1. Description

This procedure describes the repair, replacement, and inspection of plastic bumper covers. Welding and adhesive repair information is included for all types of commonly used plastics.

2. Purpose

The purpose of this procedure is to provide industry-accepted requirements for performing high-quality repair of plastic bumper covers. 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

HM01  Hazardous Materials
PR01  Plastic Repair, Welding
PR11  Plastic Repair, Adhesive
PS01  Personnel Safety
RF01P Surface Preparation
RF41  Finish Application

3.2 Other Information

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

4. Equipment And Material Requirements

4.1 Plastic Welding Equipment

Use plastic welding equipment and materials as described in PR01.

4.2 Plastic Adhesive Materials

Use plastic adhesive materials as described in PR11.
5. Damage Analysis

5.1 General Damage
Inspect plastic bumper covers for these types of damage:

- visible damage
- stress cracks or marks
- improper previous repairs
- dimensional misalignment
- damaged mounting locations or fasteners
- damaged finish

Determine whether the plastic bumper cover should be repaired or replaced. Verify the availability of replacement parts.

6. Personnel Safety

6.1 General Safety
General safety information is in PS01.

6.2 Plastic Repair Safety
Plastic repair safety information is in PR01 or PR11.

7. Environmental Safety

7.1 Hazardous Materials
Hazardous material safety information is in HM01.
8. Vehicle Protection

8.1 Bumper Covers And Adjacent Areas

To protect plastic bumper covers and adjacent areas:

- Use care when removing or installing bolts or other fasteners.
- Support the bumper cover during removal and installation.
- Protect the assembly from damage during storage.
- Protect adjacent panels during on-vehicle repairs.

9. Repair Procedure

9.1 Repair Method Selection

Several factors affect the selection of a repair method:

- type of plastic
- type, location, and extent of the damage
- surface texture
- access to the back side of the part
- equipment and skills available

Plastic welding can be used for repairing non-reinforced thermoplastics and some thermoset plastics. Plastic repair adhesives can be used to repair most types of plastics. These types of damage can often be repaired:

- cuts
- cracks
- tears
- broken tabs
- gouges
- holes

Before proceeding:

1. Select the appropriate repair method.
2. Determine if the bumper cover must be removed from the vehicle to perform repairs.

For removal see 9.2. For installation see 9.3.
9.2 Removal

To remove a plastic bumper cover:

- 1. Support the bumper as required.
- 2. Remove trim and adjacent parts as necessary.
- 3. Disconnect any electrical connectors (parking lights, turn signals, license plate lamps, etc.), if necessary.
- 4. Loosen and remove the fasteners that hold the bumper cover to the reinforcement, brackets, adjacent panels, moldings, or trim.
- 5. Remove the bumper cover.
- 6. Inspect all fasteners and mounting hardware that will be reused. Plan to replace any damaged or one-time fasteners.

9.3 Installation

To install a plastic bumper cover:

- 1. Refinish the bumper cover as necessary to restore appearance.
- 2. Ensure that all necessary repairs have been completed to reinforcements, brackets, etc.
- 3. Install any moldings or trim that cannot be installed after the installation of the bumper cover.
- 4. Position the bumper cover on the vehicle. Support the bumper as required.
- 5. Install brackets, adjacent panels, moldings, and trim. Follow the vehicle maker’s recommendations. If the fasteners are being replaced, use fasteners that are the same size, type, and strength as the original fasteners. Ensure that all coatings and spacers are installed to prevent galvanic corrosion.
- 6. Reconnect any electrical connectors (parking lights, turn signals, license plate lamps, etc.).
- 7. Align the bumper cover to the adjacent panels. Some bumper covers may allow for adjustment of the cover itself. Others may require adjustment of the entire bumper assembly.
- 8. Torque all fasteners to the vehicle maker’s recommendations.
- 9. Recheck the alignment to adjacent panels.
- 10. Reinstall any remaining moldings and trim as necessary.
- 11. Reinstall any parts that were removed for access.
- 12. Continue vehicle reassembly.
10. Use Of Recycled (Salvage) Parts

10.1 Condition Of Salvage Parts
Do not install a plastic bumper cover having any of these defects:

- unreparable damage
- damaged mounting locations
- improper previous repairs

Determine if the salvage plastic bumper cover can be repaired to restore appearance and durability. Plan to replace any damaged or corroded mounting hardware.

10.2 Preparation Of Salvage Parts
To prepare a salvage plastic bumper cover for installation:

- Remove any trim that is to be reused or replaced.
- Make any necessary repairs.
- Clean the part to remove grease, dirt, wax, etc.
- Remove any excessive paint film thickness.

11. Inspection And Testing

11.1 Inspection Of A Repaired Or Replaced Plastic Bumper Cover
Inspect a repaired or replaced bumper cover for these conditions:

- proper alignment
- proper finish appearance and film thickness
- proper installation of all trim and fasteners
- proper fastener torque
- proper operation of all electrical circuits
- proper replacement of fasteners and attaching hardware, for corrosion prevention.

Correct any defects.