



# GENUINE PARTS

## INSTALLATION INSTRUCTIONS

**1. DESCRIPTION:** Auto-Dimming Inside Mirror with Compass and Homelink®

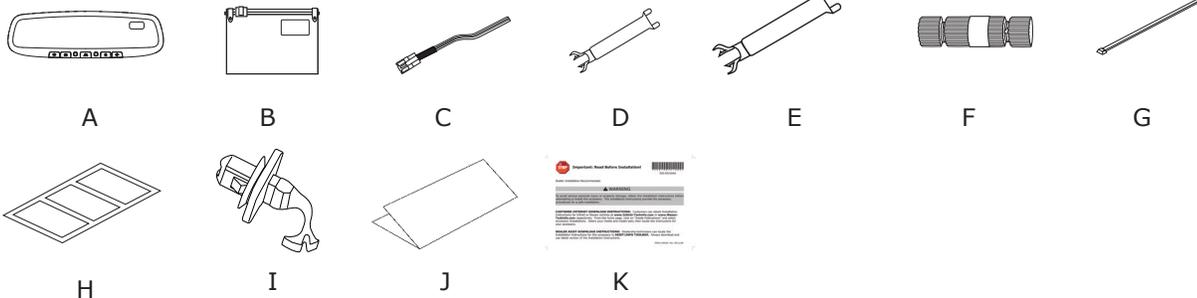
**2. APPLICATION:** Rogue (2008-2013) Rogue Select (2014)

**3. PART NUMBER:** 999L1 VW102

**4. KIT CONTENTS:**

Item	Qty	Description	Service Part Number
A	1	Auto-Dimming Mirror with Compass and Homelink®	999L1 VZ000
B	1	Parts Kit	999L1 VW103
C	1	Harness Assembly	
D	1	Wire Cover-Short	
E	1	Wire Cover-Long	
F	1	Posi-Tap™	999M1 VT000
G	7	Wire Tie	
H	9	Foam Tape	
I	2	A-Pillar Clip	76988 3DN0A
J	1	Homelink® User Guide	
K	1	Manual, Installation Instruction Download	999V2 AW000

**5. PRE-INSTALLATION CAUTION / NOTES:**



### ⚠ WARNING

- Disconnect vehicle battery before installing EC mirror to prevent possible shock injury during installation.

### ⚠ CAUTION

- Dealer installation recommended. This installation instruction will reference the service manual.
- Cut the excess wire tie(s) as flush with the head as possible. Face head of cable tie away from sheet metal and other objects.
- Use caution when removing / re-installing interior components to avoid damage, scratches, or breaking of mounting clips.
- For HomeLink Troubleshooting refer to page 14 or call 1-800-355-3515.

HOMELINK® AND THE HOMELINK HOUSE® ARE REGISTERED TRADEMARKS OF GENTEX CORPORATION.

# Auto-Dimming Inside Mirror with Compass and Homelink®

## 6. TOOLS REQUIRED:

- |                          |                         |                          |
|--------------------------|-------------------------|--------------------------|
| 1. Clean Rag             | 4. 3mm Flat Screwdriver | 6. Phillip's Screwdriver |
| 2. Needle Nose Pliers    | 5. Panel Removal Tool   | 7. Side Cutters          |
| 3. T-20 Torx Head Driver |                         |                          |

## 7. VEHICLE PREPARATION:

- 1) Apply parking brake.
- 2) Record the customer radio presets.

Presets	1	2	3	4	5	6	
A							
B							
C							

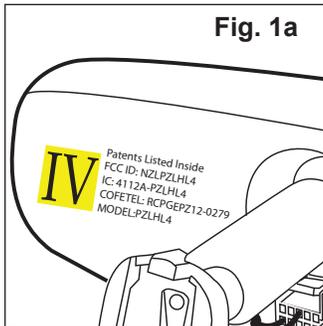
- 3) Make sure that the shift lever is engaged in the "P" position.
- 4) Turn the ignition switch OFF.
- 5) Open engine hood.
- 6) Disconnect negative battery terminal.
- 7) **For service parts only**, identify the generation of the mirror as either HomeLink 3 or HomeLink 4 by looking at laser marking on the back of the mirror. HomeLink 4 can be identified with a large "IV" as shown in (Fig. 1a) and by a yellow label on harness assembly (Fig. 1b). HomeLink 3 can be identified with a large "E11" with a circle as shown in (Fig. 2a). No harness label is present on HomeLink 3 harness assembly. **If replacing a HomeLink 3 mirror, the harness will also need to be replaced during installation.**

**HomeLink 4 Mirror**

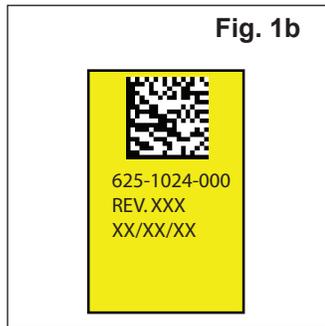
**HomeLink 4 Harness Label**

**HomeLink 3 Mirror**

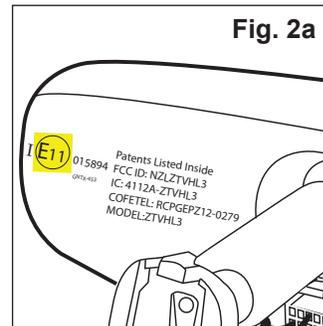
**HomeLink 3 Harness Label**



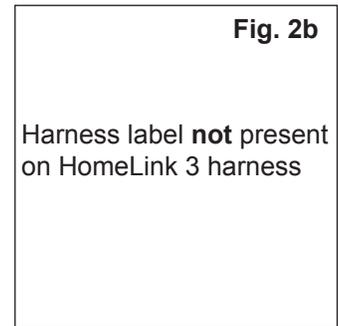
**Fig. 1a**



**Fig. 1b**



**Fig. 2a**

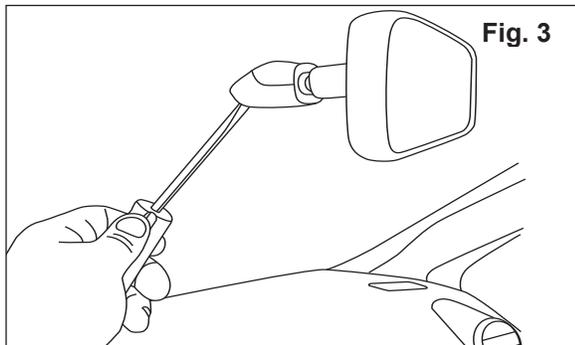


**Fig. 2b**

## 8. INSTALLATION PROCEDURE:

### ⚠ CAUTION

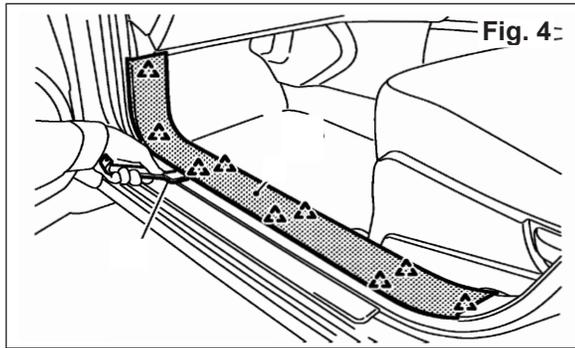
- Do not use excessive force when removing OE mirror from windshield. The window button may separate from windshield or the windshield could break.



### 1) Removal of OE rearview mirror

- a) Tape the end of a 3mm screwdriver with electrical tape (or equivalent) to prevent damage to windshield. (Fig. 3)
- b) Insert the flat end of a 3mm screwdriver into the opening at the bottom of the mirror mount.
- c) Push screwdriver up into the mount to disengage locking tab.
- d) While still applying upward pressure with the screwdriver, grasp the mirror bracket and lift the mirror up towards the headliner and off the mirror mounting bracket.

## Auto-Dimming Inside Mirror with Compass and Homelink®

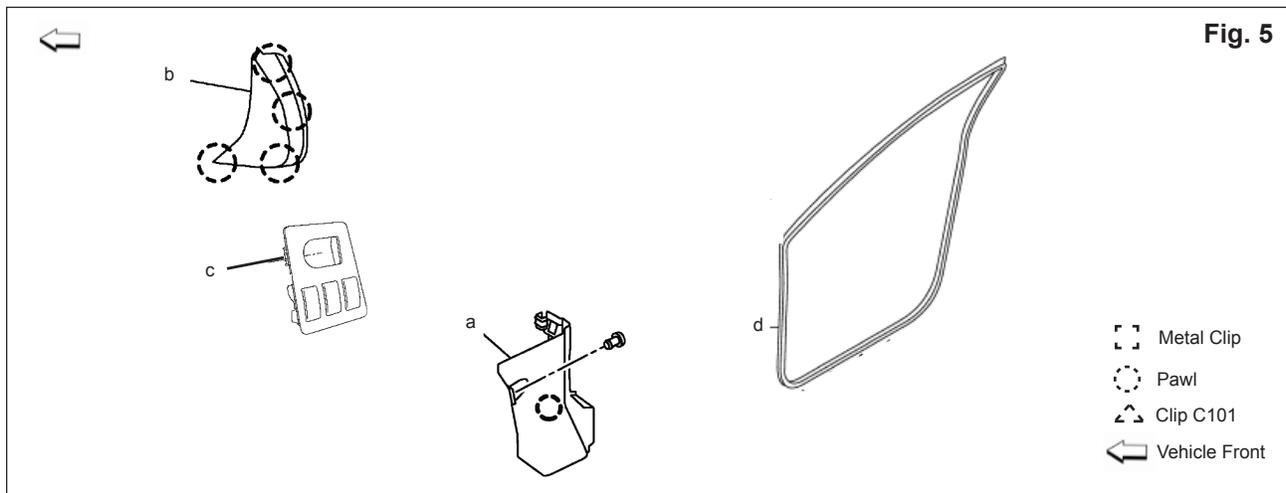


- 2) Remove driver side front kicking plate
- Using panel removal tool, pry up at each clip location (4). **(Fig. 4)**
  - Lift the part up to remove.

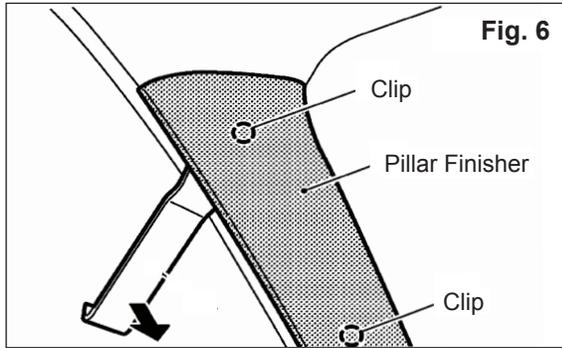
- 3) Remove the following interior parts as shown in **Fig. 5** (Refer to vehicle service manual)
- LH Dash Side Lower Finisher
  - LH Instrument Side Mask
  - Door Mirror Remote Control Switch
  - LH Front Body Side Welt (Partially remove to assist in the removal of LH Front Pillar Finisher)

### ⚠ CAUTION

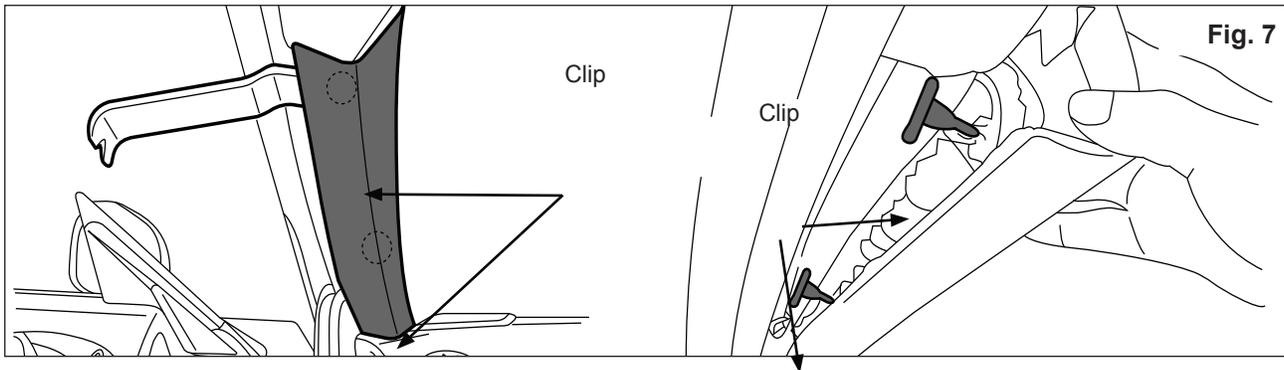
- During removal of clips, ensure proper extraction force is applied.



## Auto-Dimming Inside Mirror with Compass and Homelink®

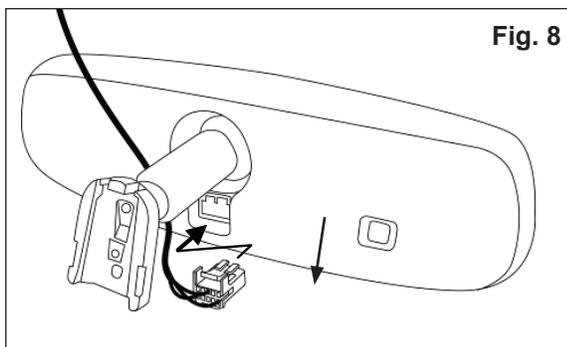


- 4) Remove LH front pillar finisher.
  - a) Disengage front pillar finisher fixing clips using panel removal tool. **(Fig. 6)**
  - b) Pull the front pillar finisher partially toward the vehicle.
  - c) Insert panel removal tool (A) between the front pillar finisher bottom side and body side to disengage the clip. **(Fig. 7)**
  - d) Once free, pull the front pillar finisher upwards and use a cutter knife to cut both clips.
  - e) Remove front pillar finisher.

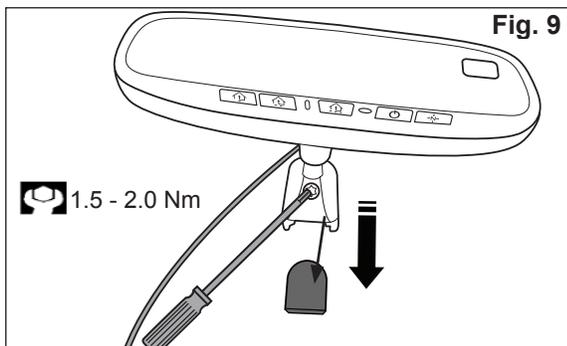


### ⚠ CAUTION

- Exercise caution when removing and installing LH front pillar finisher due to side airbag placement. Reference Figure 4 and 5 above for further detail.
- Do **NOT** re-use LH front pillar finisher clips. Both LH front pillar finisher clips (P/N 76988 3DN0A) **MUST** be replaced during re-installation of finisher.

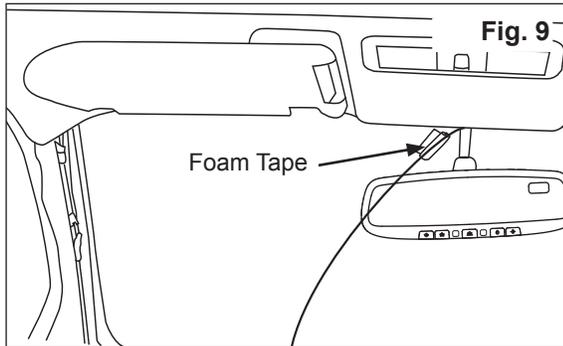


- 5) Install EC mirror. **(Fig. 8)**
  - a) Plug EC wire harness connector into the back of the mirror, pressing firmly until a “click” is heard. Pull GENTLY on the harness to confirm the harness is seated completely.

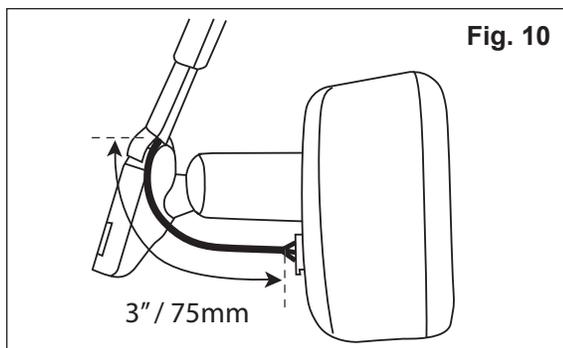


- 6) Install rearview mirror. **(Fig. 9)**
  - b) Slide the mirror base over the button on the windshield.
  - c) Using a T-20 Torx head driver, tighten the screw on the mirror mount 1.5 - 2.0 Nm (1.3 ft - lbs)

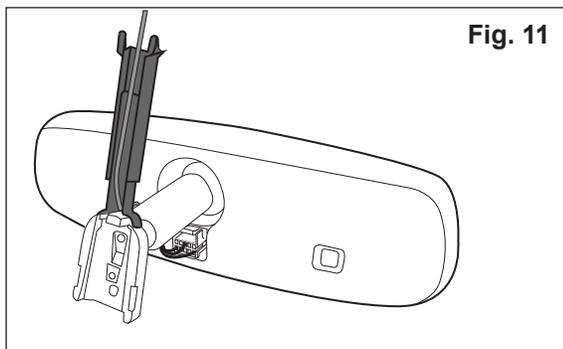
## Auto-Dimming Inside Mirror with Compass and Homelink®



- 7) Wrap 1 piece of foam tape around harness and using panel removal tool, tuck between headliner and roof above EC mirror. **(Fig. 9)**

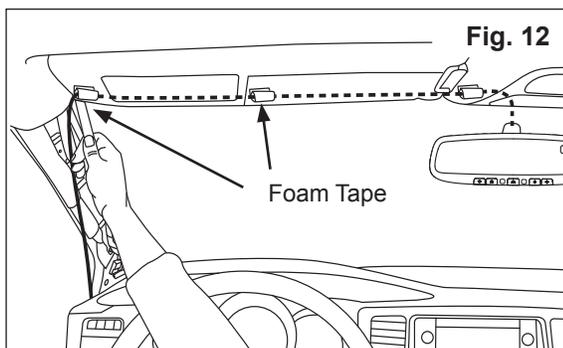


- 8) Verify that a approximately 3" (75mm) of wire are between the bottom of the wire cover and connector on the back of the mirror. Failure to allow the appropriate length will result in limited to no movement for the mirror. **(Fig. 10)**



- 9) Route the harness into the groove of the wire cover and attach to the mirror mount. **(Fig. 11)**

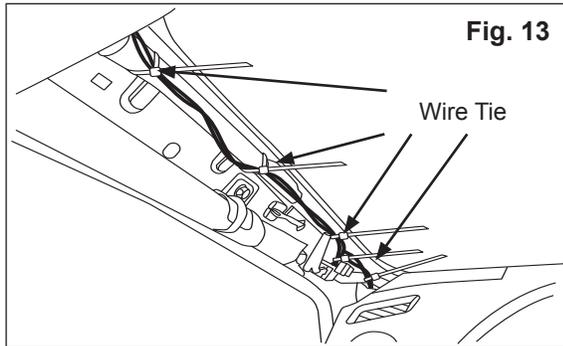
- a) Slide the forks on top of the wire cover, into the headliner.



- 10) Wrap a piece of foam tape around harness at center of sun visor and where the headliner bends towards driver-side door. **(Fig. 12)**

- b) Using panel removal tool, tuck the wire harness between the headliner and roof.

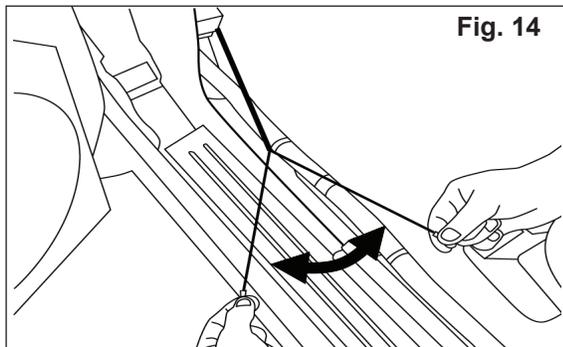
## Auto-Dimming Inside Mirror with Compass and Homelink®



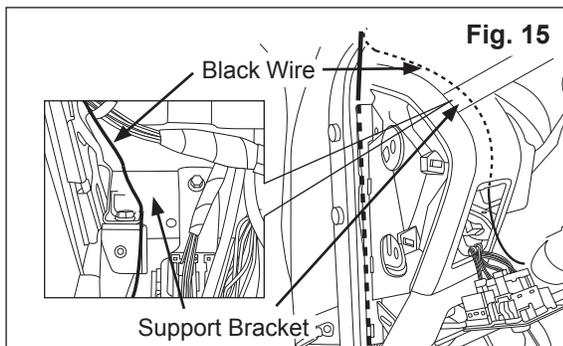
11) Route harness down driver-side A-pillar and secure to existing vehicle harness with 4 wire ties. **(Fig. 13)**

### ⚠ CAUTION

- Do not tie wrap harness to clear drain tube.



12) Pull power and ground wires apart approximately 24 inches. **(Fig. 14)**



13) Carefully route Black ignition wire **without** ring terminal through center dash panel, over the support bracket and out of the access port near the power mirror switch. **(Fig. 15)**

# Auto-Dimming Inside Mirror with Compass and Homelink®

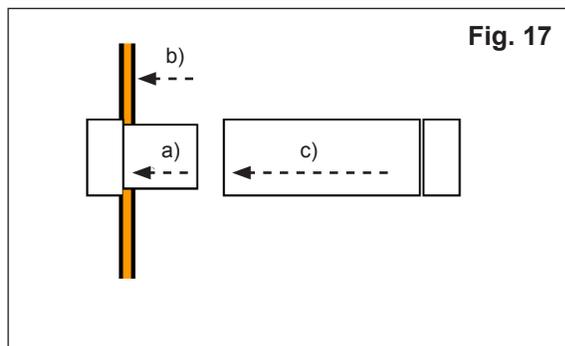
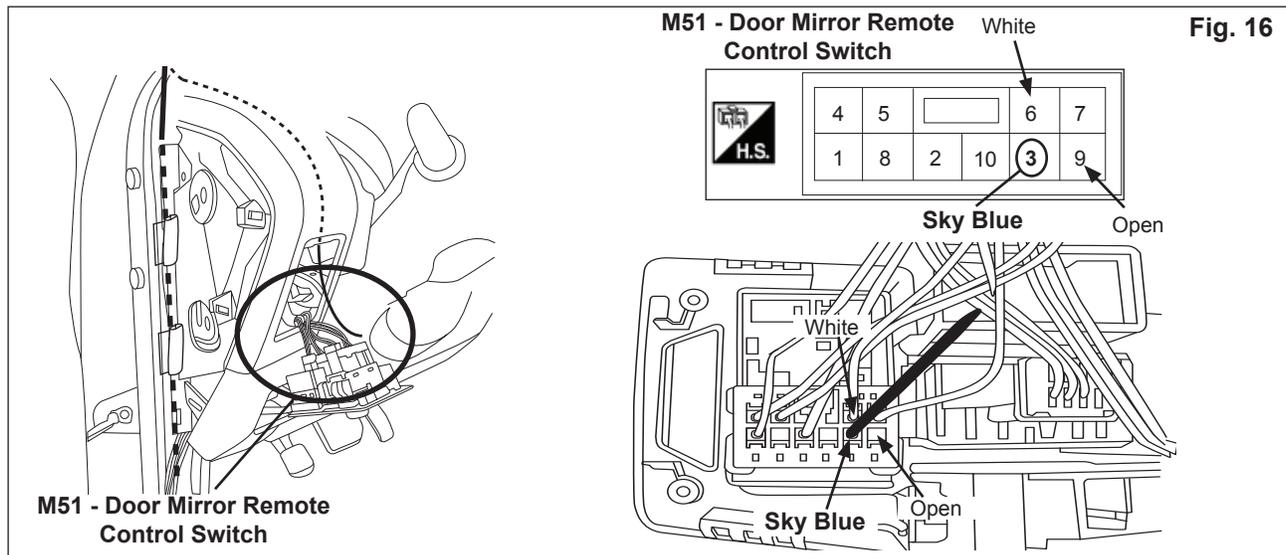
## CAUTION

- Color(s) given in illustration(s) are for reference only. Use location(s) where color deviates.
- If a vehicle wire is being used by another accessory and a posi-tap is present, tap the accessory wire NOT the vehicle wire.

Posi-Tap™ is protected by patent # 5,228,875 5,695,369 5,868,589 6,692,313 Jap 2881414 Aus 708700 Tia 103534 Can 2204826 Mex 200626 Korea 477279 China Z197105562.9 & others pending.

14) Secure gray end of the wire tap to **Sky Blue Wire**.  
(Fig. 16)

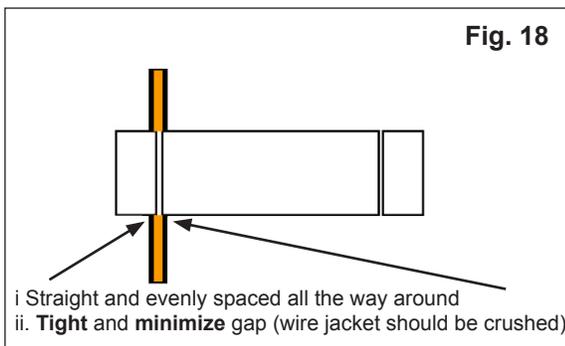
- a) See steps 7 - 11 for wire tap installation instructions.



15) Tap Vehicle Wire. (Fig. 17)

- b) Remove cap (slot side) from tap body.  
c) Slide the cap around vehicle wire.  
d) Tighten the tap **TIGHT** with finger pressure.  
e) Position cap  $\geq 6.35\text{mm}(0.25\text{in})$  away from the Connector (measurement for first posi-tap installed on the circuit).  
f) Tighten the tap **TIGHT** with finger pressure.  
g) Tighten by another quarter turn.

**NOTE: Figures are not to scale.**



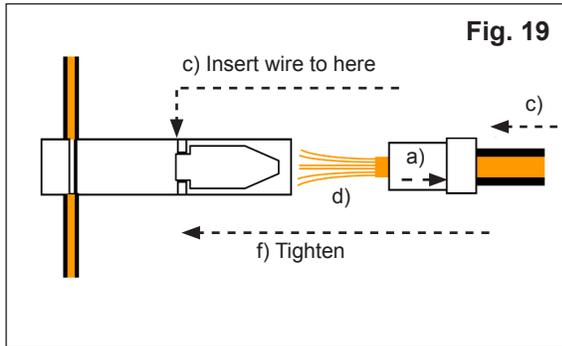
16) Inspect the tap to ensure correct installation. (Fig. 18)

- h) Pull on wire lightly to ensure connection.  
i) Inspect the tap to ensure correct installation.  
j) Test signal to ensure that it is working.

**NOTE:**

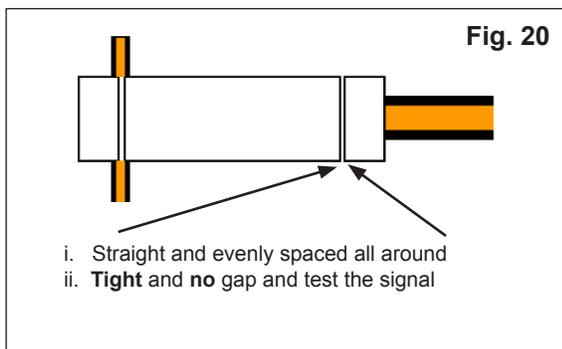
**Avoid putting pressure on the vehicle wire and tap for the rest of the installation.**

## Auto-Dimming Inside Mirror with Compass and Homelink®



### 17) Tap Accessory Wire. (Fig. 19)

- a) Remove tap (non-pierce) side from tap.
- b) Remove the protective stub.
- c) Insert wire through the non-pierce side.
- d) Spread the individual strands into fan shape.
- e) Insert wire into the tap body and ensure that it is all the way in.
- f) Tighten the tap **TIGHT** with finger pressure.
- g) Tighten by another quarter turn.

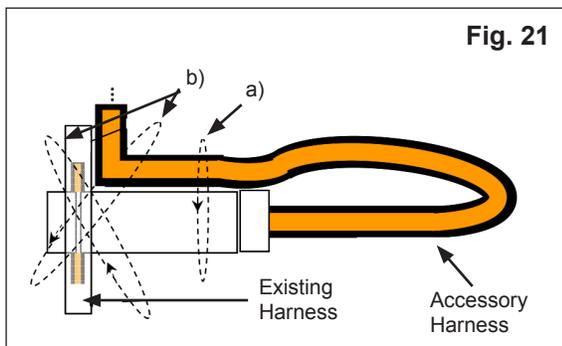


### 18) Confirm the Tapped Accessory Wire (Fig. 09)

- h) Pull on wire lightly to ensure connection.
- i) Inspect the tap to ensure correct installation.
- j) Test the signal to ensure it is working.

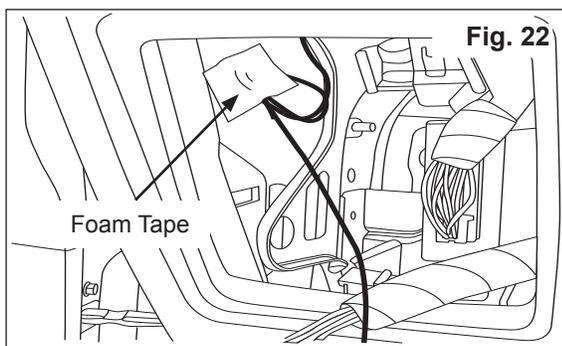
### NOTE:

**Avoid putting pressure on the vehicle wire, tap, and accessory wire for the rest of the installation.**



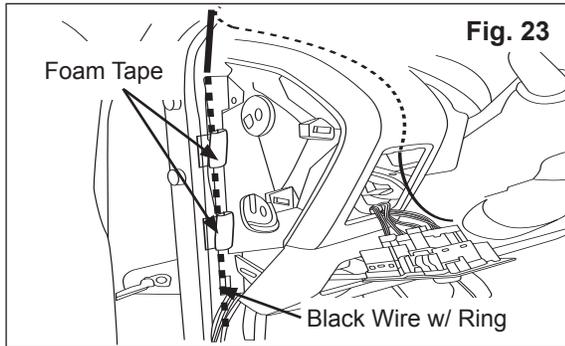
### 19) Forming strain relief loop (always required). (Fig. 21)

- k) Gently bend the end of the pierced wire (where it exits the cap) down toward the body of the posi-tap.
- l) On the tapped wire of the non-pierce side; starting at point b1) measure 50.8mm(2in.) to point b3). Make the first bend of the loop b2), half the distance measured 25.4mm(1in.), and up toward the body of the posi-tap, make the second bend of the loop b3).

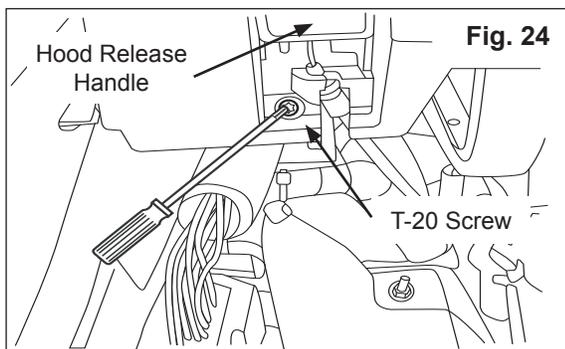


### 20) Bundle excess Black wire **without** ring terminal and secure to plastic dash inner with 1 piece of foam tape. (Fig. 22)

## Auto-Dimming Inside Mirror with Compass and Homelink®

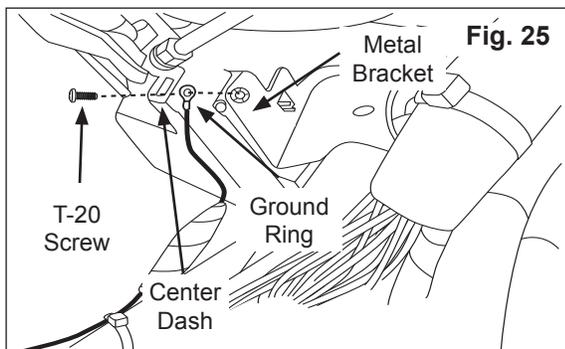


21) Wrap 2 pieces of foam tape around Black wire **with** ring terminal and tuck between vehicle body and center dash. **(Fig. 23)**

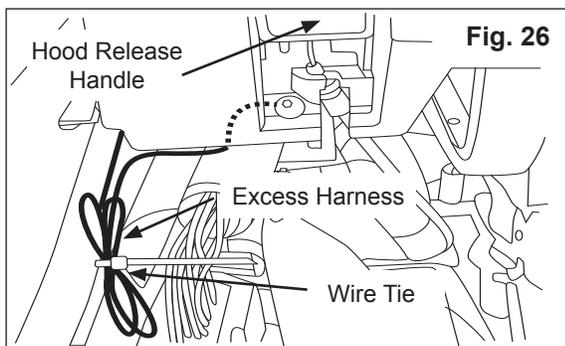


22) Locate and remove the T-20 screw just below hood release handle near footwell area. **(Fig. 24)**

a) Route Black wire **with** ring terminal to footwell area.



23) Reinstall T-20 screw, ensuring Black ground wire ring terminal is installed between center dash and metal bracket to ensure continuity. **(Fig. 25)**



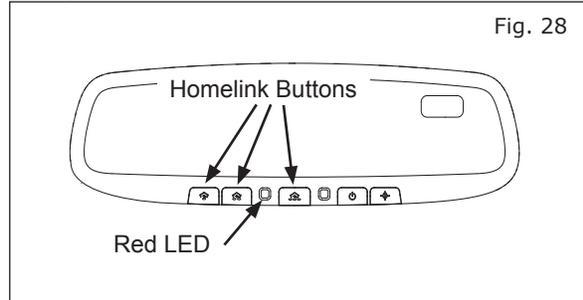
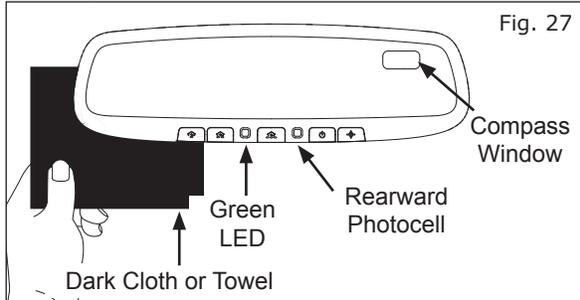
24) Bundle excess Black wire **with** ring terminal in footwell area to existing vehicle harness with 1 wire tie. **(Fig. 26)**

## ACCESSORY CHECK:

**Note: If errors are encountered during testing and compass calibration, see diagnostic flow charts, pages 12-14.**

### Testing

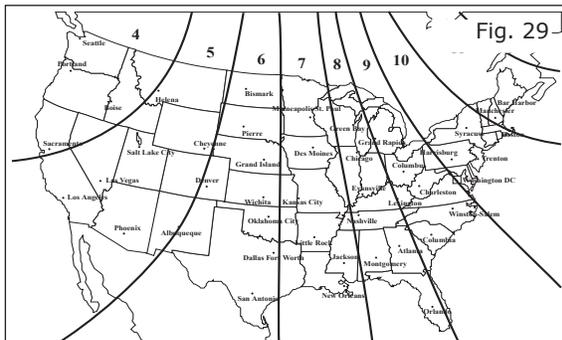
- Tighten negative battery terminal nut to 5.4 Nm (47.8 in-lb).
- Turn the ignition switch to ON.
- Push each Homelink® button one at a time and verify that the LED indicator to the left of the center switch illuminates with a red LED (Fig. 28).
- Ensure vehicle is in well lit area.
- Check to see that the green LED is illuminated. If it is not, press the "⏻" button to turn it on.
- Cover the forward-looking photocell (located to the driver side of the wire harness connection on the back of the mirror) with a dark cloth or towel. After a few seconds, the mirror should begin to darken. Timing will vary with ambient light levels and a flashlight may be shined on the rearward photocell if needed, to accelerate effect. (Fig. 27)



- Remove the cover from the forward-looking photocell and the mirror will begin to clear.
- Push the "N" button to ensure compass display shows either a direction such as "NE" or a "C", and that it can be turned ON and OFF.
- Testing is now complete.

### Set Compass Zone

- With the display turned "ON", push the "N" button for 3 seconds, until a number appears in display (numbers correspond to regional compass zones).
- Press and release "N" button to scroll through zone numbers.
- Release "N" button when correct zone number is displayed (Fig. 29). Zone number will disappear and display will return to showing either a directional heading or a "C" after 5 seconds of no switch activity.



### Calibrate Compass

- Drive vehicle in circles (360°) at 5 mph or less until compass display window shows a direction.
- Check all **Critical Installation Steps**.
- Check all torque values
- Auto-Dimming mirror, pg. 4, step 6, Fig. 9

### ACCESSORY CHECK:

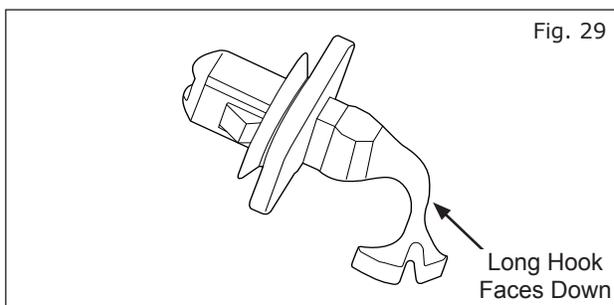
- Verify all wiring is secure and not exposed.
- Trim all excess cable ties flush.
- Check all vehicle electrical systems that the accessory interfaces with.
  - Power mirror switch.
  - Traction control switch.
  - Hood Release
  - Fuel Door Release

### RE-INSTALLATION OF REMOVED PARTS:

## **⚠ CAUTION**

**Use caution when re-installing interior components to avoid damage, scratches, or breaking of mounting clips. Refer to the vehicle service manual for more information.**

- LH front pillar garnish.
  - Insert new clip (P/N 76988 3DN0A) into garnish hole ensuring long hook faces down. (Fig. 29)



- Insert base of finisher.
- Insert panel removal tool between front pillar garnish bottom side and body side and press clips into body.
- Push garnish toward vehicle body to attach.

### FINAL INSPECTION:

- Verify re-installed trim parts for proper flush fit (no gap, no waviness, etc).
- Verify all clips are fully engaged and locked.
- Verify re-installed trim parts are free from cracks, scratches, or stress cracks.
- Verify vehicle headliner, seat, steering wheel, center console, floor carpets, etc. are not soiled.
- Verify interior and exterior is not damaged.
- Turn ignition switch to "ON" and confirm proper operation of Vehicle Systems.
  - If equipped, verify all window and sunroof one touch operation and perform the reset procedure if necessary. Refer to the vehicle service manual for more details.
  - Confirm proper audio function (AM, FM, SAT, CD and AUX).
- Re-program radio presets and other vehicle settings to the recorded settings.
- Start engine and verify that there are no new Diagnostic Trouble Codes. Turn ignition switch to "OFF".
- Place the Owner Manual, Quick Reference Guide, and/or other Manual in the glove box.

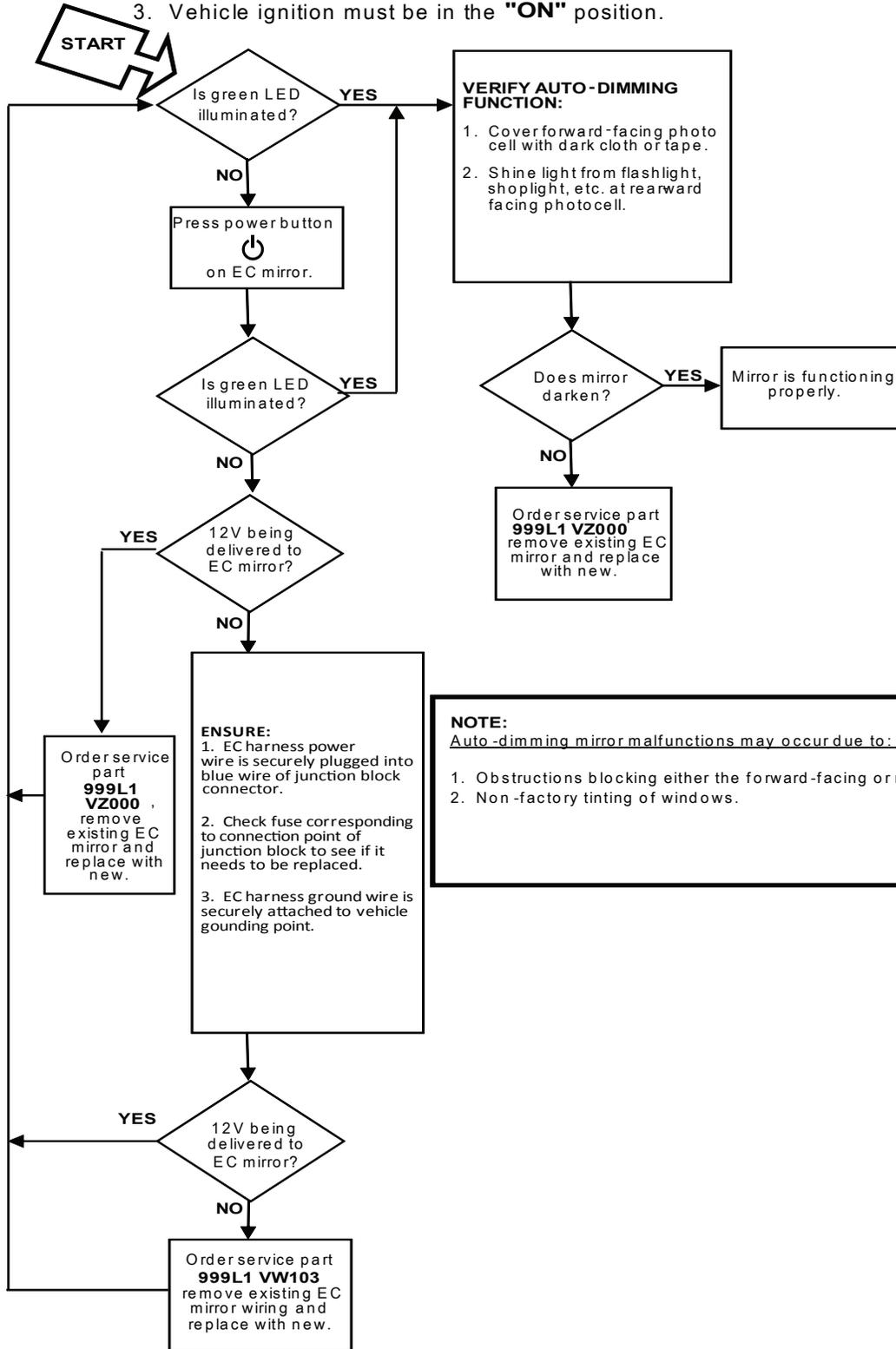
**DIAGNOSTIC FLOW CHART:**



**Note:** If working on service see Page 2, Step 7 to determine if the service mirror is HomeLink 3. Replacing a HomeLink 3 mirror will also require installing a new harness with service kit 999L1-WS102.

**Before attempting to trouble-shoot EC mirror Auto-Dimming function, ensure the following:**

1. Mirror is manufactured by **Gentex Corporation** (the letters GNTX will be etched onto the back of the mirror and the compass display window will be in the mirror glass).
2. EC mirror harness must be fully plugged into EC mirror.
3. Vehicle ignition must be in the "ON" position.



**NOTE:**  
Auto-dimming mirror malfunctions may occur due to:

1. Obstructions blocking either the forward-facing or rearward-facing photo-cells.
2. Non-factory tinting of windows.

# DIAGNOSTIC FLOW CHART: COMPASS TROUBLE-SHOOTING GUIDE

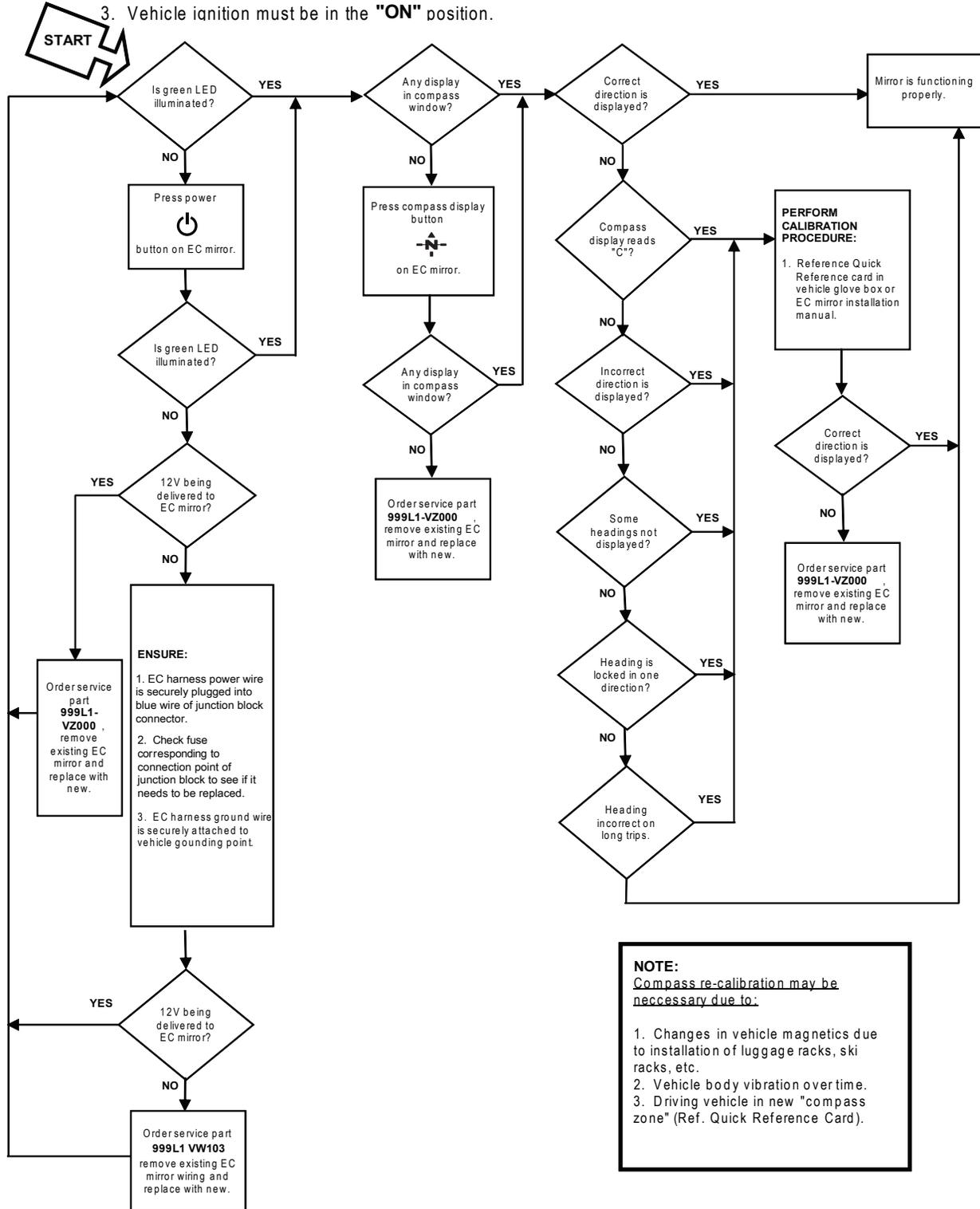
Part Number: 999L1 VZ000



**Note:** If working on service see Page 2, Step 7 to determine if the service mirror is HomeLink 3. Replacing a HomeLink 3 mirror will also require installing a new harness with service kit 999L1-WS102.

**Before attempting to trouble-shoot EC mirror compass function, ensure the following:**

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2. EC mirror harness must be fully plugged into EC mirror.
3. Vehicle ignition must be in the "ON" position.



# DIAGNOSTIC FLOW CHART: HOMELINK® TROUBLE-SHOOTING GUIDE

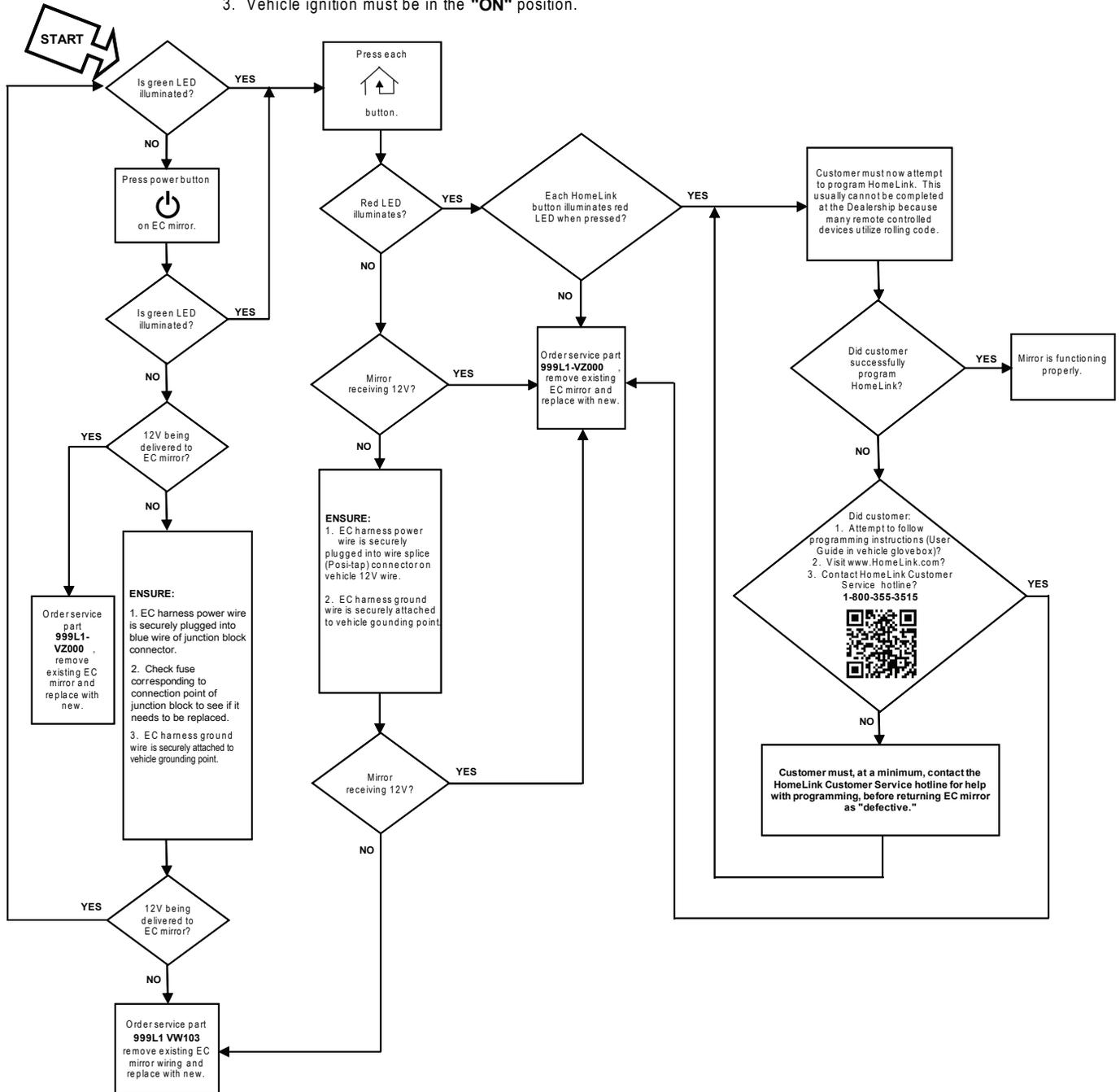
Part Number: 999L1 VZ000



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2. EC mirror harness must be fully plugged into EC mirror.
3. Vehicle ignition must be in the **"ON"** position.



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