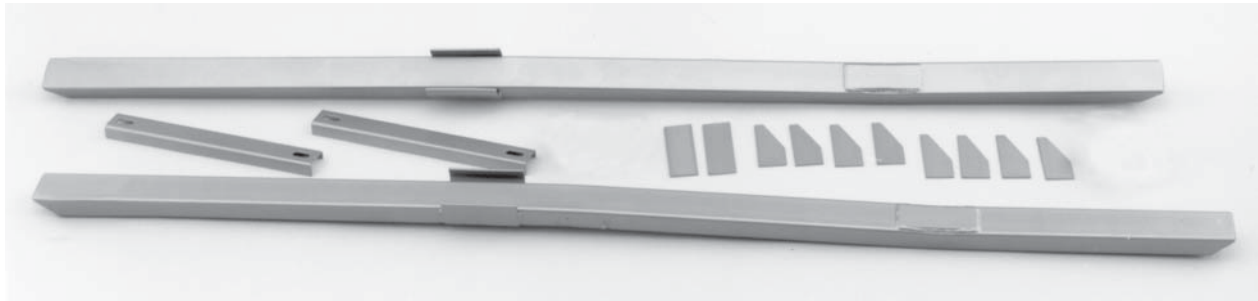


1983-93 Convertible MM Full Length Subframe Connector (MMFL-2)



Important Note

These instructions have been revised (12/28/05) with the introduction of the new and improved MM Full-length Subframe Connectors. There are significant changes from the installation of our previous subframe connectors. If you have previously installed MM Full-length Subframe Connectors, be sure to **read these instructions carefully** to avoid improper installation.

Congratulations on purchasing Maximum Motorsports' new and improved Full-length Subframe Connectors. MM created the first full-length subframe connectors (We even coined the name) many years ago to provide more chassis stiffening than any other subframe connector available. We have now improved on our previous design with an even stiffer Full-length Subframe Connector. These have a taller tube for increased bending strength, and are longer to provide increased weld area and better support to the rear subframe. Once again Maximum Motorsports leads the way with better engineering and design.

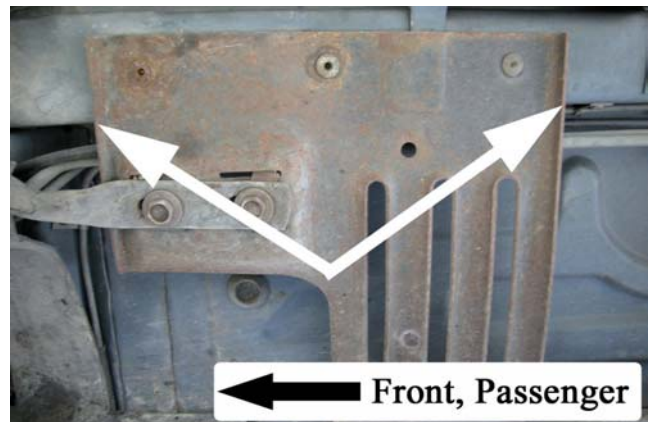
Read all instructions before beginning work. Following instructions in the proper sequence will ensure the best and easiest installation.

All welding must be done with a MIG welder. The car's weight must be on the tires. Do not lift on a regular hoist or place on jack stands. Use a muffler shop type hoist (which lifts the car by the tires) or ramps. Clean off paint and primer to bare metal - a wire wheel in a drill works well.

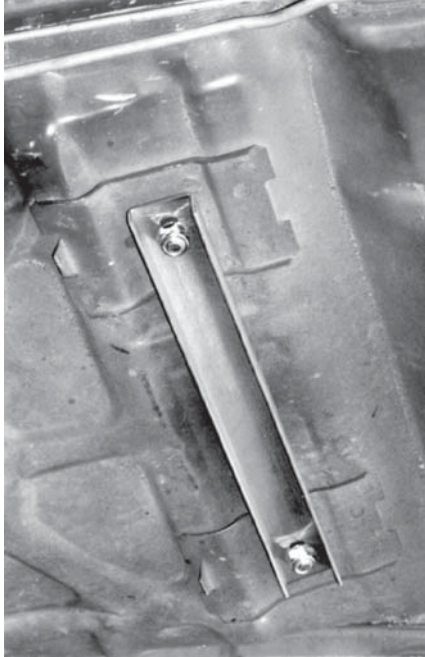
The subframe connectors must be coated (either powder coated or painted) to prevent rusting. MM bare steel subframe connectors must be painted, including all surfaces that will be hidden after installation, prior to installation. That coating, whether powder coating or paint, must be removed from the weld areas. Before painting bare steel subframe connectors, it may be helpful to mask off the areas that will be welded.

1. Using a scribe or other marking device, mark the front and rear edges of the front factory reinforcement plates where they first touch the factory subframe rails. These marks will be used in Step 11 to determine how narrow the factory reinforcement plates must be cut.

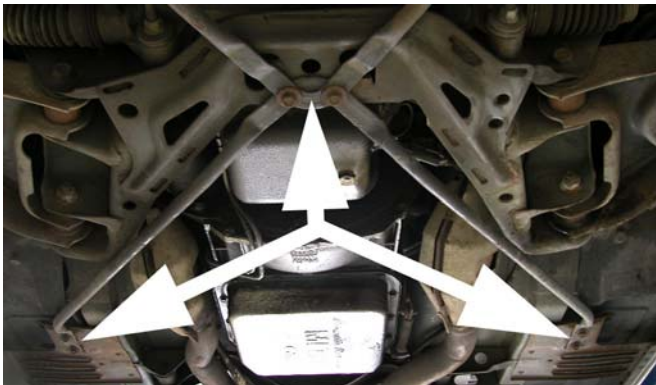
NOTE: The MM Full-length Subframe Connectors must rest flat against the bottom of the factory subframe. In order to do this, the portion of the front factory reinforcement plates that touch the factory subframe rails must be removed.



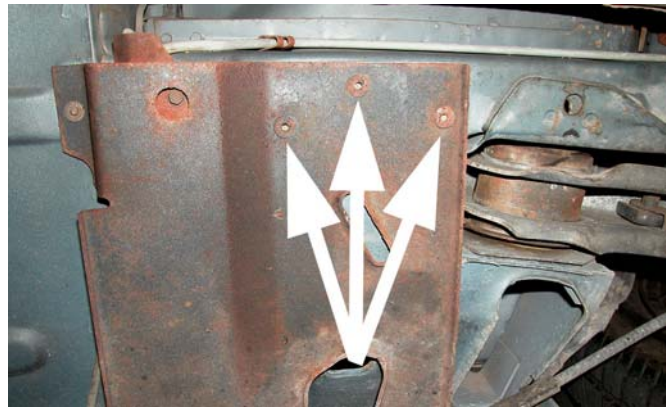
- Attach the seat reinforcing crossbars to the rearward seat mounting bolts. Use the supplied washers and locknuts. If necessary, replace the stock bolts with the supplied longer bolts. Position the crossbar's larger flange towards the front of the car.



- Remove the six bolts holding the rearward portion of the factory X-brace to the vehicle, and remove the brace from the vehicle.

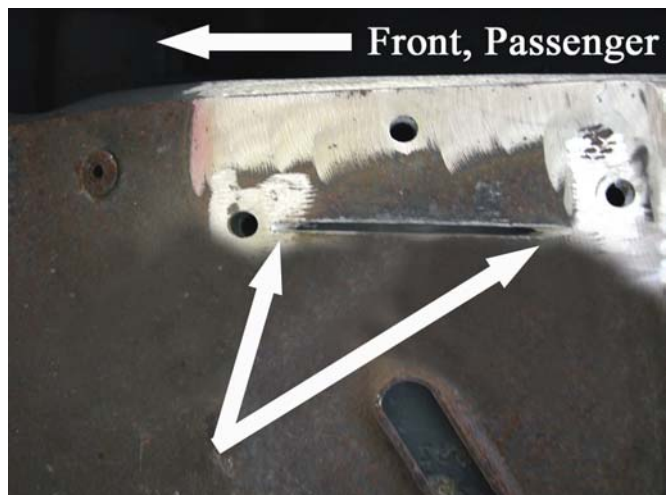


- Using a drill bit or grinder, remove the rivets retaining each of the front factory reinforcement plates to the vehicle.
- Remove the front factory reinforcement plates from the vehicle. Be sure to note which side of the vehicle the plates were taken from, as well as their orientation.
- Using a drill bit or grinder, remove the rivets retaining each rearward factory reinforcement plate to the factory subframe rail. Only remove the rivets that are in the subframe rail.

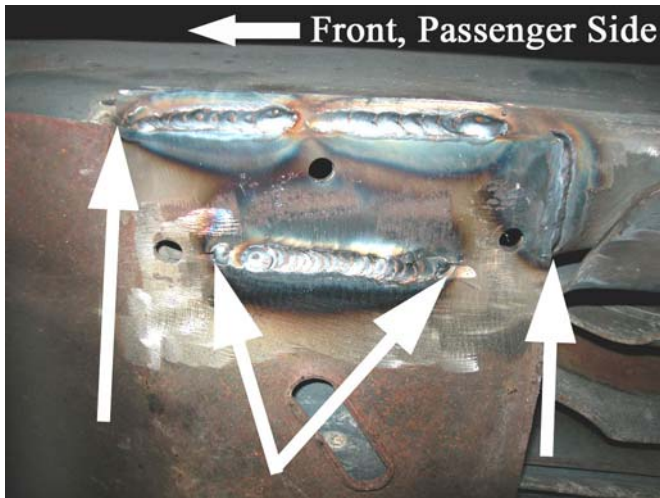


- There is a raised lip on each rear factory reinforcement plate that is perpendicular to the centerline of the vehicle. This raised lip is directly in front of the opening for the rear lower control arm mount. The portion of this lip that lies below the factory subframe rail must be removed or flattened so that the MM Full-length Subframe Connectors can rest flat against the bottom of the vehicle. Using a hammer or grinder, make the lip flush with the surrounding factory reinforcement plate surface.
- Using a grinder, cut a 3/16" or wider slit approximately 3" long in each of the rear factory reinforcement plates. This slit should be parallel to and directly below the outboard corner of the factory subframe rail. Be sure the slit goes all the way through the rear factory reinforcement plates.

NOTE: The purpose of this slit is to allow the rear factory reinforcement plates to be welded to the rear factory subframe rails. By welding the rear factory reinforcement plates to the factory subframe rail along multiple points, the strength of the chassis will be increased.



9. With the reinforcement plate pressed firmly against the bottom of the factory subframe rail, weld along any contacting areas.
10. Weld through the slits made in Step 8 to the factory subframe rails.



11. Beginning with the driver side factory reinforcement plate, align a ruler with the marks made in Step 1 and draw a straight line connecting the two points. Repeat for the passenger side factory reinforcement plate.
12. Using a hacksaw or other cutting device, cut along the lines drawn in the previous step. Discard the smaller sections cut from the factory reinforcement plates.

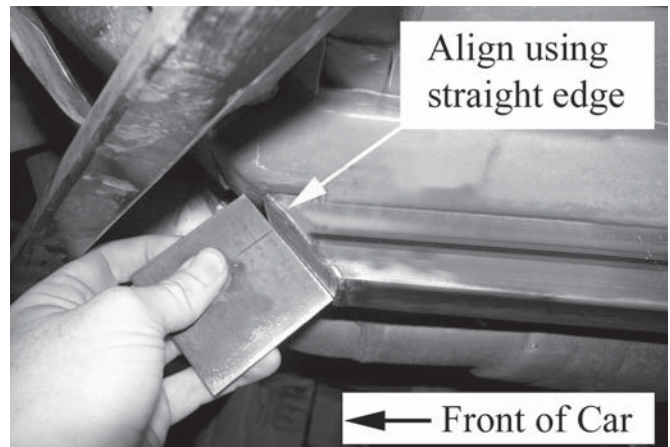


13. Place one of the subframe connectors into position. The rearward end of the subframe connector tube has a notch in its endcap.

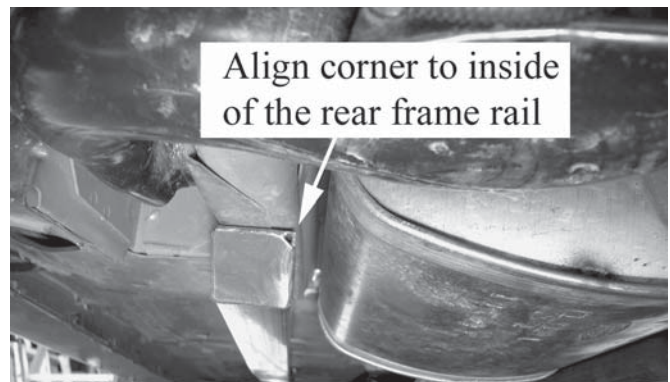
To position the subframe connector

- Hold the subframe connector up against the bottom of the car, underneath the front and rear subframe of the car.
- Place a straightedge on the front end-cap, extending above the top surface of the connector tube by about 1/2". Use the straightedge to align the front of the subframe connector with the car's front subframe, where the front subframe

angles upwards. This sets the fore and aft position of the subframe connector.



- Align the front, outside edge of the subframe connector with the outside of the factory subframe rail.
- The rear of the subframe connector is to be positioned with the inboard side of its end aligned with the inner side of the car's rear subframe. This positions the subframe connector directly underneath the car's rear subframe, and provides the most clearance for the muffler and the rear lower control arm.



- Check how closely the subframe connector fits to the underside of the car's front subframe. Due to production tolerances in stamping the floor pan, there may be a gap between the connector and the front subframe. A gap at the very front of the subframe connector of no more than 1/8" is acceptable. A gap at the rearward end of the car's front subframe of no more than 1/4" is acceptable.
- If there is a larger gap than noted above, steps should be taken to reduce the gap. A gap at the rearward end of the car's front subframe was most likely caused by the car being lifted up with an improperly placed floor jack; a jack placed

underneath the front subframe often distorts the floor pan, and will cause a gap at the rearward end of the car's front subframe. This gap can be reduced in one of two ways: Move the floor pan down to match the subframe connector (Remove the front seat and use a large hammer on the top of the floor pan), or increase the angle of the forward bend of the subframe connector tube.

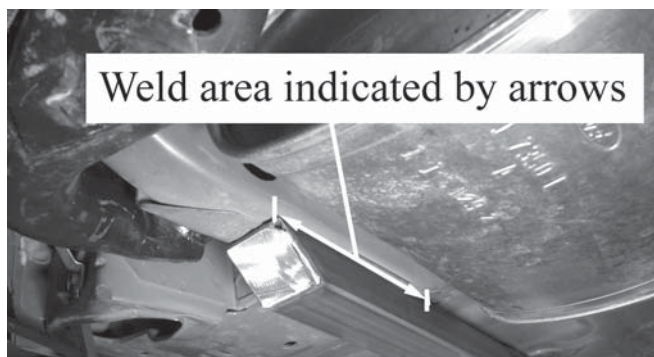
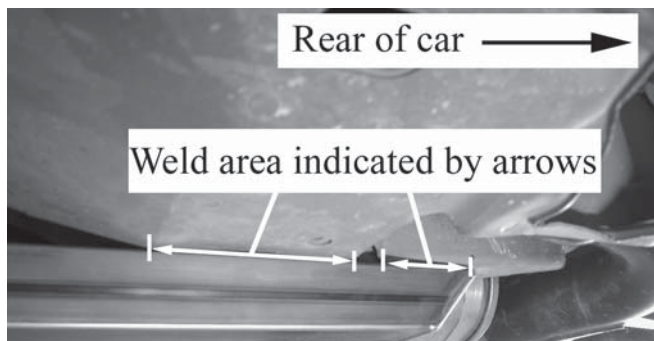
- If there is a gap between the car's front subframe and the subframe connector at its front end, the subframe connector tube needs to have its forward bend straightened. Very small changes in the bend angle will have a large effect on the gap. The subframe connector tube can have the bend angle straightened out slightly while off the car by careful use of a hydraulic press, or by clamping one end of the tube to a stout workbench and then applying a large weight at the other end of the tube to straighten out the bend slightly. If using a press, be careful not to crush the tube.

NOTE: Close shut the gap at the corner of the rear end cap. Either weld it closed, or seal it with silicone after all welding and painting is completed.

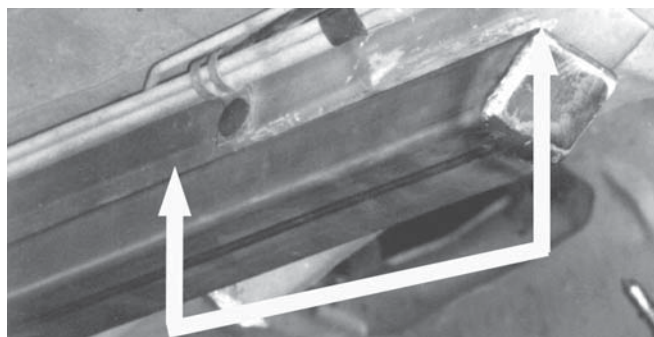
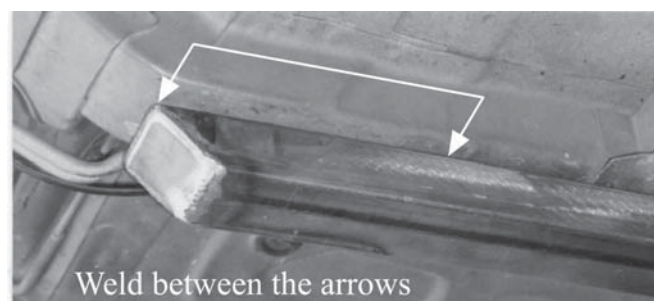
WARNING: Be careful to protect the fuel lines from heat and sparks during all welding operations.

14. With the subframe connector held in the correct position (as described above), mark on the subframe connector at every place that it will be welded. If these areas of bare steel subframe connectors were not masked prior to painting, remove the paint at this time. MM powder coated subframe connectors must have the coating removed from the subframe connector in the weld areas. A power disc sander works well for this.
15. With the subframe connector again held in the correct position, tack-weld the forward end in place, and then the rearward end. With the subframe connector now secured in place, double check that its position is correct. If necessary, remove the tack welds and reposition the subframe connector.
16. Weld the rearward end of the subframe connector into place. Weld where indicated in the photos. Do not weld across the end-cap, as

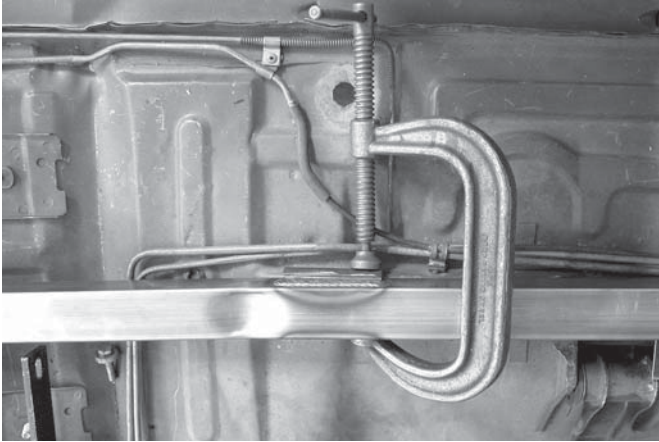
doing so will create a heat-affected zone on the unibody that may lead to later cracking, due to the orientation of the weld relative to the bending loads. Close shut the gap at the corner of the rear end cap. Either weld it closed now, or seal it later with silicone.



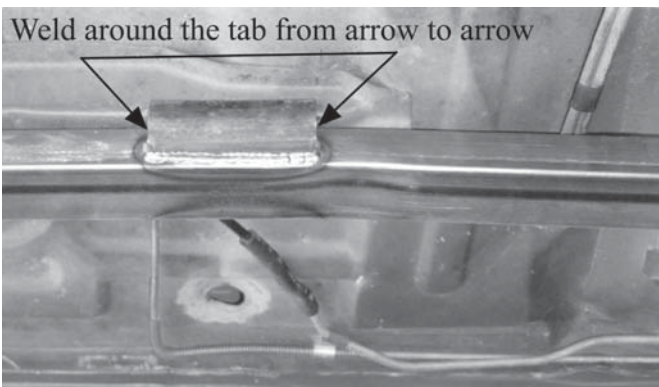
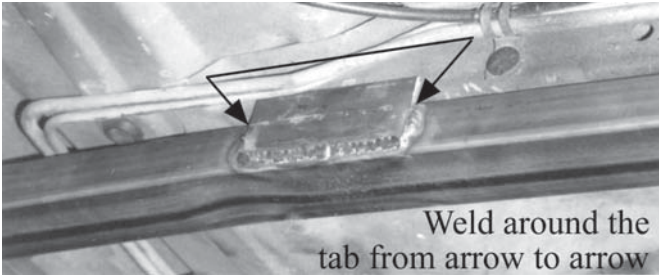
17. Weld the forward end of the subframe connector into place. Weld where indicated in the photos. Do not weld across the end-cap, as doing so will create a heat-affected zone on the unibody that may lead to later cracking, due to the orientation of the weld relative to the bending loads.



18. The two rearward mounting tabs, near the forward bend of the subframe connector tube, will need to be custom-fitted into place against each side of the car's front subframe. This can be done by squeezing them with a C-clamp or large CHANNELLOCK pliers, or by careful hammering. We position the mounting tabs to accommodate the range of tolerances in the placement of the front subframe on the floor pan, which requires the tabs to be custom-fitted to the car during installation.



19. Weld the two rearward mounting tabs to the car's front subframe, as indicated in the photos.

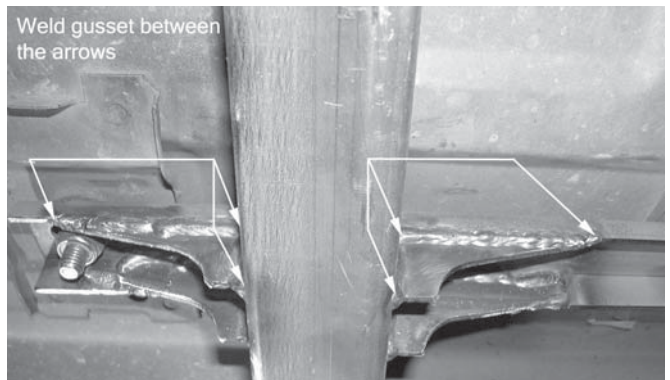


20. Follow Steps 15-19 to weld the other subframe connector into place.

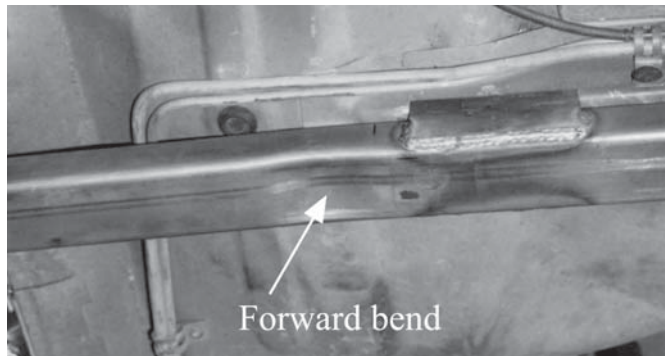
21. Place four gussets into position between each crossbar and connector. Position the gussets so that they are flush with the bottom of the

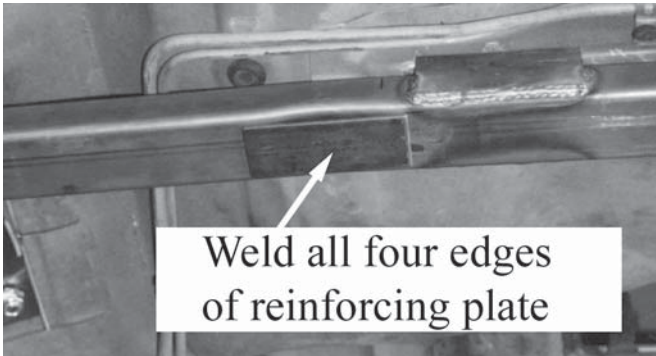
subframe connector and vertically oriented as shown. Finish welding into place as indicated.

NOTE: It is important to position the gussets vertically to facilitate torque arm cross member bolt removal on cars so equipped.



22. Locate the forward bend of the subframe connector tube (see photo). Place a supplied Reinforcing Plate against the bottom of the tube so it covers the bend area. Weld the entire perimeter. Repeat on the other subframe connector.





This kit contains the following:

- 4 10mm x 1.5 x 40mm Hex bolt
- 4 10mm x 1.5 Nylock nut
- 8 7/16" AN Washer
- 2 Reinforcing Plates
- 8 Gussets
- 2 Full Length Subframe Connectors
- 2 Seat Reinforcing Crossbar

23. If so desired, the subframe connector tube may be stitch-welded to the car's front subframe by welding the corners of the subframe connector tube to the car's front subframe. A 1-inch weld every 3 inches is sufficient.
24. Using a ViceGrip or other holding device, clamp the front factory reinforcing plates back into their stock locations. The cut-off portion of the front factory reinforcing plates should be touching the subframe connectors along the entire cut-off length.

NOTE: Make sure the plates are mounted parallel to the ground. If the plates are angled too far from their factory locations, interference issues may occur when reinstalling the rearward factory X-brace.

25. Weld the factory reinforcing plates to the subframe connectors and to the reinforcing "z-rail" that is riveted to the rocker panel's lower pinch weld along the entire length indicated by the arrows below.



26. Clean the weld areas and paint with a high quality rustproof primer and topcoat.
27. Reinstall the rearward portion of the factory X-brace and torque the mounting bolts to 32 lb-ft.