Advanced Parking Guidance System	INFO

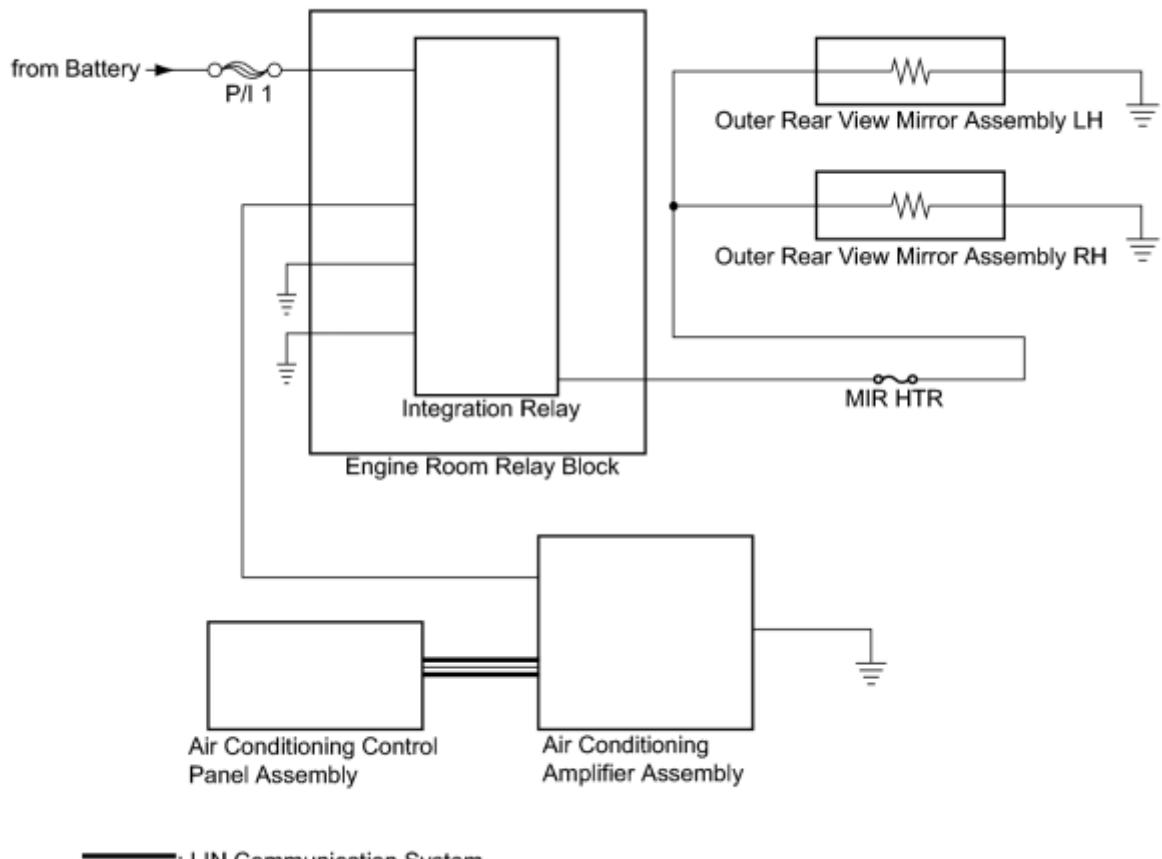
PARTS LOCATION

ILLUSTRATION



SYSTEM DIAGRAM





=====: LIN Communication System

Communication Table

Transmitting ECU	Receiving ECU	Signal	Communication Method
Air Conditioning Control Panel Assembly	Air Conditioning Amplifier Assembly	Outer Mirror Heater Switch Signal	LIN

SYSTEM DESCRIPTION

1. FUNCTION OF MAIN COMPONENT

Component	Function
Vertical mirror motor	Receives a signal from the outer mirror switch and adjusts the mirror surface position vertically.
Horizontal mirror motor	Receives a signal from the outer mirror switch and adjusts the mirror surface position horizontally.
Mirror heater	Receives a signal from the outer mirror switch and operates to warm the mirror.
Mirror select switch	Consists of R and L switches. One must be chosen to operate the outer mirror switch assembly.
Mirror adjust switch	Mirror R and L signals are sent to each outer mirror control ECU assembly from the mirror select switch. After selecting the R or L switch, the right, left, up and down control switches can be operated to change the angle of the mirror.

2. SYSTEM OPERATION

(a) The remote control mirror has the following features:

Function	Outline
Electrical remote control mirror function	When the outer mirror switch assembly is operated, this function moves the mirror surface vertically or horizontally to enable the driver to attain an optimal mirror angle. Setting the mirror select switch to the R position operates the right mirror, and setting it to the L position operates the left mirror.
Mirror heater function	Automatically turns on the mirror heaters when the rear window defogger switch is turned on. The rear window defogger and mirror heaters automatically turn off after 15 min.

PROBLEM SYMPTOMS TABLE

HINT:

Use the table below to help determine the cause of problem symptoms. If multiple suspected areas are listed, the potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

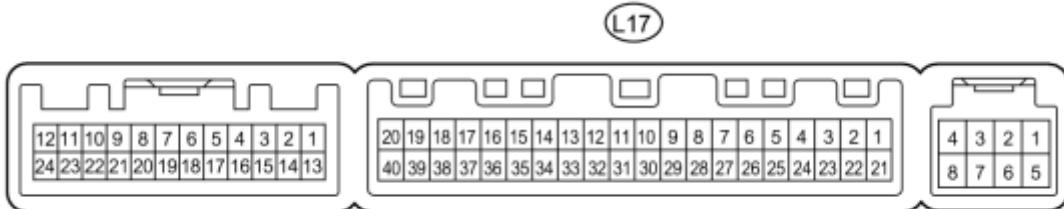
Power Mirror Control System

Symptom	Suspected Area	See page
Mirror does not operate	ECU-ACC fuse	INFO
	Outer mirror switch	INFO
	Outer rear view mirror assembly LH	INFO
	Outer rear view mirror assembly RH	INFO
	Wire harness	-
Mirror heater does not operate*	MIR HTR fuse	INFO
	Outer rear view mirror assembly LH	-
	Outer rear view mirror assembly RH	-
	Wire harness	-
	Windshield defogger system	-

TERMINALS OF ECU

1. CHECK AIR CONDITIONING AMPLIFIER ASSEMBLY

(a) Disconnect the L17 air conditioning amplifier assembly connector.



H

(b) Measure the voltage and resistance according to the value(s) in the table below.

HINT:

Measure the values on the wire harness side with the connector disconnected.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
L17-1 (IG+) - L17-14 (GND)	B - W-B	Power source (IG)	Power switch on (IG)	11 to 14 V
L17-1 (IG+) - L17-14 (GND)	B - W-B	Power source (IG)	Power switch off	Below 1 V
L17-21 (B) - L17-14 (GND)	Y - W-B	Battery power supply	Always	11 to 14 V
L17-14 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction in the wire harness.

(c) Reconnect the L17 air conditioning amplifier assembly connector.

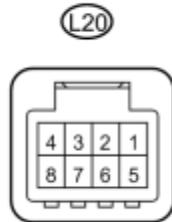
(d) Measure the voltage according to the value(s) in the table below.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
L17-20 (RDEF) - L17-14 (GND)	Y - W-B	Rear window defogger signal	Power switch on (IG), rear window defogger switch off	11 to 14 V
L17-20 (RDEF) - L17-14 (GND)	Y - W-B	Rear window defogger signal	Power switch on (IG), rear window defogger switch on	Below 1 V

If the result is not as specified, the air conditioning amplifier assembly may have a malfunction.

2. CHECK AIR CONDITIONING CONTROL PANEL ASSEMBLY

(a) Disconnect the L20 air conditioning control panel assembly connector.



(b) Measure the voltage and resistance according to the value(s) in the table below.

HINT:

Measure the values on the wire harness side with the connector disconnected.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
L20-5 (IG+) - L20-8 (GND)	B - W-B	Power source (IG)	Power switch on (IG)	11 to 14 V
L20-8 (GND) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction in the wire harness.

(c) Reconnect the L20 air conditioning control panel assembly connector.

(d) Check for pulses according to the value(s) in the table below.

Tester Connection	Wiring Color	Terminal Description	Condition	Specified Condition
L20-2 (TX+) - L20-8 (GND)	V - W-B	Rear window defogger signal	Power switch on (IG)	Pulse generation

If the result is not as specified, the air conditioning control panel assembly may have a malfunction.

DIAGNOSIS SYSTEM

1. DESCRIPTION

(a) Data of the system can be read from the Data Link Connector 3 (DLC3) of the vehicle. Therefore, when the system seems to be malfunctioning, use Techstream to check for a malfunction and repair it.

2. CHECK DLC3

(a) Check the DLC3 .

DATA LIST / ACTIVE TEST

1. ACTIVE TEST

HINT:

Using the Techstream to perform Active Tests allows relays, VSVs, actuators and other items to be operated without removing any parts. This non-intrusive functional inspection can be very useful because intermittent operation may be discovered before parts or wiring is disturbed. Performing Active Tests early in troubleshooting is one way to save diagnostic time. Data List information can be displayed while performing Active Tests.

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical / Air Conditioner / Active Test.
- (e) Perform the Active Test according to the display on the Techstream.

Air Conditioner

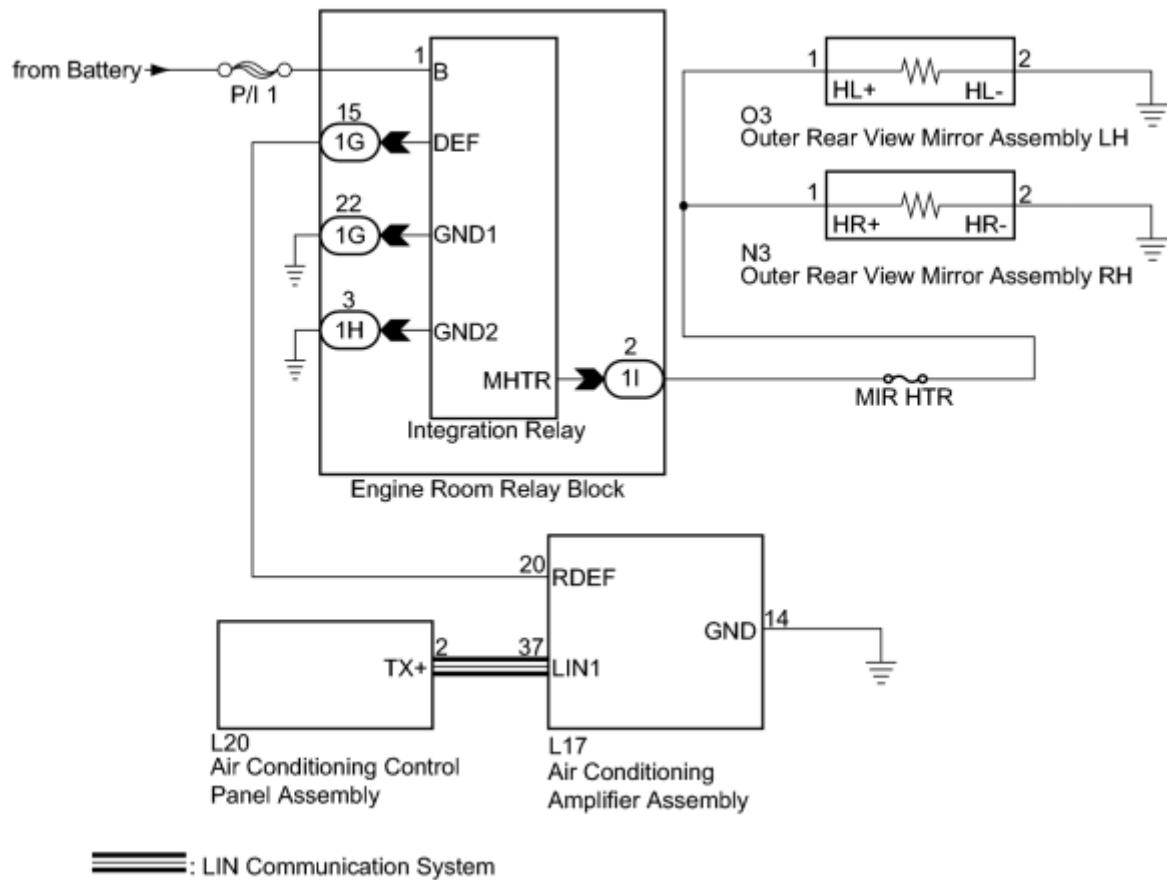
Tester Display	Test Part	Control Range	Diagnostic Note
Mirror Heater Relay	Mirror Heater	ON/OFF	-

Mirror Heater does not Operate with Rear Defogger Switch

DESCRIPTION

When the rear window defogger switch on the air conditioning control panel assembly is pressed, the operation signal is transmitted to the air conditioning amplifier assembly through a LIN communication line. When the air conditioning amplifier assembly receives the signal, it turns on the integration relay to operate the mirror heater.

WIRING DIAGRAM



INSPECTION PROCEDURE

NOTICE:

Inspect the fuses for circuits related to this system before performing the following inspection procedure.

PROCEDURE

1. PERFORM ACTIVE TEST USING TECHSTREAM

- (a) Connect the Techstream to the DLC3.
- (b) Turn the power switch on (IG).
- (c) Turn the Techstream on.
- (d) Enter the following menus: Body Electrical /Air Conditioner / Active Test.
- (e) Perform an Active Test according to the display on the Techstream.

Air Conditioner

Tester Display	Test Part	Control Range	Diagnostic Note
Mirror Heater Relay	Mirror heater	ON / OFF	-

Result:

Result	Proceed to
Mirror heater operation on both mirrors is not normal	A
Mirror heater operation on RH side mirror is not normal	B
Mirror heater operation on LH side mirror is not normal	C

 [CHECK OUTER REAR VIEW MIRROR ASSEMBLY LH](#)

 [CHECK OUTER REAR VIEW MIRROR ASSEMBLY RH](#)

A



2. CHECK DEFOGGER SYSTEM

- (a) Check the rear window defogger operation.

OK:

The rear window defogger operated normally.

 [GO TO WINDOW DEFOGGER SYSTEM](#)

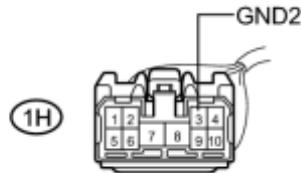
OK



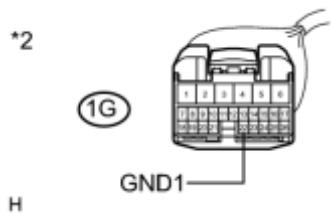
3. CHECK HARNESS AND CONNECTOR (INTEGRATION RELAY - BODY GROUND)

- (a) Disconnect the integration relay connector.

*1



*2



H

(b) Measure the resistance according to the value(s) in the table below

Standard Resistance:

Tester Connection	Condition	Specified Condition
1H-3 (GND2) - Body ground	Always	Below 1 Ω
1G-22 (GND1) - Body ground	Always	Below 1 Ω

Text in Illustration

*1	Front view of wire harness connector (to Integration Relay)
*2	Front view of wire harness connector (to Integration Relay)

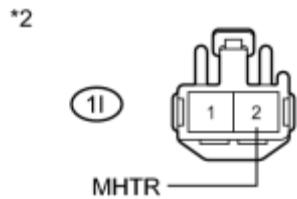
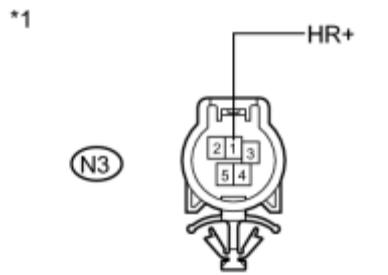
NG ➤ REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



4.	CHECK HARNESS AND CONNECTOR (OUTER REAR VIEW MIRROR ASSEMBLY RH - INTEGRATION RELAY)
----	---

(a) Disconnect the integration relay connector.



H

(b) Disconnect the outer rear view mirror assembly RH connector.

(c) Measure the resistance according to the value(s) in the table below

:

Tester Connection	Condition	Specified Condition
II-2 (MHTR) - N3-1 (HR+)	Always	Below 1 Ω
II-2 (MHTR) - Body ground	Always	10 kΩ or higher

Text in Illustration

*1	Front view of wire harness connector (to Outer Rear View Mirror Assembly RH)
*2	Front view of wire harness connector (to Integration Relay)

NG ➤ REPAIR OR REPLACE HARNESS OR CONNECTOR

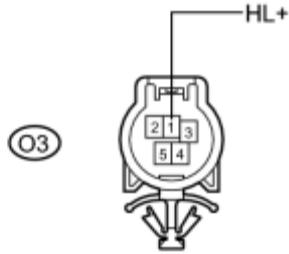
OK



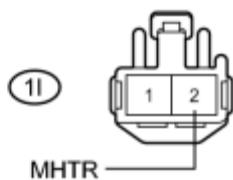
5.	CHECK HARNESS AND CONNECTOR (OUTER REAR VIEW MIRROR ASSEMBLY LH - INTEGRATION RELAY)
----	--

(a) Disconnect the integration relay connector.

*1



*2



H

(b) Disconnect the outer rear view mirror assembly LH connector.

(c) Measure the resistance according to the value(s) in the table below

:

Tester Connection	Condition	Specified Condition
II-2 (MHTR) - O3-1 (HL+)	Always	Below 1 Ω
II-2 (MHTR) - Body ground	Always	10 kΩ or higher

Text in Illustration

*1	Front view of wire harness connector (to Outer Rear View Mirror Assembly RH)
*2	Front view of wire harness connector (to Integration Relay)

NG ➤ REPAIR OR REPLACE HARNESS OR CONNECTOR

OK



6.	REPLACE INTEGRATION NO.1 RELAY
----	--------------------------------

(a) Replace the integration relay INFO.

OK



7. CHECK REAR WINDOW DEFOGGER AND MIRROR HEATER

(a) Check the mirror heater system.

OK:

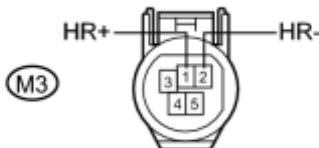
Mirror heater system is normal.

NG REPLACE AIR CONDITIONING AMPLIFIER ASSEMBLY

OK END (INTEGRATION RELAY WAS DEFECTIVE)

8. CHECK OUTER REAR VIEW MIRROR ASSEMBLY RH

*1



(a) Remove the outer mirror rear view mirror assembly RH

(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
N3-1 (HR+) - N3-2 (HR-)	25°C (77°F)	7.6 to 11.4 Ω

Text in Illustration

*1	Component without harness connected (Outer Rear View Mirror Assembly RH)
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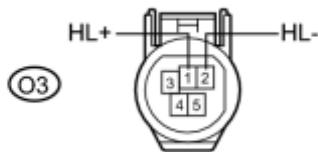
NG REPLACE OUTER REAR VIEW MIRROR ASSEMBLY RH (FRONT PASSENGER SIDE)

OK REPAIR OR REPLACE HARNESS OR CONNECTOR (INTEGRATION RELAY - OUTER REAR VIEW MIRROR ASSEMBLY RH)

9. CHECK OUTER REAR VIEW MIRROR ASSEMBLY LH

(a) Remove the outer mirror rear view mirror assembly LH

*1



(b) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

Tester Connection	Condition	Specified Condition
O3-1 (HL+) - O3-2 (HL-)	25°C (77°F)	7.6 to 11.4 Ω

Text in Illustration

*1	Component without harness connected (Outer Rear View Mirror Assembly LH)
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NG  REPLACE OUTER REAR VIEW MIRROR ASSEMBLY LH (DRIVER SIDE)

OK  **REPAIR OR REPLACE HARNESS OR CONNECTOR (INTEGRATION RELAY - OUTER REAR VIEW MIRROR ASSEMBLY LH)**