

BU11S—Reinforcement



1. Description

This procedure describes methods for the repair and replacement of a steel 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 steel 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

- CP01S Corrosion Protection
- PS01 Personnel Safety
- RF01S Surface Preparation
- RF41 Finish Application
- ST21S Metal Repair

3.2 Other Information

- Recycled parts information
- Vehicle-specific repair information



4. Equipment And Material Requirements

Does not apply.



5. Damage Analysis

5.1 General Damage

Inspect a steel bumper reinforcement for these conditions:

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



Some vehicle makers do not allow repairs of steel bumper reinforcements. Other vehicle makers allow only cold straightening. Refer to the vehicle maker's body repair or service manual for specific recommendations.

Bumper reinforcements should not be repaired with heat unless recommended by the vehicle maker.



6. Personnel Safety

6.1 General Safety

General safety information is in **PS01**.

6.2 Straightening Safety

Straightening safety information is in **ST21S**.



7. Environmental Safety

Does not apply.



8. Vehicle Protection

8.1 Adjacent Areas

To protect adjacent areas when repairing or replacing a steel bumper reinforcement:

- Do not attempt to repair a steel bumper reinforcement while it is still attached to the vehicle.
- Avoid damaging adjacent parts during removal and installation of the reinforcement.

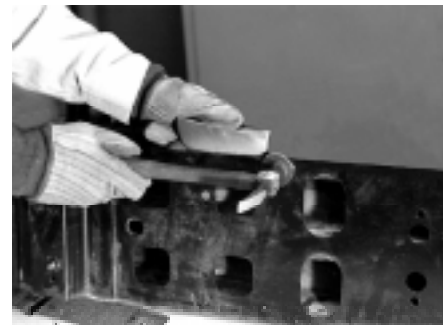


9. Repair Procedure

9.1 Bumper Reinforcement Repair

To repair a steel bumper reinforcement:

- 1. Loosen and remove the mounting fasteners. Discard any damaged fasteners.
- 2. Remove the bumper reinforcement from the vehicle.
- 3. Make necessary 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 as required to restore the appearance.



9.2 Bumper Reinforcement Installation

To install a steel bumper reinforcement:

- 1. Align and hold the repaired or replacement reinforcement in position.

(cont'd)



9. Repair Procedure (cont'd)

- 2. Install the fasteners that hold the bumper reinforcement to the frame, energy absorber, or brackets. 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**.
- 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 a salvage steel bumper reinforcement having any of these defects:

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



10.2 Preparation Of Salvage Part

To prepare a salvage steel bumper reinforcement for installation:

- Repair any minor damage following **5.1**.
- Clean the part to remove dirt, grease, undercoating, corrosion, etc.
- Apply corrosion protection as necessary.



11. Inspection And Testing

11.1 Inspection Of A Repaired Or Replaced Steel Bumper Reinforcement

Inspect a repaired or replaced bumper reinforcement for these conditions:

- proper alignment with attached and adjacent parts
- proper installation of all fasteners
- proper tightening of all fasteners
- proper application of corrosion protection
- proper finish appearance and film thickness

Correct any defects.