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Sleeved Butt Joint Repair

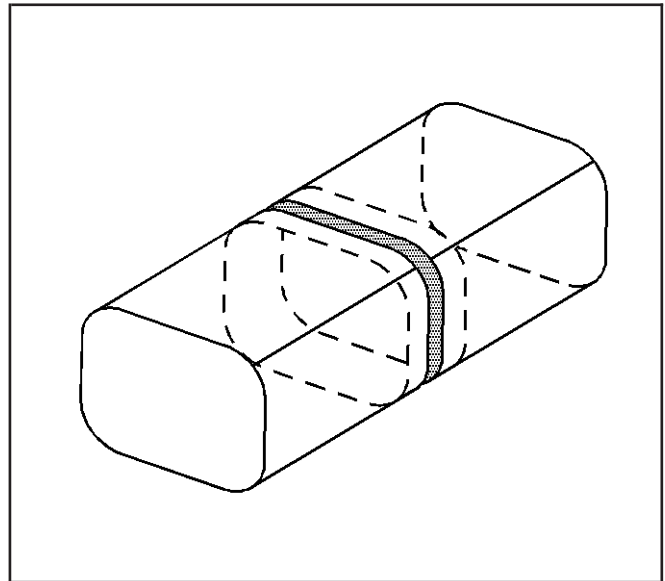
Caution: To avoid personal injury when exposed to welding flashes or to galvanized (Zinc Oxide) metal toxic fumes while grinding/cutting on any type of metal or sheet molded compound, you must work in a properly ventilated area, wearing an approved respirator, eye protection, earplugs, welding gloves, and protective clothing.

Caution: Sectioning should be performed only in the recommended areas. Failure to do so may compromise the structural integrity of the vehicle and cause personal injury if the vehicle is in a collision.

Important: When determining the area to perform the sectioning near a riv-nut within the recommended areas, choose a location that centers the sleeve through the hole. This will ensure that riv-nut fasteners remain straight during installation.

1. From the new section of frame rail, measure, mark, and cut 50 mm (2 in) of frame rail to be used as a sleeve (backing plate) for the sectioning joint.
2. Cut through each side of the sleeve to create four individual L-shaped pieces that can be installed in the new frame rail section.
3. Install the four pieces, one at a time.
4. Trim the pieces as necessary, to provide a flush fit along the inner surface of the new frame rail section.
5. Clean and prepare all of the welded surfaces.
6. Apply 3M weld-thru coating P/N 05916 or equivalent as necessary.
7. Using a Metal Inset Gas (MIG) welder, tack weld the four pieces to the inner surface of the new frame rail section.
8. Grind the sleeve as necessary to allow for accurate alignment of the existing frame rail.

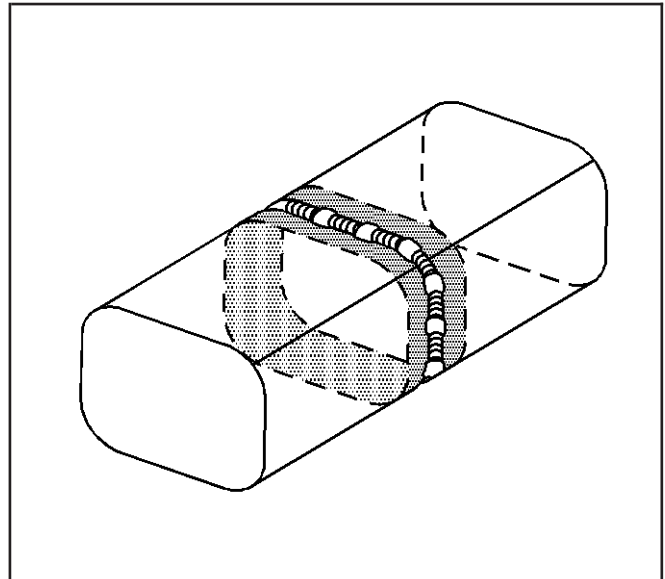
9. Install the new frame rail section to the existing frame rail to create the butt joint while maintaining a gap of one and one half frame rail metal thickness at the sleeve butt-joint.
10. Check the new frame rail section using three-dimensional measurements. Refer to *Dimensions - Body on page 2-2* and *Measurements - Underbody on page 2-4*.



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Important: Use a 25 mm (1in) stitch weld to avoid minimal heat distortion.

11. Using a MIG welder, weld completely around the sleeve joint.



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