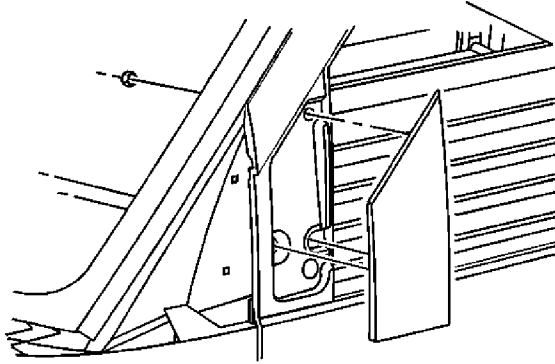


## Fastener Tightening Specifications

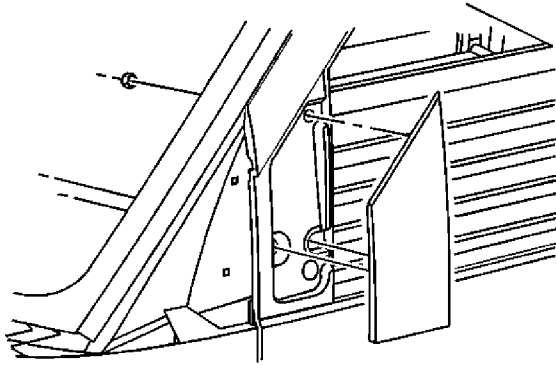
| Application   | Specifications |           |
|---|----------------|-----------|
|   | Metric         | English   |
| Inside Rearview Mirror  | 2 N·m          | 18 lb in  |
| Rearview Mirror Filler Nuts   | 10 N·m         | 89 lb in  |
| Rearview Mirror Nuts  | 10 N·m         | 89 lb in  |
| Outside Rearview Mirror Camper Head Nuts                            | 4 N·m          | 35 lb in  |
| Outsider Rearview Mirror Support Arm and Upper and Lower Brace Nuts | 12 N·m         | 106 lb in |

## Outside Rearview Mirror Opening Cover Replacement Removal Procedure



1. Remove the front door garnish molding. Refer to [Front Side Door Front Garnish Molding Replacement](#).
2. Remove the electrical connector from the rearview mirror.
3. Remove the nuts that retain the rearview mirror filler to the door.
4. Remove the rearview mirror filler from the door.

## Installation Procedure



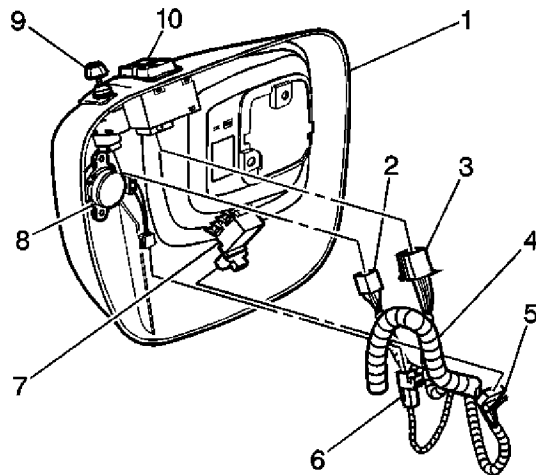
1. Install the rearview mirror filler to the door.

**Caution:** Refer to [Fastener Caution](#) in the Preface section.

2. Install the nuts in order to retain the rearview mirror filler to the door and tighten to **10 N·m (89 lb in)**.
3. Install the front door front garnish molding. Refer to [Front Side Door Front Garnish Molding Replacement](#).

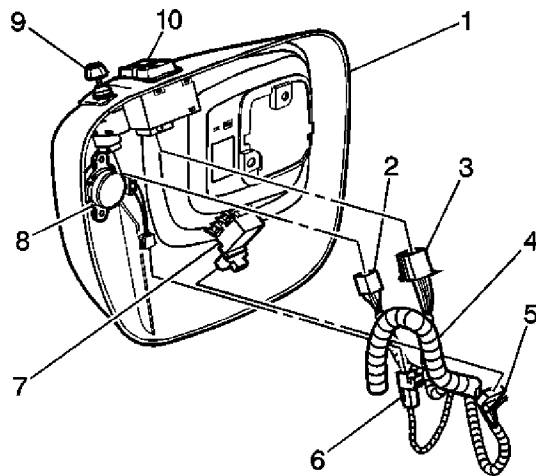
## Power Mirror Switch Replacement

### Removal Procedure



1. Remove the front door trim plate (1). Refer to [Front Door Trim Plate Replacement](#).
2. Remove the electrical connector (2) from the power mirror switch (9).
3. Release the clip that retains the power mirror switch (9) to the front door trim plate (1).
4. Remove the power mirror switch (9) from the front door trim plate (1).

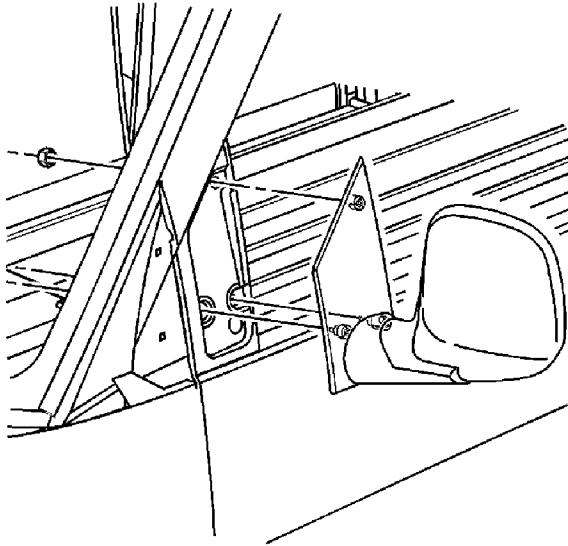
### Installation Procedure



1. Install the power mirror switch (9) to the front door trim plate (1).
2. Press the power mirror switch (9) towards the front door in order to engage the retaining tabs to the front door trim plate (1).
3. Install the electrical connector (2) to the power mirror switch (9).
4. Install the front door trim plate (1). Refer to [Front Door Trim Plate Replacement](#).

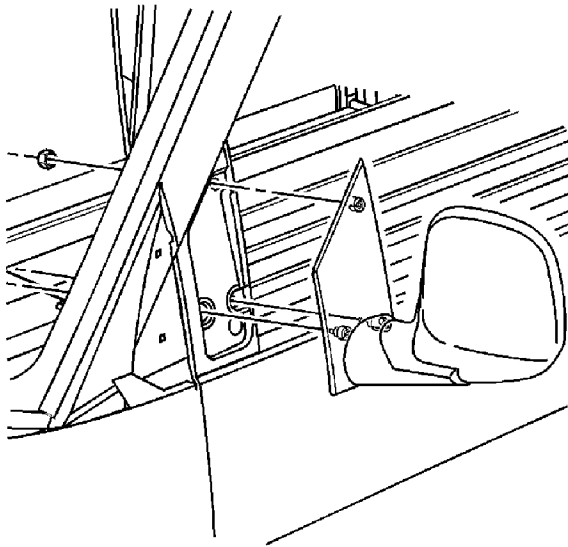
## Manual Mirror Replacement

### Removal Procedure



1. Remove the front door garnish molding. Refer to [Front Side Door Front Garnish Molding Replacement](#).
2. Remove the nuts that retain the rearview mirror to the door.
3. Remove the rearview mirror from the door.

### Installation Procedure



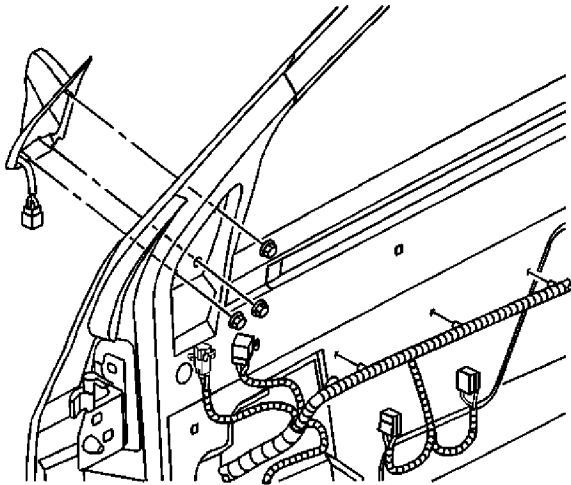
1. Install the rearview mirror to the door.

**Caution:** Refer to [Fastener Caution](#) in the Preface section.

2. Install the nuts in order to retain the rearview mirror to the door and tighten to **10 N·m (89 lb in)**.
3. Install the front door front garnish molding. Refer to [Front Side Door Front Garnish Molding Replacement](#).

## Power Mirror Replacement

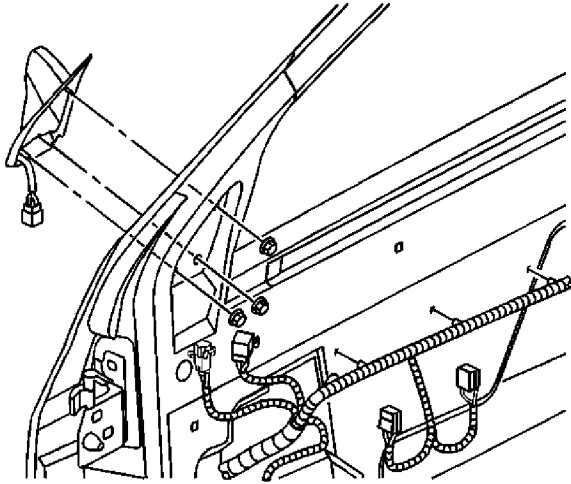
### Removal Procedure



1. Remove the front door trim panel. Refer to [Front Side Door Trim Panel Replacement](#).
2. Remove the nuts from the outside rearview mirror.
3. Disconnect the electrical connector from the outside rearview mirror.
4. Remove the outside rearview mirror from the front door.

### Installation Procedure





1. Install the outside rearview mirror to the front door.

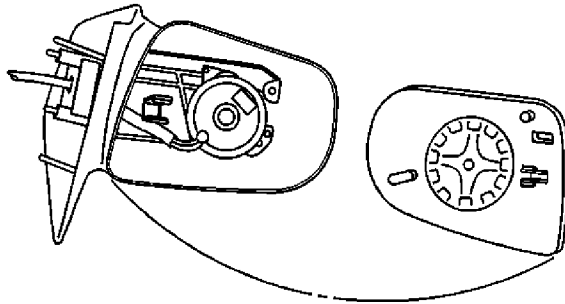
**Caution:** Refer to [Fastener Caution](#) in the Preface section.

2. Install the outside rearview mirror nuts and tighten to **10 N·m (89 lb in)**.
3. Connect the electrical connector to the outside rearview mirror.
4. Install the front door trim panel. Refer to [Front Side Door Trim Panel Replacement](#).

## Outside Rearview Mirror Glass Replacement (Base Level)

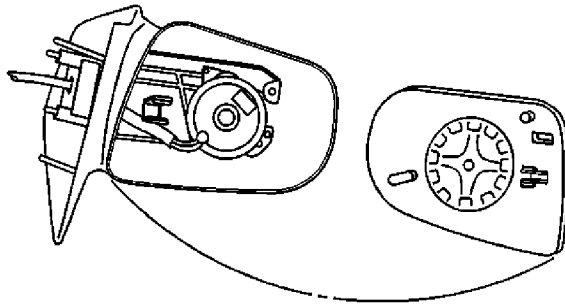
### Removal Procedure

**Warning:** When working with any type of glass or sheet metal with exposed or rough edges, wear approved safety glasses and gloves in order to reduce the chance of personal injury.



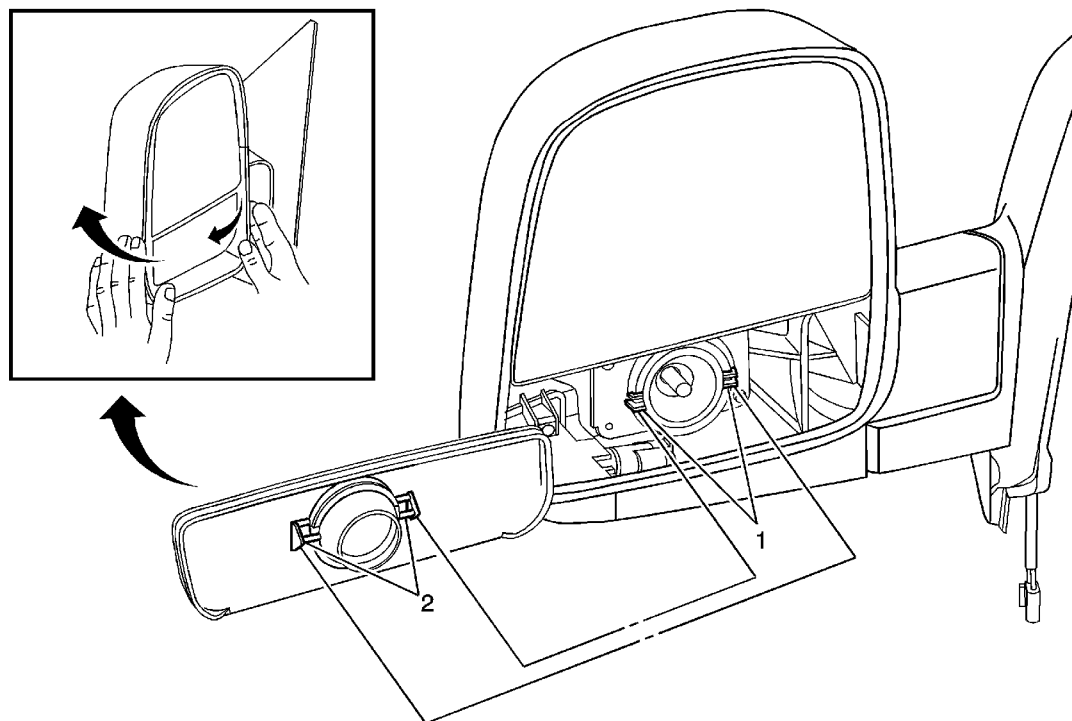
1. Remove the damaged mirror back and the glass-assembly from the mirror housing by completing the following steps:
  - 1.1. Insert your fingers as far as possible behind the mirror back toward the center of the back.
  - 1.2. With force sufficient in order to disengage the snap-fits from the adjuster mechanism, pull the mirror back out of the housing.
2. Inspect the adjuster mechanism for damage.
3. If the mirror has the heated feature, unplug the 2 electrical connections from the mirror back.
4. Remove the mirror face from the mirror housing.

### Installation Procedure



1. Remove the replacement mirror back and glass sub-assembly from the package.
2. Inspect the components for any damage. Ensure that the mirror back and the glass sub-assembly have all the snap-fit hooks in place.
3. If the mirror has the heated feature, plug in the 2 electrical connectors to the back of the mirror back.
4. Align the mirror back snap-fit hooks with the adjuster mechanism ramps.
5. Gently press the mirror back into the adjuster mechanism with the palm of the hand on the center of the glass. Use the palm of the hand to rotate the glass about the glass pivot until the engagement of the snap-fit hooks.
6. Perform the following procedure in order to ensure that the mirror glass is fully installed:
  - 6.1. Place foam below the mirror assembly to catch the glass if it should fall.
  - 6.2. Hold the assembly so that the mirror glass is face down, while taking care that the mirror housing is not scratched, slap the upward surface of the housing. The mirror glass should stay retained in the housing.
7. Observe the following conditions that indicate a successful installation:
  - The mirror back remains firmly attached to the motor pack.
  - Electrical/Manual action of the mirror is possible.

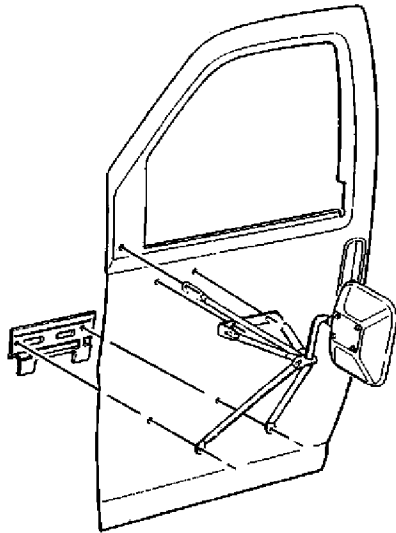
## Outside Rearview Mirror Glass Replacement (DE5/Z5X)



| Callout | Component Name  |
|---------|---|
| 1       | <p>Outside Rearview Mirror Lower Convex Retainer Tabs to Mirror</p> <p><b>Warning:</b> Refer to <a href="#">Glass and Sheet Metal Handling Warning</a> in the Preface section.</p> <p><b>Procedure</b></p> <p>Disconnect the electrical connectors from the heater mirror, If equipped.</p> <p><b>Tip:</b><br/>The lower mirror can be remove by pulling on the lower outboard edge, this will allow the retainer tabs to release from the mirror back.</p> |
| 2       | <p>Outside Rearview Mirror Convex</p> <p><b>Tip:</b><br/>Align the retainer tabs with the slots in the back of the mirror, push in on the center of the convex mirror until it locks in place.</p>  |

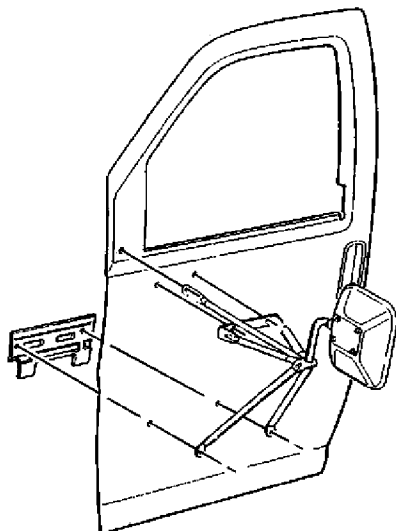
## Camper Type Rearview Mirror Replacement

### Removal Procedure



1. Remove the outside rearview camper mirror head from the vehicle.
2. Remove the nuts that retain the outside rearview camper mirror braces to the door.
3. Remove the outside rearview camper mirror braces from the vehicle.

### Installation Procedure



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1. Install the outside rearview camper mirror braces to the vehicle.
2. Align the holes in the outside rearview camper mirror braces with the studs on the door.
3. Install the nuts that retain the outside rearview camper mirror braces to the door.

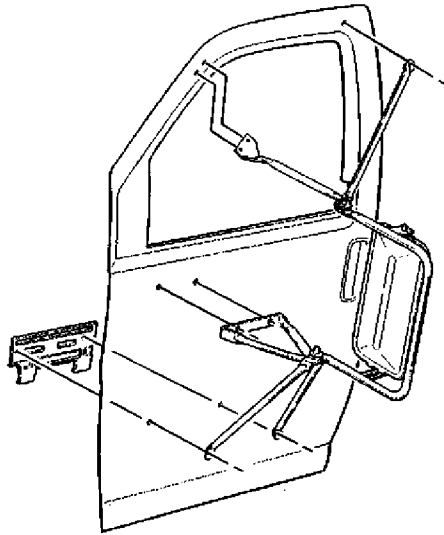
Do not tighten the nuts.

**Caution:** Refer to [Fastener Caution](#) in the Preface section.

4. Install the outside rearview camper mirror head to the vehicle and tighten to **4 N·m (35 lb in)**.

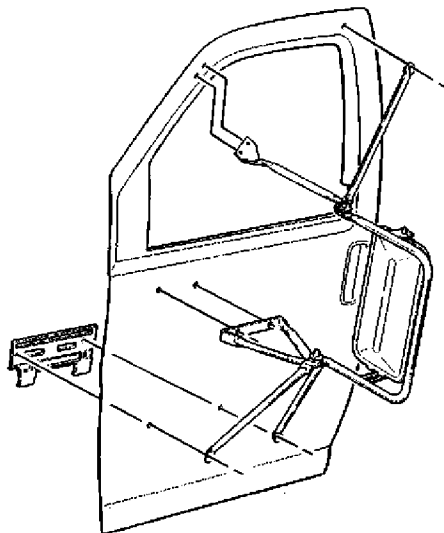
## Commercial Rearview Mirror Replacement

### Removal Procedure



1. Remove the commercial outside rearview mirror head from the vehicle.
2. Remove the nuts that retain the commercial outside rearview mirror braces to the door.
3. Remove the commercial outside rearview mirror braces from the vehicle.

### Installation Procedure



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1. Install the commercial outside rearview mirror braces to the vehicle.
2. Align the holes in the commercial outside rearview mirror braces with the studs on the door.
3. Install the nuts that retain the commercial outside rearview mirror braces to the door.

Do not tighten the nuts.

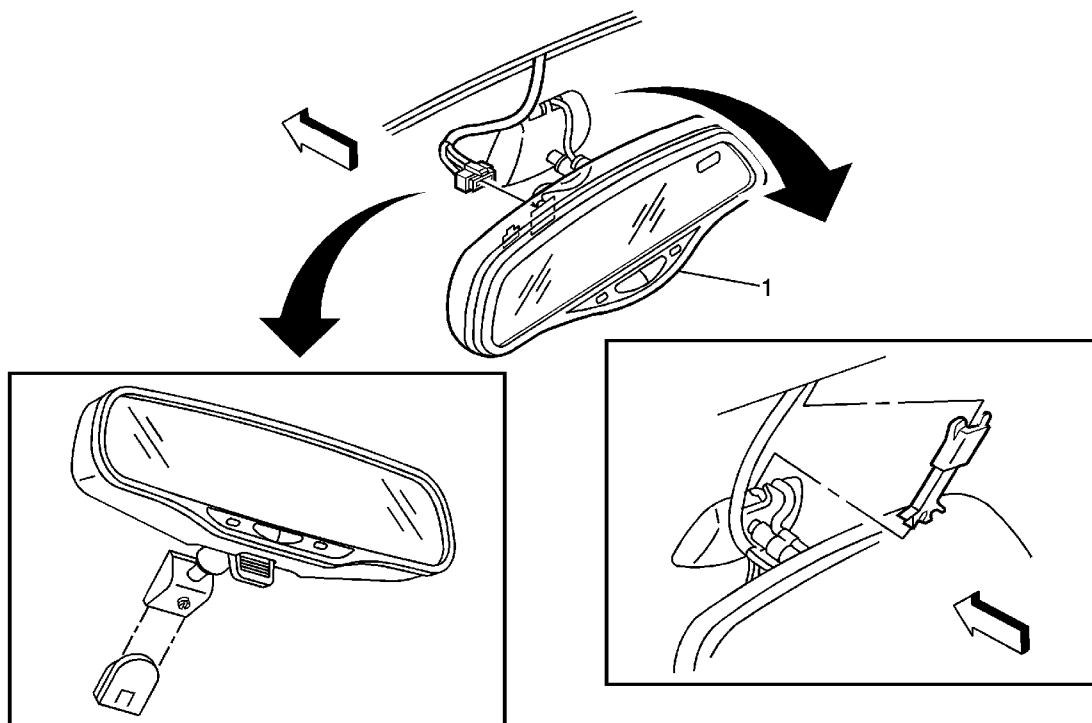
**Caution:** Refer to [Fastener Caution](#) in the Preface section.

4. Install the commercial outside rearview mirror head to the vehicle. Tighten the retaining nuts to **4 N·m (35 lb in)**.
5. Perform the following procedure when the mirror installation is complete:
  - 5.1. Position the mirror support arm approximately 90 degrees to the door panel.
  - 5.2. Torque the following pivot nuts:
    - 5.2.1. The upper brace
    - 5.2.2. The lower brace
    - 5.2.3. The mirror support arm

Tighten the pivot nuts to **12 N·m (106 lb in)**.



## Inside Rearview Mirror Replacement



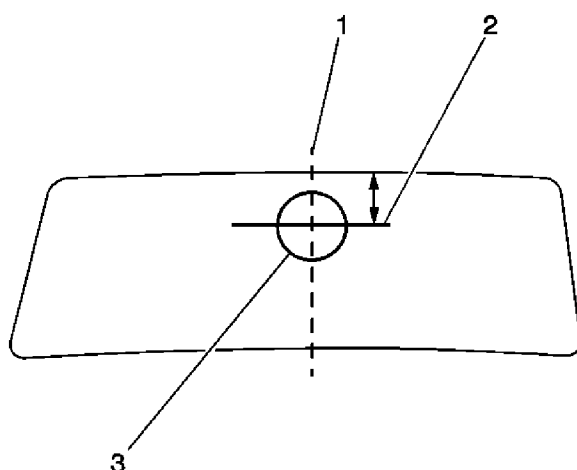
| Callout | Component Name   |
|---------|--|
| 1       | <p>Inside Rearview Mirror</p> <p><b>Caution:</b> Refer to <a href="#">Fastener Caution</a> in the Preface section.</p> <p><b>Procedure</b></p> <ol style="list-style-type: none"><li>1. Remove the inside rearview mirror cover, if equipped</li><li>2. Disconnect the electrical connector, if equipped.</li><li>3. Adjust the mirror to the full upward position.</li><li>4. Loosen the set screw located at the base of the mirror.</li><li>5. Slide the mirror upward off of the rearview mirror button.</li><li>6. Refer to <a href="#">Control Module References</a> for programming and setup information.</li></ol> <p><b>Tighten</b><br/>2 N·m (18 lb in)</p> |

## Rearview Mirror Support Installation

### Special Tools

Safety Razor or Utility Knife

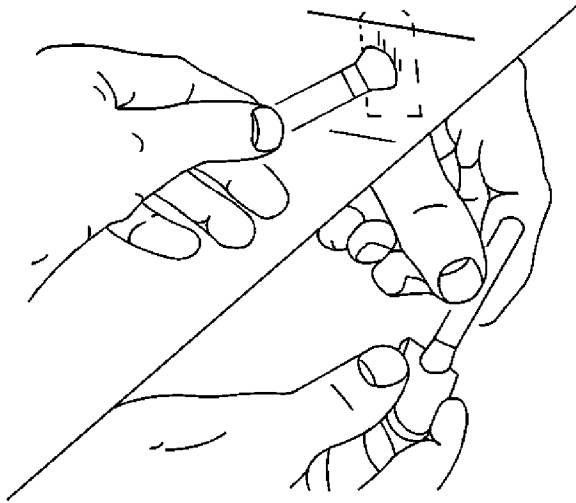
1. Determine the location of the mirror mounting base by marking the outside of the windshield with a marking pencil where the base was previously located. If it is not clear where the base was mounted, use the following steps to determine where the base should be installed:



- 1.1. Using a measuring tape, measure the distance between the windshield pillars from the base of the shade line .
- 1.2. Using a marking pencil, halfway between the windshield pillars, draw a centerline (1) on the windshield from the roof panel to the windshield base.
- 1.3. Draw a perpendicular line intersecting the centerline (2) at that location.

The top center of the mirror mounting base will be at the intersection of these lines.

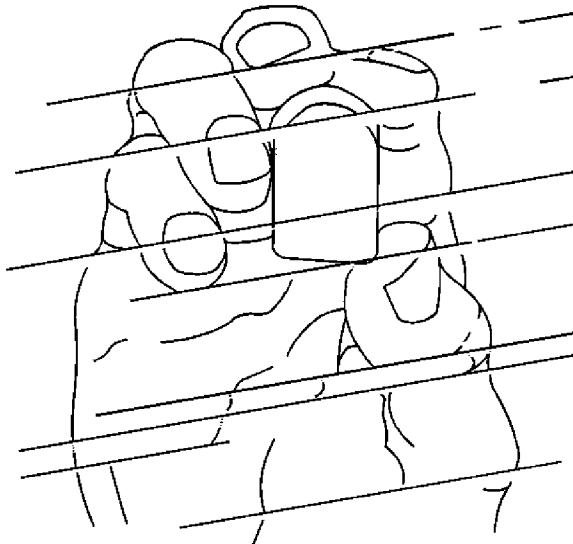
2. Scrape the inside windshield glass thoroughly with a safety razor or utility knife in order to remove all old adhesive.
3. If reinstalling the original mounting base, place the mirror mounting base in a suitable holding device, such as a vice.
4. Scrape the mirror mounting base thoroughly with a safety razor or utility knife in order to remove all old adhesive.
5. Clean the inside windshield glass and the mounting surface of the mirror mounting base thoroughly with a clean cloth saturated with naphtha or a 50/50 mixture (by volume) of clean water and isopropyl alcohol.



6. Use Inside Mirror Adhesive Kit GM P/N 89021329, (Canadian P/N 993362) or equivalent to apply a small amount of activator to the mounting surface of the mirror mounting base.
7. Apply a small amount of activator to the windshield where the mounting base is to be installed.
8. Allow the activator to dry 5 minutes.

**Important:** Do not touch the mounting surface of the mirror mounting base or the glass.

9. Apply 1 drop of adhesive to the center of the mirror mounting base.



10. Immediately apply the mounting base to the windshield, ensuring that the mounting base aligns correctly to the marks made on the outside of the windshield.
11. Hold the mounting base firmly in place for 1 minute.
12. Allow the adhesive to set for 15 minutes.

13. Install the mirror to the mirror mounting base and fasten, if necessary.
14. Connect the electrical connector and install the wire cover, if equipped.