

Uniform Procedures For Collision Repair

H001—Hinge, Bolted-On

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v.2.3



1. Description

This procedure describes the removal, repair, and replacement of a bolted-on hood hinge. 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 bolted-on hood hinges. 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
- HO21P Hood
- HO21S Hood
- PS01 Personnel Safety
- RF01S Surface Preparation
- RF41 Finish Application

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 bolted-on hood hinges for these conditions:

- visible damage
- cracked or damaged paint
- damaged fasteners
- worn or damaged hinge pins or bushings
- misalignment
- damaged springs or hydraulic supports
- corrosion**
- damaged occupant hood safety stops

Raise and lower the hood slowly to determine if the hinges operate without binding.

If a hinge pin or bushing is damaged, replace the hinge.



6. Personnel Safety

6.1 General Safety

General safety information is in **PS01**.

6.2 Hinge Replacement Safety

Make sure a raised hood is properly supported to prevent accidental closure. Some hinges have attached springs under tension. Use caution when removing and replacing them.



7. Environmental Safety

Does not apply.



8. Vehicle Protection

8.1 Hood And Adjacent Parts

When removing or replacing hood hinges:

- Properly handle and store the hood to prevent damage.
- Protect adjacent parts and glass from damage.



9. Repair Procedure

9.1 Repair

Small bends in the arms of hinges may be straightened by hand, either on or off the vehicle. Otherwise, the hinge should be replaced.

9.2 Removal

To remove bolted-on hood hinges:

- 1. Raise and support the hood. Avoid damaging the windshield, cowl, or fenders.
- 2. Disconnect the support rods, electrical connectors, windshield washer hoses, and the insulator as necessary.
- 3. Mark the hinge position on the hood and body side before removal.
- 4. Unbolt, remove, and carefully store the hood.
- 5. Unbolt and remove the hinges. Note the location of any shims.
- 6. Inspect fasteners for damage. On aluminum hoods, inspect the coatings on the fasteners and discard the fasteners if the coating is damaged. 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**.



It may be necessary to remove the fenders or cowl panel for access to hinge fasteners.

(cont'd)



9. Repair Procedure (cont'd)

9.3 Installation

To install bolted-on hood hinges:

- 1. Refinish replacement or repaired hinges before installation.
- 2. Position the hinges on the vehicle and install the fasteners loosely.
- 3. Protect the windshield and cowl.
- 4. Support the hood on the hinges, and loosely install the fasteners. Reinstall any removed shims.
- 5. Lower the hood slowly. Make sure it does not contact the cowl or fenders. It may be helpful to remove the latch.
- 6. Check the horizontal alignment with the cowl and fenders. Adjust the position at the hinges as needed.
- 7. Adjust the height at the hinges as needed. Adjust the height at the front, using the adjustable stops.
- 8. Raise the hood and install the support rods. Torque all fasteners to the vehicle maker's recommendations.
- 9. Close the hood and recheck the alignment.
- 10. Reinstall the latch.
- 11. Test for proper latching. Lower the hood slowly to see if the striker squarely enters the latch assembly without forcing the hood out of alignment. Align the latch assembly, or the striker as needed.
- 12. Check the alignment of the hood safety stops.
- 13. Reconnect any hoses or electrical connectors.
- 14. Install the hood insulator.
- 15. Spot-paint fasteners as necessary.
- 16. Install trim, labels, insulators, weatherstripping, seals, etc.
- 17. Lubricate the latch and hinges as necessary.

To replace one hinge:

- 1. Raise and support the hood. Avoid damaging the windshield, cowl, or fenders.
- 2. Disconnect the support rods, electrical connectors, windshield washer hoses, and the insulator, as necessary.
- 3. Mark the hinge position on the hood and body side before removal.
- 4. Place padding between the hood and cowl to prevent damage to the cowl or windshield.
- 5. Remove the fasteners from the hinge to be replaced. Note the location of any shims.
- 6. Remove the damaged hinge.
- 7. Install the replacement hinge.
- 8. Install the hood-to-hinge fasteners. Reinstall any removed shims.

(cont'd)



9. Repair Procedure (cont'd)

- 9. Align the hood as necessary.
- 10. Torque all fasteners to the vehicle maker's recommendations.

It may be necessary to remove the hood a second time to adjust the hinges on the body.

Follow the vehicle maker's recommendations for removing and reinstalling hood springs.



10. Use Of Recycled (Salvage) Parts

10.1 Condition Of Salvage Parts

Do not install salvage hinges with any of these defects:

- unrepairable damage
- corrosion that has caused pitting
- bends or distortion
- damage to the mounting locations
- worn or damaged hinge pins, bushings, springs, or supports



11. Inspection And Testing

11.1 Hood Operation

After installation of the hinges, inspect the hood for these conditions:

- proper lubrication of hinges and latch
- alignment to the cowl and fenders
- proper operation of the latch, including the safety catch
- proper alignment of the front edge to the adjacent panel
- ease of operation
- proper alignment of safety stops
- proper operation and aiming of the windshield washer nozzles
- proper operation of the security system, if applicable
- proper operation of the hood release
- proper operation of the underhood convenience light



Correct any defects.