



GENUINE ACCESSORIES  
INSTALLATION INSTRUCTIONS

550-0730 Rev. AAA



**PART NUMBER:**

BCKAV7210(DIO) / BCSAV7210(PIO)  
BEPNV7210(DIO) / BESNV7210 (PIO)

**APPLICABLE MODELS:**

2019 > Mazda 3

**REQUIRED COMPONENTS:**

| ITEM | QTY | DESCRIPTION | Usage Chart | Service Part Number |
|------|-----|-------------|-------------|---------------------|
|------|-----|-------------|-------------|---------------------|

**MIRROR ASSEMBLY:**

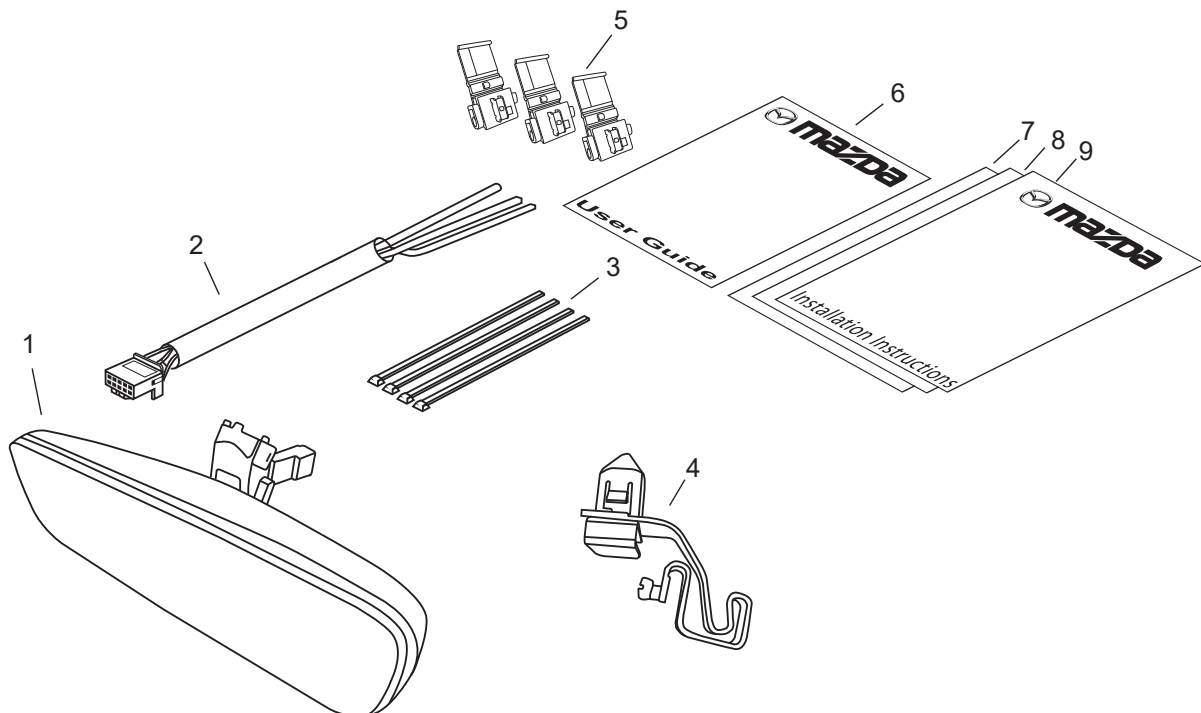
|   |   |                 |   |     |
|---|---|-----------------|---|-----|
| 1 | 1 | Mirror Assembly | ① | N/A |
|---|---|-----------------|---|-----|

**INSTALLATION KIT:**

|   |    |                                   |   |           |
|---|----|-----------------------------------|---|-----------|
| 2 | 1  | SA Harness - 3 Conductor          | ① | BCKAV7211 |
| 3 | 6  | Wire Ties                         | ⑥ |           |
| 4 | 1  | A-Pillar Tether Clip (BCJL-68162) | ① |           |
| 5 | 3  | Electro-Tap(wire connector)       | ③ |           |
| 6 | 1  | User Guide                        | ① |           |
| 7 | 1* | Installation Instructions-English | ① | N/A       |
| 8 | 1* | Installation Instructions-French  | ① | N/A       |
| 9 | 1* | Installation Instructions-Spanish | ① | N/A       |

\*Installation Instructions not included in BCSAV7210/BCSAV7210 or BCKAV7211.

\*\*Installation kit may have more components than necessary. Please refer to the chart above and the instructions for required components.



**TOOLS REQUIRED:**

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

|                      |           |              |                    |
|----------------------|-----------|--------------|--------------------|
| 10mm Socket          | Ratchet   | Fiberstick   | Needle Nose Pliers |
| 4mm Flat Screwdriver | Clean Rag | Wire Cutters | Pliers             |

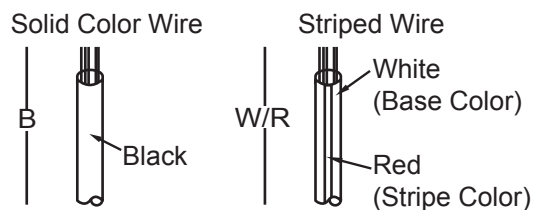
## WIRE CODES

Two-color wires are indicated by a two-letter symbol. The first indicates the base color of the wire, the second indicates the color of the stripe. For example:

W/R = White wire with a red stripe

BR/Y = Brown wire with a yellow stripe

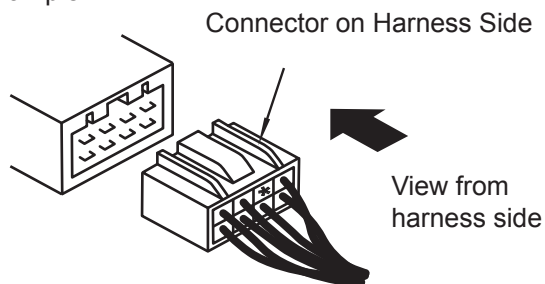
Symbol (Example):



## CONNECTOR DIAGRAMS

Connector diagrams show connectors on the harness side. The terminal indicates the view from the harness side.

Example:

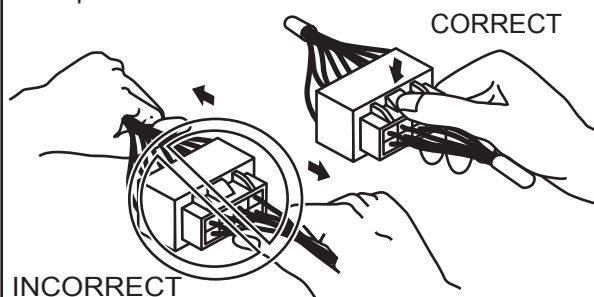


Unused terminals are indicated by "\*"

## DISCONNECTING CONNECTORS

When disconnecting the wires, grasp the connectors, not the wires.

Example:



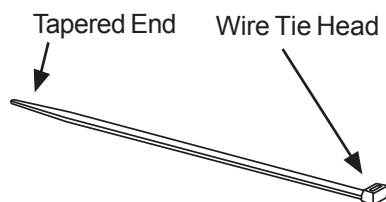
## LOCKING CONNECTORS

When locking connectors, listen for a click, indicating they are securely locked.

Example:

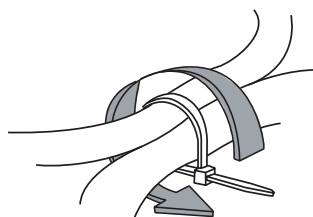


## WIRE TIE PROCEDURE

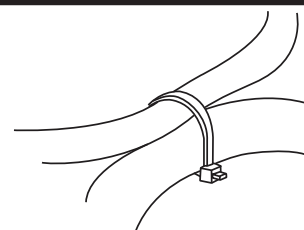


Wrap wire tie around the harness you wish to secure together.

Insert the Tapered End of the wire tie into the Wire Tie Head.

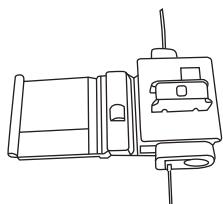


Pull the Tapered End through the Wire Tie Head until the wire tie is snug.

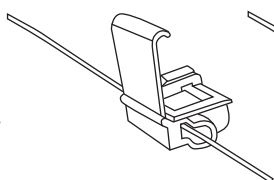


Trim wire tie end after tightening.

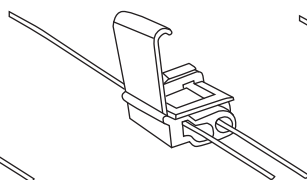
## IDC WIRE TAP PROCEDURE



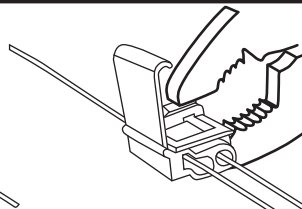
Place IDC on Vehicle Wire.



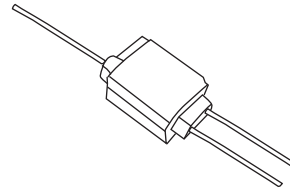
Close side of IDC.



Insert EC Mirror Harness wire into IDC.



Crimp IDC metal tab over both wires until flush with top of IDC.



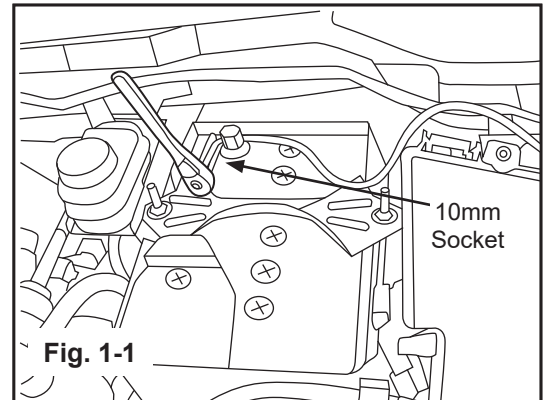
Close top of IDC.

## INSTALLATION PRECAUTIONS / NOTES:

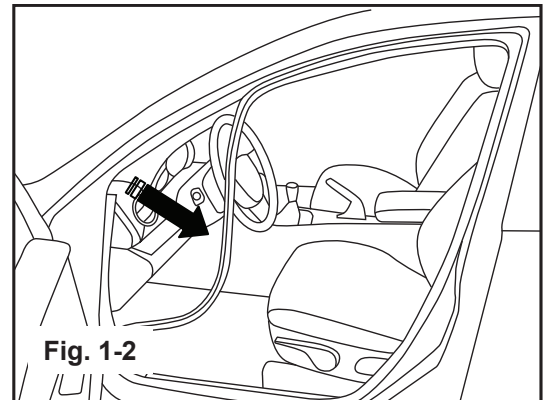
- If using fish wire, use caution to avoid damage to existing components.
- Do not place wire harness against objects with sharp edges that may cause electrical shorting.
- Verify that power harness path will not interfere with brake, clutch, emergency brake or air bag operation. Use wire ties to hold the wiring away from critical locations.

### 1 Preparation

1. Place kit components on a clear, padded surface and inspect for damage, defects, or missing components.
2. Record customer's programmed Radio - AM/FM/SAT stations and trip computer (if applicable).
3. Disconnect negative battery terminal.
  - a) Using 10mm socket, remove negative battery terminal. (Fig. 1-1)



4. Remove driver-side door seal.
  - a) Pull back past top of A-pillar trim. (Fig. 1-2)



5. Remove driver-side A-pillar trim.

#### NOTE

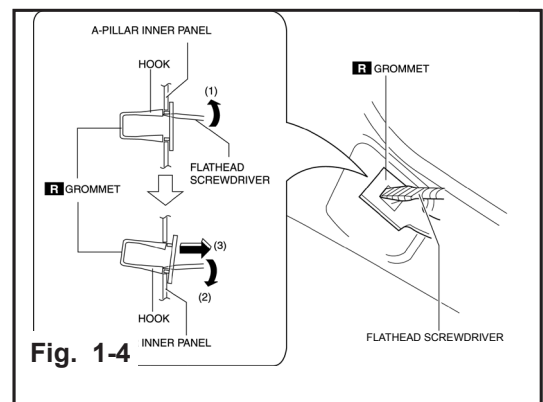
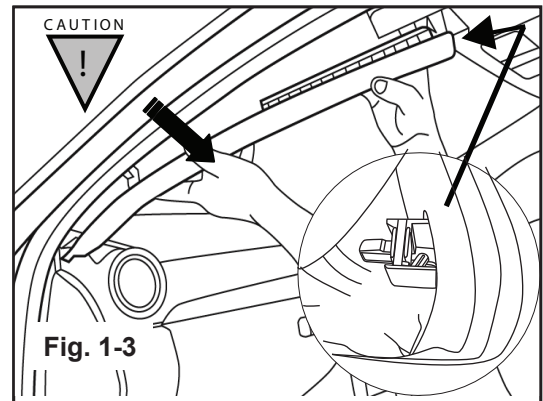
**Do not use excessive force. A-pillar could be damaged.**

- a) Pull out the top portion of A-pillar trim towards passenger-side of vehicle until A-pillar push-pin connector is extended approximately 1½". (Fig. 1-3)

#### NOTE

**A-pillar connector will remain attached to vehicle body. (Fig. 1-3)**

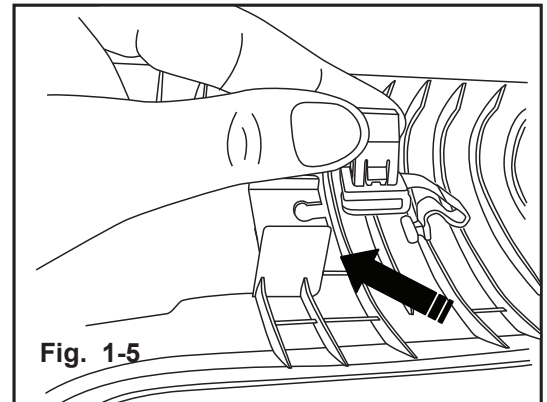
- b) Remove A-pillar push-pin connector from A-pillar trim. It is recommended to use your finger to slide A-pillar push-pin up off of A-pillar trim. (Fig. 1-3)
- c) After A-pillar trim is detached from connector, pull firmly to detach lower clips.
- d) Move the hook in the direction of arrows (1) and (2) using a flathead screwdriver and detach it from the A-pillar inner panel. (Fig. 1-4)
- e) Remove the grommet in the direction of the arrow (3). (Fig. 1-4)



#### NOTE

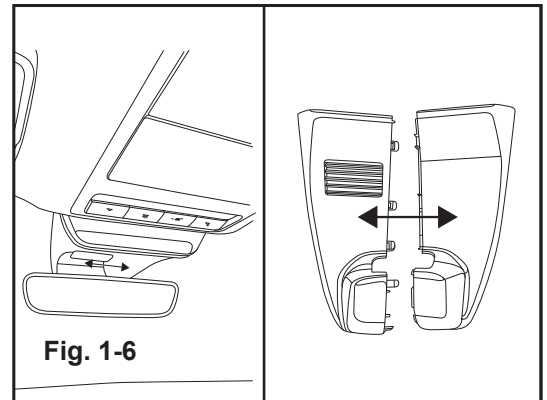
**A-pillar connector must be replaced with the supplied tether clip.**

- f) Install new A-pillar tether clip from kit into A-pillar before proceeding. **(Fig. 1-5)**

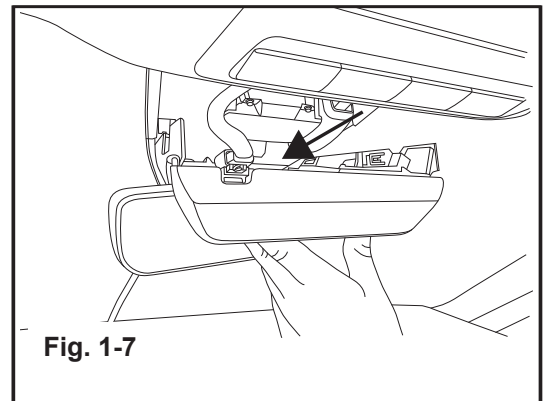


#### 6. Remove OE Mirror.

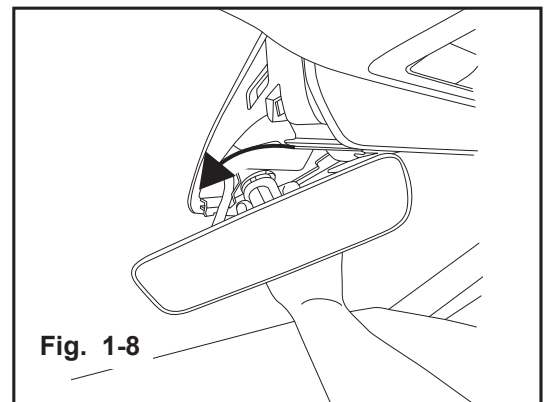
- a) Remove sensor cover by sliding the two halves of the cover outward. **(Fig. 1-6)**



- b) Remove the sensor display unit by sliding the display backwards or toward the front of the car. **(Fig. 1-7)**  
c) Unclip the display unit power harness.



- d) Firmly grasp the mirror mount and rotate approximately 60 degrees counterclockwise until the mirror mount spring disengages from the windshield button. **(Fig. 1-8)**



#### CAUTION

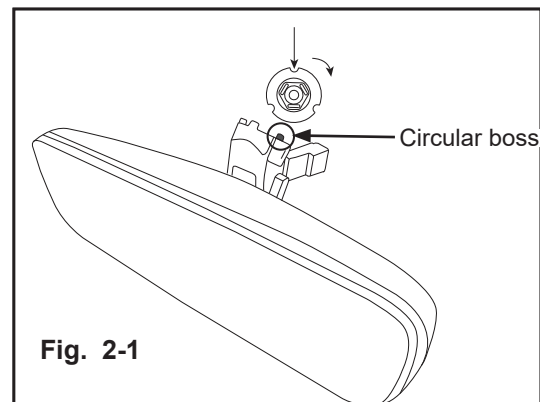


**DO NOT pull mirror away from the windshield while it is engaged on the windshield button. This could damage or break the windshield and button, requiring replacement.**

## 2 EC Mirror Installation

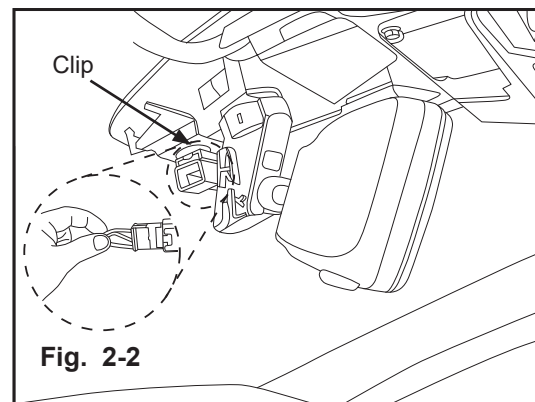
### 1. Attach EC mirror.

- Firmly grasp the base of the mount and place the mirror onto the windshield button
- Align the grey unpainted boss shown in the circle in Fig. 2-1 to the top of the button.
- Rotate the mirror 60 degrees in a clockwise direction until the mirror snaps into place and is fully seated. **(Fig. 2-1)**



### 2. Attach Harness Clip and Connectors

- Plug the vehicle harness into the mirror harness and install the christmas tree clip on the mirror harness into the vehicle slot. **(Fig. 2-2)**



## 3 Route Mirror Harness to Vehicle Power

### 1. Route Harness through Sensor Cluster.

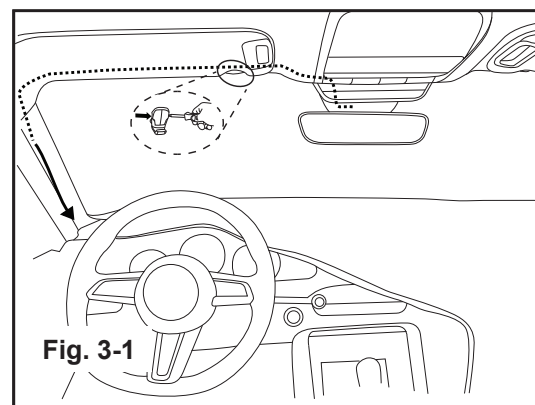
- Route harness on the left side of the sensor cluster and secure by using the existing vehicle harness clips. **(Fig. 3-1)**

### 2. If necessary, Remove Sun Visor Clip.

- Using a taped flathead screw driver disengage locking tabs by pressing inward on both sides of the clip. **(Fig. 3-1)**

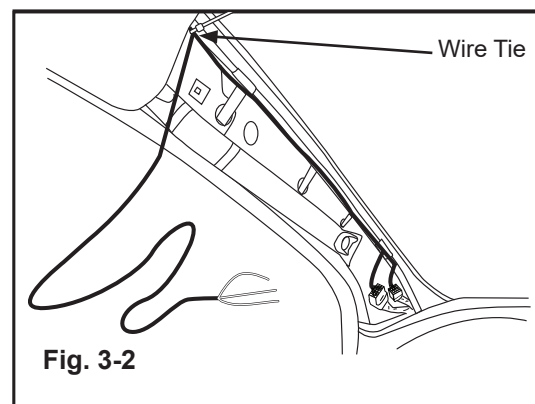
### 3. Route mirror harness to driver-side A-pillar.

- Route mirror harness between vehicle headliner and roof to top of driver-side A-pillar area. **(Fig. 3-1)**



### 4. Route mirror harness down driver-side A-pillar.

- Route mirror harness down A-pillar and secure to OE harness at the top of A-pillar with (1) wire tie while leaving the remainder of the harness loose as shown. **(Fig. 3-2)**
- See Wire Tie Procedure on Page 2 for detailed instructions and images of proper wire tie installation techniques.

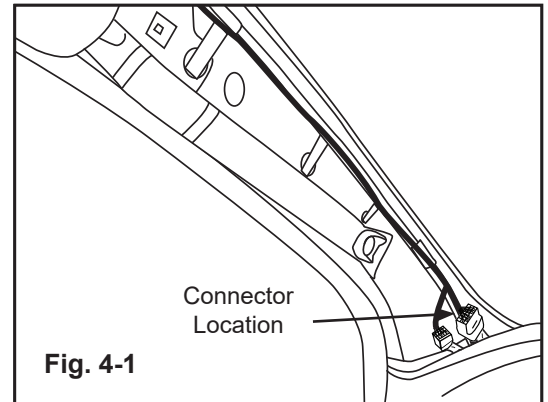


#### CAUTION

**Ensure mirror harness does not interfere with airbag operation. Do not secure wire ties to air bag or sunroof drain tube.**

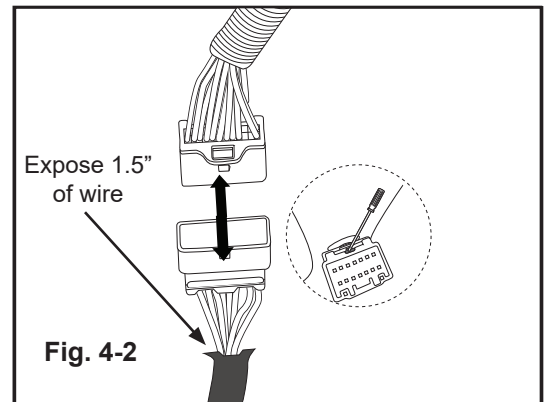
## 4 Connect Mirror Harness Power and Ground

1. Locate the 24 pin connector at the bottom of the A-pillar. (Fig. 4-1)



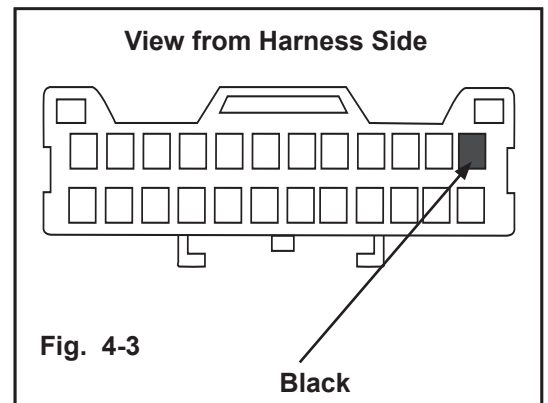
2. Prepare 24 pin connector for connection method.

- a) Remove protective tape from corrugated tubing and slide away from the connector 1.5 inches. (Fig. 4-2)
- b) Remove protective tape from lower connector and slide away 1.5 inches from connector.
- c) Unplug 24 pin harness connectors by removing the female connector from the male connector.
- d) Using a screwdriver, disconnect the lower connector from the vehicle body by disengaging the connector snap and sliding upward.

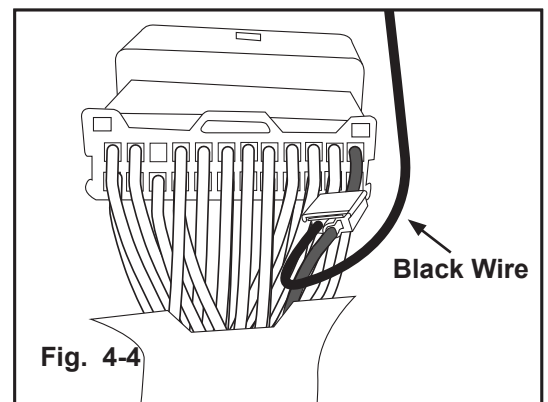


3. Connector EC Harness to Ground.

- a) Locate the **Black wire** in the location shown of the female(lower) 24-pin connector. (Fig. 4-3)

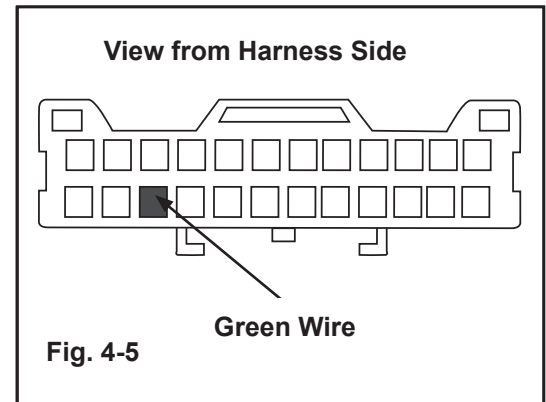


- b) Attach IDC connector to this **Black wire** of the lower 24-pin connector.
- c) Insert end of **Black wire** of the mirror harness into opening of IDC connector on the **Black wire**. (Fig. 4-4)
- d) Using Pliers, crimp IDC tab and then close plastic top.
- e) See IDC Wire Tap Procedure on Page 2 for detailed instructions and images of proper wire tap installation techniques.

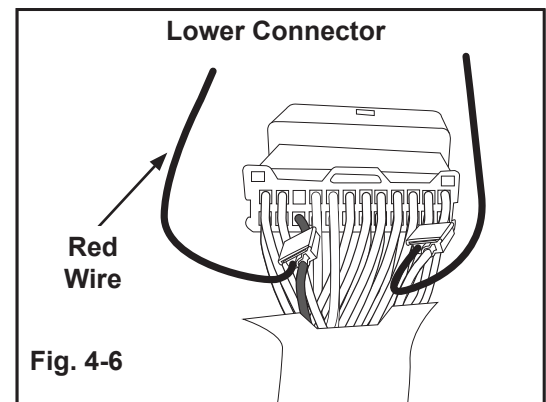


#### 4. Connect EC Harness to +12V Ignition.

- a) Locate the **Green wire** in the location shown of the female (lower) 24-pin connector. (**Fig. 4-5**)
- b) Attach IDC connector to this **Green wire** of the 24-pin connector.

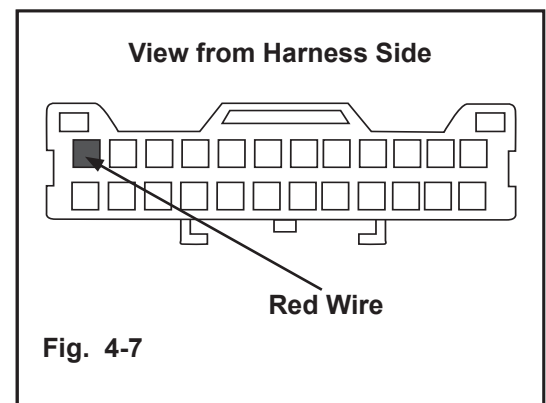


- c) Insert end of **Red wire** of the mirror harness into opening of IDC connector on the **Green wire**. (**Fig. 4-6**)
- d) Using Pliers, crimp IDC tab and then close plastic top.
- e) **See IDC Wire Tap Procedure on Page 2 for detailed instructions and images of proper wire tap installation techniques.**

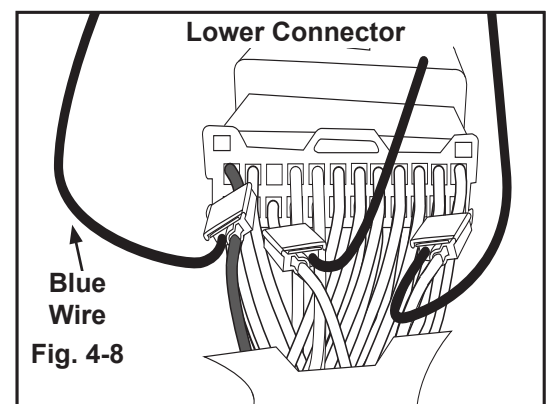


#### 5. Connect EC Harness to Battery.

- a) In the same 24-pin female connector, locate the **Red wire** in the location shown. (**Fig. 4-7**)
- b) Attach IDC connector to this **Red wire** of the 24-pin connector.



- c) Insert end of **Blue wire** of the mirror harness into opening of IDC connector on the **Red wire**. (**Fig. 4-8**)
- d) Using Pliers, crimp IDC tab and then close plastic top.
- e) **See IDC Wire Tap Procedure on Page 2 for detailed instructions and images of proper wire tap installation techniques.**





## 5 Secure Remaining EC Harness Wires

1. Bundle excess EC harness wires with wire ties.
  - a) Bundle excess EC harness wires with (5) additional wire ties. (Fig. 5-1)
  - b) See Wire Tie Procedure on Page 2 for detailed instructions and images of proper wire tie installation techniques.

### CAUTION

Ensure mirror harness does not interfere with airbag operation. Do not secure wire ties to air bag or sunroof drain tube.

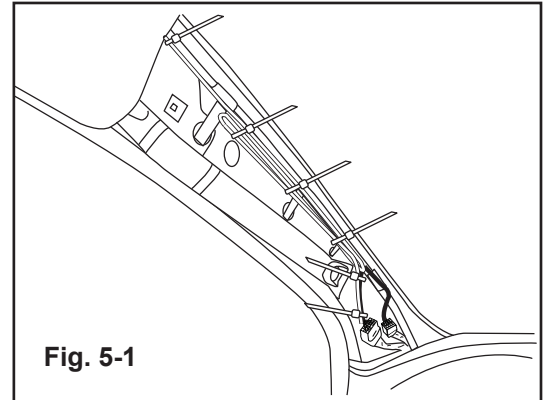


Fig. 5-1

## 6 Testing

1. Reconnect negative battery cable.
2. Turn the ignition switch to ON.
3. With the vehicle in a fairly well-lit area, perform the following:
  - a) To make sure the auto-dimming feature is on, verify that the power button, located the center button is illuminated. If it is not on, push the "⏻" button to turn the amber LED on. (Fig. 6-1)
  - b) Cover the forward looking photocell on the back of the mirror and in a few seconds the mirror will begin to darken. (Fig. 6-2)

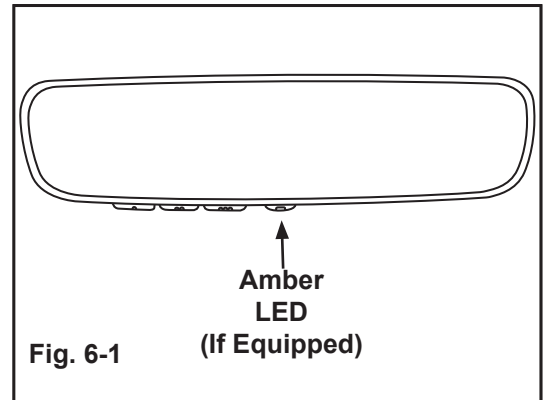


Fig. 6-1

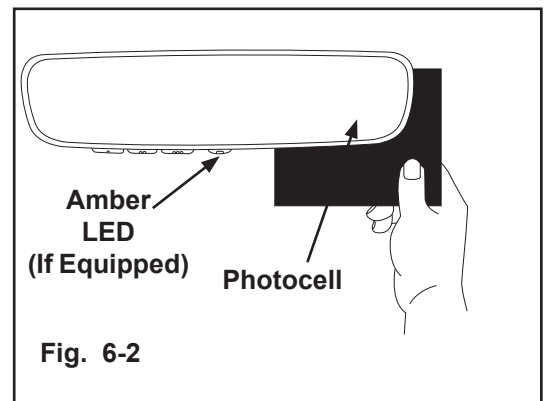


Fig. 6-2

### NOTE

Time to darken will vary with ambient light level.

- c) Remove the cover from the forward looking photocell and the mirror will begin to clear.

4. Turn the ignition key to the OFF position.
5. If equipped, push each HomeLink® button, one at a time, and verify that the HomeLink® indicator blinks orange. (Fig. 6-3)
6. Testing is now complete.

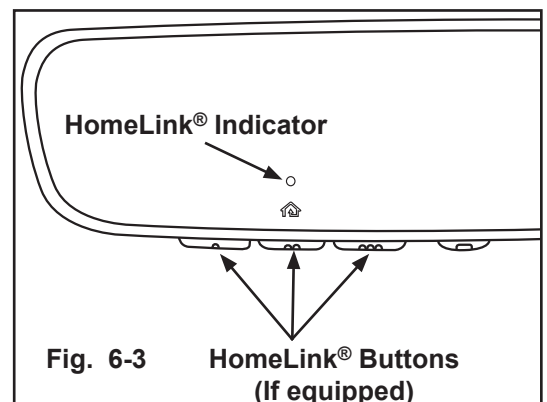


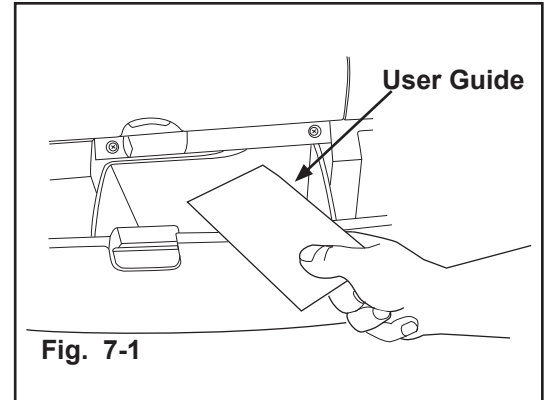
Fig. 6-3

HomeLink® Buttons  
(If equipped)



## 7 Installation of Removed Components

1. Trim excess off all wire ties.
2. Reinstall all trim in reverse order that is was removed.
3. Place User Guide in vehicle glove-box. (Fig. 7-1)
4. Remove fingerprints, smudges, etc. from mirror and verify each component for proper fit and function.



## 8 Inspection

| Inspection Parts          | Inspection Items (O) |   |  |                 |
|---------------------------|----------------------|---|--|-----------------|
|                           | Clearance / Fit      | Scratches / Dirt / Harness Interference | Installation / Tightening / Engagement | Operation Check |
| Negative battery terminal |                      |   | O                                      |                 |
| Driver-side Door Seal     | O                    | O                                       | O                                      |                 |
| Driver-side A-pillar Trim | O                    | O                                       | O                                      |                 |
| EC mirror mount spring    |                      |   | O                                      |                 |
| EC harness connector      |                      |   | O                                      |                 |
| EC mirror features:       |                      |   |  |                 |
| - auto-dimming            |                      |   |  | *1              |
| - Homelink®               |                      |   |  | *2              |
| User guide                |                      |   | *3                                     |                 |

**O : Applicable**

**\*1: Mirror dims (key must be in ON position).**

**\*2: Orange circle blinks through the glass when each button is pushed (test with key in the OFF position).**

**\*3: In vehicle glove-box.**

**CAUTION****When the battery is disconnected, the DSC may stop operating.**

(The DSC OFF indicator will flash at this time, and the TCS/DSC operation indicator will illuminate.)

Carry out the following procedure to reactivate DSC:

1. Turn the ignition switch to "OFF" and then turn it back to "ON".
2. Turn the steering wheel clockwise as far as it will go, and then turn it back counterclockwise as far as it will go.
3. Check that the TCS/DSC operation indicator is turned off.
4. Turn the ignition switch to "OFF" and then turn it back to "ON".
5. Check that the TCS/DCS operation indicator is turned off. If the TCS/DSC operation indicator is still illuminated or the DSC indicator is not turned off when the ignition switch is turned back to "ON", contact your Mazda dealer.

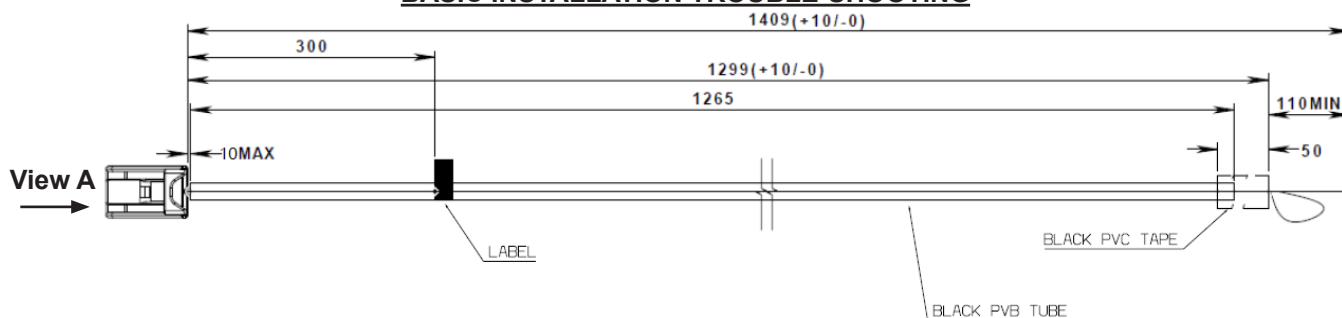
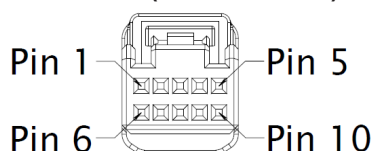
**CAUTION****If the battery is disconnected, the power windows may no longer fully open or fully close automatically.**

Carry out the following operation at driver seat first and passenger seat to restore normal operation:

1. Turn the ignition key to the "ON" position.
2. Press the power window switch to fully open the power windows.
3. Lift up the power window switch to fully close the power windows, and keep it pulled up for approximately 2 seconds.
4. Position the engine switch at "OFF", and then at "ON" again. When the function doesn't work after these procedures, please contact your Mazda dealer.

**Verify the following:**

1. If equipped with HomeLink, B+ harness wire (pin 10 terminal side) is receiving +12V with ignition OFF and ON.
2. Switched harness wire (pin 5 terminal side) is receiving +12V with ignition ON and 0V with ignition OFF.
3. Ground wire (pin 6 terminal side) is securely attached.
4. Mirror harness is fully inserted into mirror.
5. Mirror harness is not pinched, cut or damaged.
6. Ensure IDC connectors are properly installed. Check to see that the blade in the connector did not miss either wire.

**BASIC INSTALLATION TROUBLE-SHOOTING****View A (Terminal Side)****View A**

| PIN | FUNCTION        | NOTE     | COLOR |
|-----|-----------------|----------|-------|
| 1   |                 |          |       |
| 2   |                 |          |       |
| 3   |                 |          |       |
| 4   |                 |          |       |
| 5   | +12VDC SWITCHED | IGNITION | RED   |
| 6   | GROUND          |          | BLACK |
| 7   |                 |          |       |
| 8   |                 |          |       |
| 9   |                 |          |       |
| 10  | +12VDC          | BATTERY  | BLUE  |