

2022 CHEVROLET CORVETTE SERVICE MANUAL

- **SEARCH**

1. **Body Repair**
2. **Collision Repair**
3. **Repair Instructions**
- 4.

Front Compartment Side Rail Replacement

Materials

- Structural Adhesive Aluminum Panel Bonding
- Countersunk Structural Rivet (CR2 4X) Fastener Specifications
- Countersunk Structural Rivet (CR1 2X) Fastener Specifications

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 front compartment side rail is 5000 series stamped aluminum sheet. Aluminum
6. **Note:**

Three dimensional fixturing 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 countersunk structural rivet.
13. **Note:**

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

Drill through top layer only.
15. Remove spot welds (1). [2X]
16. [Click here for full size](#)
17. Remove bolts (1). [2X]

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

19. Note:

Record the number and location of spot welds for installation countersunk structural rivet.

20. Note:

Do not damage or cut attaching panels and reinforcements.

21. Note:

Drill through top layer only.

22. Remove spot welds (1). [4x]

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

24. 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.

25. Apply heat to release adhesive (1).

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

27. Remove front compartment side rail (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 front compartment side rail (1) on vehicle using three dimensional fixturing equipment and clamp into place.

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

5. Note:

The 6.7 mm (17/64) holes used for countersunk structural 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). [2X]

8. Note:

Prepare rivet holes for countersunk structural rivet.

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

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

11. Note:

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

12. Note:

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

13. Drill 6.7 mm (17/64) holes (1). [4X]

14. Note:

Prepare rivet holes for countersunk structural rivet.

15. Using countersink cutting tool, countersink the holes (1). [4X] Special Tools

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

17. Remove front compartment side rail (1) from vehicle.

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

19. Note:

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

20. Note:

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

21. Note:

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

22. Note:

Only remove E-coat where adhesive will be applied.

23. Note:

Ensure all bare metal is covered.

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

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

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

27. Install front compartment side rail (1) on vehicle using three dimensional fixturing equipment and clamp into place.

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

29. Install countersunk structural rivets (1). [CR1 2X] Fastener Specifications

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

31. Install countersunk structural rivets (1). [CR2 4X] Fastener Specifications

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

33. Install bolts (2) 9N-m (7 lb ft). [2X]

34. Remove excess adhesive.

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

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

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

38. Install all related panels and components.

39. Enable the SIR System. SIR Disabling and Enabling