

2022 CHEVROLET CORVETTE SERVICE MANUAL

- **SEARCH**

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

Materials

- Structural Adhesive Aluminum Panel Bonding
- Structural Rivet (CR1 2X) Fastener Specifications
- Structural Rivet (CR3 4X) 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 6000 series aluminum extrusion with 5000 series stamped aluminum sheet brackets. Aluminum
6. Note:

Three dimensional measuring equipment required for installation.
7. Disable the SIR system. SIR Disabling and Enabling.
8. Remove all related panels and components.
9. Remove the sealers and anti-corrosion materials from the repair area as necessary. Anti-Corrosion Treatment and Repair
10. Click here for full size
11. Note:

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

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

Drill through top layer only.
14. Note:

Left shown, right similar.
15. Remove spot welds (1). [5X]

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

17. Note:

Do not damage or cut attaching panels and reinforcements.

18. Note:

Left shown, right similar.

19. Measure and mark cut line (1) on roof panel bow approximately 100mm (4 in) from lower outer edge of part and along outer vertical edges of part.

20. Using a cut off wheel or equivalent tool cut out square (1) at marked location in roof panel bow.

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

22. Note:

Left shown, right similar.

23. Remove cut out square portion of roof panel bow (1) from vehicle.

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

25. 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.

26. Note:

Left shown, right similar.

27. Apply heat to release adhesive (1).

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

29. Note:

Excessive prying force may damage surrounding structure.

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

31. Note:

Do not damage body structure when removing adhesive.

32. 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. Note:

Left shown, right similar.

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

9. Note:

Prepare rivet holes for countersunk structural rivet.

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

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

12. Note:

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

13. Note:

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

14. Note:

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

15. Note:

Left shown, right similar.

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

17. Note:

Prepare rivet holes for countersunk structural rivet.

18. Using countersink cutting tool, countersink the holes (1). [2X]

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

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

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

22. Note:

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

23. Note:

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

24. Note:

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

25. Note:

Only remove E-coat where adhesive will be applied.

26. Note:

Ensure all bare metal is covered.

27. Note:

Left shown, right similar.

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

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

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

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

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

33. Note:

Install structural rivets in direction shown in illustration.

34. Note:

Left shown, right similar.

35. Install countersunk structural rivets (1). [CR1 1X] Fastener Specifications

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

37. Note:

Install structural rivets in direction shown in illustration.

38. Note:

Left shown, right similar.

39. Install countersunk structural rivets (1). [CR3 2X] Fastener Specifications

40. Remove excess adhesive.

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

42. Seal tops of countersunk rivets with seam sealer.

43. Paint the repaired area. Basecoat/Clearcoat Paint Systems

44. Install all related panels and components.

45. Enable the SIR System. SIR Disabling and Enabling