Part Number: PT374-02090

Kit Contents

Item #	Quantity Reqd.	Description
1	1	Auto Dimming Mirror Assembly w/ PRNDL
2	1	Hardware bag

Hardware Bag Contents

Item #	Quantity Reqd.	Description
1	2	T-tap Connectors, Red 3M™
2	1	Wire Cover (short)
3	1	Wire Cover (long)
4	1	Auto-Dimming Mirror Wire Harness
5	9	Foam Tape
6	6	Wire Ties, small
7	1	Corrugated Tubing
8	1	Operation Instruction Card

Additional Items Required For Installation

Item #	Quantity Reqd.	Description

Conflicts

None

Recommended Tools

Personal & Vehicle Protection	**Notes**
Blankets, Towels	
Cloth or Nylon Cover	700mm x 120mm
Special Tools	**Notes**
None	
Installation Tools	**Notes**
Ratchet	
Socket	10 mm
Torx Head Driver	T20
Pliers	Needle Nose
Side Cutters	
Nylon Panel Removal Tool	e.g. Panel Pry Tool #1 Toyota SST# 00002-06001-01
Dark Towel or Cloth	For Testing
Torque Wrench	15.5 lbf-in, 48 lbf-in
Masking Tape	
Electrical Tape	
Special Chemicals	**Notes**
Cleaner	VDC approved

General Applicability

All 2009 and newer Matrix models

Recommended Sequence of Application

Item #	Accessory
1	Security System
2	RES
3	Auto-Dimming Rearview Mirror
4	Satellite Radio

*Mandatory

Vehicle Service Parts (may be required for reassembly)

Item #	Quantity Reqd.	Description
1	1	74318-52020-B1, Driver side visor clip cover

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.

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 and blankets, cleaning chemicals, etc.).
- Safety (eye protection, rechecking torque procedure, etc.).
- Vehicle Disassembly/Reassembly (panel removal, part storage, etc.).
- Electrical Component Disassembly/Reassembly (battery disconnection, connector removal, etc.).

Please see your Toyota dealer for a copy of this document.

1. Remove the Negative Battery Cable.

(a) Protect the fender before starting.

(b) Do not touch the positive terminal with any tool when removing the cable.

(c) Remove the negative battery cable (Fig. 1-1).

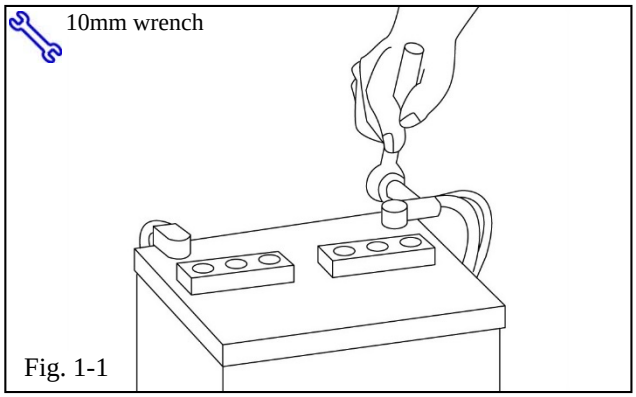


Fig. 1-1

2. Disassemble the Vehicle.

(a) Remove the OE mirror.

Screw-on type mirror:

(1) Use a T20 Torx driver to loosen the Torx screw in the mirror mount and slide the mirror up and off of the windshield button (Fig. 2-1).

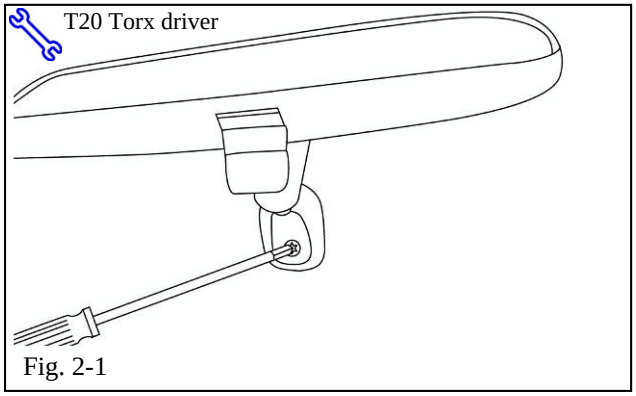


Fig. 2-1

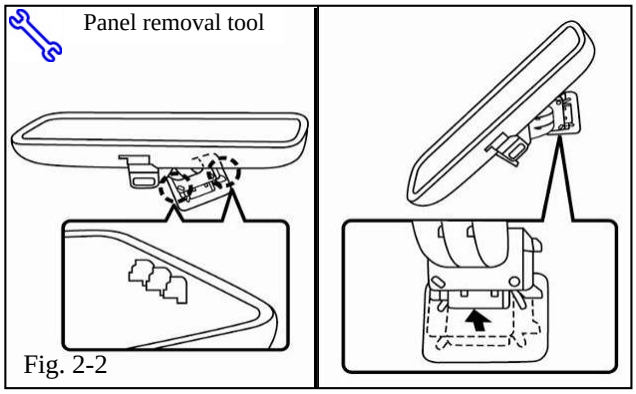
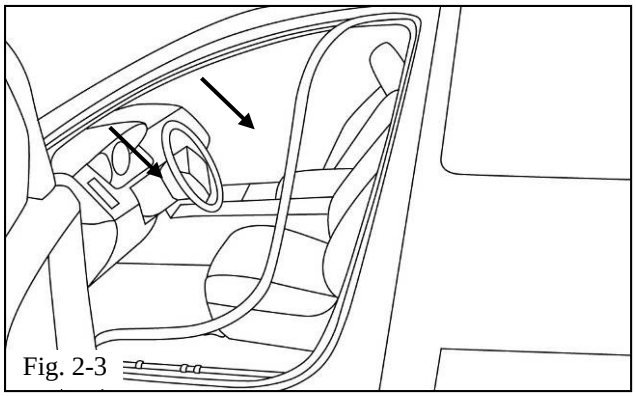


Fig. 2-2

Clip-on type mirror:

(1) Disengage the two claws and remove the mirror cover from the mirror base (Fig. 2-2).

(2) Pull the lever in the direction indicated by the arrow shown in the illustration and slide the inner rear view mirror assembly upward to remove it (Fig. 2-2).


Fig. 2-3

(b) Pull the driver side weather-stripping down past the top of the A-pillar garnish and out of the way of access to vehicle occupant compartment (Fig. 2-3).

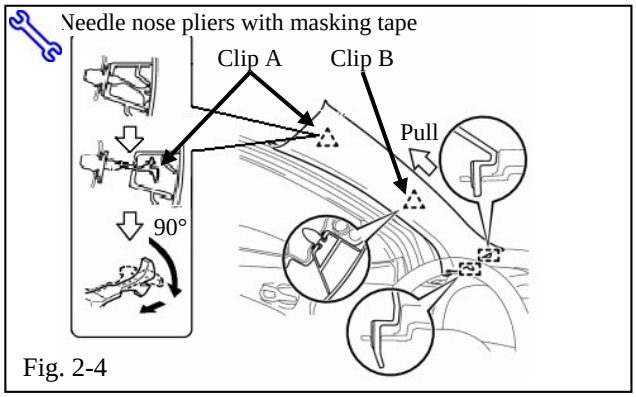


Fig. 2-4

(c) Detach the A-pillar garnish from the body.

(1) Starting from the top, pull the A-pillar garnish outward so that clip B detaches, the base of clip A detaches, and the tip of clip A locks in the pillar garnish's hole (Fig. 2-4).

⚠ (2) Put masking tape around the jaws of the needle-nose pliers to prevent clip damage.

(3) Use needle-nose pliers to rotate the center portion of clip A 90°, then pull the pillar garnish to release the tip of clip A from the pillar garnish (Fig. 2-4).

(4) DO NOT remove clip A from the A-pillar body. If clip A shows any sign of damage (i.e. scarred) or is removed from the body, replace it with a new clip. Confirm the latest clip part number with the electronic parts catalog.

(5) Pull the pillar garnish in the direction indicated by the arrow in the illustration to detach the bottom claws (Fig. 2-4).

(d) Remove the driver side upper vent panel.

(1) Pull bottom edge out first then the top edge (Fig. 2-5).

(2) Disconnect the Outer Mirror Switch connector.

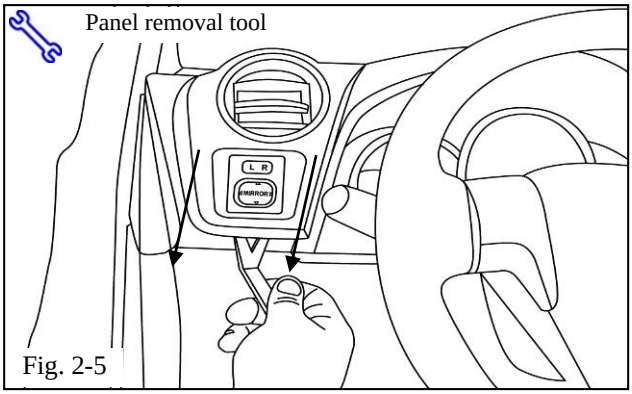


Fig. 2-5

(e) Remove the overhead console.

(1) **Non-sunroof models:** Use a panel removal tool to remove the overhead console from the headliner (Fig. 2-6).

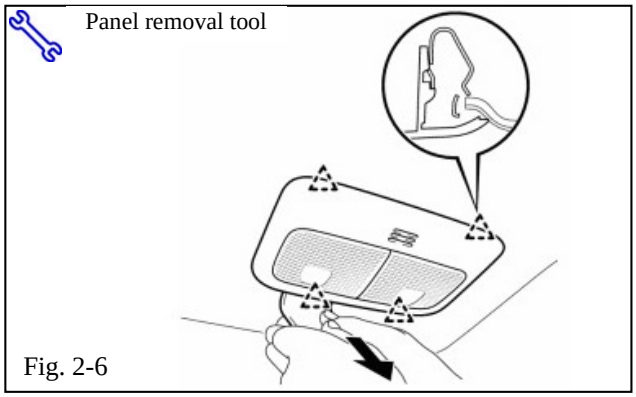


Fig. 2-6

(2) **Sunroof models:** Use a panel removal tool to remove overhead console from the headliner (Fig. 2-7).

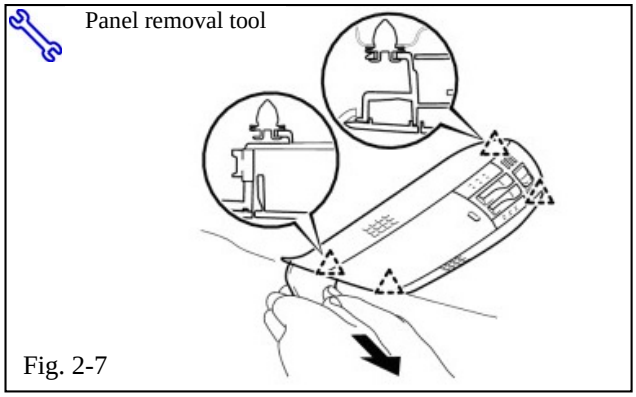
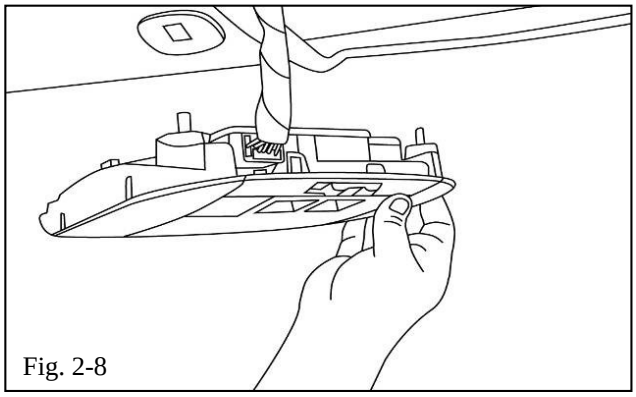


Fig. 2-7


Fig. 2-8

(3) Disconnect the overhead console connector (Fig. 2-8).

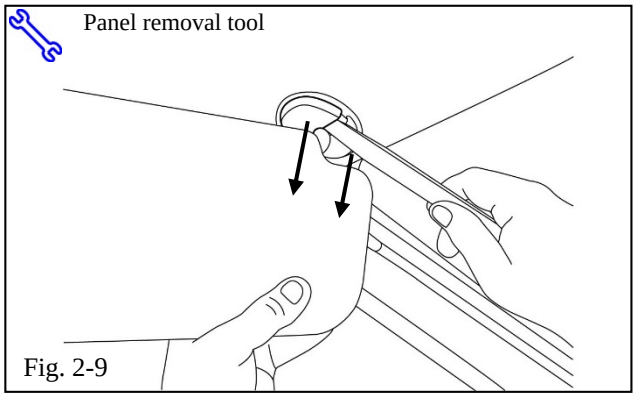


Fig. 2-9

(f) Use a panel removal tool to pry the driver side visor mount cover off of the visor mount (Fig. 2-9).

NOTE: DO NOT fully remove the cover.

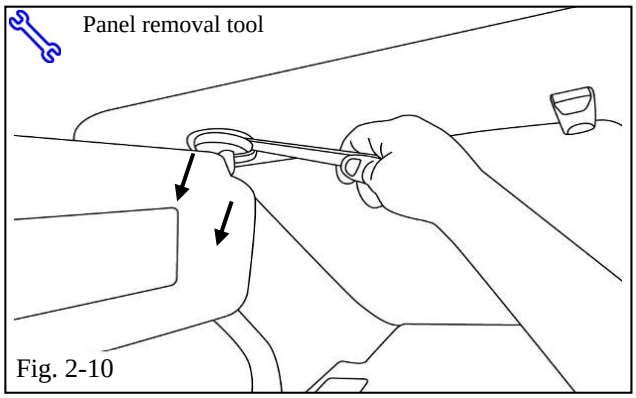
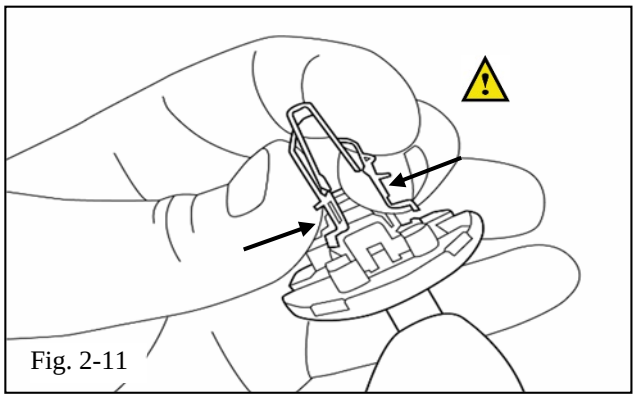


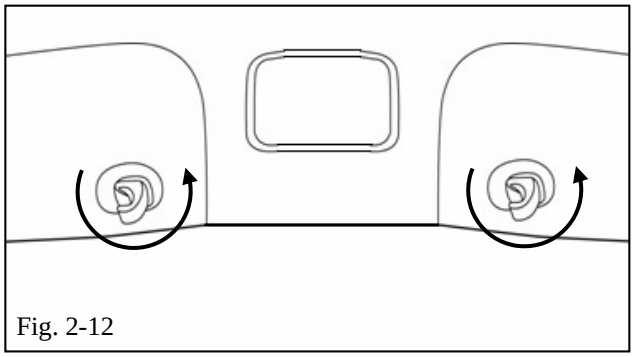
Fig. 2-10

(g) Use a panel removal tool to pry downward on the visor mount to disengage the two (2) clips (Fig. 2-10).

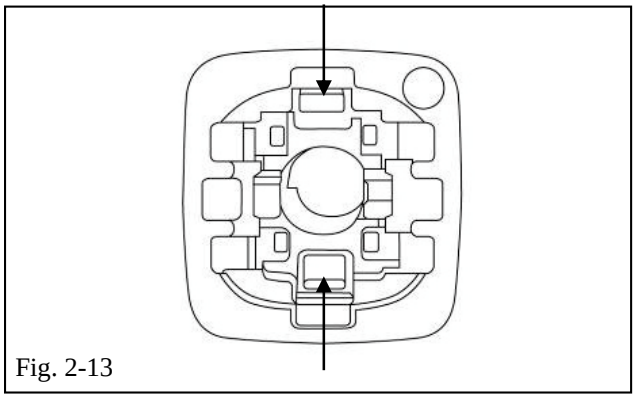
(h) Disconnect the vanity light connector, if equipped.


Fig. 2-11

(i) If a metal fastener clip remains in the vehicle headliner, remove it and reinsert it into the visor mount by squeezing the sides of the clips together and inserting it into the visor mount (Fig. 2-11).


Fig. 2-12

(j) Remove both driver side and passenger side sun visor clips by rotating them counterclockwise about 45° (Fig. 2-12).


Fig. 2-13

(k) Remove both driver side and passenger side visor clip bases by pressing in on the two inner tabs (Fig. 2-13).

3. Install the T-taps.

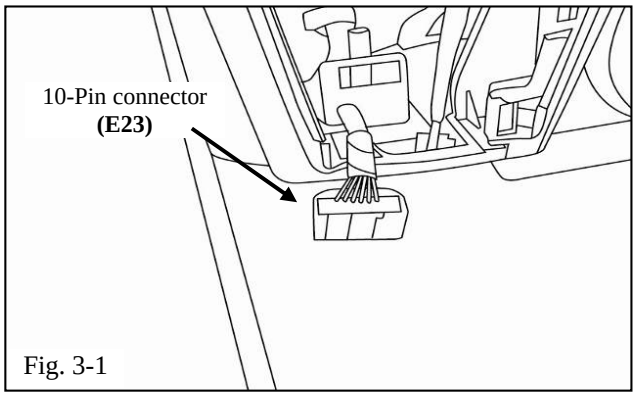


Fig. 3-1

(a) Locate the disconnected 10-Pin Outer Mirror Switch Assembly connector **(E23)** (Fig. 3-1).

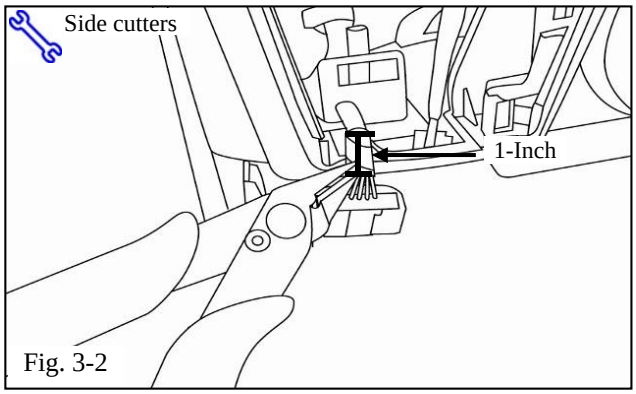


Fig. 3-2

(b) Cut back approximately 1 inch of plastic tubing on the 10-Pin connector wire bundle (Fig. 3-2).

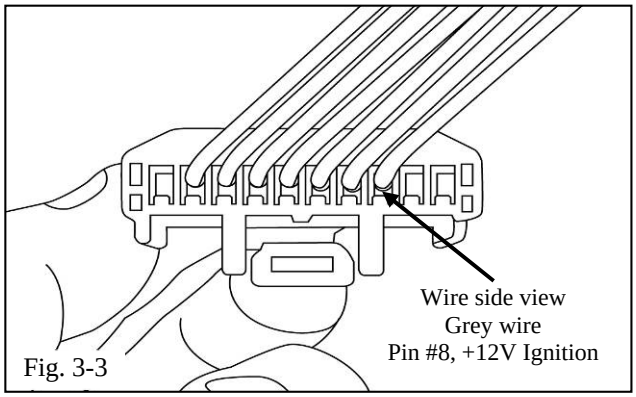


Fig. 3-3

(c) Locate the GREY wire in Pin #8 on the 10-Pin connector (Fig. 3-3).

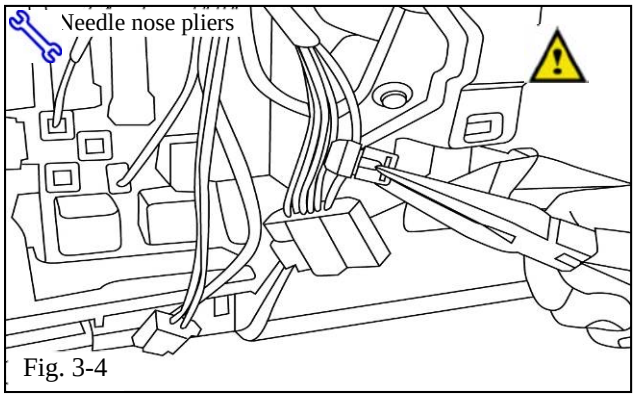


Fig. 3-4

(d) Use needle nose pliers to attach a T-tap connector to the GREY wire (Pin #8) on the 10-Pin connector about 1 inch from the connector (Fig. 3-4).

NOTE: Ensure both halves of the T-tap connector are snapped together.

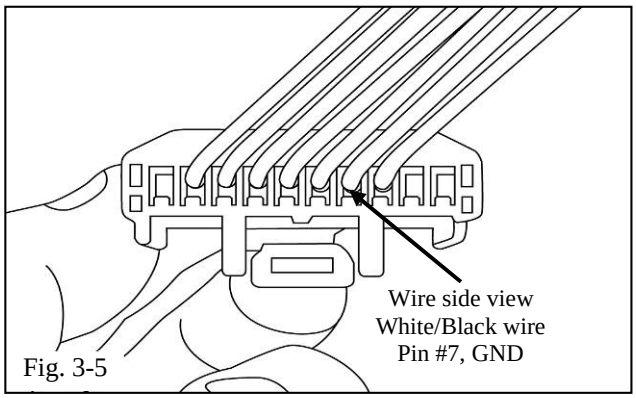


Fig. 3-5

(e) Locate the WHITE/BLACK wire in Pin #7 on the 10-Pin connector (Fig. 3-5).

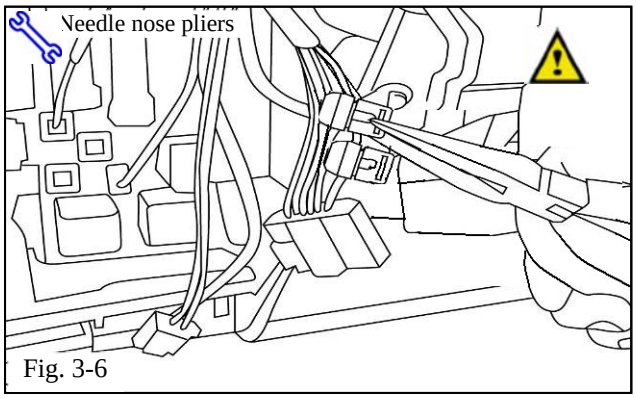


Fig. 3-6

(f) Use needle nose pliers to attach a T-tap connector to the WHITE/BLACK wire (Pin #7) on the 10-Pin connector about 1.5 inches from the connector (Fig. 3-6).

NOTE: Ensure both halves of the T-tap connector are snapped together.

4. Install the Auto-Dimming Mirror.

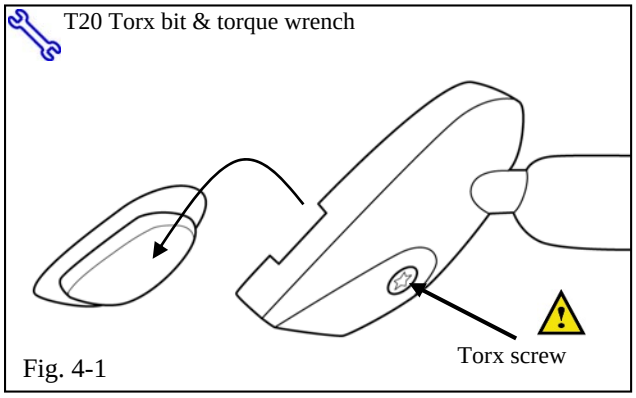
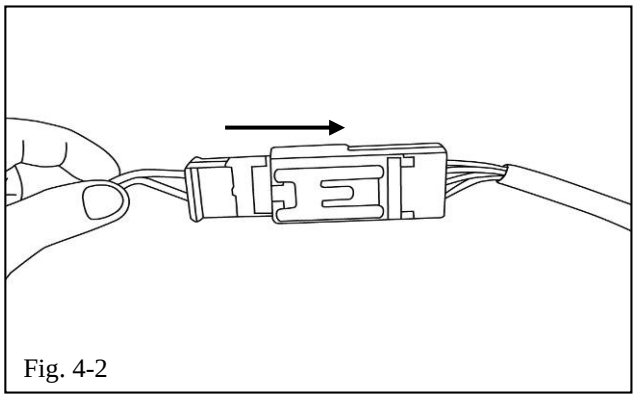


Fig. 4-1

(a) Slide the auto-dimming mirror onto the mounting button on the windshield (Fig. 4-1).

(b) Use a torque wrench to tighten the screw in the mirror mounting bracket to 1.75 N-m (15.5 lbf-in).

Torque: 1.75 N-m (15.5 lbf-in)


Fig. 4-2

(c) Plug the auto-dimming wire harness 2-Pin connector into the 2-Pin mirror harness (Fig. 4-2).

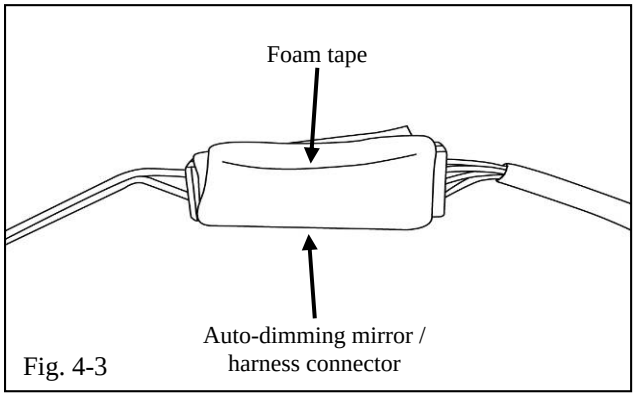


Fig. 4-3

(d) Wrap one (1) piece of foam tape around the auto-dimming mirror connector and the auto-dimming harness connector (Fig. 4-3).

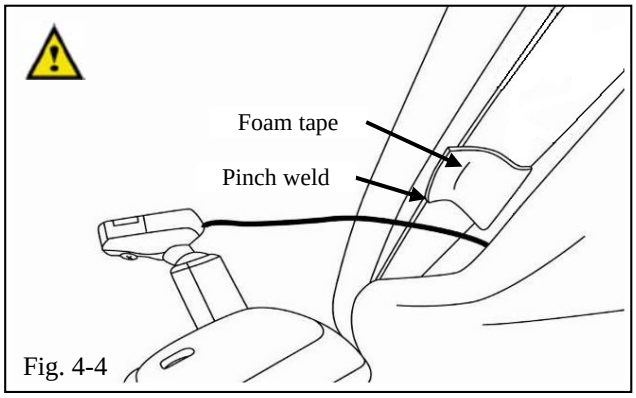
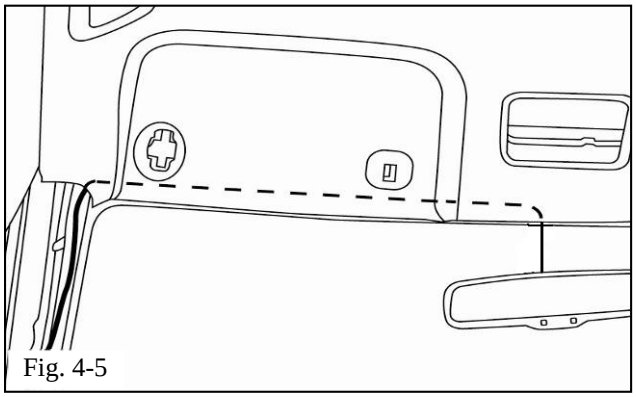


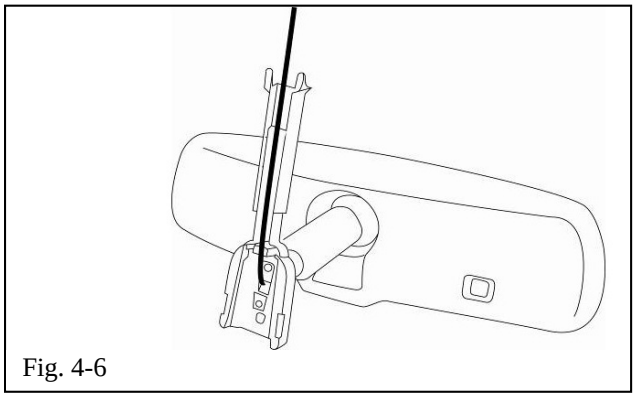
Fig. 4-4

(e) Apply one (1) piece of foam tape to the pinch weld between the windshield and the headliner above the center of the mirror (Fig. 4-4).

NOTE: Do not use excessive force when pulling headliner, as this may cause headliner to crease.


Fig. 4-5

(f) Route the wire along the bottom curve of the headliner toward the driver side A-pillar (Fig. 4-5).


Fig. 4-6

(g) Install the LONG wire harness cover over the wire harness (Fig. 4-6).

(1) Seat the bottom of the cover securely to the base.

(2) Extend the top of the cover fully into headliner.

(3) For mirrors with a smaller gap, separate the two halves and seat the bottom cover to the mirror, then seat the top cover to the headliner and snap the two pieces together.

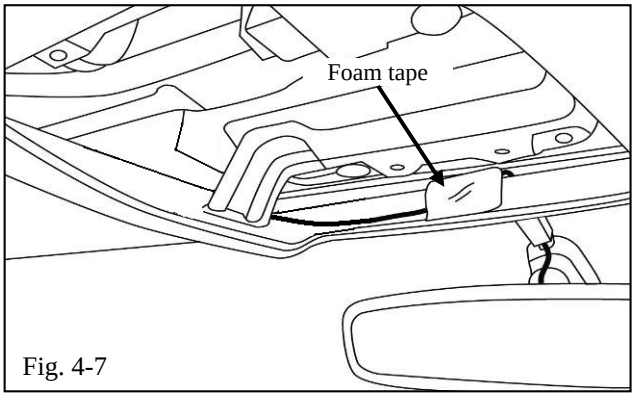


Fig. 4-7

(h) Secure the harness to the front center of the headliner with one (1) piece of foam tape (Fig. 4-7).

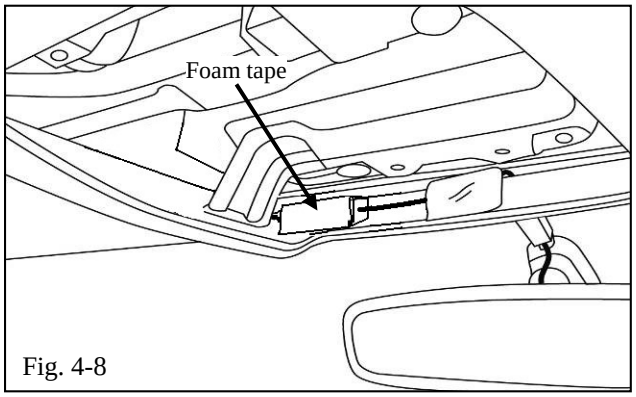


Fig. 4-8

(i) Secure the connector to an open area in the center of the headliner with one (1) piece of foam tape (Fig. 4-8).

⚠ **NOTE:** Ensure the auto-dimming mirror harness connector does not cause interference with the headliner and roof of the vehicle.

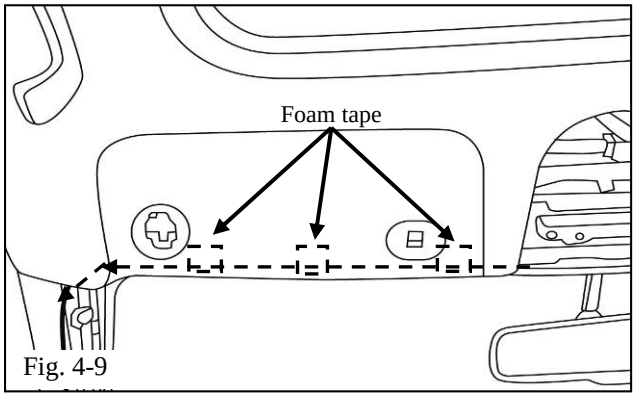


Fig. 4-9

(j) Secure the harness in the driver side visor area to the headliner with three (3) pieces of foam tape in the locations shown (Fig. 4-9).

⚠ **NOTE:** Make sure the wire harness does not block any of the visor mounting holes.

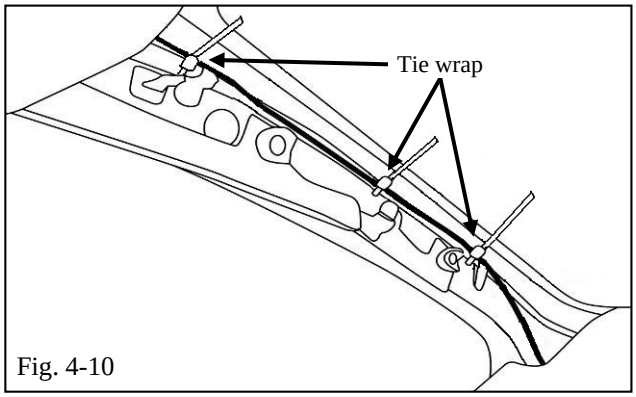


Fig. 4-10

(k) Route the auto-dimming mirror harness down the vehicle A-pillar above the OE harness. Secure the wire harness to the OE harness in front of and above each wire clip with three (3) tie wraps (Fig. 4-10).

STOP (1) Verify the mirror harness will not interfere with airbag deployment.

STOP (2) Do not wire tie to the sunroof drain tube, if equipped.

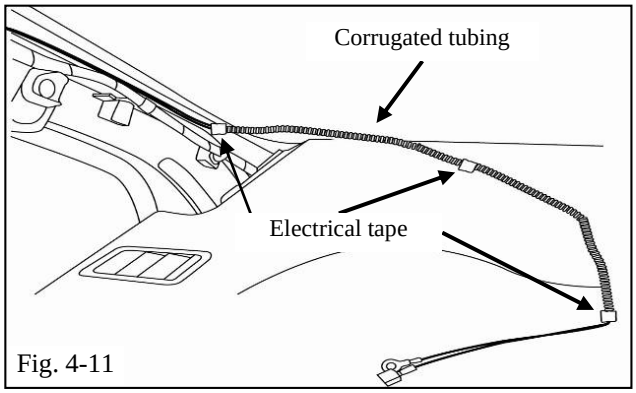


Fig. 4-11

(l) Apply corrugated tube to the remaining portion of the wire about 3 inches from the last wire tie (Fig. 4-11).

(m) Use electrical tape to secure the wire in the tube at the top, in the middle, and at the bottom of the tube.

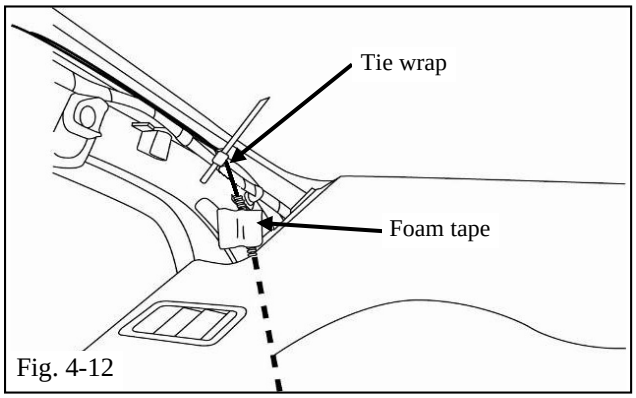


Fig. 4-12

(n) Secure the corrugated tube to the OE harness clip at the bottom of the A-pillar with one (1) tie wrap (Fig. 4-12).

(o) Secure the corrugated tube to the bottom of the A-pillar body with one (1) piece of foam tape (Fig. 4-12).

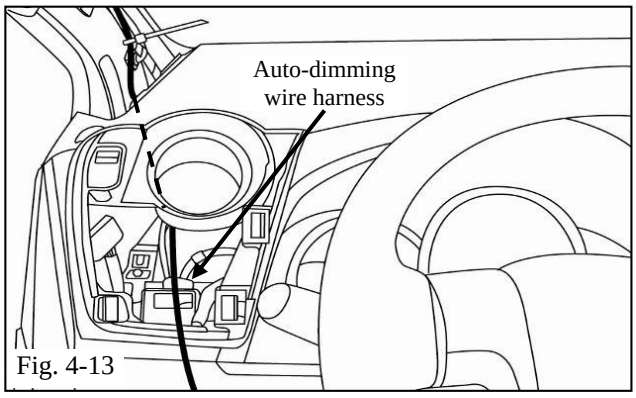


Fig. 4-13

(p) Carefully route the harness through the dash panel to the front of the upper vent panel opening (Fig. 4-13).

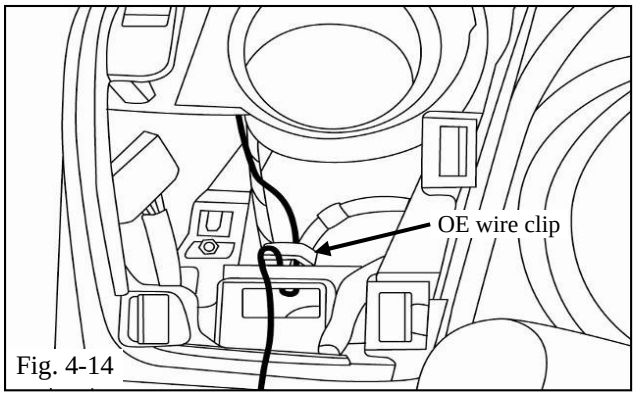
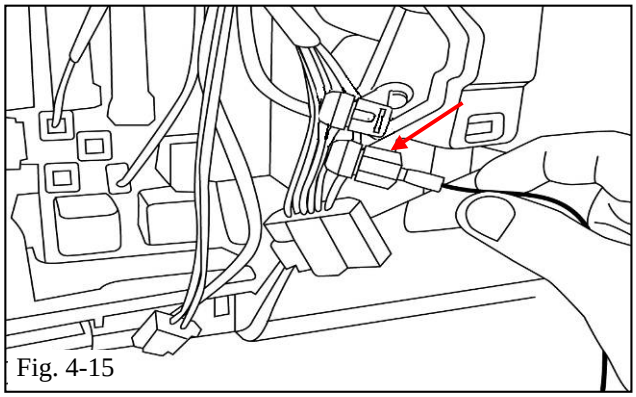


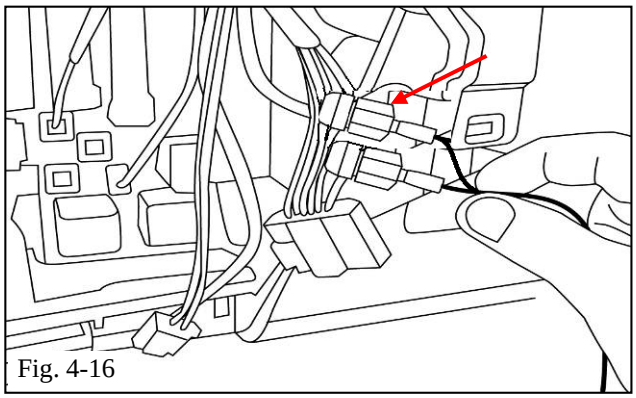
Fig. 4-14

(q) Secure the auto-dimming mirror harness to the OE wire clip (Fig. 4-14).


Fig. 4-15

(r) Plug the BLACK/RED wire spade end of the auto-dimming mirror harness into the T-tap connector on the GREY wire (Fig. 4-15).

⚠ **NOTE:** Ensure that the spade end is properly seated in the T-tap.


Fig. 4-16

(s) Plug the BLACK wire spade end of the auto-dimming mirror harness into the T-tap connector on the WHITE/BLACK wire (Fig. 4-16).

⚠ **NOTE:** Ensure that the spade end is properly seated in the T-tap.

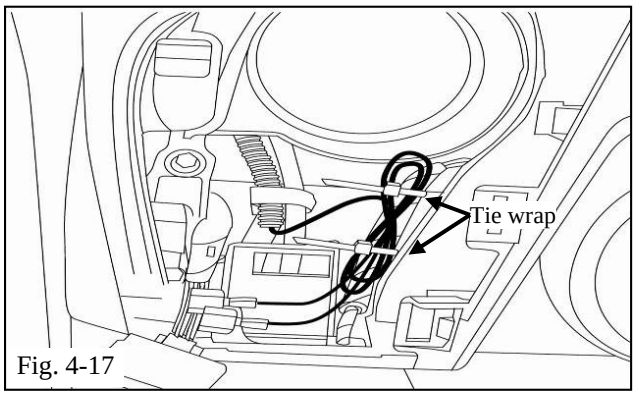


Fig. 4-17

(t) Bundle any excess wire and secure it to the OE harness with two (2) tie wraps (Fig. 4-17).

⚠ **NOTE:** Ensure wire does not come into contact with any sharp edges.

5. Test the Installation.

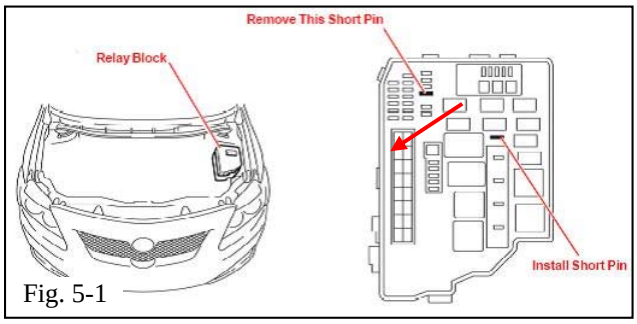


Fig. 5-1

(a) If required, install the short pin located in the engine compartment relay block (Fig. 5-1).

(b) Temporarily reconnect the vehicle's negative battery cable.

(c) Turn the ignition switch to ON.

(d) With the vehicle in a fairly well-lit area, perform the following tests.

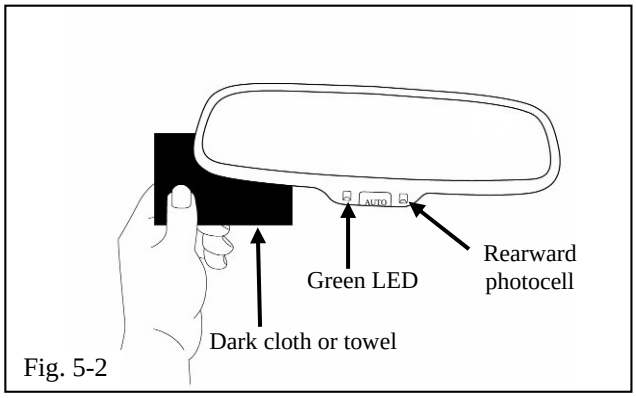


Fig. 5-2

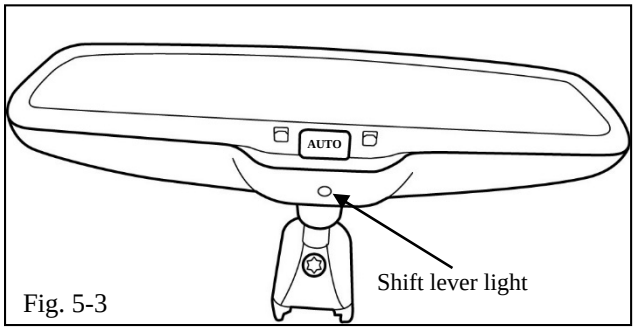


Fig. 5-3

(e) Auto-dimming feature:

(1) To make sure the auto-dimming feature is on, verify that the LED indicator light is on. If it is not on, push the "On/Off" button for 3 seconds, or until the LED is illuminated.

(2) Cover the forward-looking light sensor located on the back of the mirror with a dark cloth or towel (Fig. 5-2).

(3) In a few seconds, the mirror will begin to darken (the amount of time may vary with ambient light levels).

(4) Remove the cover from the forward-looking light sensor and the mirror will begin to clear.

(f) Shift lever light feature:

(1) With the ignition ON, cover the forward-looking light sensor on back of the mirror. Low-level ambient lighting should be visible from the bottom of the mirror (Fig. 5-3).

(2) Turn the ignition OFF.

(g) Disconnect the negative battery terminal.

(h) If required, remove and replace the short pin in its original location.

6. Complete the Vehicle Reassembly.

(a) Trim the excess off of all tie wraps.

(b) Reinstall the driver side sun visor assembly, visor clip, and hinge cover.

(c) Reconnect the overhead console connector and reinstall the overhead console.

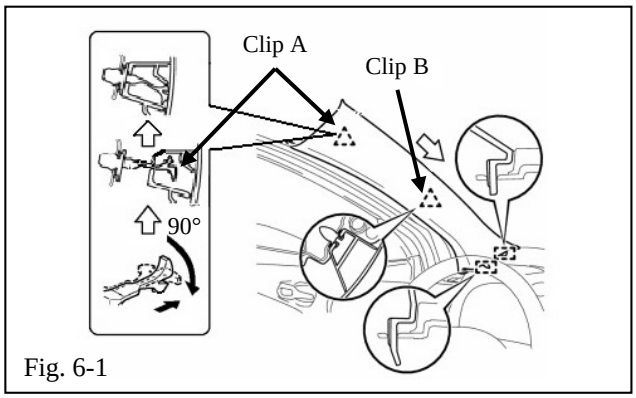


Fig. 6-1

(d) Reconnect the outer mirror switch and re-install the driver side vent panel.

(e) Reinstall the A-pillar garnish (Fig. 6-1).

(1) Inspect the upper A-pillar clip, clip A. If it is damaged, replace it.

(2) Set the claws of the lower A-pillar garnish into the upper instrument panel (Fig. 6-1).

(3) Insert the tip of clip A into the pillar garnish's hole by using needle-nose pliers to rotate the tip of clip A 90°.

STOP (4) Ensure that clip A is properly secure in the A-pillar garnish, and that the clip is properly engaged in the garnish when in the deployed position.

STOP (5) Before installing the A-pillar garnish, be sure the airbag or wire harnesses will not get pinched or tangled.

(6) Push the pillar garnish toward the vehicle body to attach the base of clip A and clip B.

(f) Reinstall the weather seal.

(g) Ensure the components are securely fastened and do not interfere with existing OE or auto-dimming mirror harnesses.

(h) Place the operation instruction card in the vehicle glove box.

(i) Remove fingerprints, smudges, dirt, etc. from the mirror and windshield with a VDC-approved cleaner.

(j) Verify each reinstalled component for proper fit and function.

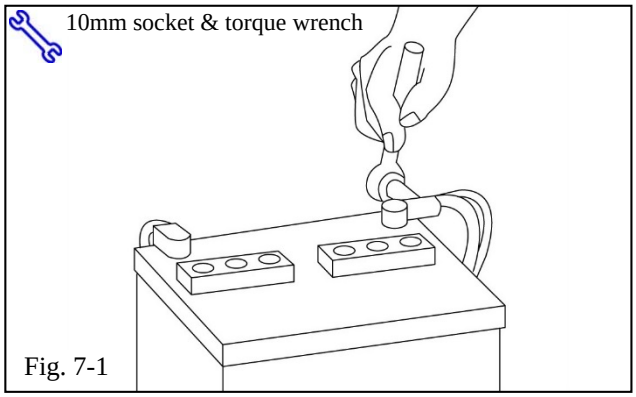


Fig. 7-1

7. Reconnect the Negative Battery Cable.

(a) Reconnect the vehicle's negative battery cable (Fig. 7-1).

(1) Tighten the nut to 5.4 N-m (48 lbf-in).

Torque: 5.4 N-m (48 lbf-in)

(2) Do not touch the positive terminal with any tools when replacing the cable.

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

Check:	Look For:
Accessory Function Checks	
Vehicle should be in a fairly well-lit area.	
☐ Turn ignition (ACC power) to ON.	Verify green LED is on. If it is not ON press On / Off button - confirm LED is ON.
Auto-dimming feature:	
☐ Cover the forward-looking light sensor (located on the back of the mirror).	Verify mirror darkens.
Mirror clears:	
☐ Remove cover from forward-looking light sensor.	Mirror returns to clear state.
Shift-light Feature:	
☐ Turn ignition ON, cover forward-looking light sensor and observe shift-light.	Light is visible from bottom of mirror.
☐ Operation Instruction Card	Placed in the vehicle glove box.
Vehicle Function Checks	
☐ Check dome light.	Verify dome light functions properly.
☐ Check sunroof, if equipped.	Verify sunroof functions properly.
☐ Check power mirrors.	Verify power mirrors function properly.