

2022 CHEVROLET CORVETTE SERVICE MANUAL

- **SEARCH**

1. **Body Repair**
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Roof Panel Bow Replacement (Convertible)

Materials

- Structural Adhesive Aluminum Panel Bonding
- Countersunk Structural Blind Rivet (CR1 1X) Fastener Specifications
- Countersunk Structural Blind Rivet (CR3 2X) Fastener Specifications
- Countersink Cutting Tool Special Tools

Removal Procedure

1. [Click here for full size](#)
2. Warning:

Refer to Approved Equipment for Collision Repair Warning
3. Warning:

Refer to Collision Sectioning Warning
4. Warning:

Refer to Glass and Sheet Metal Handling Warning
5. Note:

The roof panel bow is 5000 series stamped aluminum sheet. Aluminum
6. Note:

Three dimensional measuring equipment required for installation.
7. Note:

Left shown, right similar.
8. Disable the SIR system. SIR Disabling and Enabling.
9. Remove all related panels and components.
10. Remove the sealers and anti-corrosion materials from the repair area as necessary. Anti-Corrosion Treatment and Repair
11. [Click here for full size](#)
12. Note:

Record the number and location of spot welds for installation of structural rivets.
13. Note:

Do not damage or cut attaching panels and reinforcements.
14. Note:

Drill through top layer only.
15. Remove spot welds (1). [5X]

16. [Click here for full size](#)
17. Note:

Do not damage or cut attaching panels and reinforcements.

18. Measure and mark cut line (1) on roof panel bow approximately 90mm (3 1/2 in) from lower edge of part and along outer vertical edges of part.
19. Using a cut off wheel or equivalent tool cut out square (1) at marked location in roof panel bow.
20. [Click here for full size](#)
21. Remove cut out square portion of roof panel bow (1) from vehicle.
22. [Click here for full size](#)
23. Warning:

When separating the aluminum panels during collision repair, be sure to adhere to the following precautions:

- Do not use an open flame
- Focus heat onto panel being replaced and do not exceed 200°C (392°F) for 3 consecutive minutes
- Use care not to damage adjacent panel while prying the panels apart

Failure to follow the precautions may lead to vehicle damage or personal injury.

24. Apply heat to release adhesive (1).
25. [Click here for full size](#)
26. Note:

Excessive prying force may damage surrounding structure.

27. Remove roof panel bow (1) from vehicle.
28. Note:

Do not damage body structure when removing adhesive.

29. Remove remaining adhesive from body structure.

Installation Procedure

1. [Click here for full size](#)
2. Note:

Temporarily install replacement part

3. Position roof panel bow (1) on vehicle using three-dimensional measuring equipment and clamp into place.
4. [Click here for full size](#)
5. Note:

The 6.7 mm (17/64") holes used for rivet installation.

6. Note:

Drill holes in the original spot weld location as noted in removal.

7. Drill 6.7 mm (17/64") holes (1). [1X]
8. Note:

Prepare rivet holes for countersunk structural rivet.

9. Using countersink cutting tool, countersink the holes (1). [1X] Special Tools
10. [Click here for full size](#)
11. Note:

The final 2 removed welds along top of roof panel bow bracket will be replaced during body lock pillar outer panel replacement.

12. Note:

The 6.7 mm (17/64") holes used for rivet installation.

13. Note:

Drill holes in the original spot weld location as noted in removal.

14. Drill 6.7 mm (17/64") holes (1). [2X]

15. Note:

Prepare rivet holes for countersunk structural rivet.

16. Using countersink cutting tool, countersink the holes (1). [2X] Special Tools

17. [Click here for full size](#)

18. Remove roof panel bow (1) from vehicle.

19. [Click here for full size](#)

20. Note:

Accurate and timely assembly methods must be used in order to meet proper bonding requirements.

21. Note:

Dry fit all parts with proper clamping devices prior to final assembly to ensure full understanding of the assembly process.

22. Note:

When using adhesive, ensure all necessary tools and materials are in place prior to final assembly.

23. Note:

Only remove E-coat where adhesive will be applied.

24. Note:

Ensure all bare metal is covered.

25. Clean and prepare mating surfaces on structure and replacement part according to adhesive manufacturer's recommendations.
Aluminum Panel Bonding

26. Apply structural adhesive (1) to mating surfaces on structure and replacement part according to adhesive manufacturer's recommendations. Aluminum Panel Bonding

27. [Click here for full size](#)

28. Install roof panel bow (1) on vehicle using three dimensional fixturing equipment and clamp into place.

29. [Click here for full size](#)

30. Note:

Install structural rivets in direction shown in illustration.

31. Install countersunk structural rivets (1). [CR1 1X]

32. [Click here for full size](#)

33. Note:

Install structural rivets in direction shown in illustration.

34. Install countersunk structural rivets (1). [CR3 2X]

35. Remove excess adhesive.

36. Seal structural rivets with seam sealer. Anti-Corrosion Treatment and Repair

37. Apply the sealers and anti-corrosion materials to the repair area as necessary. Anti-Corrosion Treatment and Repair

38. Paint the repaired area. Basecoat/Clearcoat Paint Systems
39. Install all related panels and components.
40. Enable the SIR System. SIR Disabling and Enabling

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