

2022 CHEVROLET CORVETTE SERVICE MANUAL

- **SEARCH**

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

Front Compartment Inner Side Rail Replacement

Materials

- Structural Adhesive Aluminum Panel Bonding
- Countersunk Structural Blind Rivet (CR1 5X) Fastener Specifications
- Countersunk Structural Blind Rivet (CR2 1X) 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 front compartment inner side rail is made of cast aluminum. Aluminum
6. **Note:**

Left shown, right similar.
7. **Note:**

Three dimensional measuring equipment required for installation.
8. Disable the SIR system. SIR Disabling and Enabling.
9. Remove all related panels and components.
10. Remove front bumper energy absorber. Front Bumper Energy Absorber Replacement
11. Remove front crossmember. Front Crossmember Replacement
12. Remove front compartment side rail bracket. Front Compartment Side Rail Bracket Replacement
13. Remove dash panel. Dash Panel Replacement
14. Remove front rail. Front Rail Replacement
15. Remove the sealers and anti-corrosion materials from the repair area as necessary. Anti-Corrosion Treatment and Repair
16. [Click here for full size](#)
17. Remove flow drill screws (1). [6X] Fastener Specifications
18. [Click here for full size](#)

19. Remove flow drill screw (1). [1X] Fastener Specifications

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

21. Note:

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

22. Note:

Do not damage or cut attaching panels and reinforcements.

23. Remove spot welds (1). [6X] Fastener Specifications

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. Apply heat to release adhesive (1).

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

28. Apply heat to release adhesive (1).

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

30. Note:

Do not damage body structure when removing adhesive.

31. Remove front compartment inner side rail (1) from vehicle.

32. Remove remaining adhesive from body structure.

Installation Procedure

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

2. Note:

Temporarily install replacement part.

3. Position front compartment inner side rail (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 are 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) for countersunk structural blind rivets. [6X] Fastener Specifications

8. Note:

Prepare rivet holes for countersunk structural rivets.

9. Using countersink cutting tool, countersink holes (1). [6X] Special Tools

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

11. Note:

Drill pilot holes (1) at locations of previous flow drill screws.

12. Drill 4.0 mm (5/32") pilot holes (1) for flow drill screw (M5). [1X] Fastener Specifications
13. [Click here for full size](#)
14. Remove front compartment inner side rail (1) from vehicle.
15. [Click here for full size](#)
16. Note:

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

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

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

Only remove E-coat where adhesive will be applied.
20. Note:

Ensure all bare metal is covered.
21. Clean and prepare mating surfaces on structure and replacement part according to adhesive manufacturer's recommendations. Aluminum Panel Bonding
22. Apply structural adhesive (1) to mating surfaces on structure and replacement part according to adhesive manufacturer's recommendations. Aluminum Panel Bonding
23. [Click here for full size](#)
24. Apply structural adhesive (1) to mating surfaces on structure and replacement part according to adhesive manufacturer's recommendations. Aluminum Panel Bonding
25. [Click here for full size](#)
26. Install front compartment inner side rail (1) on vehicle and clamp into place.
27. [Click here for full size](#)
28. Note:

Ensure screw is fully seated with a minimum torque of 5N-m (4 lb ft) and not stripped.
29. Install flow drill screws (1). [6X] Fastener Specifications
30. [Click here for full size](#)
31. Note:

Ensure screw is fully seated with a minimum torque of 5N-m (4 lb ft) and not stripped.
32. Install flow drill screws (1). [1X] Fastener Specifications
33. [Click here for full size](#)
34. Note:

Install fasteners from direction shown.
35. Install countersunk structural blind rivet (2). [CR1 5X] Fastener Specifications
36. Install countersunk structural blind rivets (1). [CR2 1X] Fastener Specifications
37. Remove excess adhesive.
38. Apply the sealers and anti-corrosion materials to the repair area as necessary. Anti-Corrosion Treatment and Repair
39. Seal countersunk and structural rivets with seam sealer. Anti-Corrosion Treatment and Repair

40. Install front rail. Front Rail Replacement
41. Install dash panel. Dash Panel Replacement
42. Install front compartment side rail bracket. Front Compartment Side Rail Bracket Replacement
43. Install front crossmember. Front Crossmember Replacement
44. Install front bumper energy absorber. Front Bumper Energy Absorber Replacement
45. Paint the repaired area. Basecoat/Clearcoat Paint Systems
46. Install all related panels and components.
47. Enable the SIR System. SIR Disabling and Enabling

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