



1. Description

This procedure describes methods for replacing a mirror assembly, both exterior and interior. Inspection and evaluation requirements are also included.



2. Purpose

The purpose of this procedure is to provide industry-accepted requirements for performing high-quality repair of mirror assemblies. This procedure is intended for use by professionals who are qualified through training and experience.



3. Referenced Documents

The following documents are considered part of this procedure by reference.

3.1 Procedures

- EL01 Wire Repair
- EL11 Troubleshooting
- PS01 Personnel Safety

3.2 Other Information

- Equipment-specific information
- Product-specific information
- Recycled parts information
- Vehicle-specific repair information



4. Equipment And Material Requirements

4.1 Equipment

The use of this equipment is included in this procedure:

- special interior mirror bracket tools
- digital volt-ohmmeter (DVOM)

4.2 Mirror Mounting Adhesive

Special mirror-mounting adhesive is required for bonding the interior mirror mounting spade to the windshield.



5. Damage Analysis

5.1 General Damage

Inspect an exterior mirror assembly for these conditions:

- visible damage
- corrosion
- loose or improper mounting
- proper operation of the adjustment control or pivot-action

Inspect an interior mirror assembly for these conditions:

- visible damage
- loose or improper mounting
- proper pivot-action
- proper functioning of special features, such as day/night pivoting, courtesy lamp, turn signal and brake lamp indicators, compass, etc.

Determine if parts of the mirror assembly, or the complete assembly, must be replaced. Verify the availability of replacement parts.

5.2 Electrical Parts

Inspect mirror electrical parts for these conditions or types of damage:

- blown fuses
- loose or corroded grounds or connectors
- damaged wiring or connectors
- corrosion on terminal pins

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5. Damage Analysis (cont'd)

- damaged or corroded switches
- damaged or binding motors
- damaged control module, if applicable
- inoperable heated mirror

If electrical parts do not function correctly, troubleshoot the power mirror circuit to isolate the cause. See **EL11**. Determine the parts that will be replaced and the wiring that will be repaired. See **EL01** for wire repair procedures.



6. Personnel Safety

6.1 General Safety

General safety information is in **PS01**.



7. Environmental Safety

Does not apply.



8. Vehicle Protection

8.1 Mirror And Adjacent Areas

To protect the mirror assembly and adjacent areas when replacing a mirror:

- Avoid scratching the mirror or mounting when handling the mirror assembly.
- Cover tools used to pry out the mirror, unless the tool is designed specifically for the purpose.
- Support the mirror when removing the fasteners holding the mirror assembly to the vehicle.
- Make sure breakaway interior mirror assemblies are fully seated on the mounting spade, usually indicated by an audible click.



9. Repair Procedure

9.1 Exterior Mirror Removal

To remove an exterior mirror assembly:

- 1. Lower the window glass, if required.
- 2. Remove the interior door trim panel, if required.
- 3. Remove the fasteners holding the mirror mount cover panel, if required, and remove the cover panel.
- 4. Disconnect the electrical connectors, if required.
- 5. Remove any retaining clips used to route the mirror cable, if required. Position the cable to allow removal of the mirror assembly.
- 6. Remove the fasteners and the mirror assembly from the vehicle.

9.2 Exterior Mirror Installation

To reinstall an exterior mirror assembly:

- 1. Position the mirror assembly on the vehicle while installing the fasteners.
- 2. Torque the fasteners to the vehicle maker's recommendations.
- 3. Reconnect the electrical connector, if required.
- 4. Reroute and secure the mirror cable in its original location, if required.
- 5. Reinstall the mirror mount cover panel. Torque the fasteners to the vehicle maker's recommendations.
- 6. Inspect the replacement mirror assembly for proper operation. See **11.1**.
- 7. Reinstall the interior door trim panel.

9.3 Interior Mirror Removal

To remove an interior mirror assembly:

- 1. Remove the mounting trim cover, if required.
- 2. Disconnect the electrical connector, if required.
- 3. Remove the fasteners or clip holding the mirror assembly.
- 4. Remove the mirror assembly from the vehicle.
Note: A special tool may be required. Breakaway mirror assemblies are friction-fitted to the windshield mount, and require no fasteners.
- 5. Remove the mounting spade, if required. To reinstall the mounting spade, see **9.5**.

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9. Repair Procedure (cont'd)

9.4 Interior Mirror Installation

To reinstall an interior mirror assembly:

- 1. Align the mirror bracket with the fastener holes, or position the mirror bracket on the mounting spade, making sure the mount is fully seated.
- 2. Install the fasteners or mounting clip.
Note: A special tool may be required.
- 3. Torque the fasteners to the vehicle maker's recommendations.
- 4. Reconnect the electrical connector.
- 5. Reinstall the mounting trim cover.
- 6. Inspect the replacement mirror assembly for proper operation. See **11.1**.

9.5 Windshield Mounting Spade Installation

To install a windshield mounting spade:

- 1. Mark the location of the spade on the outside of the windshield, following the vehicle maker's recommendations. If the location is not known, use an identical model vehicle as a guide.
- 2. Clean the mounting location with glass cleaner. Wipe dry.
- 3. Lightly sand the bonding surface of the spade. Make sure all original adhesive is removed.
- 4. Apply the required adhesive to the spade bonding surface and properly position the spade to the windshield. Follow the product-specific application recommendations.
- 5. Allow proper curing time for the adhesive.
- 6. Install the mirror.



10. Use Of Recycled (Salvage) Parts

10.1 Condition Of Salvage Parts

Do not use salvage mirror assemblies with these conditions:

- visible damage
- damaged or missing mounting locations
- loose or binding pivot-action

If electrical wires are damaged, follow the vehicle maker's repair recommendations.



11. Inspection And Testing

11.1 Inspection Of Mirrors

Following installation, inspect a mirror assembly for these conditions:

- proper operation
- proper mounting and position
- proper operation of accessories
- fasteners torqued to the vehicle maker's recommendations
- proper travel of the window glass for exterior mirrors

Correct any defects.