

**Toyota Rav4 2017**

**Frameless® EC Mirror w/ Compass & HomeLink®**



**Part Number: 00016-05464**

**Accessory Code: ME4000**

**Note: This accessory requires replacement of two A-Pillar clips 62217-52120 to complete the installation for this vehicle.**

**Conflicts**

Note: **Factory HomeLink**

**Kit Contents**

Item #	Quantity Req'd.	Description
1	1	Frameless® Mirror w/Compass & HomeLink®
2	1	Wire Harness Cover
5	1	Main Power Wire Harness

**Hardware Bag Contents**

Item #	Quantity Req'd.	Description
1	3	Red T-Taps
2	10	Wire Ties
3	6	Foam Tapes
4	1	Quick Reference Guide

**Additional Items Required For Installation**

Item #	Quantity Req'd.	Description
1	2	A-Pillar Clip (62217-52120)

**Recommended Tools**

<b>Safety Tools</b>	
Safety Glasses	
<b>Special Tools</b>	
<b>Installation Tools</b>	
Needle Nose Pliers	10mm Socket
Screw Gun	Torque Wrench-48inch lbs & 67inch lbs. (Car Battery)
T20 Torx Bit/Driver	Ratchet/Driver
#2 Phillips Bit	Torque Wrench-15.5 inch lbs
Nylon Tool	
Side cuts	
Dark Towel/ Cloth	
<b>Special Chemicals</b>	

**Service Part Numbers**

Part Description	Part Number
Frameless® EC Mirror w/Compass and HomeLink®	00016-05464-01
Main Power Wire Harness	00016-05464-02
A-Pillar Clip	62217-52120

**General Applicability**

All models except factory installed Homelink

**Recommended Sequence of Application**

Item #	Accessory
1	
2	
3	

**Legend**

- STOP:** Damage to the vehicle may occur. Do not proceed until process has been complied with.
- OPERATOR SAFETY:** Use caution to avoid risk of injury.
- CAUTION:** A process that must be carefully observed in order to reduce the risk of damage to the accessory/vehicle and to ensure a quality installation.
- TOOLS & EQUIPMENT:** Used in Figures calls out the specific tools and equipment recommended for this process.
- REVISION MARK:** This mark highlights a change in installation with respect to previous issue.
- SAFETY TORQUE:** This mark indicates that torque is related to safety.

**SPECIAL NOTE: Installation Sequences**

After TMS and Safety mandated preparatory steps have been taken, the installation sequence is the suggested method for completing the accessory installation. In some instances the suggested sequence is written for one associate to install and in others the sequence is given as part of a team accessory installation. Unless otherwise stated in the document, the associates may perform the installation steps in any order to make the installation as efficient as possible while maintaining consistent quality.

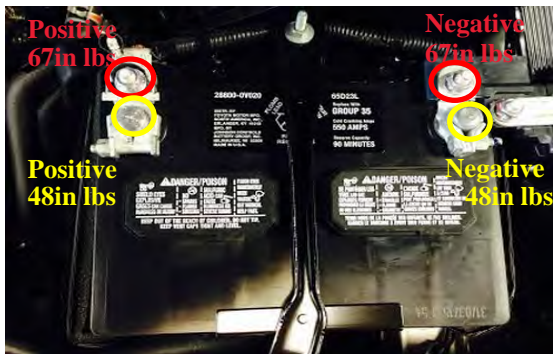
Care must be taken when installing this accessory to ensure damage does not occur to the vehicle. The installation of this accessory should follow approved guidelines to ensure a quality installation. These guidelines can be found in the “Accessory Installation Practices” document.

This document covers such items as:

- \* Vehicle Protection (use of covers & blankets, cleaning chemicals, etc.).
- \* Safety (eye protection, rechecking torque procedure, etc.).
- \* Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- \* Electrical Components Disassembly/Reassembly (battery disconnection, connector removal, etc.).



## 1. Battery Preparation

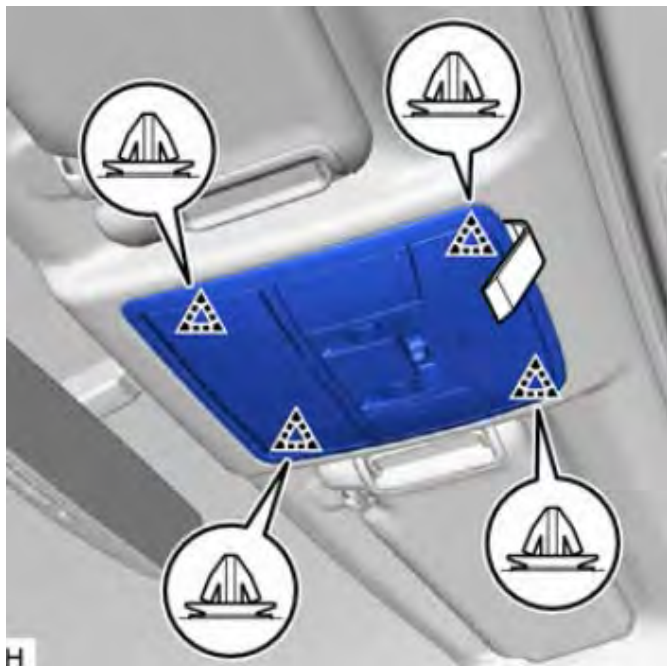


**Option 1:** If the battery clamp nut cannot be accessed to set torque to the recommended specification without removing additional panels & /or other components. You may change (reverse the direction) the negative battery clamp bolt & nut. Battery terminal must have torque set to factory specification. **CAUTION:** Do not touch the positive terminal. Re-torque to 48in lbs.

**Option 2:** Removing the 12mm nut from the positive or negative terminal junction. When re-tightening the torque specification is 67in lbs.

**NOTE:** It is recommended to use Option 1 when a lead wire is not being installed. However Option 2 is to be used when a lead wire is being added to the positive side, or anytime the negative side 12mm nut is being removed, re-torque both to 67in lbs.

**NOTE:** If removal of the positive battery terminal 12mm nut is required to install a lead wire, the negative battery terminal must be disconnected first to disable the electrical system. The positive battery or terminal should never be disconnected unless the negative battery terminal is first removed & waiting 90 seconds for the SRS system to power down.



H  
Figure 2

2. Detach the 4 clips. Disconnect the connector to remove the map light assembly. See figure 2.

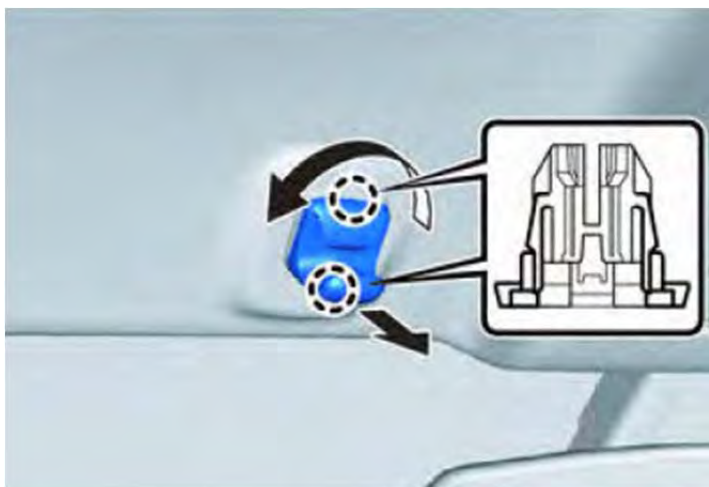


Figure 3

3. Remove the driver side visor holders. Turn the holder counter clockwise approximately 45° and pull it as shown in the illustration. Detach the 2 claws and remove the visor holder. See figure 3.



4. Pull the upper part of the front A-Pillar garnish LH toward the inside of the cabin and detach the 2 front A-Pillar garnish clips. Turn the ends of the 2 front A-Pillar garnish clips 90° with needle-nose pliers and disconnect them from the front A-Pillar garnish LH. Remove the A-Pillar garnish clip from the A-Pillar. The clips CAN NOT be reused. DESTROY and DISPOSE of both clips. See figure 4.



**NOTE: Install new A-Pillar garnish clips when replacing A-Pillar garnish at the end of installation. A-Pillar clips 62217-52120 are not provided in the mirror kit. These items must be ordered separately. Two clips are required.**

Figure 4

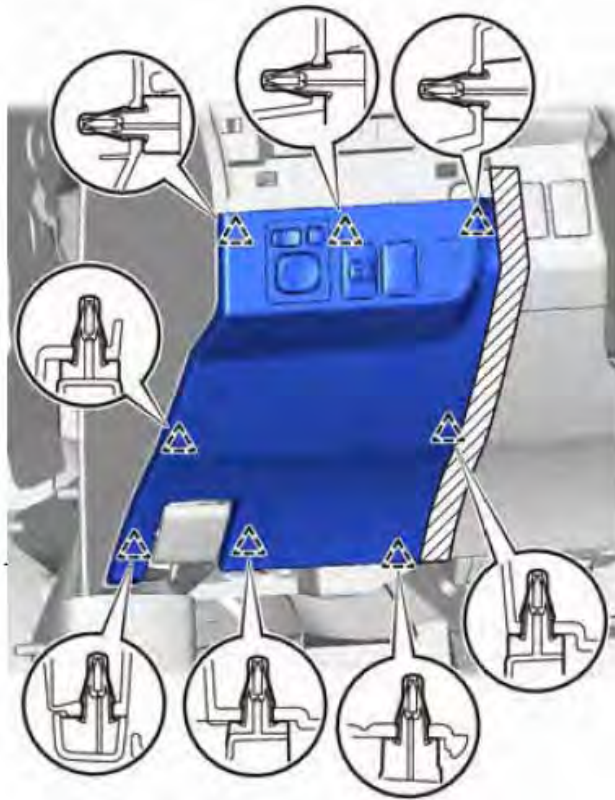
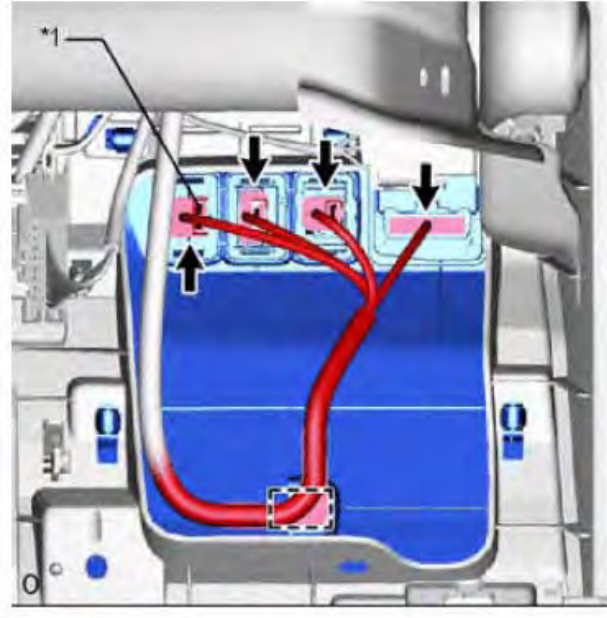


Figure 5a

5. Detach the 8 clips and remove the fuse box opening cover. Disconnect each connector and detach the wire harness clamp. See figure 5a and figure 5b.



\*1 w/ Blind Spot Monitor

Figure 5b



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Figure 6a

6. Remove factory mirror. Pinch the cover and detach the 2 claws. Then remove the cover. Push the lever, and then slide and remove the inner rear view mirror. See figure 6a and figure 6b.

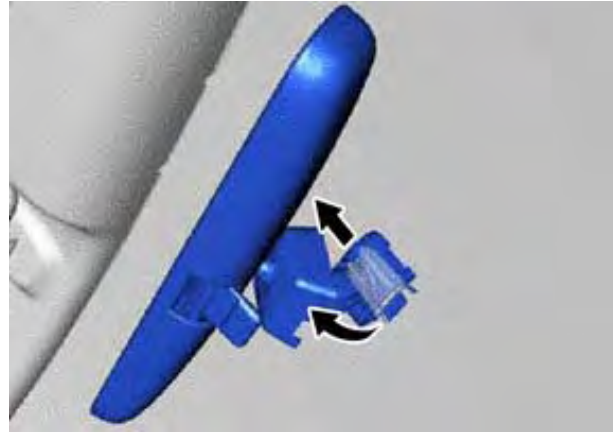
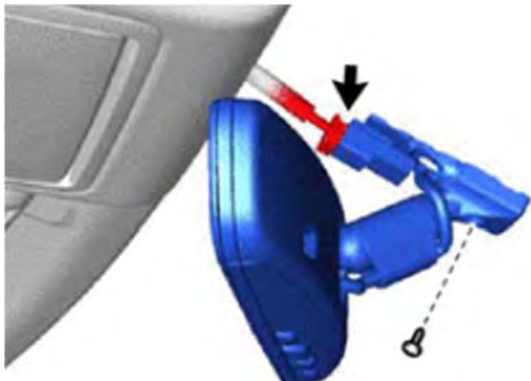


Figure 6b



H

Figure 6c

**Replacing EC mirror with Frameless® EC Mirror w/ Compass & HomeLink®.**

Remove the factory ec mirror cover. Disconnect the connector. Using a T20 "TORX" bit, remove the screw and inner rear view mirror assembly. See figure 6c.

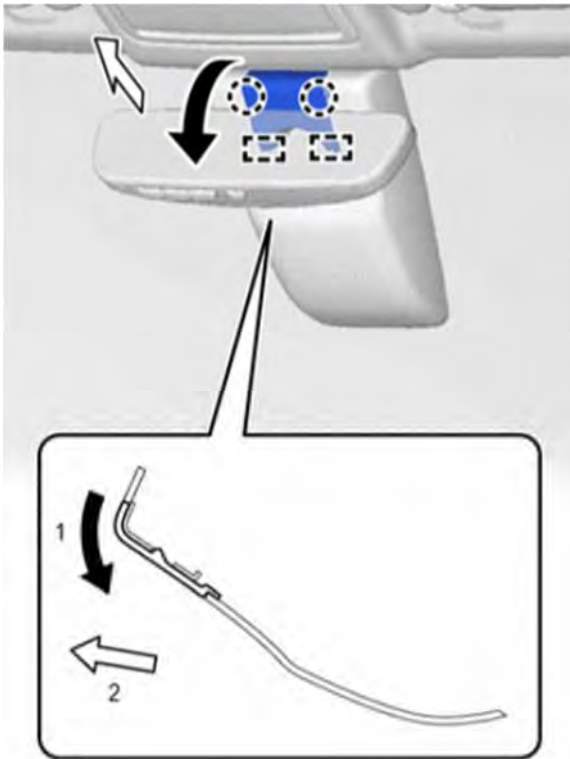


Figure 6d

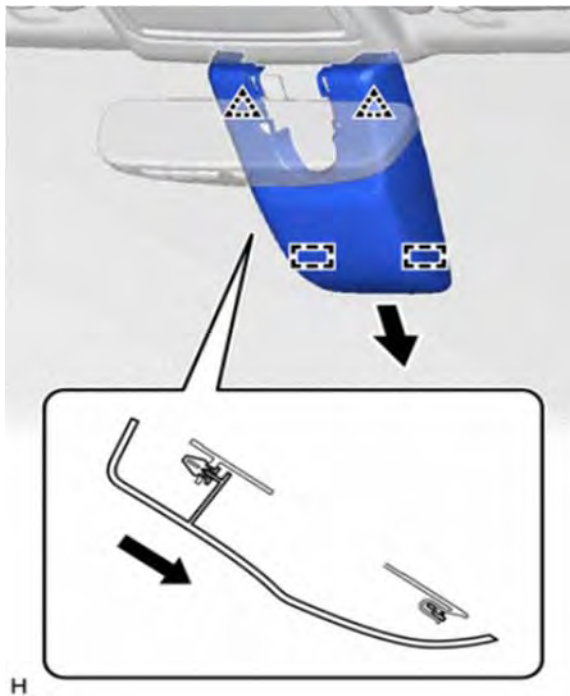


Figure 6e

**Vehicles Equipped with Safety Sense (LDS) System- Cover Removal**

Detach the 2 claws and 2 guides and remove the No. 2 forward recognition cover as shown in the illustration. See figure 6d.

**NOTICE:** If these claws are detached separately, they may break. Detach the claws simultaneously.

Detach the 2 clips and 2 guides and remove the No. 1 forward recognition cover as shown in the illustration. See figure 6e.

**NOTICE:** Push the cover while keeping it parallel with the surface of the glass so as not to damage the clips and guides.



**Note: Remove fingerprints, smudges, dirt, etc. from mirror and windshield with glass cleaner.**

Figure 7a

7. Mount the Frameless® EC Mirror w/Compass in reverse of original factory mirror removal. Slide and attach the rearview mirror assembly and tighten mirror set screw with a T20 torx bit or driver. DO NOT over tighten screw. See figure 7a and 7b.

**Torque: 15.5 in.\*lbf**

**STOP Do not use power tools to tighten screw. Hands tighten only.**

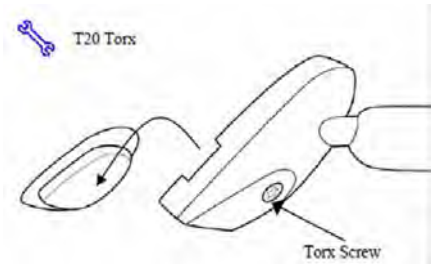


Figure 7b



Figure 8

8. Route the mirror harness to overhead console opening using the precut notches on the front of the headliner. See figure 8.





Figure 9a

9. Install the wire harness cover over the wire harness. Seat the bottom of the cover securely to base of the mirror. Extend the top of the cover fully into headliner. See figure 9a.

**Note: Vehicles with Pre-Collision System (Safety Sense) will not require the wire harness cover. Follow the instructions below to install the Pre-Collision System Cover.**

**Install Pre-Collision Cover.**

Attach the 2 clips and 2 guides to install the No. 1 forward recognition cover as shown in the illustration. See figure 9b.

Attach the 2 guides and 2 claws to install the No. 2 forward recognition cover as shown in the illustration. See figure 9c.

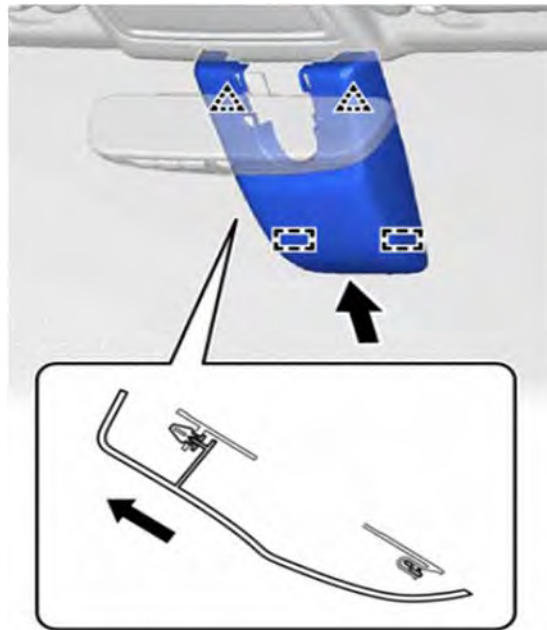


Figure 9b

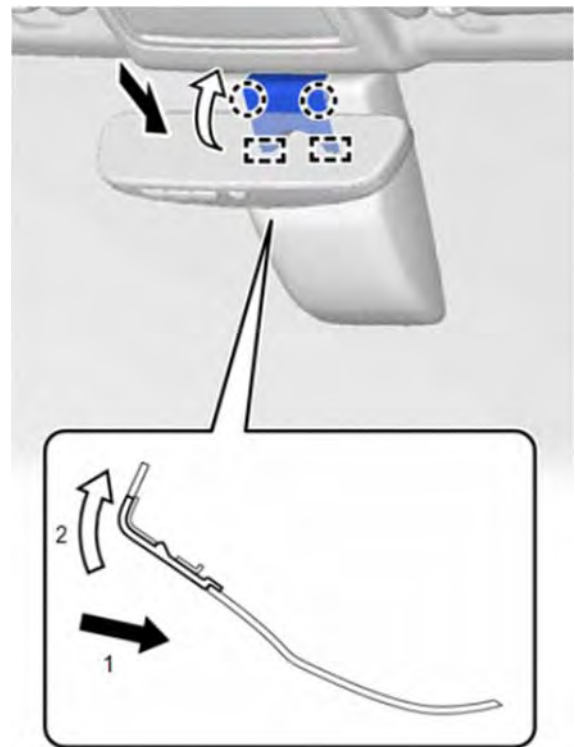
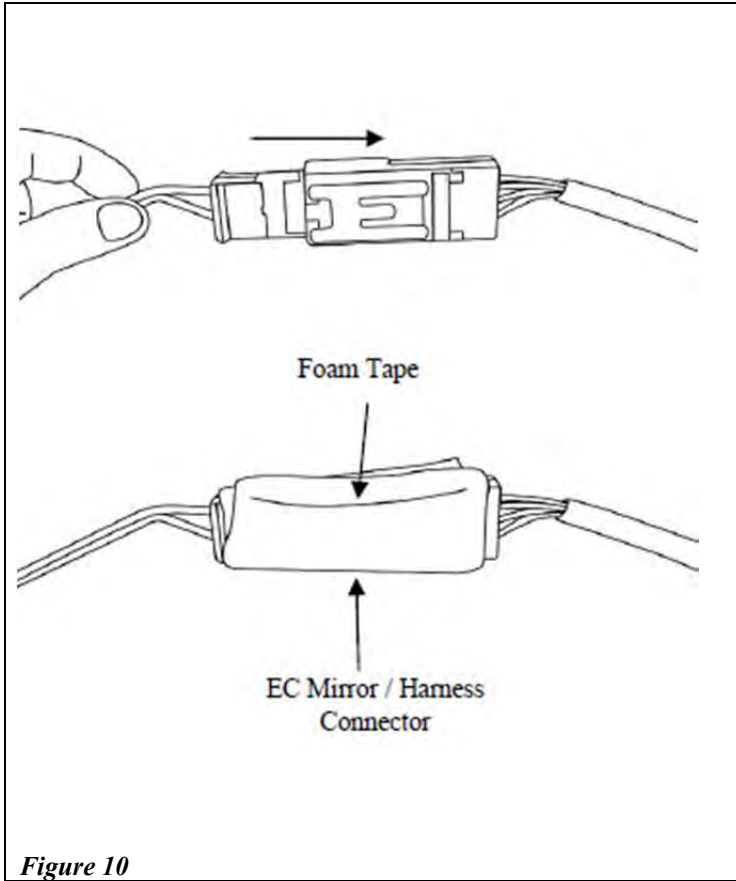


Figure 9c



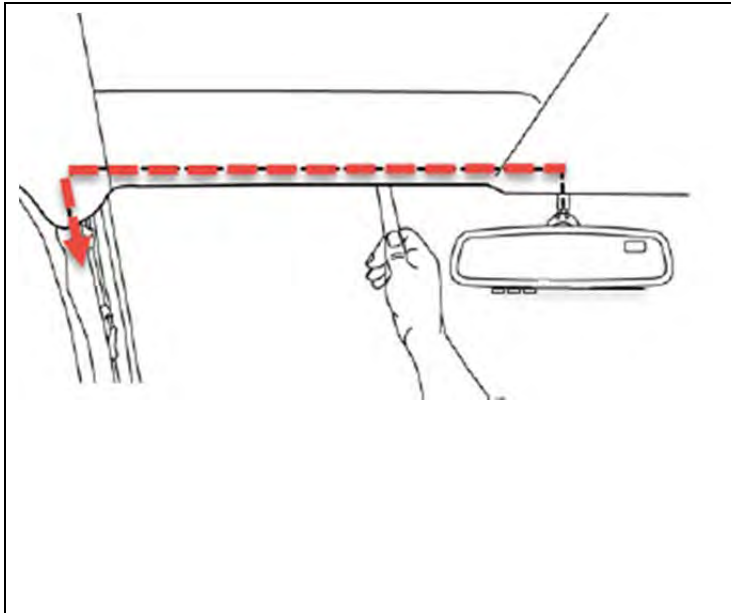
10. Connect the mirror harness to the mirror main power harness. Make sure both connectors are fully engaged. Wrap foam tape around connectors. See figure 10.

Figure 10



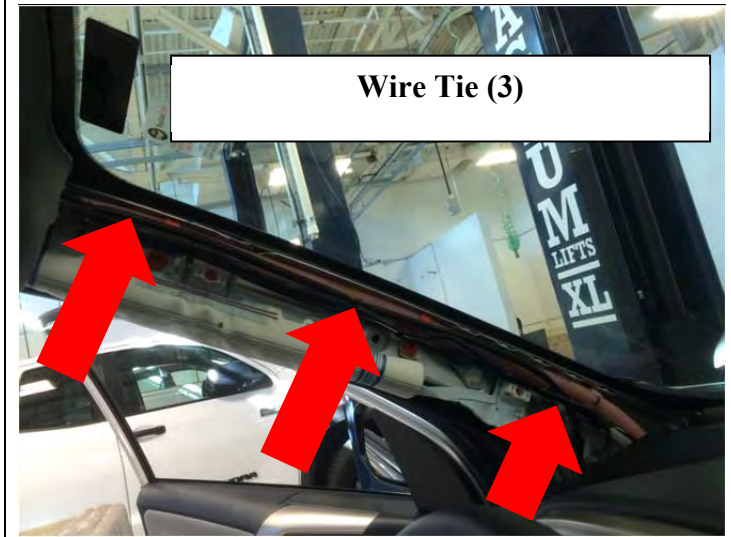
11. Secure the harness to the front center of the headliner with one (1) piece of foam tape. See figure 11.

Figure 11



12. Route mirror main power harness along front edge of headliner towards the LH vehicle A-Pillar. See figure 12.

Figure 12



13. Route the mirror harness down to the bottom of the Front LH pillar. Wire tie the harness to the vehicle OE harness as shown using (3) wire ties. If equipped with a sunroof, be sure not to secure mirror harness to sunroof drain tube. See figure 13.

Figure 13

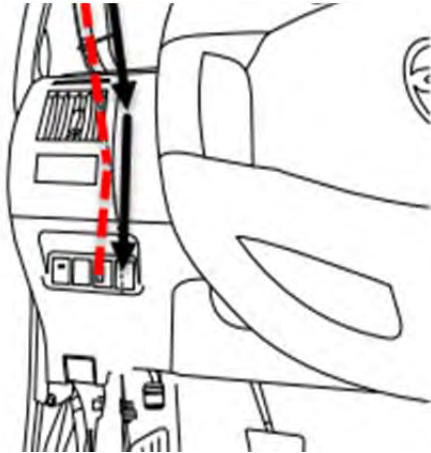


Figure 14

14. Route the mirror harness behind the dash to the outside mirror remote switch. See figure 14.

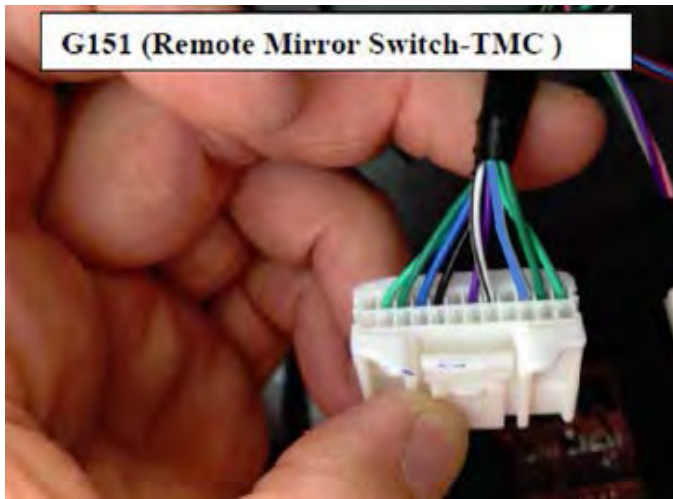
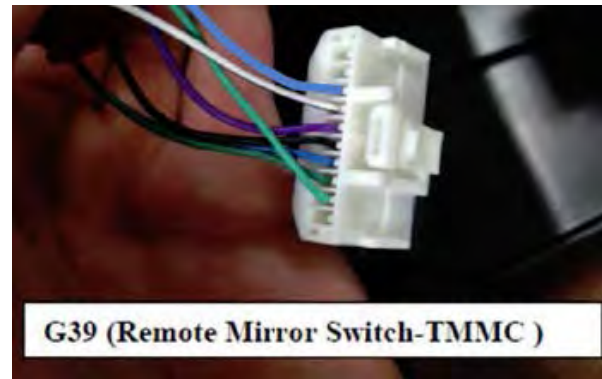


Figure 15a

15. Locate the outer mirror switch connector G151 (TMC) Made/ G39 (TMMC Made) on the rear side of the fuse box opening where the cover was detached. See figure 15a and figure 15b.



TMMC Made-10 Pin  
TMC Made-24Pin

Figure 15b

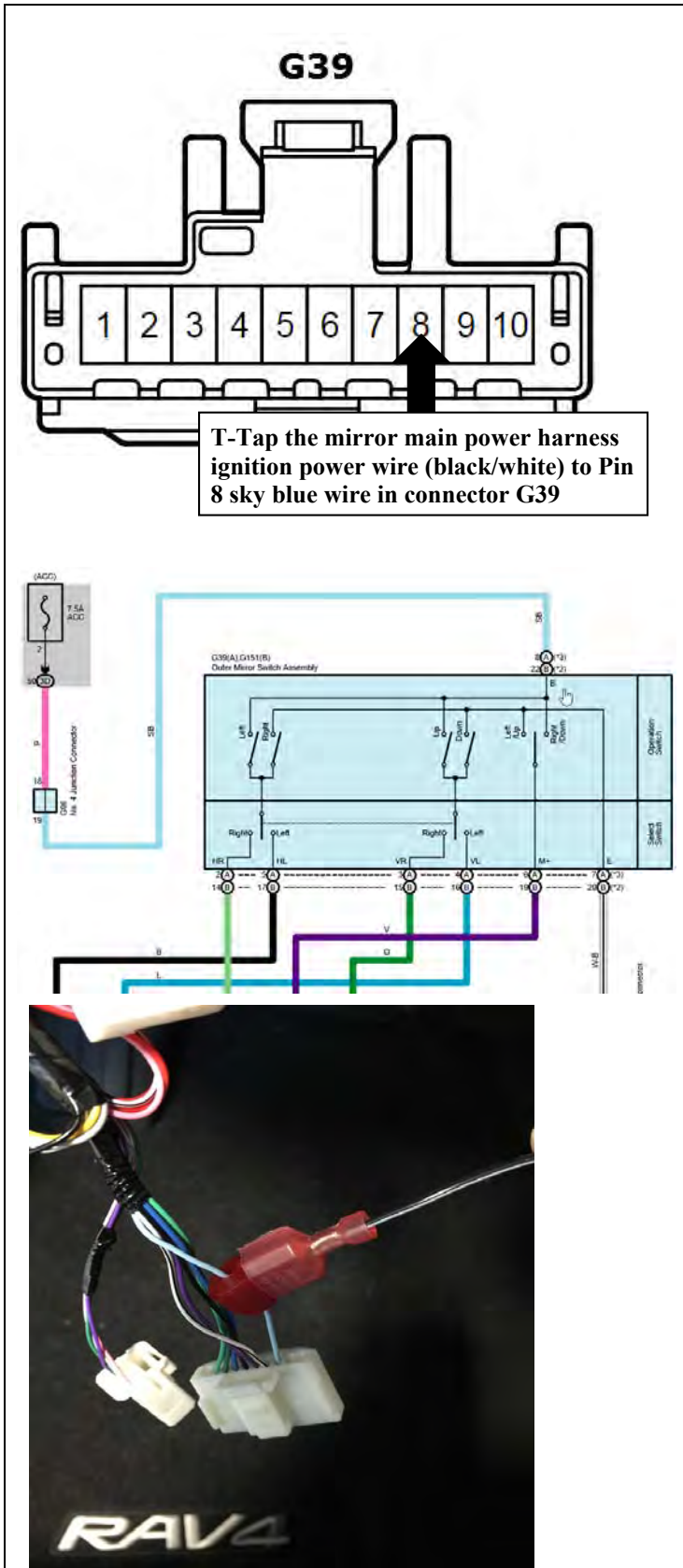


Figure 16a

16. Vehicle wire connections:

**TMMC Made (10 pin connector)**

T-Tap the mirror main power harness ignition power wire (black/white) to Pin 8 sky blue wire in connector G39. See figure 16a.

**TMC Made (24 pin connector)**

T-Tap the mirror main power harness ignition power wire (black/white) to Pin 22 sky blue wire in connector G151. See figure 16b.

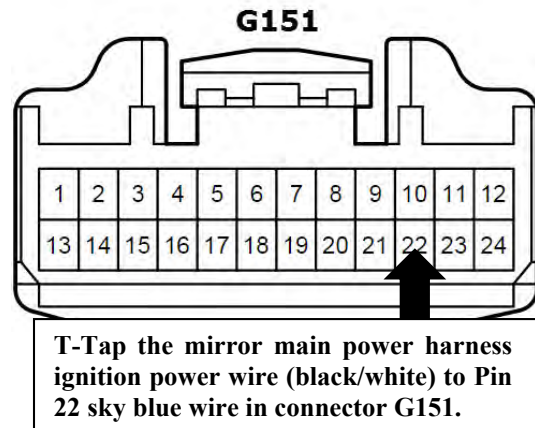
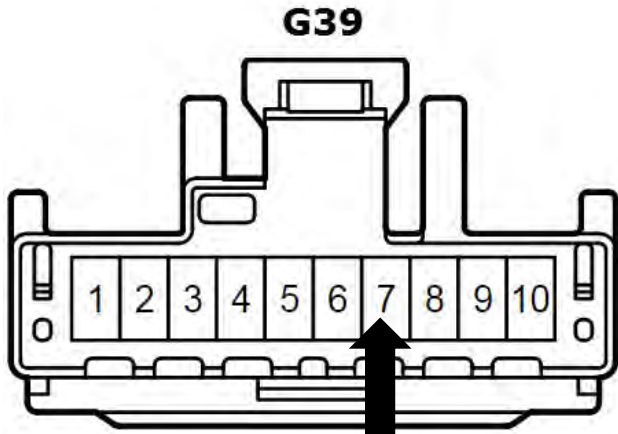


Figure 16b



T-Tap the mirror main power harness ground wire (black/orange) to Pin 7 white/black wire in connector G39.

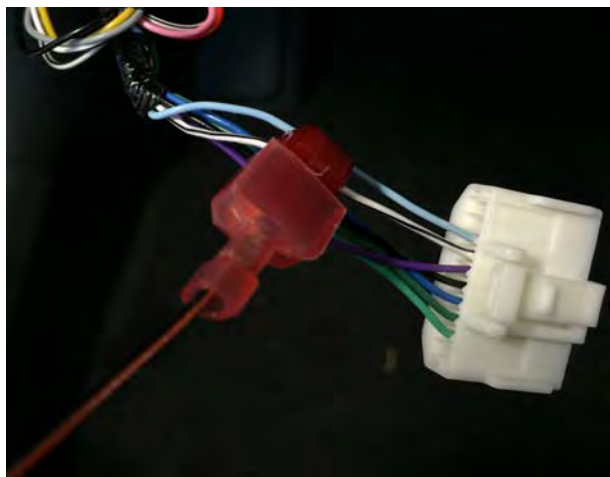
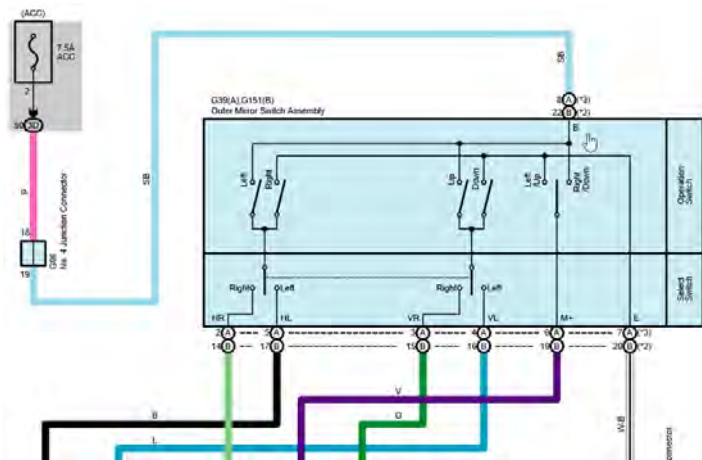


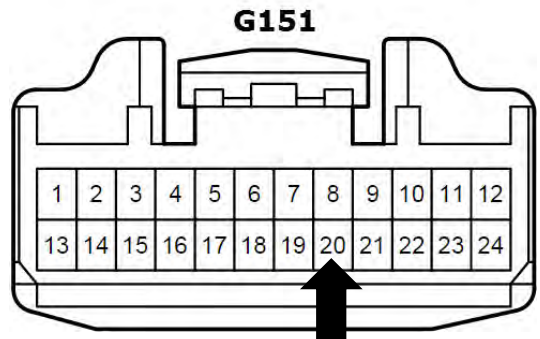
Figure 16c

**TMMC Made (10 pin connector)**

T-Tap the mirror main power harness ground wire (black/orange) to Pin 7 white/black wire in connector G39. See figure 16c.

**TMC Made (24 pin connector)**

T-Tap the mirror main power harness ground wire (black/orange) to Pin 20 white/black wire in connector G151. See figure 16d.



T-Tap the mirror main power harness ground wire (black/orange) to Pin 20 white/black wire in connector G151.

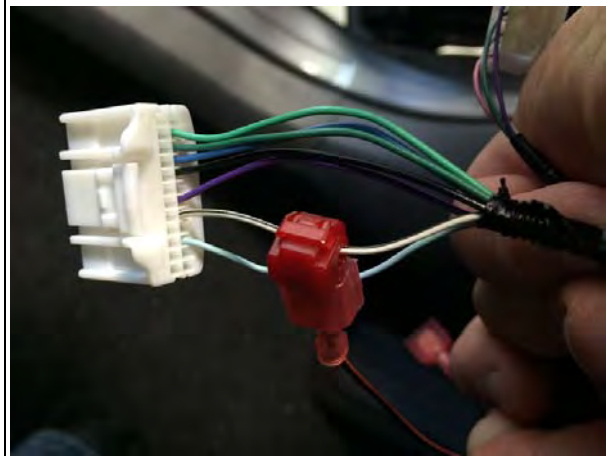
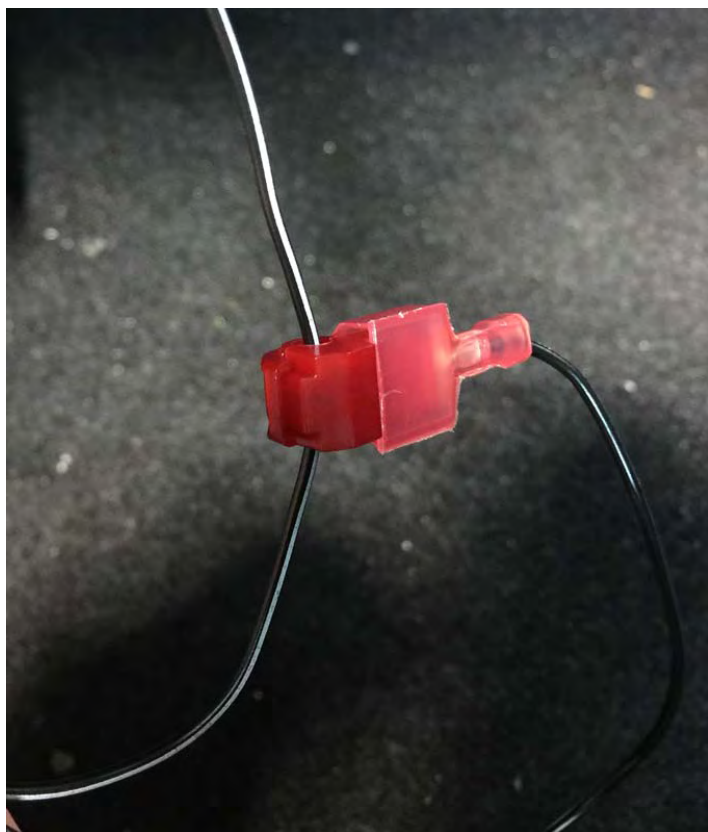
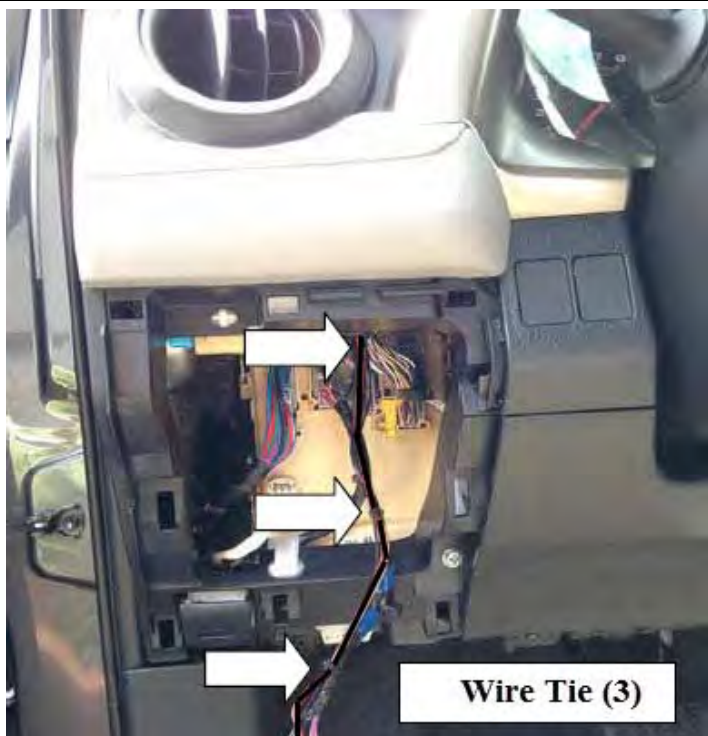


Figure 16d



17. T-Tap the mirror main power harness power wire (black) to the mirror main power harness ignition wire (black/white). See figure 17.

Figure 17



18. Bundle up any excess wire. Secure the mirror main power harness to the remote mirror switch OE harness as shown with (3) wire ties. See figure 18.

Figure 18

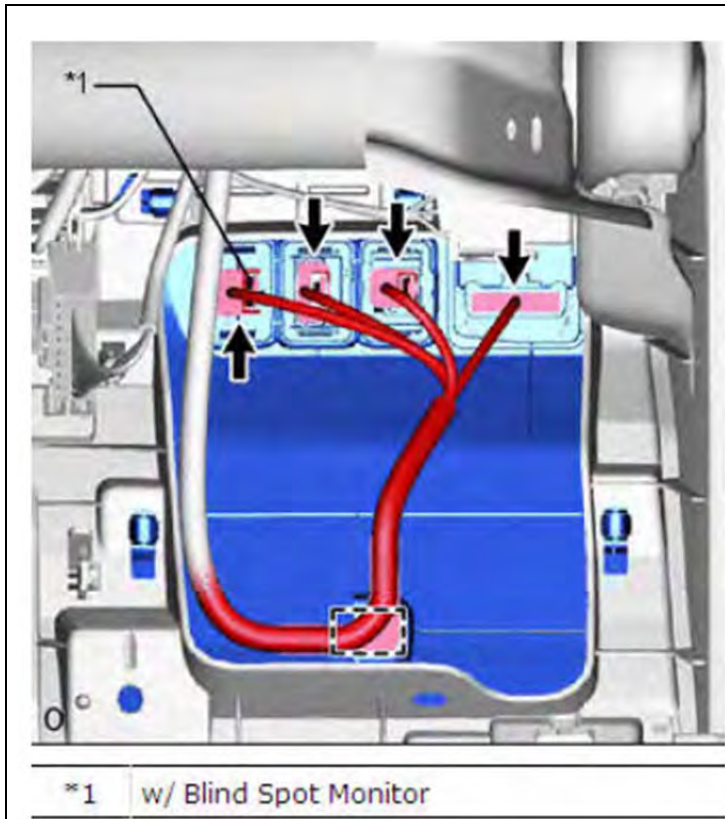


Figure 19a

19. Connect each connector and attach the wire harness clamp. Attach the 8 clips to install the fuse box opening cover. See figure 19a and figure 19b.



Figure 19b



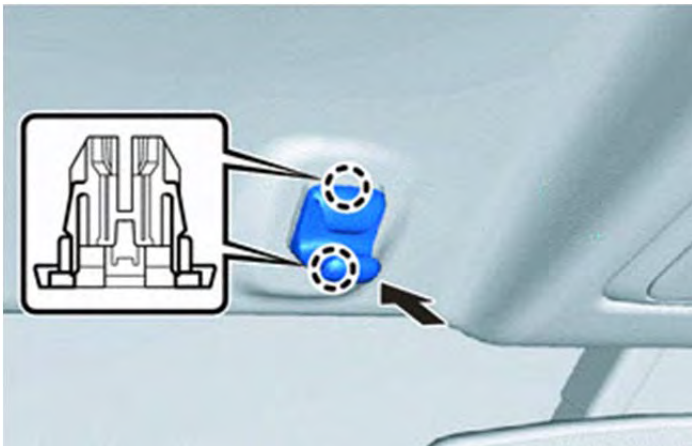
20. Install the two new A-Pillar garnish clips **62217-52120** to vehicle A-Pillar.

**STOP** **NOTE: Install two new A-Pillar garnish clips when installing garnish. DO NOT reuse the old clips. THE CLIPS MUST BE REPLACED.**

**A-Pillar clips 62217-52120 is not provided in the mirror kit. These item must be ordered separately.**

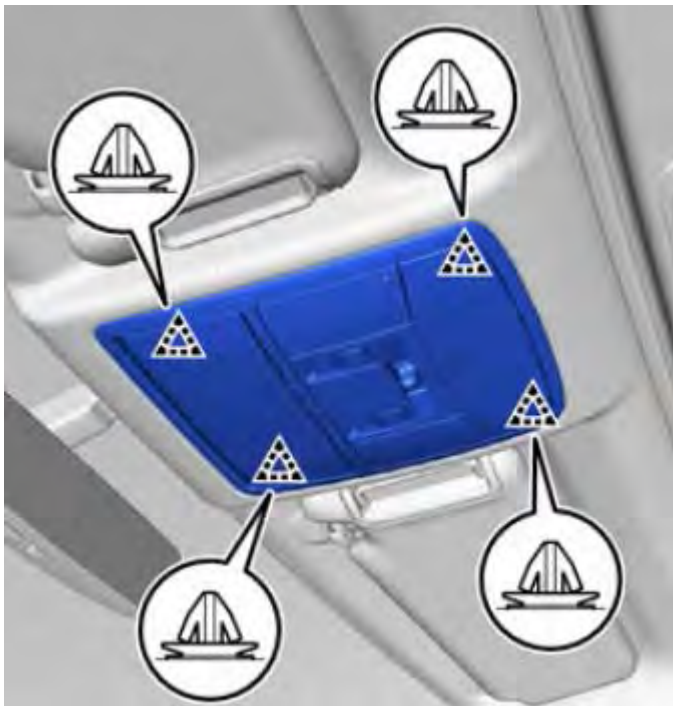
Attach the 3 guides. Turn the ends of the front A-Pillar garnish clips 90° with needle-nose pliers and connect them to the front A-Pillar garnish LH. Attach the 2 front A-Pillar garnish clips to install the front A-Pillar garnish LH. See figure 20.

*Figure 20*



21. Attach the 2 claws and push in the visor holder to install it. See figure 21.

Figure 21



22. Connect the connector. Attach the 4 clips to install the map light assembly. See figure 22.

Figure 22



Figure 23

23. Place owner's cards in the glove box. See figure 23.

24. Connect the negative battery cable. See page 2 for battery re-connection.



Figure 25

25. Compass Zone Setting.

- (a) With display turned ON, push the mirror power button for 3 seconds or until a number is displayed in the display window.
- (b) Refer to the Zone Map and toggle button until correct zone is displayed. See figure 25.
- (c) Release button.
- (d) The display will return to normal compass mode (showing either a "C" or a directional heading) within 10 seconds of no switch activity.

26. Calibrate Compass.

- (a) If a "C" is displayed in window, drive the vehicle in one circle at less than 5 mph.
- (b) Correct compass heading should now be displayed.

**NOTE:** Correct compass zone must be selected prior to compass calibration to ensure accurate calibration. If the vehicle is driven in a new zone, repeat zone selection procedure.

Checklist - these points **MUST** be checked to Ensure a quality installation.

**Check: After Installation**

- Vehicle should be in a fairly well lit area. Turn ignition (ACC power) to ON.

**Auto-dimming feature:**

- Cover the forward-looking light sensor (located on the back of the mirror).

- Remove cover from photocell.

**Compass Feature:**

- Look at the mirror compass display.

- Operation Instruction Cards

**HomeLink Feature:**

- Look at the mirror's (3) HomeLink buttons.

- Press the mirror's (3) HomeLink buttons.

**Overhead Console:**

- Check dome light.

- Check the Sunroof if applicable.

**Remote Mirror Switch, Interior Light Dimming Switch, and Traction Control Switch**

- Check the remote mirror switch, interior light switch, and traction control switch.

**Look For:**

Verify green LED is on. If it is not ON press ON / OFF button - confirm LED is ON.

Verify mirror darkens.

Mirror returns to clear state.

Correct compass heading should now be displayed. If a "C" is displayed in window, calibrate the compass.

Place in the vehicle glove box.

Verify all (3) buttons are illuminated when the vehicle ignition is ON.

HomeLink icon will appear in mirror. Press button again to stop the icon from flashing.

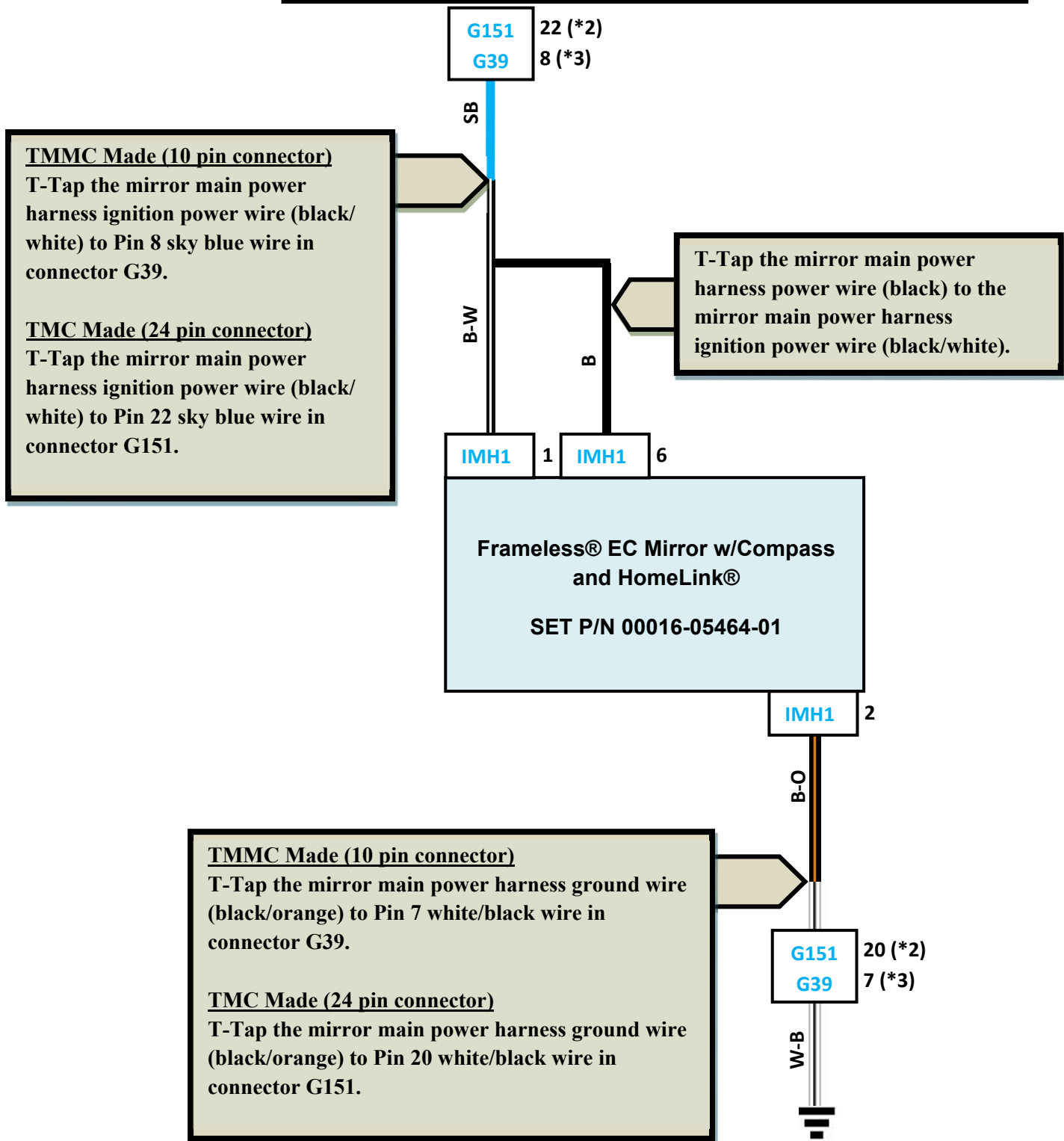
Verify the dome light functions properly.

Verify the sunroof functions properly.

Verify switch functions properly.

# Block Diagram Frameless® EC Mirror w/Compass & HomeLink®

Applies to SET P/N 00016-05464 2017 Rav4

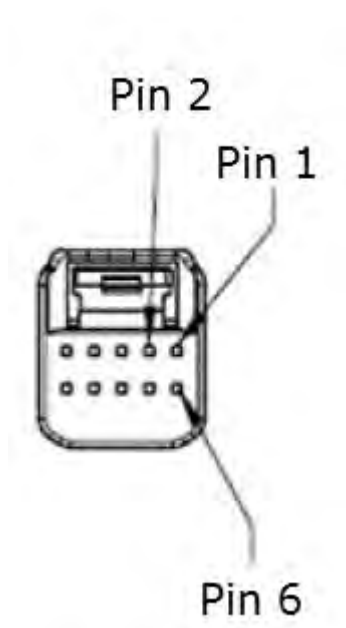


\* 2 :TMC Made  
 \* 3 :TMMC Made  
 \* 8 :w/o Panoramic View Monitor System  
 \* 9 :w/ Panoramic View Monitor System

\*10 :w/o Mirror Heater  
 \*11 :w/ Mirror Heater

## Checking the Harness Pin outs:

### Connector IMH1: Frameless® EC Mirror w/Compass Power Harness Connector



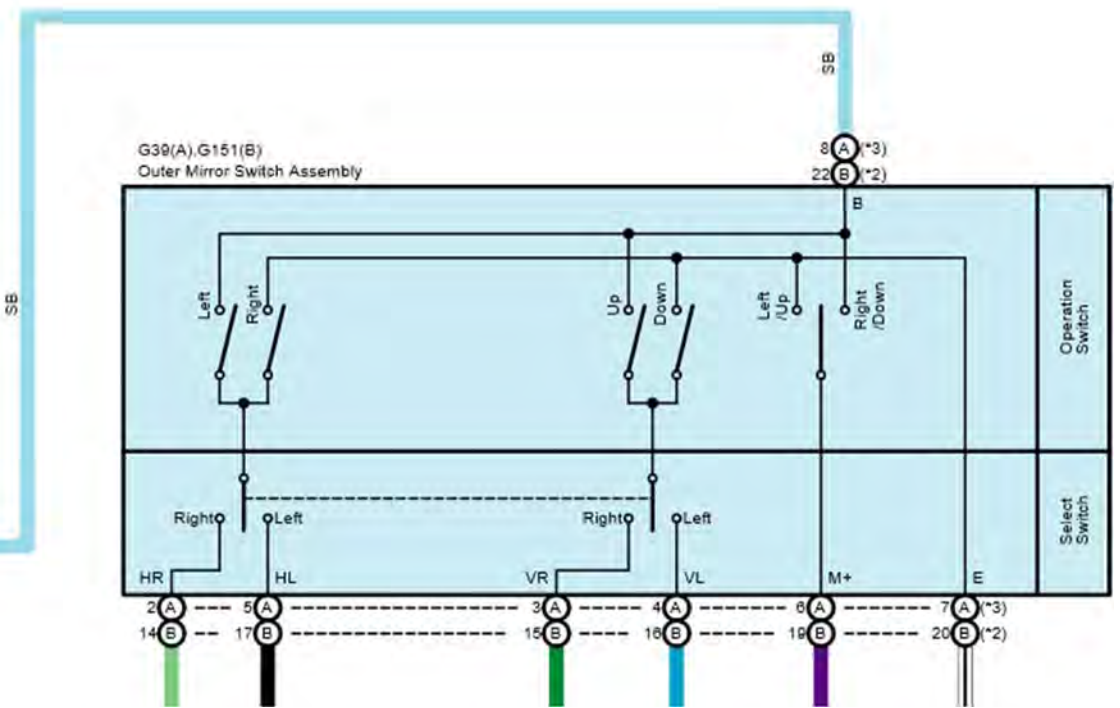
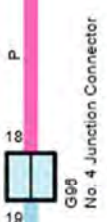
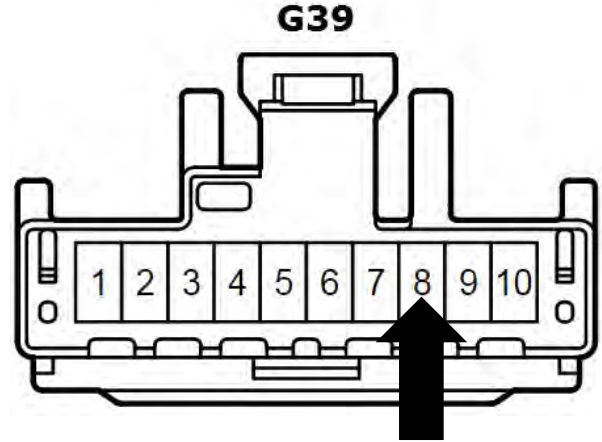
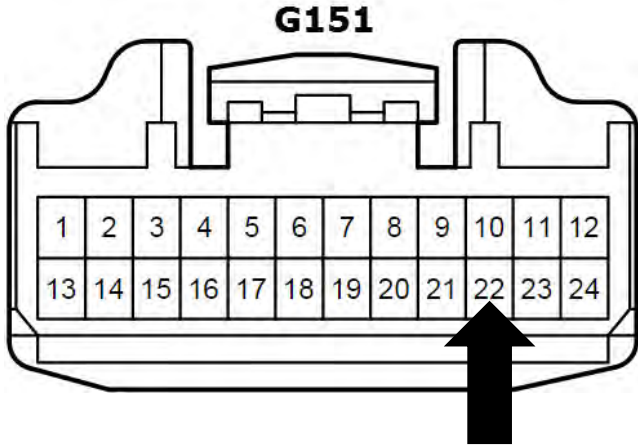
**Connector view is from the front (pin side)**

**If feedback from the harness on any of the pins does not match the results shown in the Proper Operation field below, check the connection to the vehicle wiring and re-test.**

Pin	Wire Color	Test Reference	Proper Operation
1	Black w/White Trace	Pin 1 to ground	Approx. 12 VDC with switch in ON position Approx. 0 VDC with switch in OFF position
2	Black w/Orange Trace	Pin 2 to ground	Always Continuity
6	Black	Pin 3 to ground	Approx. 12 VDC with switch in ON position Approx. 0 VDC with switch in OFF position

Pin	Wire Color	Circuit
1	Black w/White Trace	Ignition
2	Black w/Orange Trace	Ground
6	Black	Battery

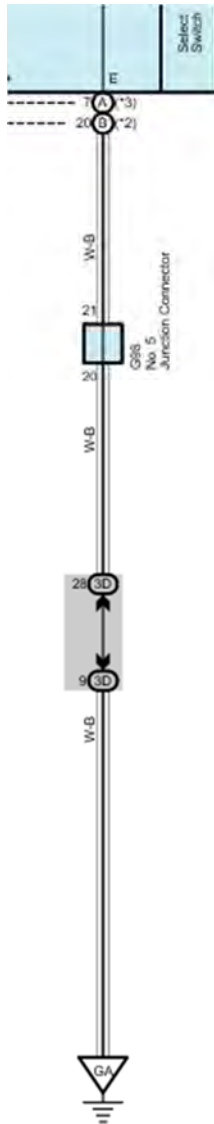
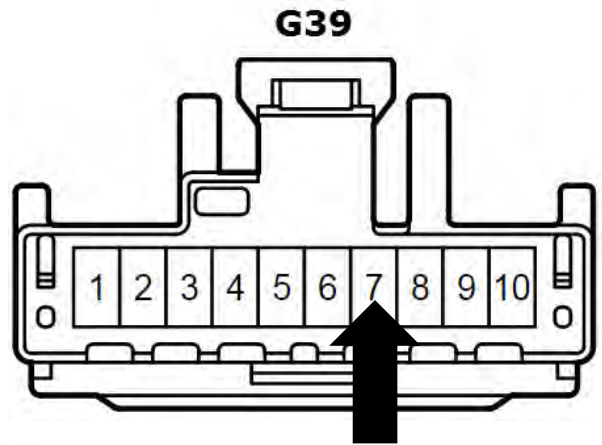
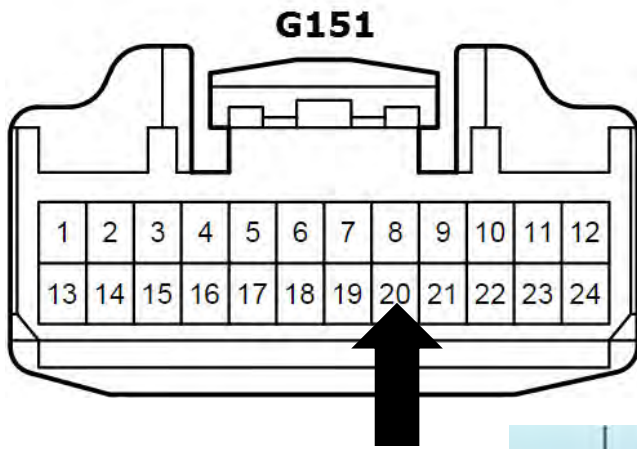
# Vehicle Connector G151/G39-Power Circuit



\* 2 :TMC Made  
\* 3 :TMCC Made  
\* 8 :w/o Panoramic View Monitor System  
\* 9 :w/ Panoramic View Monitor System  
\* 10 :w/o Mirror Heater  
\* 11 :w/ Mirror Heater



### Vehicle Connector G151/G39-Ground Circuit



- \* 2 :TMC Made
- \* 3 :TMMC Made
- \* 8 :w/o Panoramic View Monitor System
- \* 9 :w/ Panoramic View Monitor System

- \*10 :w/o Mirror Heater
- \*11 :w/ Mirror Heater