



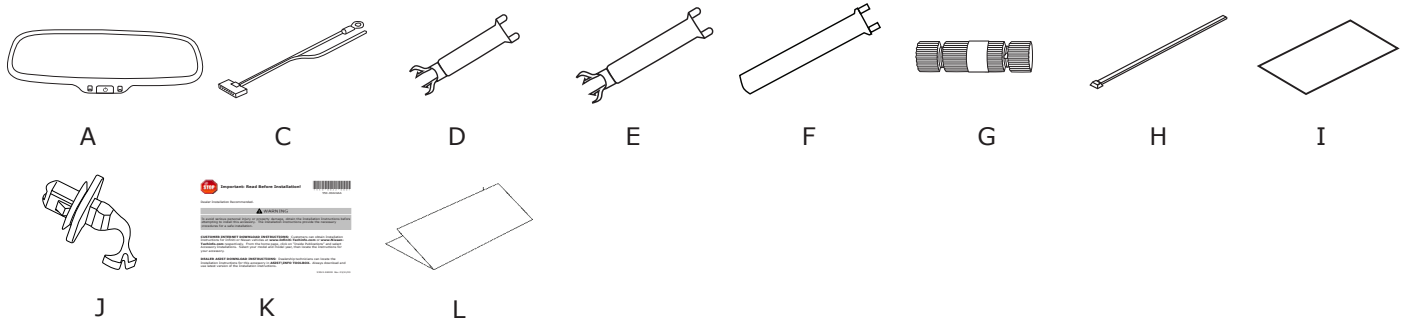
GENUINE PARTS

INSTALLATION INSTRUCTIONS

DESCRIPTION: EC Mirror
APPLICATION: NV Cargo & Passenger (2011)
PART NUMBER: 999L1 VT005

KIT CONTENTS:

Item	Qty.	Part Description	Service Part Number
A	1	EC Mirror	999L1 AU000S1
B	1	Parts Kit	999L1 VT005S1
C	1	• Harness Assembly - Power and Ground	
D	1	• Wire Cover Assembly - Short	
E	1	• Wire Cover Assembly - Long	
F	1	• Wire Cover - Long	
G	1	• Posi-tap	
H	10	• Wire Tie	
I	7	• Foam Tape	
J	2	• A-Pillar Clip	76988 3DN0A
K	1	• Manual, Installation Instruction Download	999V2 AW000
L	1	• User Guide	



TOOLS REQUIRED:

Phillips Screwdriver	10mm Socket Wrench	Side Cutters
3mm Flat Scredriver	8mm Socket Wrench	Shop Light
T-20 Torx Head Driver	Needle Nose Pliers	Clean Rag
Panel Removal Tool		

PRE-INSTALLATION WARNINGS, CAUTIONS, CRITICAL STEPS, and NOTES:

- Dealer Installation Recommended. Instructions may refer to Service Manual.

⚠ CAUTION

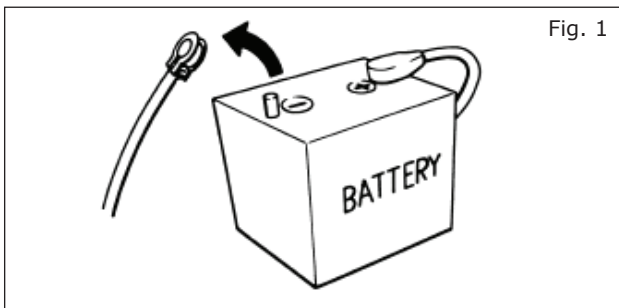
- This is a universal kit so all parts may not be used.
- Place removed vehicle trim components in a clean, dry area to prevent damage.

INSTALLATION PROCEDURE:

- 1) Apply parking brake.
- 2) Turn ignition switch to "ON" position.
- 3) Record customer radio presets and other presets as required.

Presets	1	2	3	4	5	6	

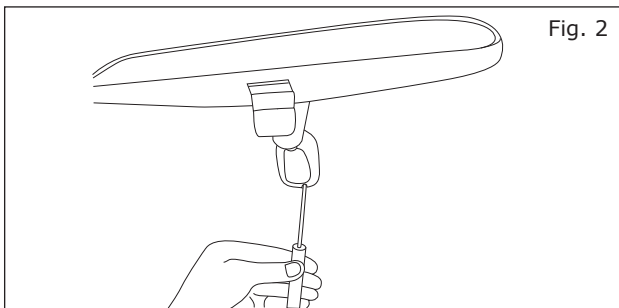
- 4) Put shift lever in "P" position.
- 5) Turn ignition switch to "OFF" position.



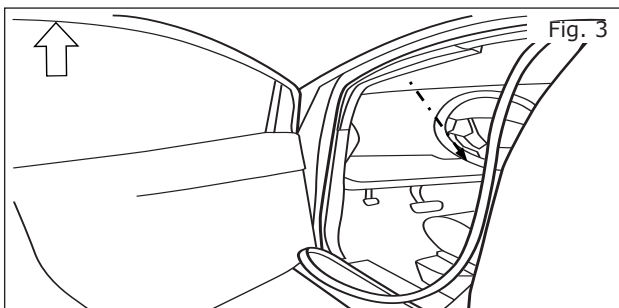
- 6) Disconnect negative battery terminal.

⚠ CAUTION

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

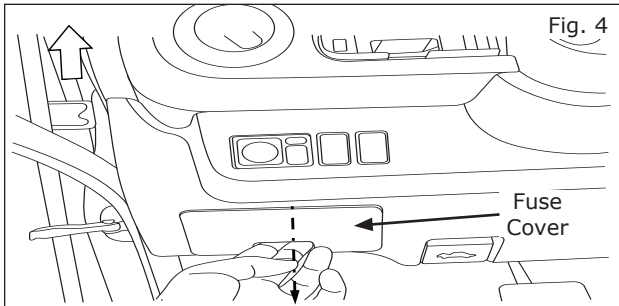


- 7) Removal of OE rearview mirror.
 - a) Slide flat end of 3mm screwdriver into opening at bottom of mirror mount until resistance is felt.
 - b) Apply additional upward force to lift lock spring.
 - c) Lift mirror upward off mirror mount while applying pressure with screwdriver.

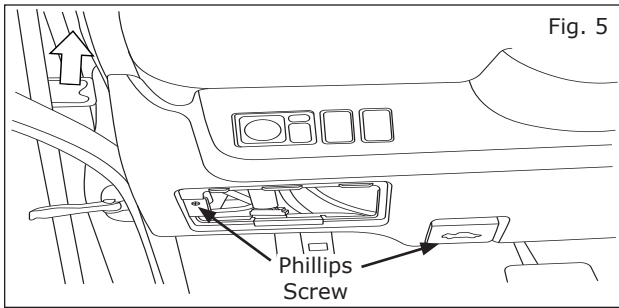


- 8) Using panel removal tool, loosen driver side weather strip. Remove from top of A-pillar.

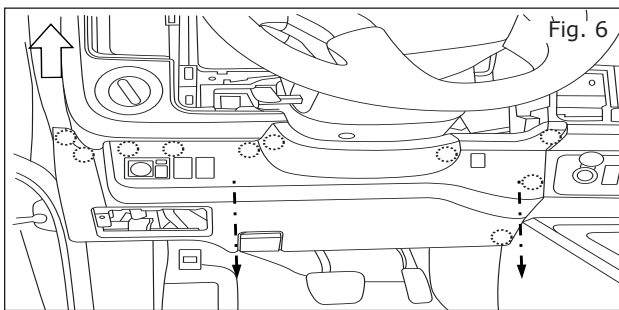
INSTALLATION PROCEDURE:



- 9) Remove driver-side lower dash finisher.
- Pull outward on fuse cover and remove from dash finisher.



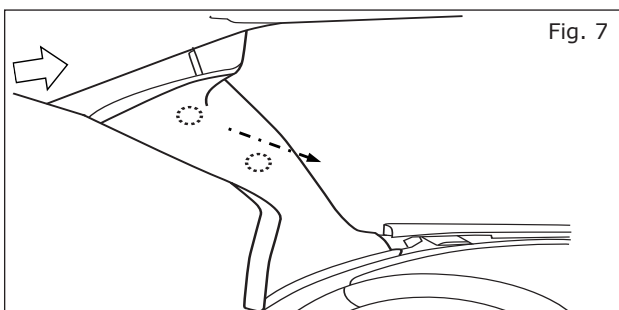
- Remove 1 phillips screw from fuse cover area.
- Partially pull outward on hood release lever to expose 1 phillips screw. Remove screw.



- 10) Pull outward on lower dash finisher to remove.
- Remove all connectors from back of dash finisher.

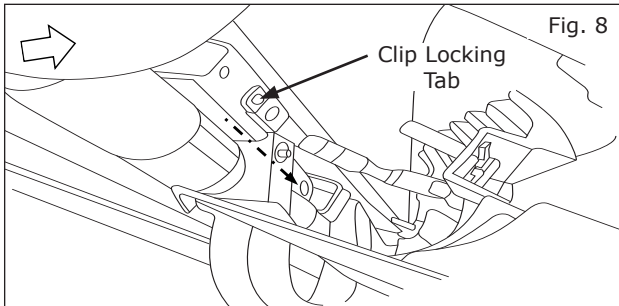
⚠ CAUTION

Exercise caution when removing and installing LH front pillar garnish due to side airbag placement.

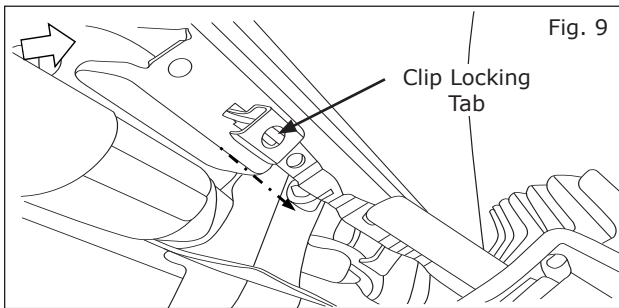


- 11) Remove LH front pillar garnish.
- Disengage fixing clip and metal clip with panel removal tool.

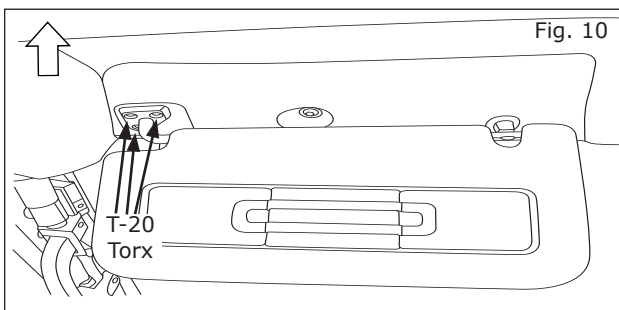
INSTALLATION PROCEDURE:



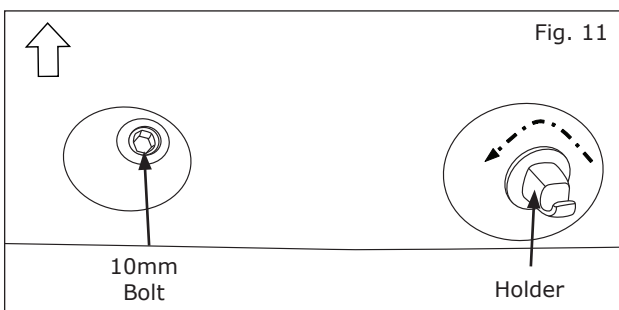
- b) Press inward on LH front pillar garnish clip and pull downward.



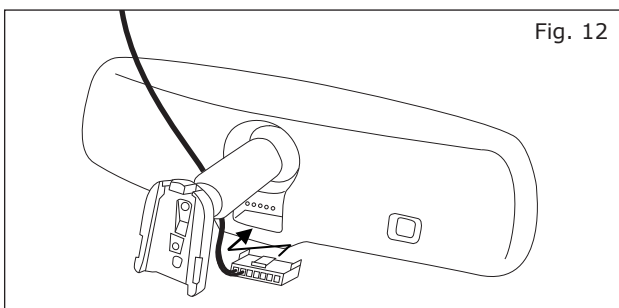
- c) Continue pressing inward on LH front pillar garnish clip and pull downward to completely remove clip.
d) Remove LH front pillar garnish from vehicle body.



- 12) Remove driver side sun-visor assembly.

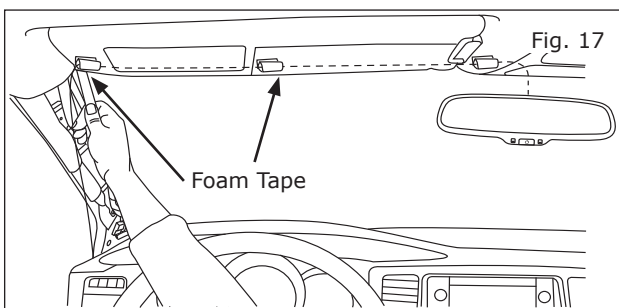
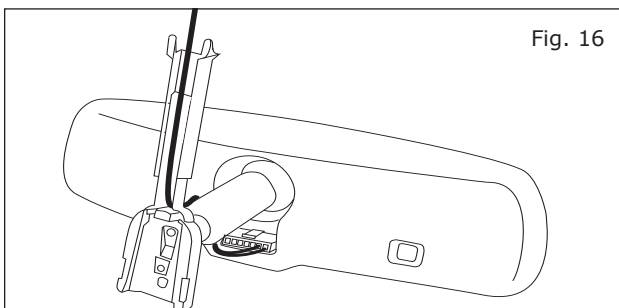
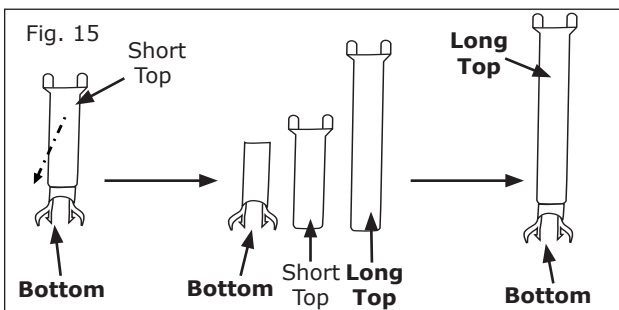
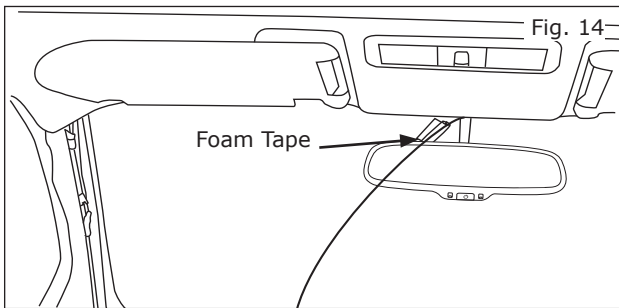
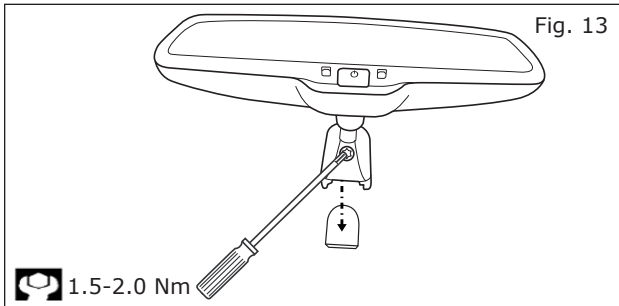


- 13) Remove driver side sun-visor holder by rotating CCW 90°.
14) Remove 10mm bolt securing headliner to roof.



- 15) Install EC mirror.
a) Plug harness connector into back of mirror.

INSTALLATION PROCEDURE:



- b) Slide mirror base over button on windshield.
- c) Using a T-20 torx head driver, tighten screw on mirror mount to 1.5 - 2.0 Nm.

- d) Wrap 1 piece of foam tape around harness and using panel removal tool, tuck between headliner and roof above mirror.

- 16) Create long wire cover assembly from existing wire covers.

- a) Remove Short-Top cover from bottom of wire cover assembly
- b) Attach Long Top cover over bottom cover.

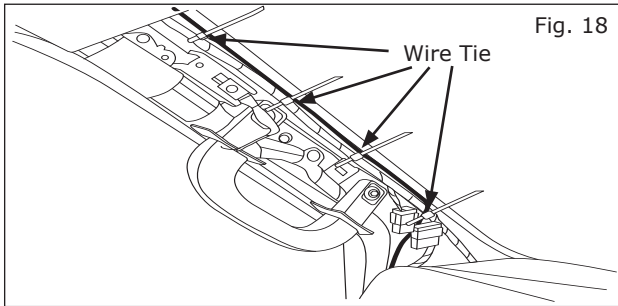
- c) Route mirror harness into groove of wire cover and attach to mirror mount.

- d) Slide forks on top of wire cover, into headliner so that the prongs of wire cover are under headliner.

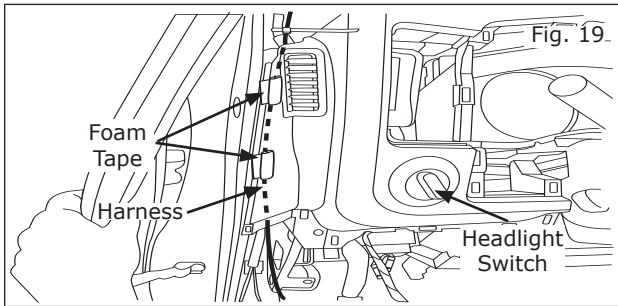
- e) Wrap 1 piece of foam tape around harness at center of driver side sun visor and where headliner bends towards driver side door.

- f) Using panel removal tool, tuck harness between headliner and roof.

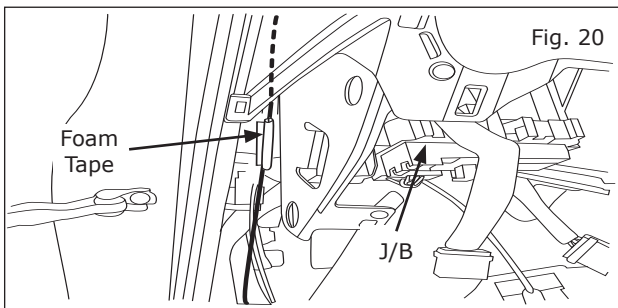
INSTALLATION PROCEDURE:



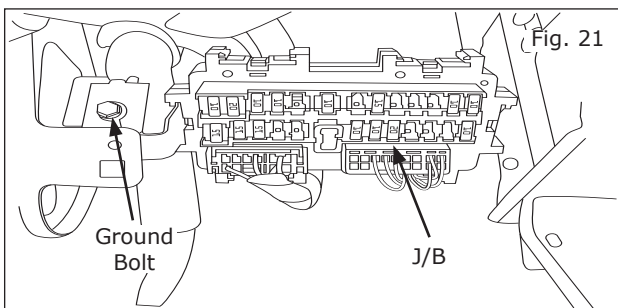
- 17) Route harness down driver side A-pillar and secure to existing vehicle harness with 4 wire ties.



- 18) Wrap 2 pieces of foam tape around mirror harness and tuck between metal bracket and center dash.



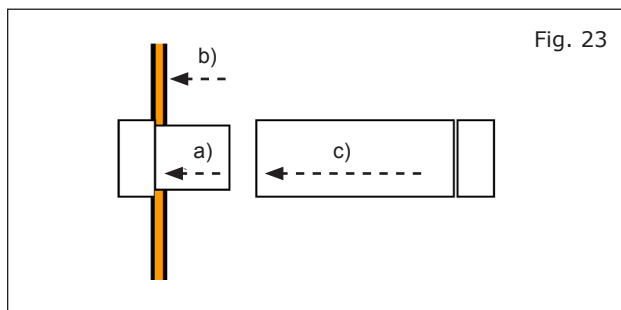
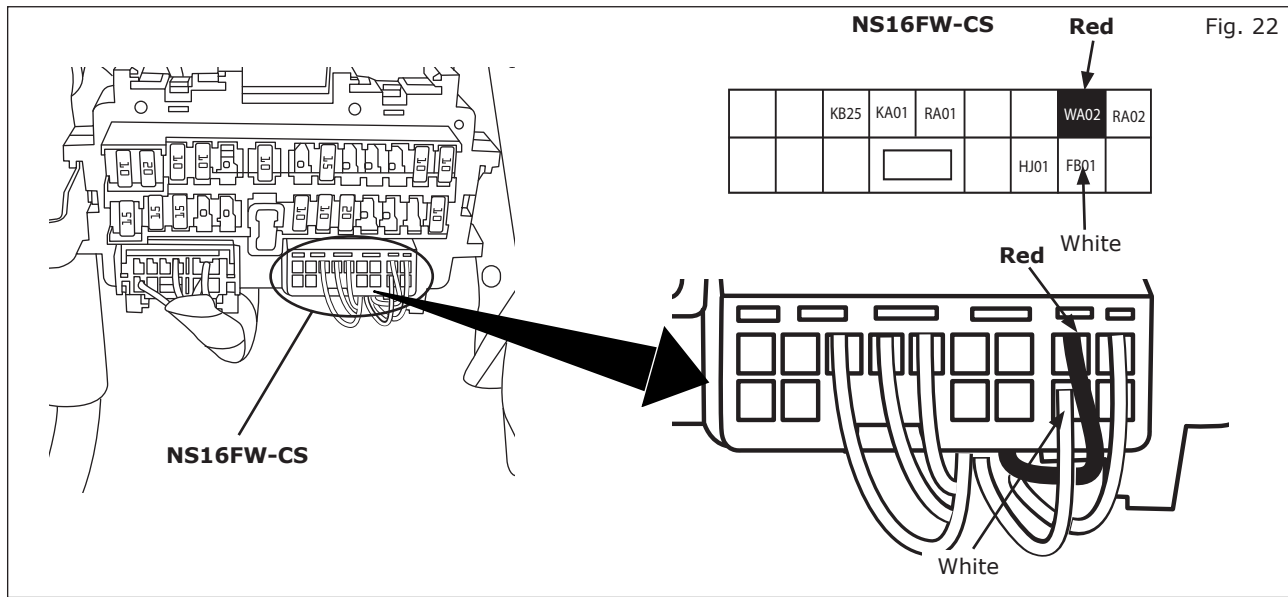
- 19) Wrap 1 piece of foam tape around harness to protect from metal frame near center dash in location shown.



- 20) Locate 8mm ground bolt in driver side dash area, near J/B, and remove.
a) Install ring terminal from Black wire of mirror harness over ground bolt and reinstall.

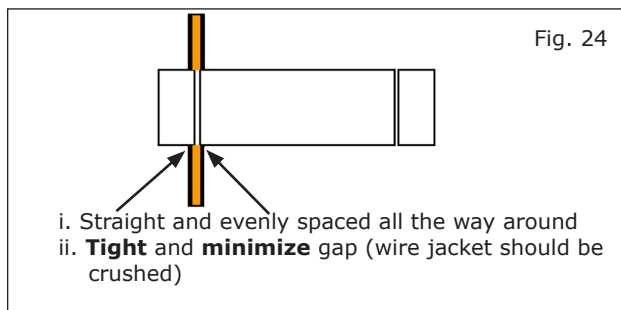
INSTALLATION PROCEDURE:

- 21) Secure gray end of wire tap to **Red Wire** in J/B in driver side kick panel area.
 - a) See steps 22 - 27 for wire tap installation instructions.



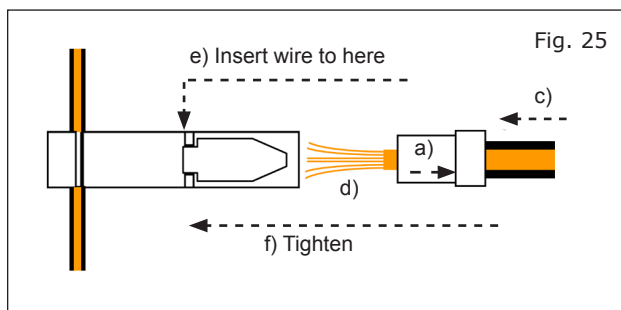
- 22) Identify and confirm (test if necessary) the correct vehicle wire to be tapped.
- 23) Tap vehicle wire.
 - a) Remove cap (slot side) from tap body.
 - b) Slide cap around vehicle wire.
 - c) Tighten the tap **TIGHT** with finger pressure.

NOTE:
Do not re-use the tap for subsequent reinstallation. Figures are not to scale.



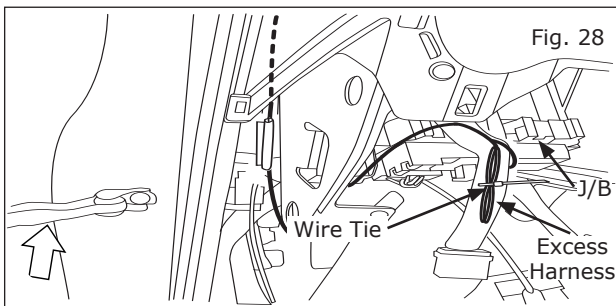
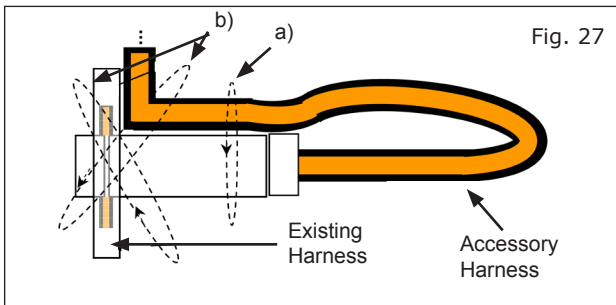
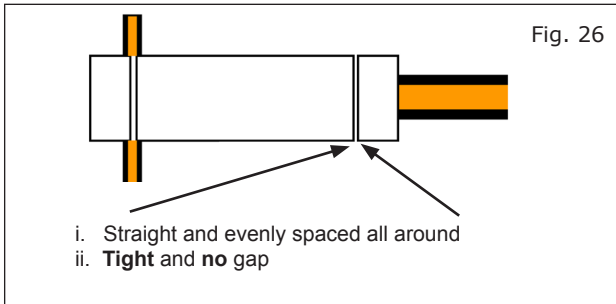
- 24) Inspect the tap to ensure correct installation.

NOTE:
Avoid putting pressure on the vehicle wire and tap for the remainder of the installation.



- 25) Tap accessory wire.
 - a) Remove tap (non-pierce) side from tap.
 - b) Remove the protective stub from the wire.
 - c) Insert wire through the non-pierce side opening.
 - 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.

INSTALLATION PROCEDURE:




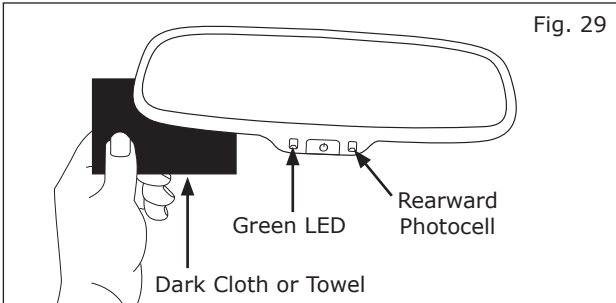
- 26) Confirm the tapped accessory wire.
 - a) Inspect the tap to ensure correct installation.
 - b) Test the signal to ensure that it is working properly.

- 27) Secure the tap.
 - a) Secure the tapped wire on the non-pierce side to the body of the tap with electrical tape (≥ 2 revolutions).
 - b) Secure the body to harness where vehicle wire is being tapped with electrical tape (≥ 2 revolutions).

- 28) Bundle excess harness wires and secure to existing vehicle harness with 1 wire tie in center dash area, near J/B.

ACCESSORY CHECK:

- Testing
 - Tighten negative battery terminal nut to 4.1 Nm.
 - Turn the ignition switch to ON.
 - 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.



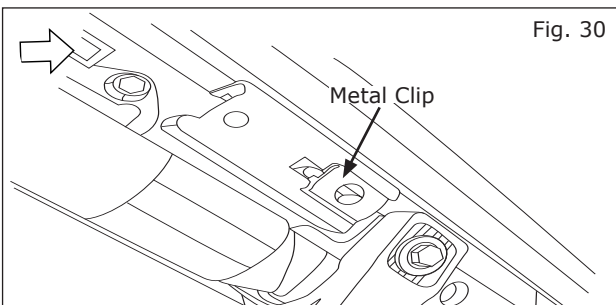
- Remove the cover from the forward-looking photocell and the mirror will begin to clear.
- Diagnostic flow chart is available on last page of instructions for troubleshooting.
- Check all **Critical Installation Steps**.
- Check all torque values
 - Auto-Dimming mirror, pg. 5, step 15c, fig. 13
- Verify 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.

RE-INSTALLATION OF REMOVED PARTS:

CAUTION

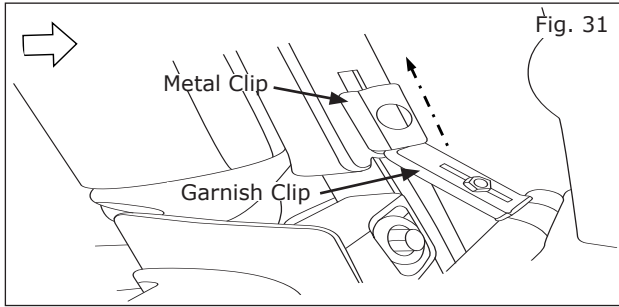
Use caution when re-installing interior components to avoid damage, scratches, or breaking of mounting clips. Refer to the vehicle service manual for more information.

- LH front pillar garnish.
 - Ensure metal clip in A-pillar body is seated properly.

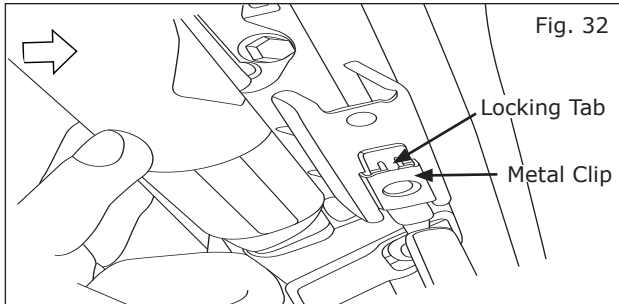


ACCESSORY CHECK:

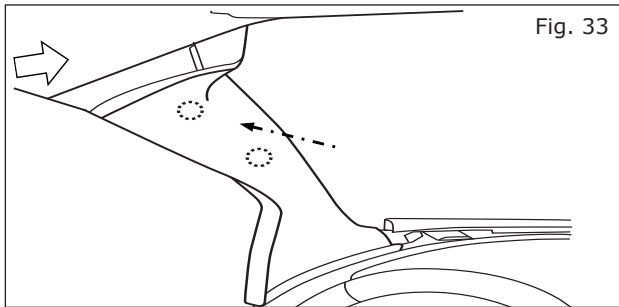
- Insert LH front pillar garnish clip from LH front pillar garnish into metal clip of A-pillar body.



- Continue inserting LH front pillar garnish clip until locking tab is securely fastened at top of metal clip.



- Push finisher toward vehicle body to securely attach.



- Re-install all removed vehicle parts. Refer to the vehicle service manual as necessary.

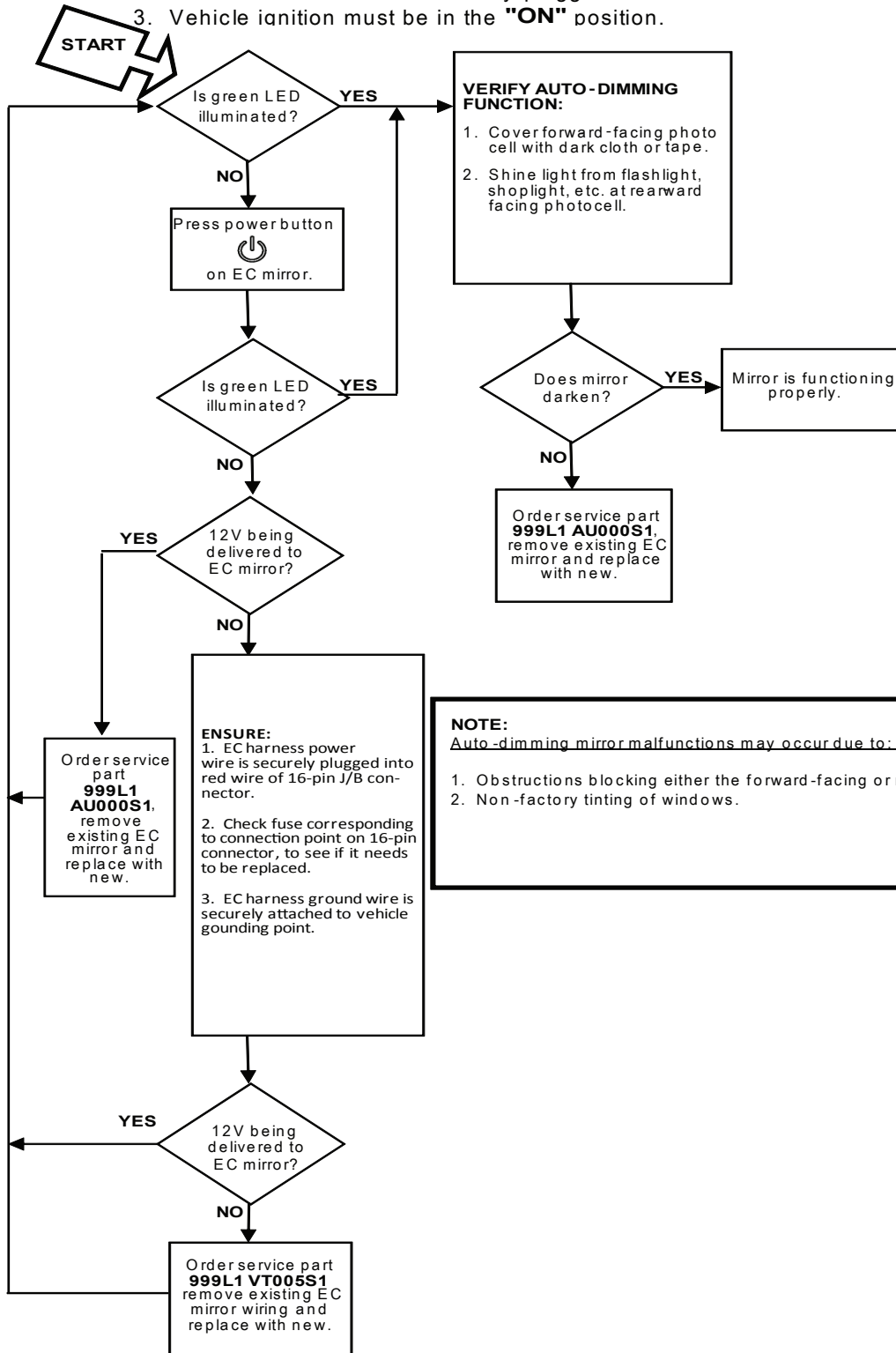
FINAL INSPECTION:

- 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:

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.