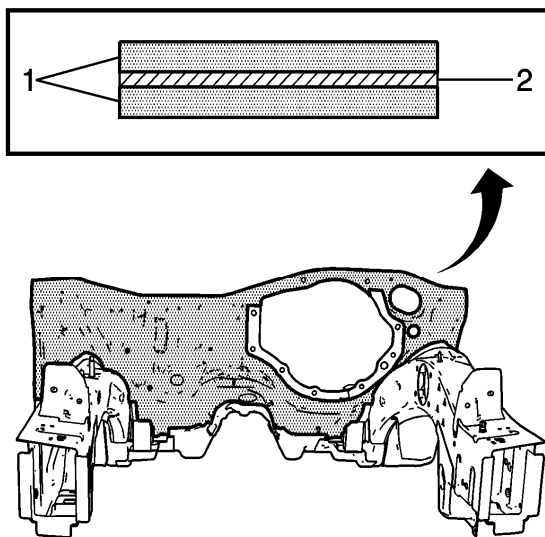


Front Compartment Front Rail Replacement

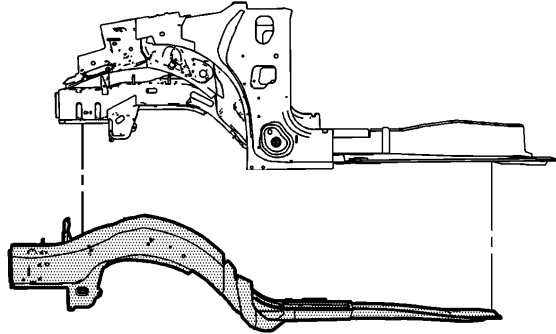
Removal Procedure



Important: Failure to follow this procedure will compromise the structural integrity of the vehicle.

The front of the dash panel and the plenum lower are formed from laminated steel. This steel is constructed by bonding 2 pieces of cold rolled steel (1) with a viscoelastic layer of adhesive (2). MIG welding laminated steel does not meet GM Corporate standards for structural integrity. As an alternative, all factory welds will be replaced by using the rivet and adhesive bond method described in the installation portion of this procedure. The rivet and adhesive bond method must only be used in the areas as described in this procedure.

Caution: Refer to [Approved Equipment for Collision Repair Caution](#) in Cautions and Notices.



Important: The full rail service part is replaced at factory seams.

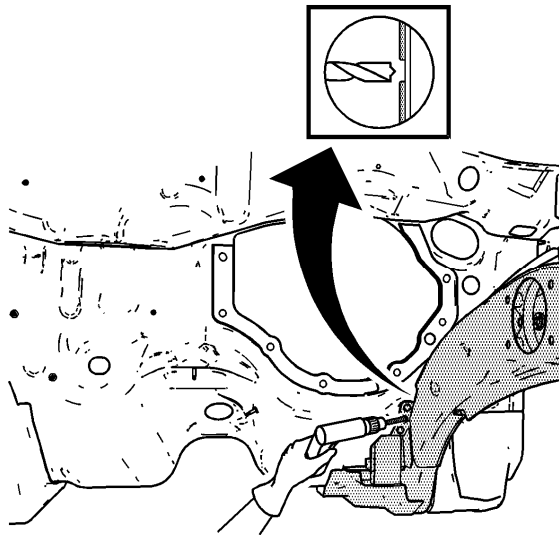
1. Disable the SIR system. Refer to [SIR Disabling and Enabling](#) in SIR.
2. Disconnect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) in Engine Electrical.

Caution: Refer to [Collision Sectioning Caution](#) in Cautions and Notices.

3. Remove all related panels and components.
4. Repair as much of the damage as possible.

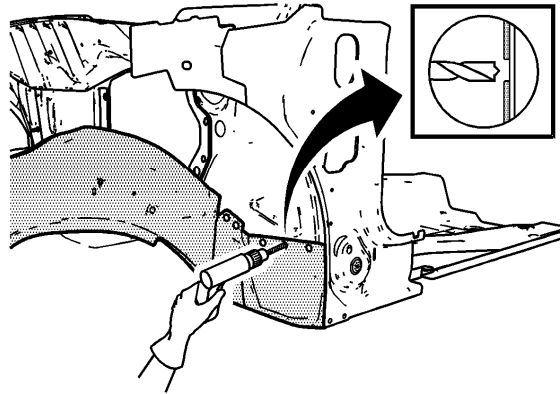
Important: Note the number and location of the factory welds for installation of the full rail service part.

5. Remove the sealers and the anti-corrosion materials from the repair area, as necessary. Refer to [Anti-Corrosion Treatment and Repair](#) in Paint/Coatings.

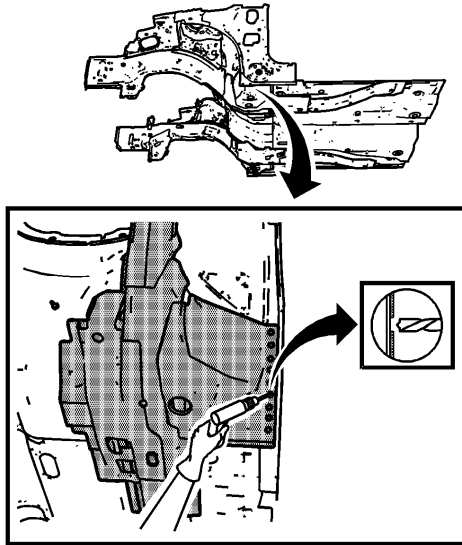


Important: Drill through the rail flange only. Do NOT drill into the dash panel or the inner reinforcements.

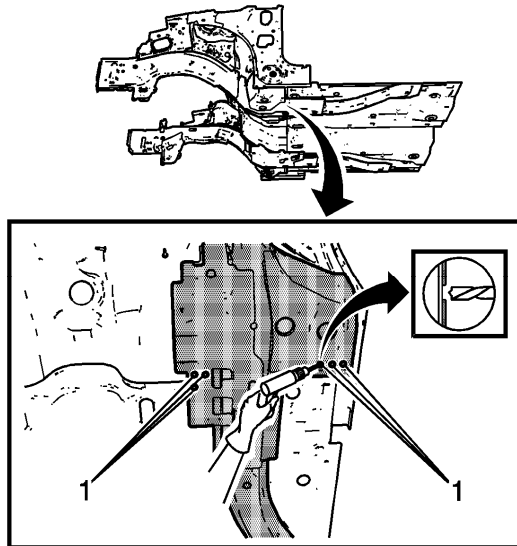
6. Using an 8-mm (5/16-in) spot weld remover, locate and drill out the factory welds on the weld flange connecting the lower inner rail to the dash panel.



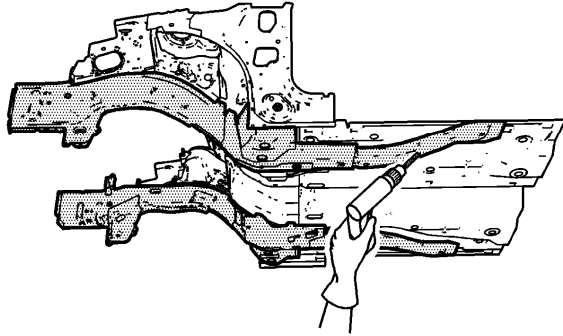
7. Using an 8-mm (5/16-in) spot weld remover, locate and drill out the factory welds on the weld flange connecting the lower outer rail to the dash panel.



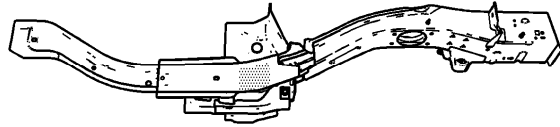
8. Using an 8-mm (5/16-in) spot weld remover, locate and drill out the factory welds on the weld flange connecting the lower rail to the outer dash panel.



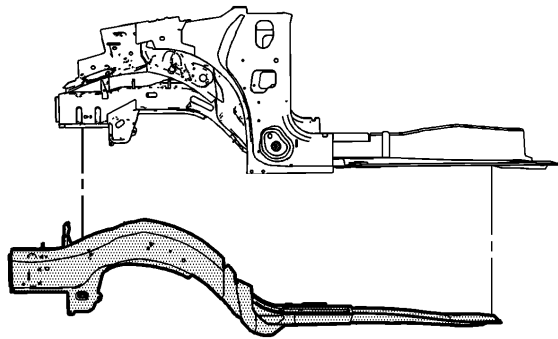
9. Using an 8-mm (5/16-in) spot weld remover, locate and drill out the factory welds on the weld flange connecting the lower rail to the dash panel.



10. Locate and drill out the remaining factory welds on the rail.

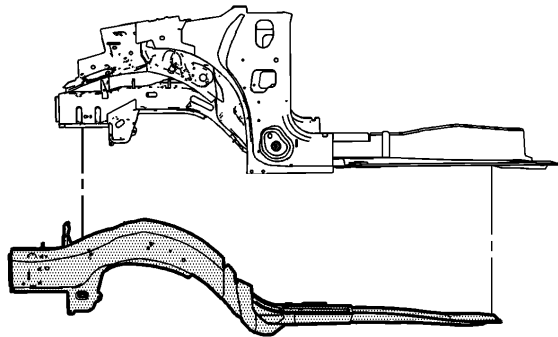


11. Remove the section of frame by applying heat. Pry to detach the adhesive along the bonding surface.



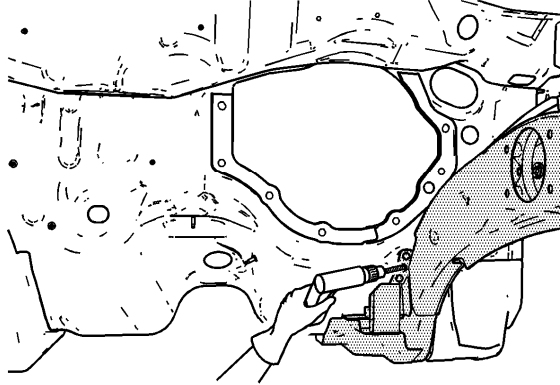
12. Remove the full damaged rail.

[Installation Procedure](#)

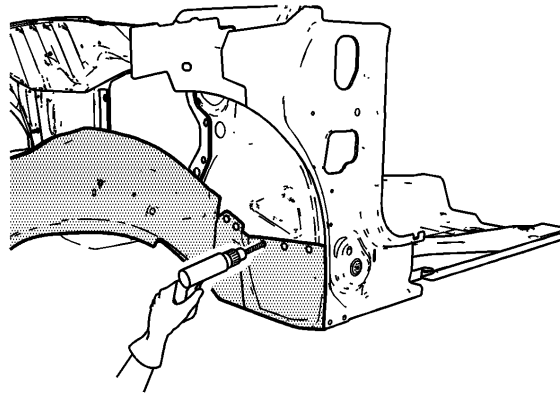


1. Position the service rail to the vehicle using 3-dimensional measuring equipment.

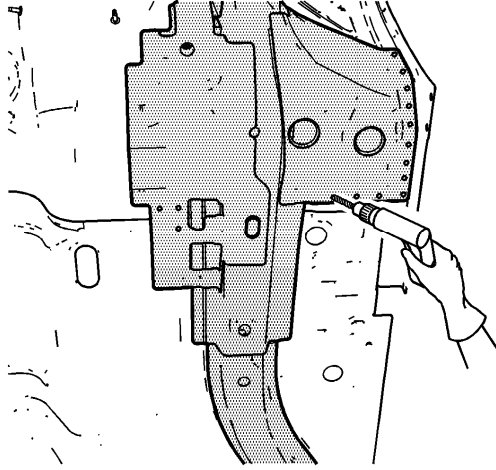
2. Clamp the service rail in place.



3. Using a 7-mm (17/64-in) bit, drill the rivet attachment holes through the lower inner rail and the dash panel in the exact locations as noted from the factory rail.



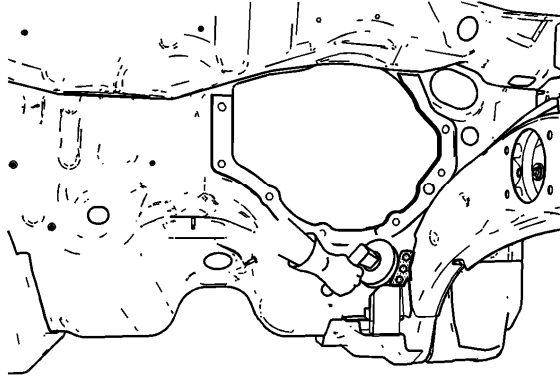
4. Using a 7-mm (17/64-in) bit, drill the rivet attachment holes through the lower outer rail and the dash panel in the exact locations as noted from the factory rail.



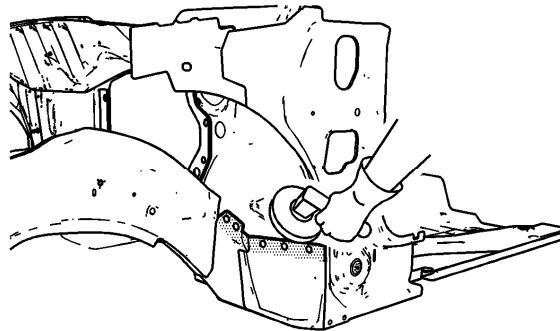
5. Using a 7-mm (17/64-in) bit, drill the rivet attachment holes through the lower rail and the dash panel in the exact locations as noted from the factory rail.
6. Remove the service rail.

Important: If the location of the original plug weld holes cannot be determined, or if the structural weld-through adhesive is present, space the plug weld holes every 40 mm (1.5 in) apart.

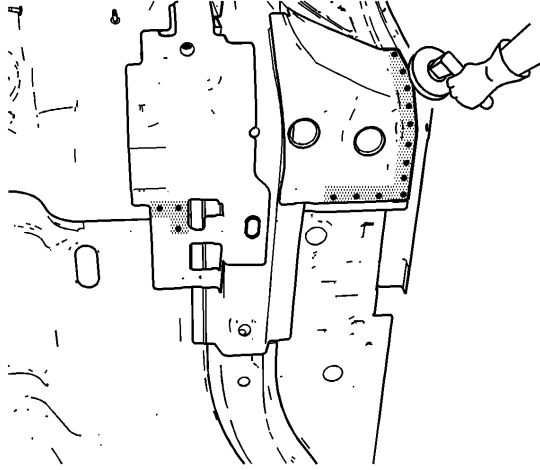
7. Drill 8-mm (5/16-in) plug weld holes in the service rail, as necessary, in the remaining locations noted from the original rail.
8. Prepare the plug weld mating surfaces, as necessary.
9. Apply GM-approved Weld-Thru Coating or equivalent to all mating surfaces. Refer to [Anti-Corrosion Treatment and Repair](#).



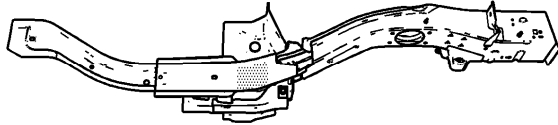
10. Prepare the bond mating areas by grinding to bare steel the lower inner rail and the dash panel mating surfaces. Do NOT damage the corners or thin the metal during the grinding process.



11. Prepare the bond mating areas by grinding to bare steel the lower outer rail and the dash panel mating surfaces. Do NOT damage the corners or thin the metal during the grinding process.

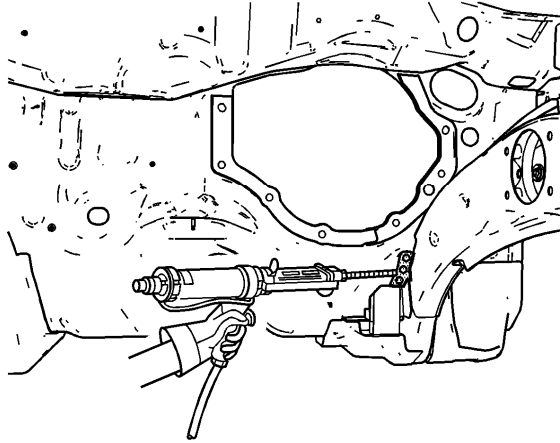


12. Prepare the bond mating areas by grinding to bare steel the surface of the lower rail and the dash panel mating surfaces. Do NOT damage the corners or thin the metal during the grinding process.



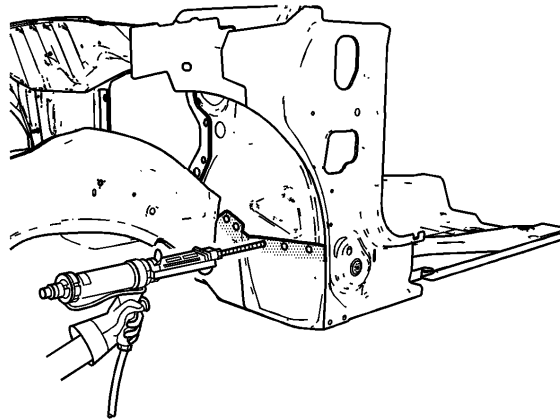
13. Prepare the bond mating areas by grinding to bare steel the lower rail and the floor panel mating surfaces. Do NOT damage the corners or thin the metal during the grinding process.

14. Clean the mating surfaces.

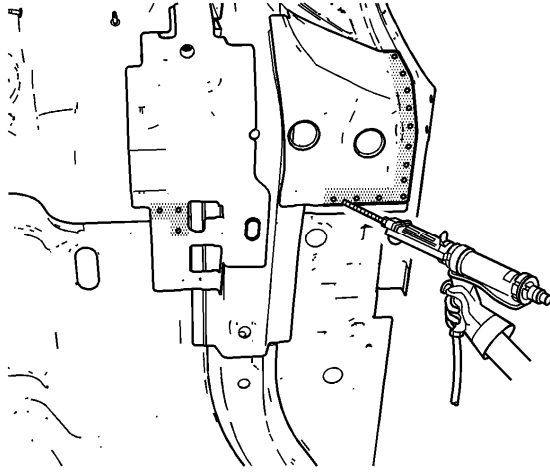


Important: The adhesive has a 40-50 minute working time. Do NOT allow the adhesive to cure prior to installing the service rail.

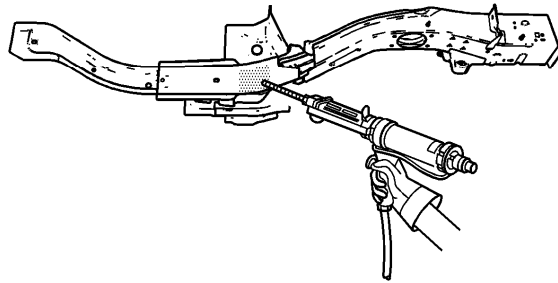
15. Apply a 3-6 mm (1/8-1/4 in) bead of metal panel bonding adhesive GM P/N 12378567 (Canadian P/N 88901675) or equivalent to both of the mating surfaces.



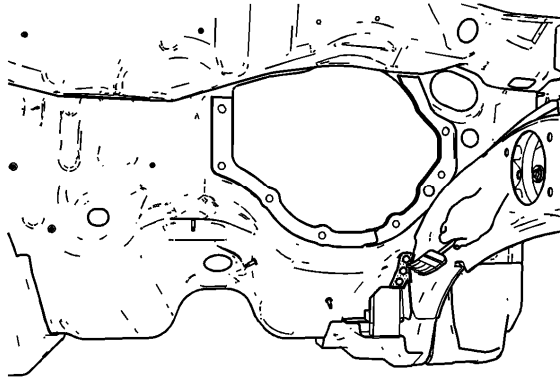
16. Apply a 3-6 mm (1/8-1/4 in) bead of metal panel bonding adhesive GM P/N 12378567 (Canadian P/N 88901675) or equivalent to the lower inner rail and the dash panel mating surfaces.



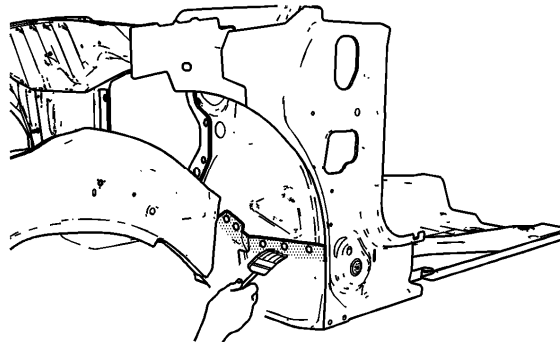
17. Apply a 3-6 mm (1/8-1/4 in) bead of metal panel bonding adhesive GM P/N 12378567 (Canadian P/N 88901675) or equivalent to the lower outer rail and the dash panel mating surfaces.



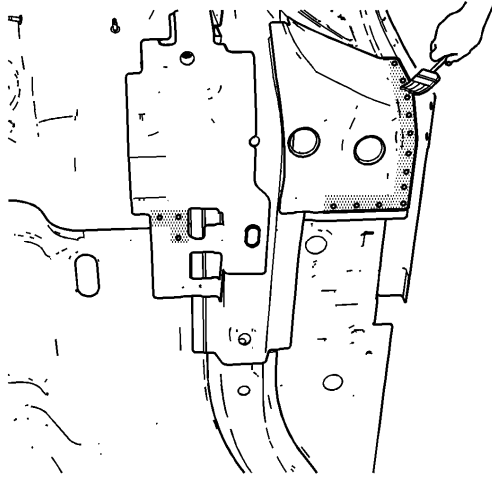
18. Apply a 3-6 mm (1/8-1/4 in) bead of metal panel bonding adhesive GM P/N 12378567 (Canadian P/N 88901675) or equivalent to the lower rail and the floor panel mating surfaces.



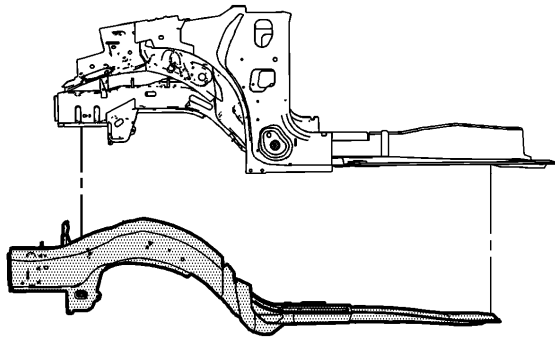
19. Using a small acid brush, spread a coat of adhesive to the lower inner rail and the dash panel mating surfaces. Cover all of the bare metal to ensure corrosion protection.



20. Using a small acid brush, spread a coat of adhesive to the lower outer rail and the dash panel mating surfaces. Cover all of the bare metal to ensure corrosion protection.



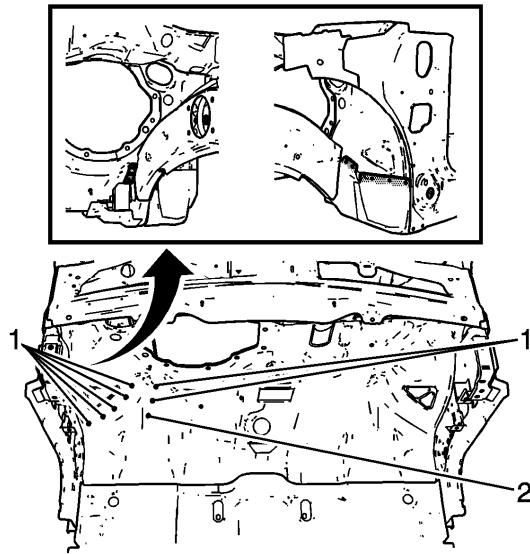
21. Using a small acid brush, spread a coat of adhesive to the lower rail and the dash panel mating surfaces. Cover all of the bare metal to ensure corrosion protection.



Important: Do NOT pull the rail off of the dash after adhesion. To align the parts, slide the rail against the front of the dash.

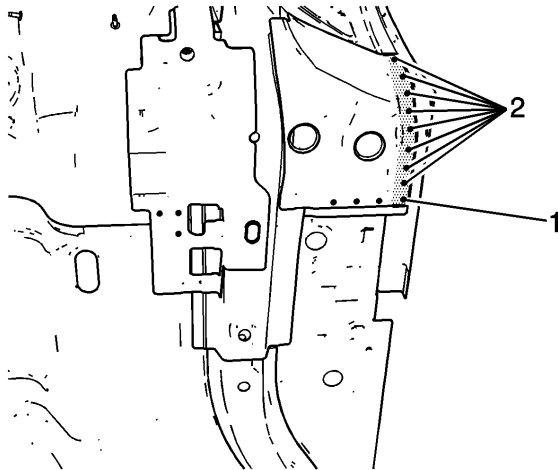
22. Position the service rail to the vehicle using 3-dimensional measuring equipment.

23. Clamp the rail in place.

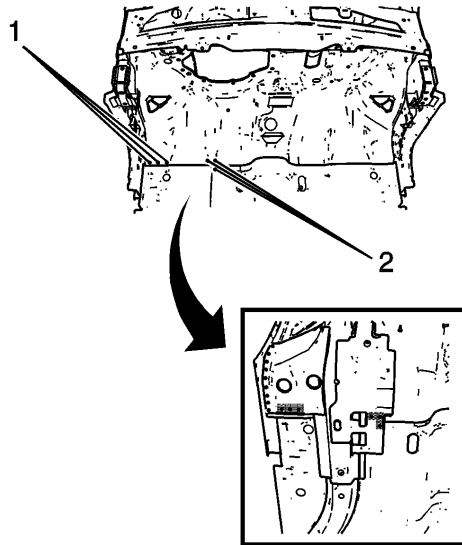


Important: Verify proper positioning of the service rail prior to riveting and welding.

24. Install the 9-mm (11/32-in) long rivets (1) and the 14-mm (17/32-in) long rivets (2) to the lower inner and outer rail so that the rivet head contacts the passenger compartment side of the dash panel.



25. Install the 9-mm (11/32-in) long rivets (1) and the 14-mm (17/32-in) long rivets (2) to the lower inner and the outer dash panel so that the rivet head contacts the rail side.



26. Install the 9-mm (11/32-in) long rivets (1) and the 14-mm (17/32-in) long rivets (2) to the lower rail and the dash panel so that the rivet head contacts the passenger compartment side of the dash panel.
27. Remove the excess adhesive from the rail area.
28. Plug weld the remaining holes accordingly.
29. Clean and prepare all of the welded surfaces.
30. Apply the sealers and anti-corrosion materials to the repaired area, as necessary. Refer to [Anti-Corrosion Treatment and Repair](#) in Paint/Coatings.
31. Paint the repaired area. Refer to [Basecoat/Clearcoat Paint Systems](#) in Paint/Coatings.
32. Install all of the related panels and components.
33. Connect the negative battery cable. Refer to [Battery Negative Cable Disconnection and Connection](#) in Engine Electrical.
34. Enable the SIR system. Refer to [SIR Disabling and Enabling](#) in SIR.