

BU11A

Reinforcement

**Uniform
Procedures For
Collision Repair
UPCR**



1. Description

This procedure describes methods for the repair and replacement of an aluminum bumper reinforcement. 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 aluminum bumper reinforcements. 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

PS01 Personnel Safety

3.2 Other Information

Vehicle-specific repair information



4. Equipment And Material Requirements

Does not apply.



5. Damage Analysis

5.1 General Damage

Inspect aluminum bumper reinforcements for these conditions:

- visible damage
- galvanic corrosion
- damage to mounting fasteners
- improper previous repairs

Determine if the reinforcement will be repaired or replaced. Repairs to aluminum bumper reinforcements may not be recommended, or may be limited to minor damage and cold straightening methods. Follow the vehicle maker's recommendations.



6. Personnel Safety

6.1 General Safety

General safety information is in **PS01**.



7. Environmental Safety

Does not apply.



8. Vehicle Protection

8.1 Reinforcement And Adjacent Areas

To protect the aluminum bumper reinforcement and adjacent areas when repairing or replacing an aluminum bumper reinforcement:

- Avoid the use of a shrinking hammer or other rough or sharp-edged tools.
- Use sandpaper and discs designated for use on aluminum to avoid contaminating the aluminum surface with steel particles.
- Avoid damaging adjacent parts during removal and installation of the reinforcement.
- Install the required isolators, spacers, washers, and coated fasteners to avoid permanent contact between dissimilar metals, such as aluminum and steel.



9. Repair Procedure

9.1 Bumper Reinforcement Repair

To repair an aluminum bumper reinforcement:

- 1. Loosen and remove the mounting fasteners. Replace any damaged fasteners with undamaged coated fasteners. Use replacement coated fasteners that are the same grade, size, and type as the original fasteners.
- 2. Remove the bumper reinforcement from the vehicle, if required.
- 3. Make the required repairs, following the vehicle maker's recommendations.
- 4. Apply corrosion-resistant primer to all interior and exterior surfaces that have been damaged by the collision or repairs.
- 5. Refinish if required to restore the appearance.

9.2 Bumper Reinforcement Installation

To install an aluminum bumper reinforcement:

- 1. Align and hold the bumper reinforcement in position.
- 2. Install the coated fasteners that hold the bumper reinforcement to the frame, energy absorber, or brackets. Ensure that all coatings and spacers are installed to prevent galvanic corrosion.
- 3. Adjust the reinforcement to obtain proper alignment with attached and adjacent parts. Follow the vehicle maker's recommendations.
- 4. Torque all fasteners to the vehicle maker's recommendations.
- 5. Continue vehicle reassembly.



10. Use Of Recycled (Salvage) Parts

10.1 Condition Of Salvage Parts

Do not install salvage aluminum bumper reinforcements that have any of these defects:

- unrepairable damage
- corrosion that has caused pitting
- improper previous repairs

10.2 Preparation Of Salvage Parts

To prepare a salvage aluminum bumper reinforcement for installation:

- Make any necessary repairs.
- Clean the part to remove dirt, grease, etc.
- Apply corrosion protection as necessary.



11. Inspection And Testing

11.1 Inspection Of A Repaired Or Replaced Aluminum Bumper Reinforcement

After installation or repair, inspect an aluminum bumper reinforcement for these conditions:

- proper alignment with attached and adjacent parts
- proper installation of all coated fasteners, isolators, spacers, and washers
- fasteners torqued to the vehicle maker's recommendations
- proper application of corrosion protection

Correct any defects.