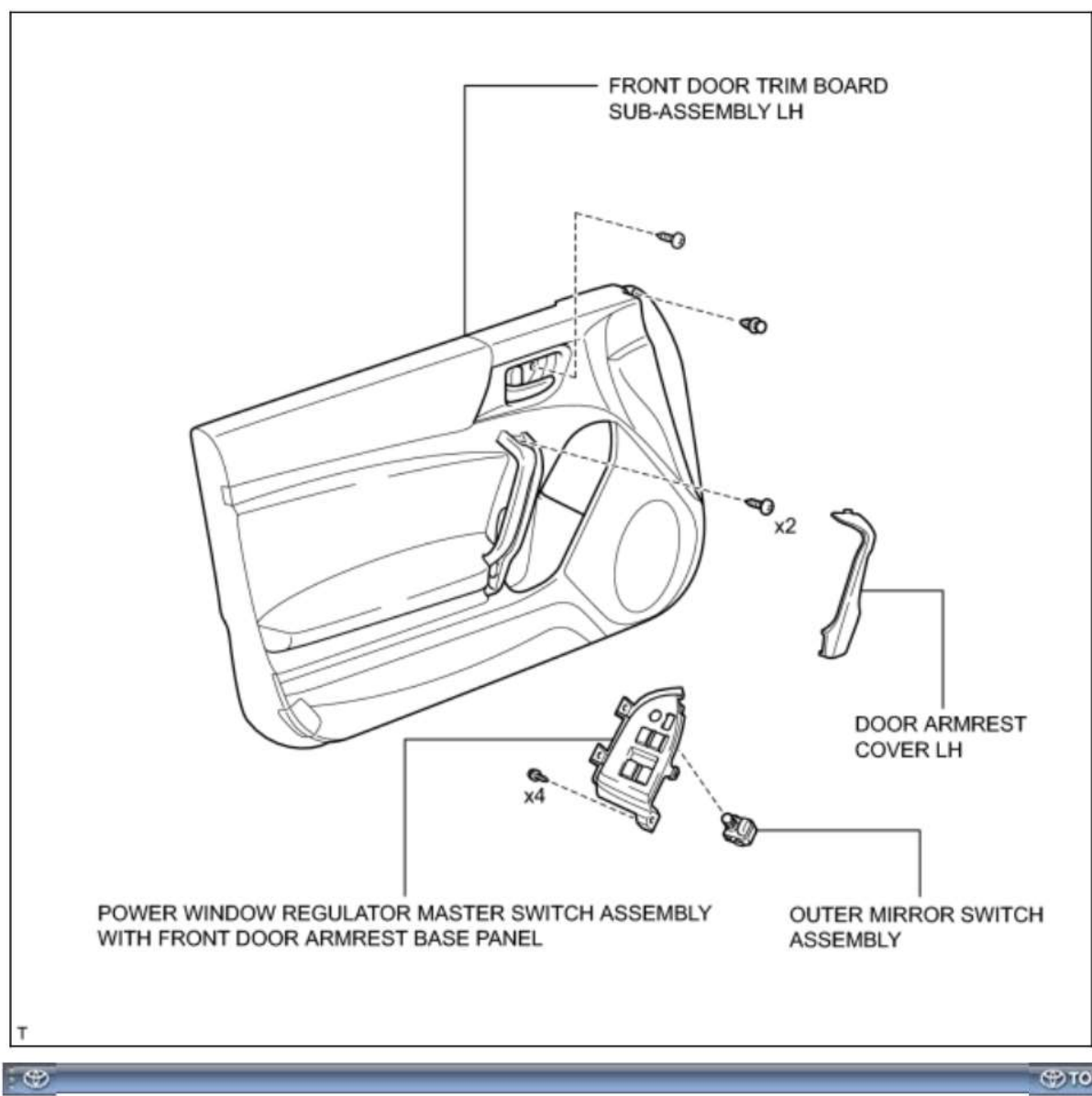


Last Modified: 3-27-2012	6.4 K	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000001PGN01TX
Title: MIRROR (EXT): OUTER MIRROR SWITCH: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



Last Modified: 3-27-2012	6.4 G	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000015DS072X
Title: MIRROR (EXT): OUTER MIRROR SWITCH: INSPECTION (2013 FR-S)		

INSPECTION

1. INSPECT OUTER MIRROR SWITCH ASSEMBLY

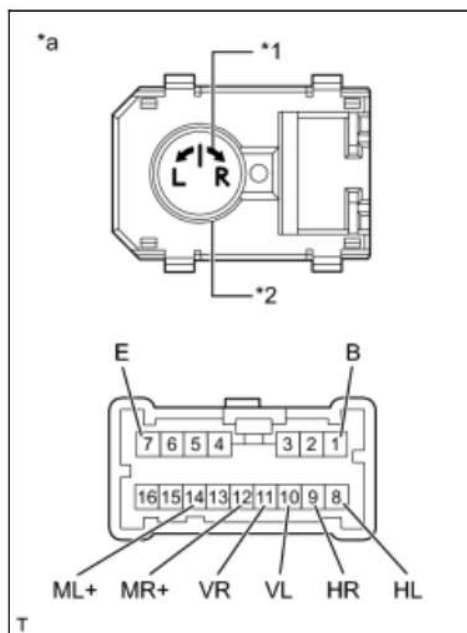
(a) Check the switch functions.

- (1) Turn the mirror select switch to the L position.
- (2) Measure the resistance according to the value(s) in the table below.

Text in Illustration

*1	Mirror Select Switch
*2	Mirror Surface Adjust Switch
*a	Component without harness connected (Outer Mirror Switch Assembly)

Standard Resistance (for left side):



TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 (B) - 14 (ML+) 10 (VL) - 7 (E)	UP	Below 1 Ω
1 (B) - 10 (VL) 14 (ML+) - 7 (E)	DOWN	Below 1 Ω
1 (B) - 8 (HL) 14 (ML+) - 7 (E)	LEFT	Below 1 Ω
1 (B) - 14 (ML+) 8 (HL) - 7 (E)	RIGHT	Below 1 Ω

(3) Turn the mirror select switch to the R position.

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

Standard Resistance (for right side):

TESTER CONNECTION	SWITCH CONDITION	SPECIFIED CONDITION
1 (B) - 12 (MR+) 11 (VR) - 7 (E)	UP	Below 1 Ω
1 (B) - 11 (VR) 12 (MR+) - 7 (E)	DOWN	Below 1 Ω
1 (B) - 9 (HR)		

12 (MR+) - 7 (E)	LEFT	Below 1 Ω
1 (B) - 12 (MR+) 9 (HR) - 7 (E)	RIGHT	Below 1 Ω

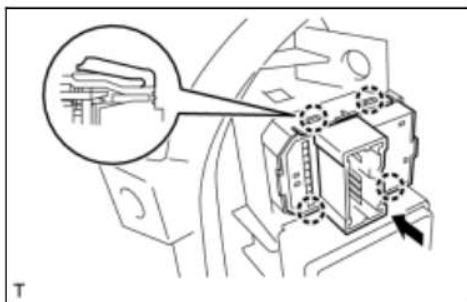
If the result is not as specified, replace the outer mirror switch assembly.



Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000003DK602SX
Title: MIRROR (EXT): OUTER MIRROR SWITCH: INSTALLATION (2013 FR-S)		

INSTALLATION

1. INSTALL OUTER MIRROR SWITCH ASSEMBLY



(a) Engage the 4 claws and install the outer mirror switch assembly.

2. INSTALL POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL [INFO](#)

3. INSTALL FRONT DOOR TRIM BOARD SUB-ASSEMBLY LH [INFO](#)

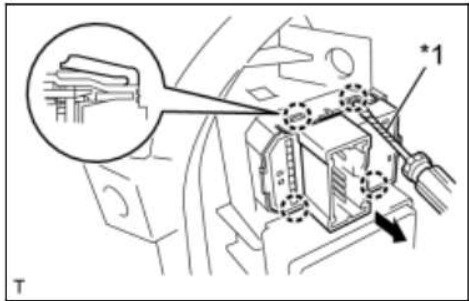
4. INSTALL DOOR ARMREST COVER LH [INFO](#)



Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000003DK802MX
Title: MIRROR (EXT): OUTER MIRROR SWITCH: REMOVAL (2013 FR-S)		

REMOVAL

1. REMOVE DOOR ARMREST COVER LH INFO
2. REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY LH INFO
3. REMOVE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY WITH FRONT DOOR ARMREST BASE PANEL INFO
4. REMOVE OUTER MIRROR SWITCH ASSEMBLY



(a) Using a screwdriver with its tip wrapped in protective tape, disengage the 4 claws and remove the outer mirror switch assembly.

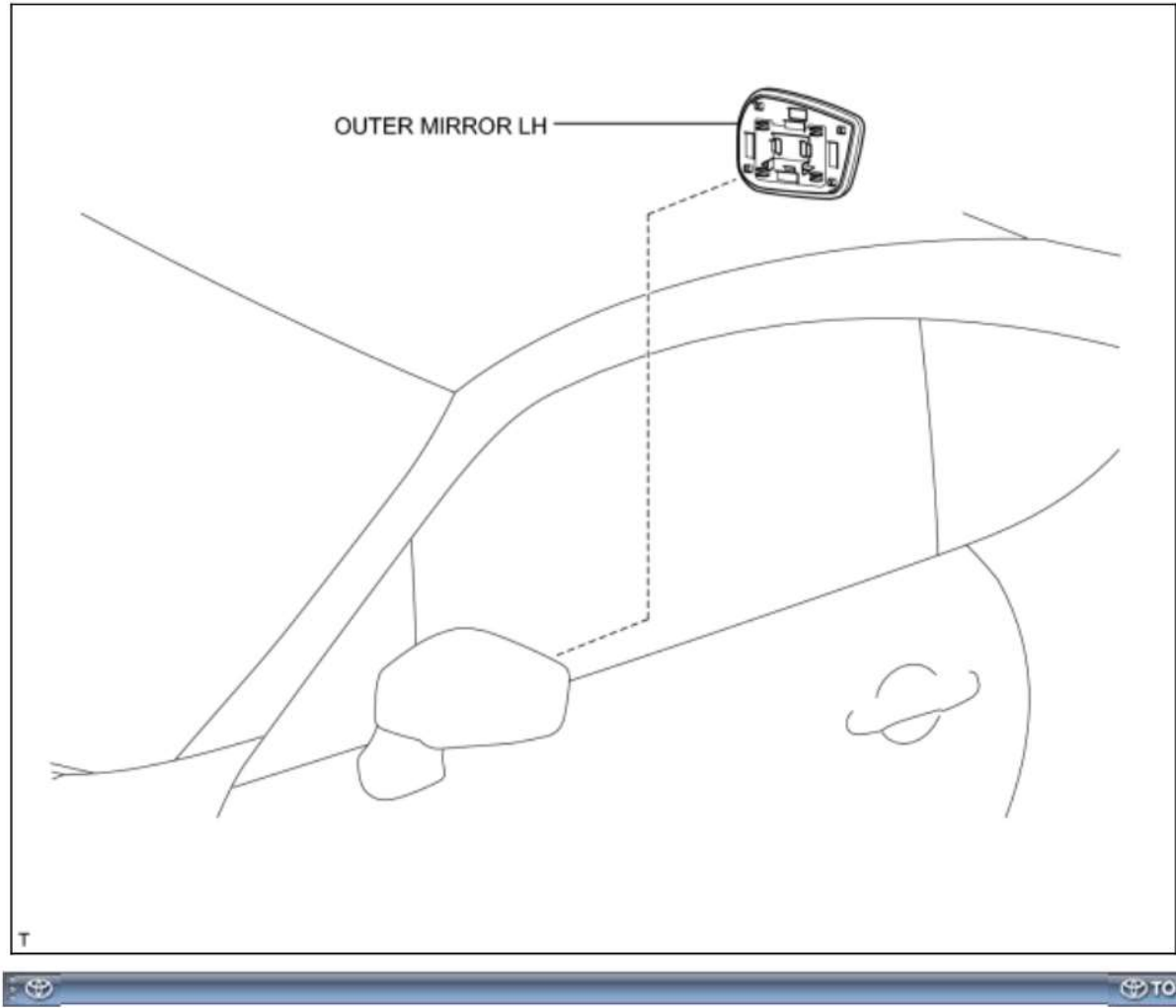
Text in Illustration

*1	Protective Tape
----	-----------------

Last Modified: 3-27-2012	6.4 K	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000001PGK03SX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR GLASS: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



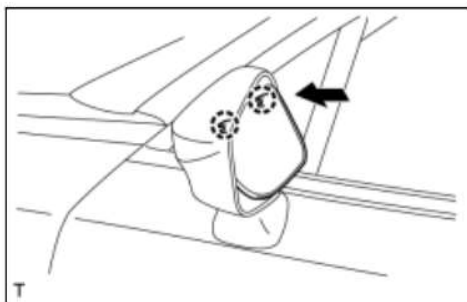
cardiagn.com

Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000003EWR01MX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR GLASS: INSTALLATION (2013 FR-S)		

INSTALLATION

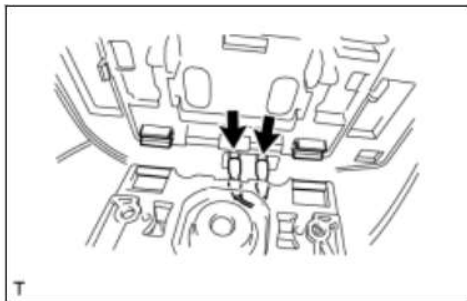
1. INSTALL OUTER MIRROR LH

(a) w/o Mirror Heater:

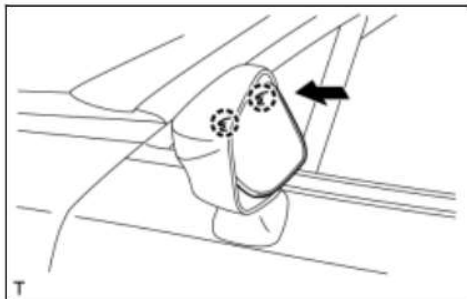


- (1) Engage the 2 claws on the upper part of the outer rear view mirror sub-assembly LH to the outer mirror LH.

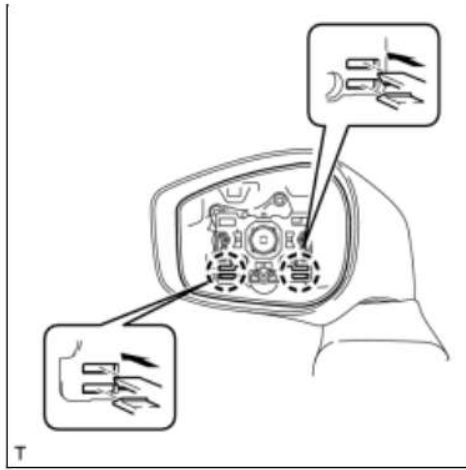
(b) w/ Mirror Heater:



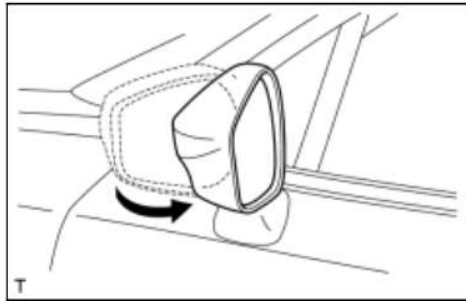
- (1) Connect the 2 connectors.



- (2) Engage the 2 claws on the upper part of the outer rear view mirror sub-assembly LH to the outer mirror LH.



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



- (d) Push the outside part of the outer rear view mirror sub-assembly LH and tilt it as show in the illustration.



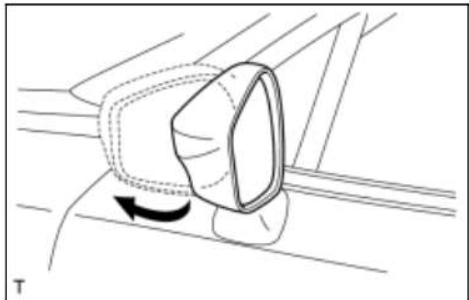
Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000001Q5703WX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR GLASS: REMOVAL (2013 FR-S)		

REMOVAL

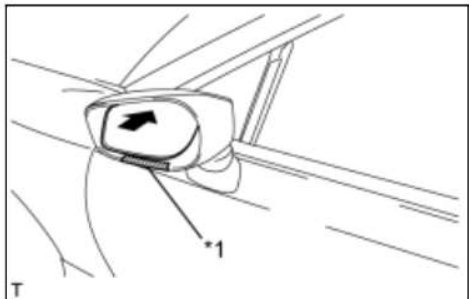
HINT:

- Use the same procedure for both the RH and LH sides.
- The following procedure is for the LH side.

1. REMOVE OUTER MIRROR LH



(a) Push the outside part of the outer rear view mirror sub-assembly LH and tilt it as show in the illustration.



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

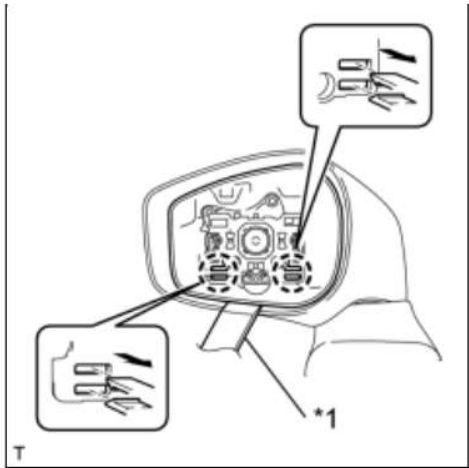
(c) Apply protective tape as shown in the illustration.

Text in Illustration

*1	Protective Tape
----	-----------------

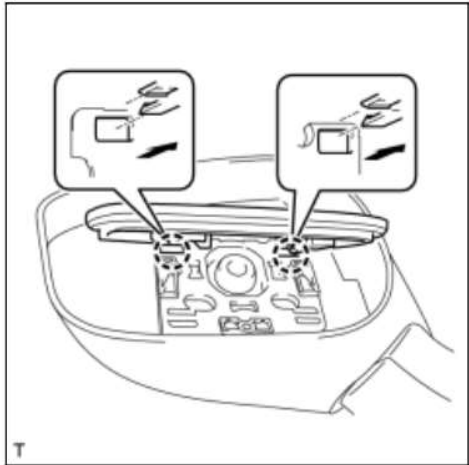
(d) Using a moulding remover, disengage the 2 claws at the lower part of the outer rear view mirror sub-assembly LH, and separate the outer mirror LH.

Text in Illustration



*1	Moulding Remover
----	------------------

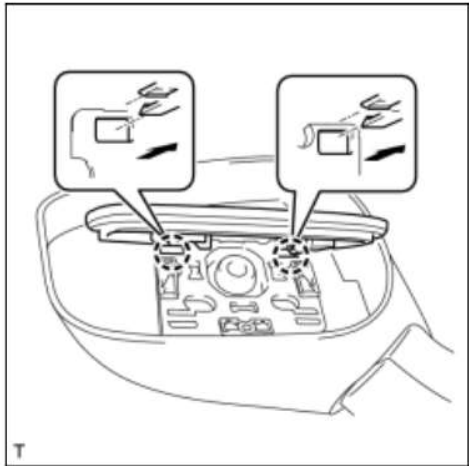
(e) w/o Mirror Heater:



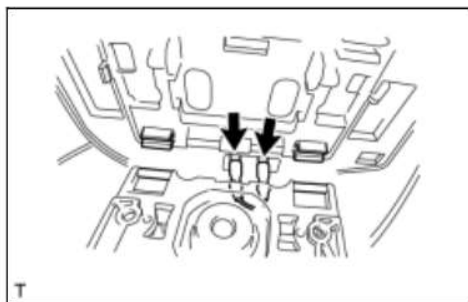
(1) Disengage the 2 claws at the upper part of the outer mirror LH.

(2) Remove the outer mirror LH.

(f) w/ Mirror Heater:



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



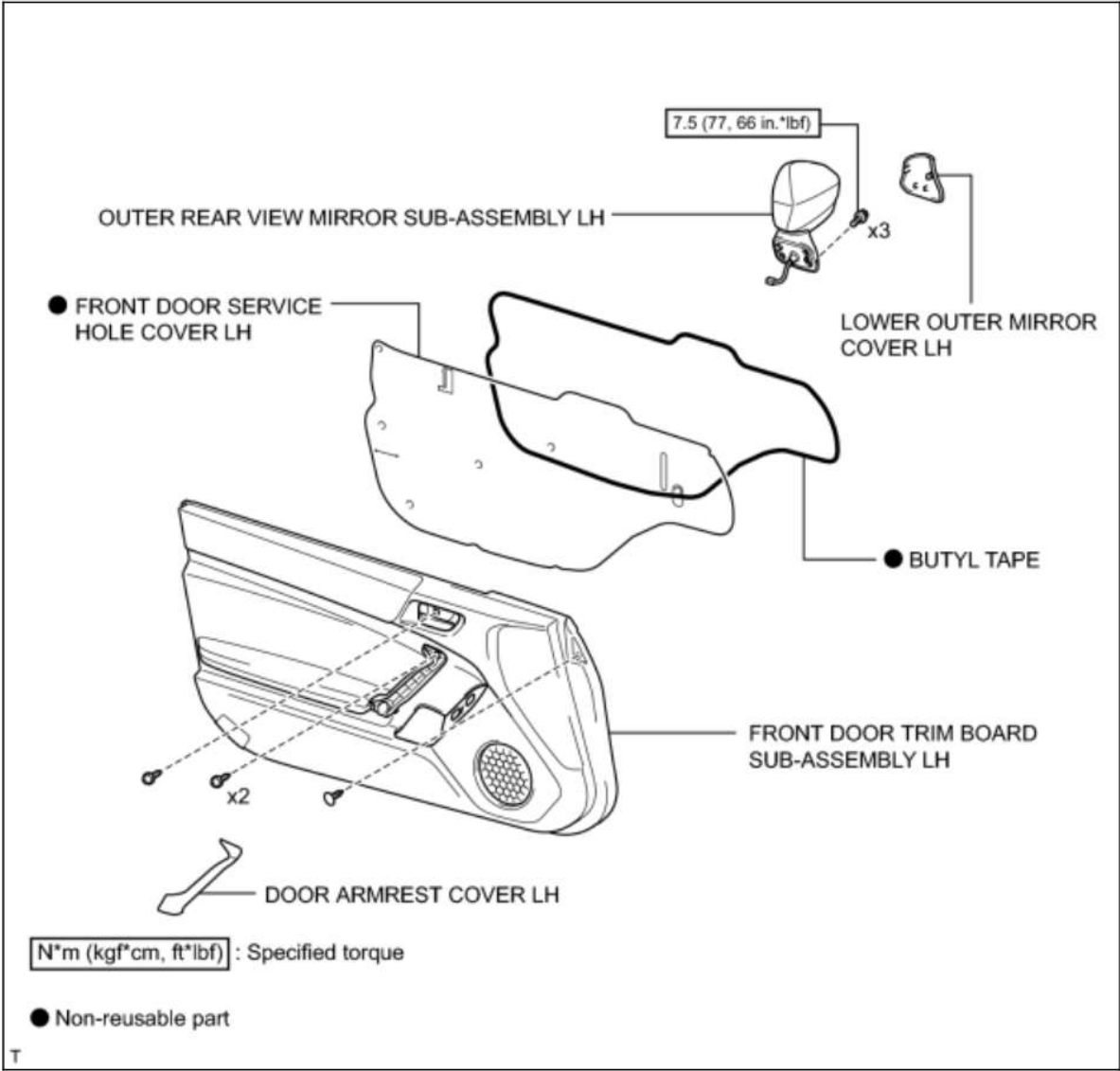
(2) Disconnect the 2 connectors and remove the outer mirror LH.



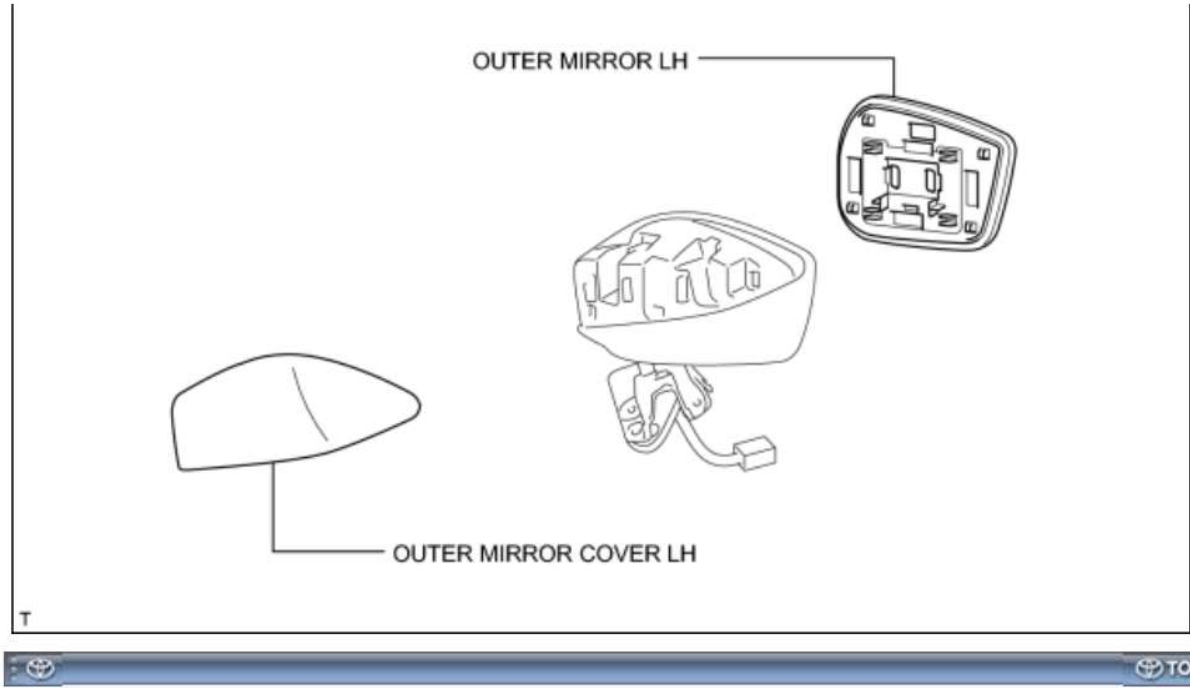
Last Modified: 3-27-2012	6.4 K	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000001PGQ04WX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR: COMPONENTS (2013 FR-S)		

COMPONENTS

ILLUSTRATION



ILLUSTRATION



Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000044KC00PX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR: DISASSEMBLY (2013 FR-S)		

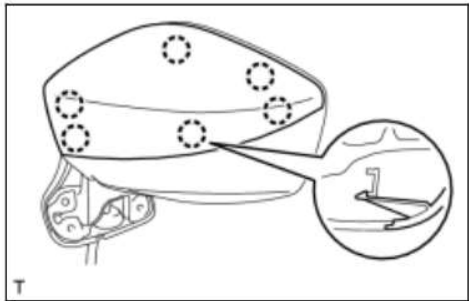
DISASSEMBLY

HINT:

- Use the same procedure for both the RH and LH sides.
- The following procedure is for the LH side.

1. REMOVE OUTER MIRROR LH INFO

2. REMOVE OUTER MIRROR COVER LH



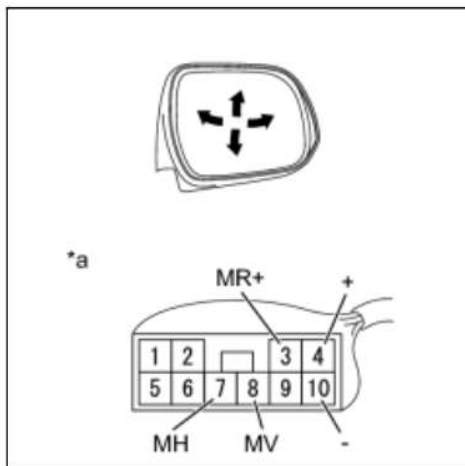
(a) Disengage the 6 claws and remove the outer mirror cover LH.

Last Modified: 3-27-2012	6.4 G	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000014YH04VX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR: INSPECTION (2013 FR-S)		

INSPECTION

1. INSPECT OUTER REAR VIEW MIRROR SUB-ASSEMBLY RH

- (a) Check the operation of the mirror surface.



- (1) Disconnect the outer rear view mirror sub-assembly RH connector.

- (2) Apply battery voltage and check the operation of the mirror.

OK:

MEASUREMENT CONDITION	SPECIFIED CONDITION
Battery positive (+) → Terminal 3 (MR+) Battery negative (-) → Terminal 8 (MV)	Turns upward
Battery positive (+) → Terminal 8 (MV) Battery negative (-) → Terminal 3 (MR+)	Turns downward
Battery positive (+) → Terminal 3 (MR+) Battery negative (-) → Terminal 7 (MH)	Turns right
Battery positive (+) → Terminal 7 (MH) Battery negative (-) → Terminal 3 (MR+)	Turns left

Text in Illustration

*a	Component without harness connected (Outer Rear View Mirror Sub-assembly RH)
----	---

If the result is not as specified, replace the outer rear view mirror sub-assembly RH.

- (b) Check the operation of the mirror heater (w/ Mirror Heater).

- (1) Disconnect the outer rear view mirror sub-assembly RH connector.

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

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 (+) - 10 (-)	25°C (75°F)	9.6 to 14.4 Ω

If the result is not as specified, replace the outer rear view mirror sub-assembly RH.

- (2) Connect the cable from the positive (+) terminal to terminal 4 (+) and the negative battery (-) terminal to terminal 10 (-), then check that the mirror becomes warm.

HINT:

It takes a short time for the mirror to become warm.

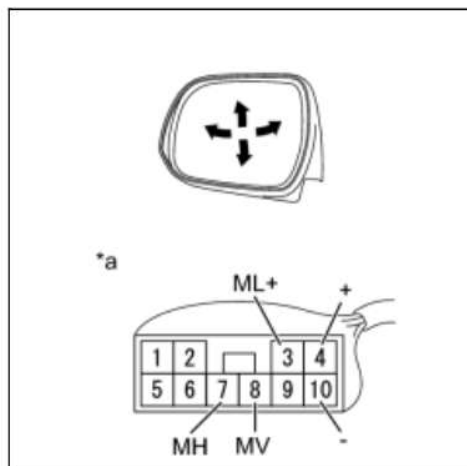
OK:

Mirror becomes warm.

If the result is not as specified, replace the outer rear view mirror sub-assembly RH.

2. INSPECT OUTER REAR VIEW MIRROR SUB-ASSEMBLY LH

- (a) Check the operation of the mirror surface.



- (1) Disconnect the outer rear view mirror sub-assembly LH connector.

- (2) Apply battery voltage and check the operation of the mirror.

OK:

MEASUREMENT CONDITION	SPECIFIED CONDITION
Battery positive (+) → Terminal 3 (ML+) Battery negative (-) → Terminal 8 (MV)	Turns upward
Battery positive (+) → Terminal 8 (MV) Battery negative (-) → Terminal 3 (ML+)	Turns downward
Battery positive (+) → Terminal 7 (MH) Battery negative (-) → Terminal 3 (ML+)	Turns left
Battery positive (+) → Terminal 3 (ML+)	

Battery negative (-) → Terminal 7 (MH)	Turns right
--	-------------

Text in Illustration

*a	Component without harness connected (Outer Rear View Mirror Sub-assembly LH)
----	---

If the result is not as specified, replace the outer rear view mirror sub-assembly LH.

- (b) Check the operation of the mirror heater (w/ Mirror Heater).
- (1) Disconnect the outer rear view mirror sub-assembly LH connector.
 - (2) Measure the resistance according to the value(s) in the table below.

Standard Resistance:

TESTER CONNECTION	CONDITION	SPECIFIED CONDITION
4 (+) - 10(-)	25°C (75°F)	9.6 to 14.4 Ω

If the result is not as specified, replace the outer rear view mirror sub-assembly LH.

- (3) Connect the cable from the positive (+) terminal to terminal 4 (+) and the negative battery (-) terminal to terminal 10 (-), then check that the mirror becomes warm.

HINT:

It takes a short time for the mirror to become warm.

OK:
Mirror becomes warm.

If the result is not as specified, replace the outer rear view mirror sub-assembly LH.



Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000001PGP09IX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR: INSTALLATION (2013 FR-S)		

INSTALLATION

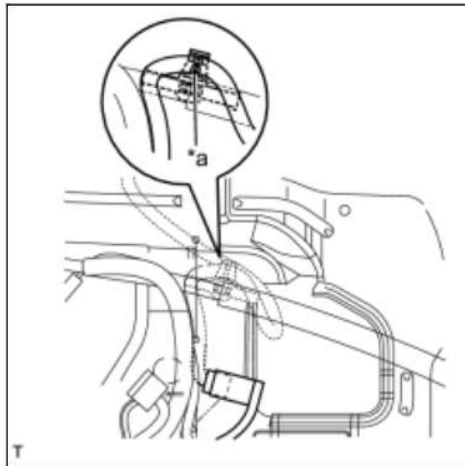
HINT:

- Use the same procedure for both the RH and LH sides.
- The following procedure is for the LH side.

1. INSTALL OUTER REAR VIEW MIRROR SUB-ASSEMBLY LH

- Retract the outer rear view mirror sub-assembly LH.
- Install the outer rear view mirror sub-assembly LH with the 3 bolts.

Torque: 7.5 N·m (77 kgf·cm, 6ft·lbf)



- Align the matchmark on the wire harness with the harness clip on the body side, and engage the wire harness.

*a	Matchmark
----	-----------

2. INSTALL LOWER OUTER MIRROR COVER LH

- Engage the 5 claws and install the lower outer mirror cover LH.

3. INSTALL FRONT DOOR SERVICE HOLE COVER LH INFO

4. INSTALL FRONT DOOR TRIM BOARD SUB-ASSEMBLY LH INFO

5. INSTALL DOOR ARMREST COVER LH INFO



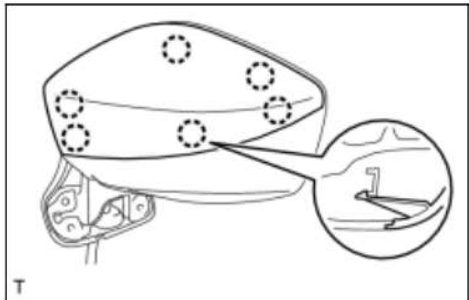
Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000044KD00PX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR: REASSEMBLY (2013 FR-S)		

REASSEMBLY

HINT:

- Use the same procedure for both the RH and LH sides.
- The following procedure is for the LH side.

1. INSTALL OUTER MIRROR COVER LH



(a) Engage the 6 claws to install the outer mirror cover LH.

2. INSTALL OUTER MIRROR LH

INFO



Last Modified: 3-27-2012	6.4 A	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM000001PGR09CX
Title: MIRROR (EXT): OUTER REAR VIEW MIRROR: REMOVAL (2013 FR-S)		

REMOVAL

HINT:

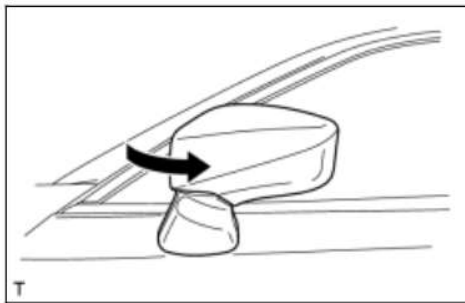
- Use the same procedure for both the RH and LH sides.
- The following procedure is for the LH side.

1. REMOVE DOOR ARMREST COVER LH INFO

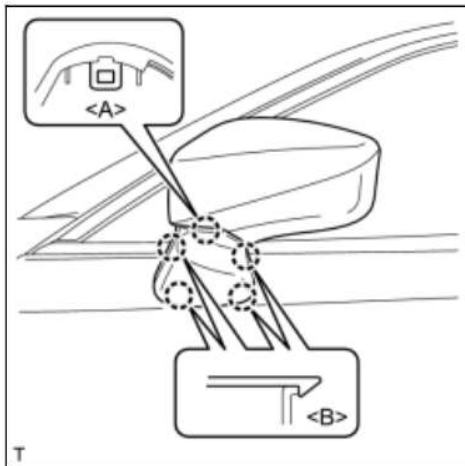
2. REMOVE FRONT DOOR TRIM BOARD SUB-ASSEMBLY LH INFO

3. REMOVE FRONT DOOR SERVICE HOLE COVER LH INFO

4. REMOVE LOWER OUTER MIRROR COVER LH



(a) Retract the outer rear view mirror sub-assembly LH.

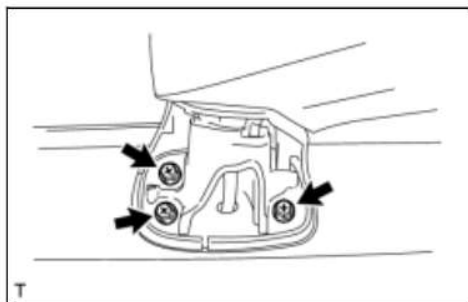


(b) Using a screwdriver with its tip wrapped in protective tape, disengage the claw <A>.

(c) Disengage the 4 claws and remove the lower outer mirror cover LH.

5. REMOVE OUTER REAR VIEW MIRROR SUB-ASSEMBLY LH

(a) Disengage the wire harness clip.



(b) Remove the 3 bolts and the outer rear view mirror sub-assembly LH.



Last Modified: 3-27-2012	6.4 D	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000030W901VX
Title: MIRROR (EXT): POWER MIRROR CONTROL SYSTEM: OPERATION CHECK (2013 FR-S)		

OPERATION CHECK

1. CHECK OUTER MIRROR SWITCH OPERATION

- (a) Turn the ignition switch to ACC.
- (b) With the mirror master switch set to L, check that the mirror surface moves up, down, left and right normally.
- (c) With the mirror master switch set to R, check that the mirror surface moves up, down, left and right normally.

2. CHECK MIRROR HEATER

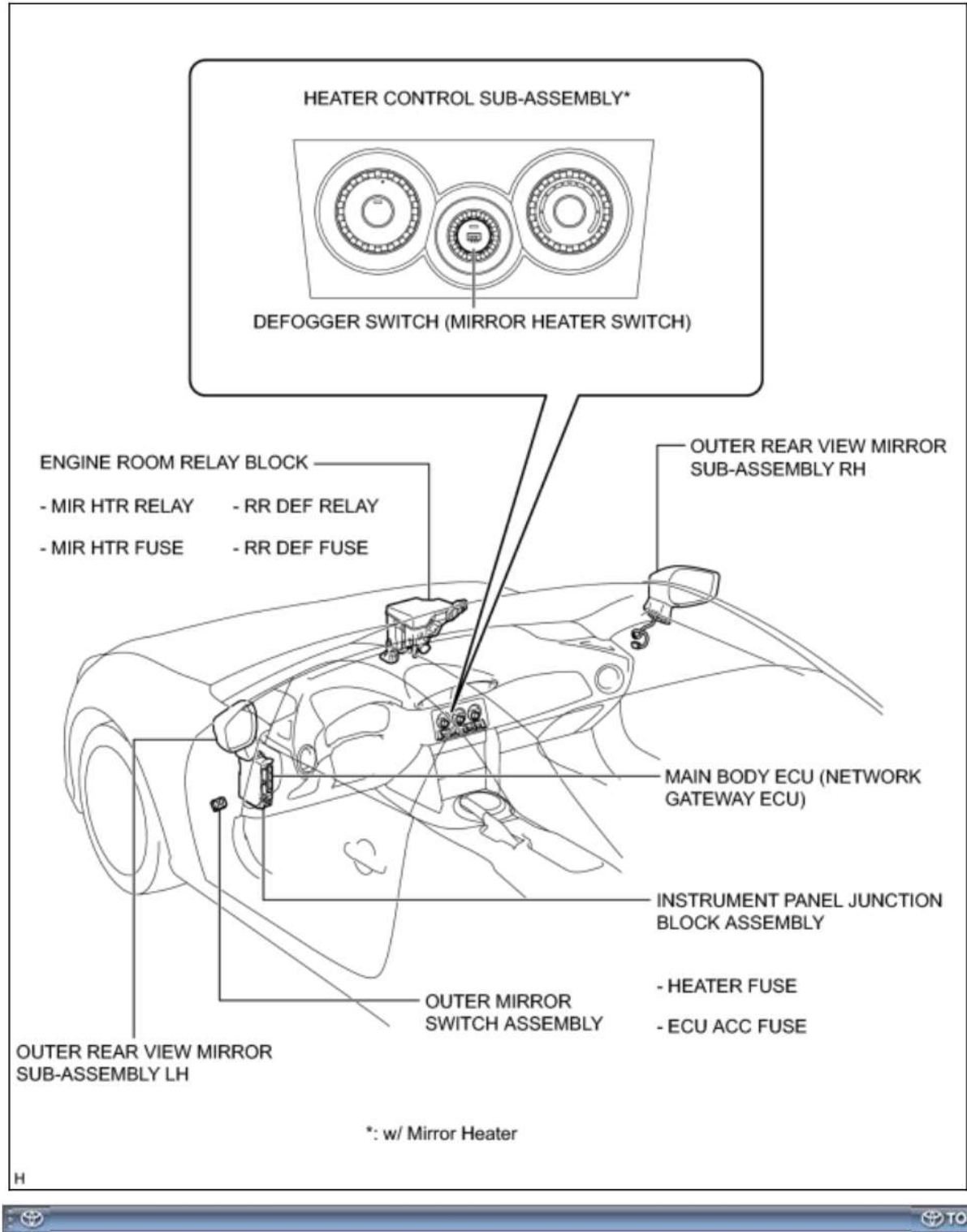
- (a) Turn the ignition switch to ON.
- (b) Check that pressing the mirror heater switch illuminates the indicator and warms the mirror surface.
- (c) Check that after approximately 15 minutes, the indicator light turns off and the mirror heater deactivates.



Last Modified: 3-27-2012	6.4 R	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000030W7012X
Title: MIRROR (EXT): POWER MIRROR CONTROL SYSTEM: PARTS LOCATION (2013 FR-S)		

PARTS LOCATION

ILLUSTRATION



Last Modified: 3-27-2012	6.4 T	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000030W8018X
Title: MIRROR (EXT): POWER MIRROR CONTROL SYSTEM: PROBLEM SYMPTOMS TABLE (2013 FR-S)		

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
Power retractable mirror does not operate*1	ACC fuse	-
	Outer mirror switch assembly	INFO
	Outer rear view mirror assembly LH	INFO
	Outer rear view mirror assembly RH	INFO
	Wire harness or connector	-
Mirror heater does not operate with rear defogger switch*2	MIR HTR fuse	-
	MIR HTR relay	-
	Outer rear view mirror assembly LH	INFO
	Outer rear view mirror assembly RH	INFO
	Wire harness or connector	-
	Window defogger system	INFO

*1: w/ Retract Mirror

*2: w/ Mirror Heater



TOYOTA

Last Modified: 3-27-2012	6.4 U	From: 201203
Model Year: 2013	Model: FR-S	Doc ID: RM0000030WA017X
Title: MIRROR (EXT): POWER MIRROR CONTROL SYSTEM: SYSTEM DIAGRAM (2013 FR-S)		

SYSTEM DIAGRAM

