

# FRAME

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## INSTALLATION INSTRUCTIONS

### Frame Reinforcement Kit 11104 (Patent Pending)

1978-87 GM G-Body 2dr

**Read Instructions FULLY before starting Installation**

#### Important Note

**Installation of this kit requires welding and fabrication skills. If, you do not feel that you have adequate skills to install this kit, seek a professional installer.**

#### **Tools Required:**

Welder capable of fully welding 10 GA .135" steel

Grinder with the following:

Grinding Disc

Cutoff Wheel

60 Grit Flap disk—optional— for finishing and close fitment

C-Clamp

2-3 lb. Hammer to straighten flanges of rail (if required)

Floor Jack

Wood 4x6 blocks to raise body off of frame

New body bushings — Optional but **Highly Recommended**

Optional—5 feet of 2" square tubing or angle to brace frame rail in center to keep frame within factory specification.

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## **BEFORE STARTING YOUR PROJECT**

**DISCONNECT AND REMOVE BATTERY FROM VEHICLE**

**WHEN LIFTING A VEHICLE WITH A JACK, BE SURE TO USE SAFETY STANDS.**

**WHEN LIFTING BODY OFF THE FRAME MAKE SURE VEHICLE AND FRAME ARE SUPPORTED SO THAT OPERATION CAN BE COMPLETED SAFELY.**

**WHEN BODY IS REMOVED FROM FRAME, SUPPORT BODY SO THAT IT IS SECURE AND SOLIDLY SUPPORTED.**

**THE G-BODY BODY SHELL IS HEAVIER AT THE REAR AND THIS FACT WILL NEED TO BE COMPENSATED FOR WHEN LIFTING BODY OFF FRAME.**

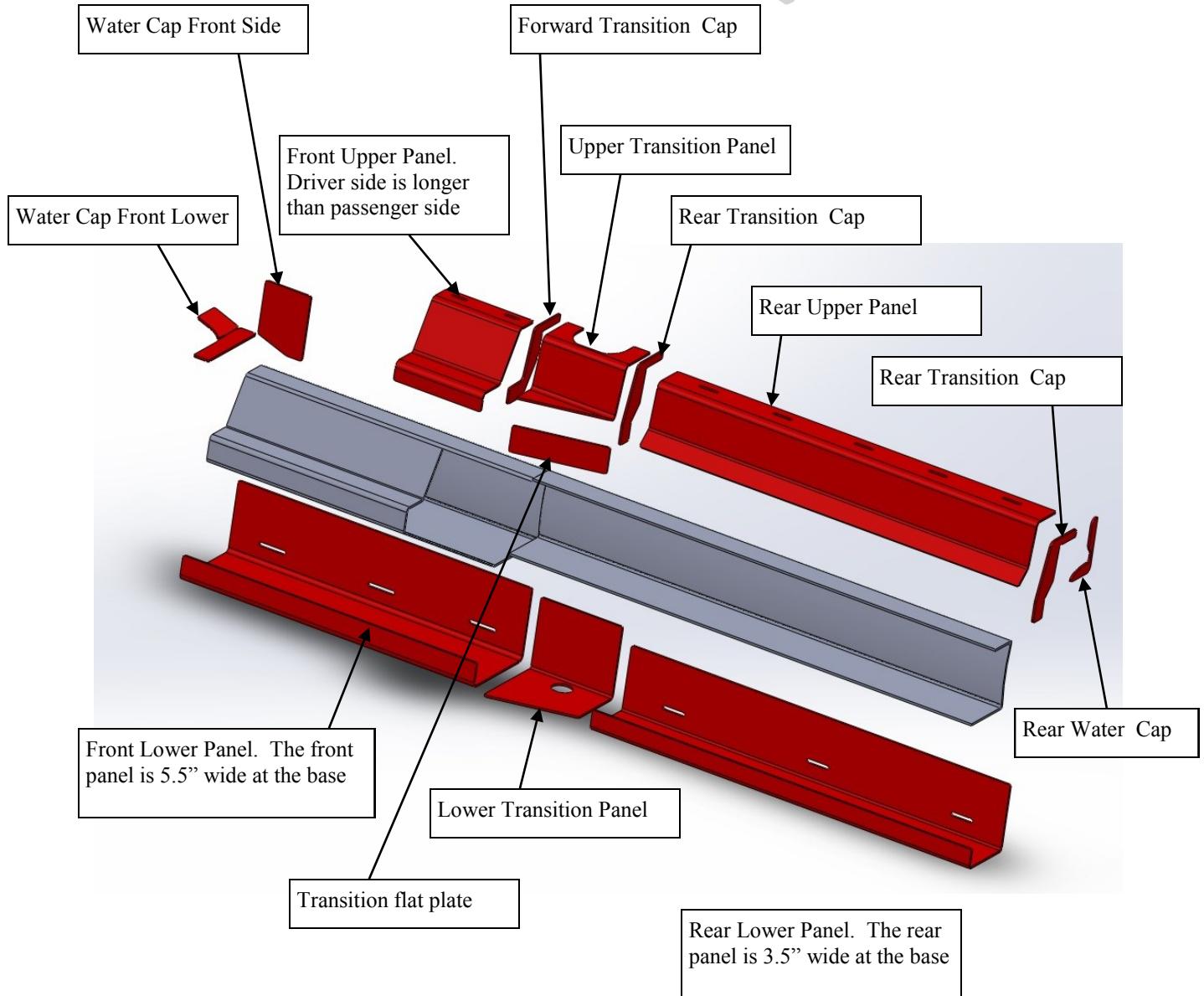
**ENSURE THAT THE INSTALLATION OF COMPONENTS WILL NOT CRUSH OR DAMAGE FUEL AND BRAKE LINES OR ELECTRICAL HARNESSSES.**

**BEFORE DRILLING ANY HOLES, ENSURE THAT ALL ELECTRICAL WIRES, FUEL LINES, BRAKE LINES, BRAKE HOSES AND ANY OTHER COMPONENTS ARE MOVED OR PROTECTED TO AVOID DAMAGE FROM DRILLING ANY HOLES .**

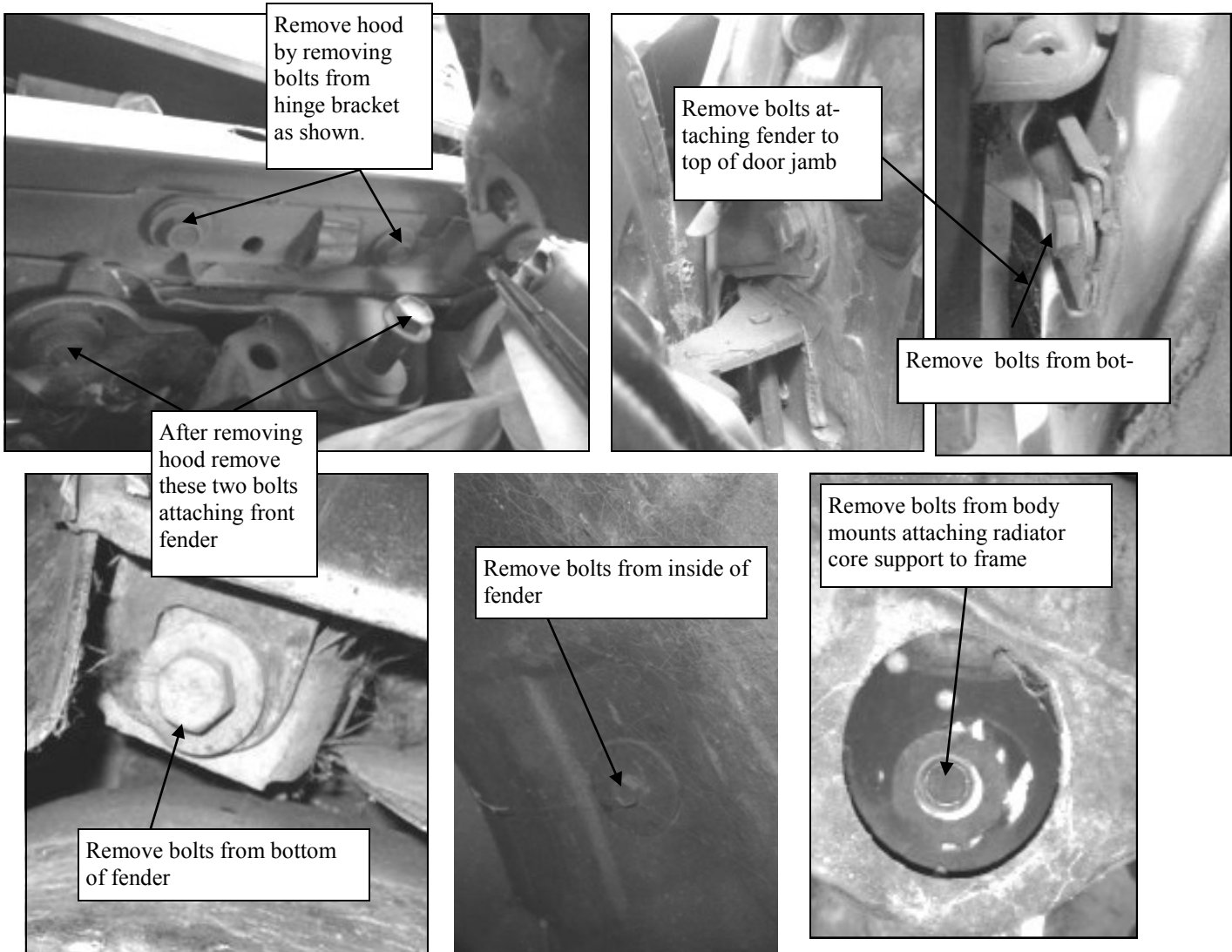
**DO NOT ATTEMPT ANY MODIFICATIONS TO THE VEHICLE OTHER THAN THOSE OUTLINED IN THIS INSTRUCTION SHEET. IF ANY INTERFERENCE WITH THE GAS TANK, FUEL LINES, BRAKE LINES, EXHAUST PIPE, ETC. EXISTS, STOP YOUR INSTALLATION AND CALL HELLWIG PRODUCTS FOR TECHNICAL HELP.**

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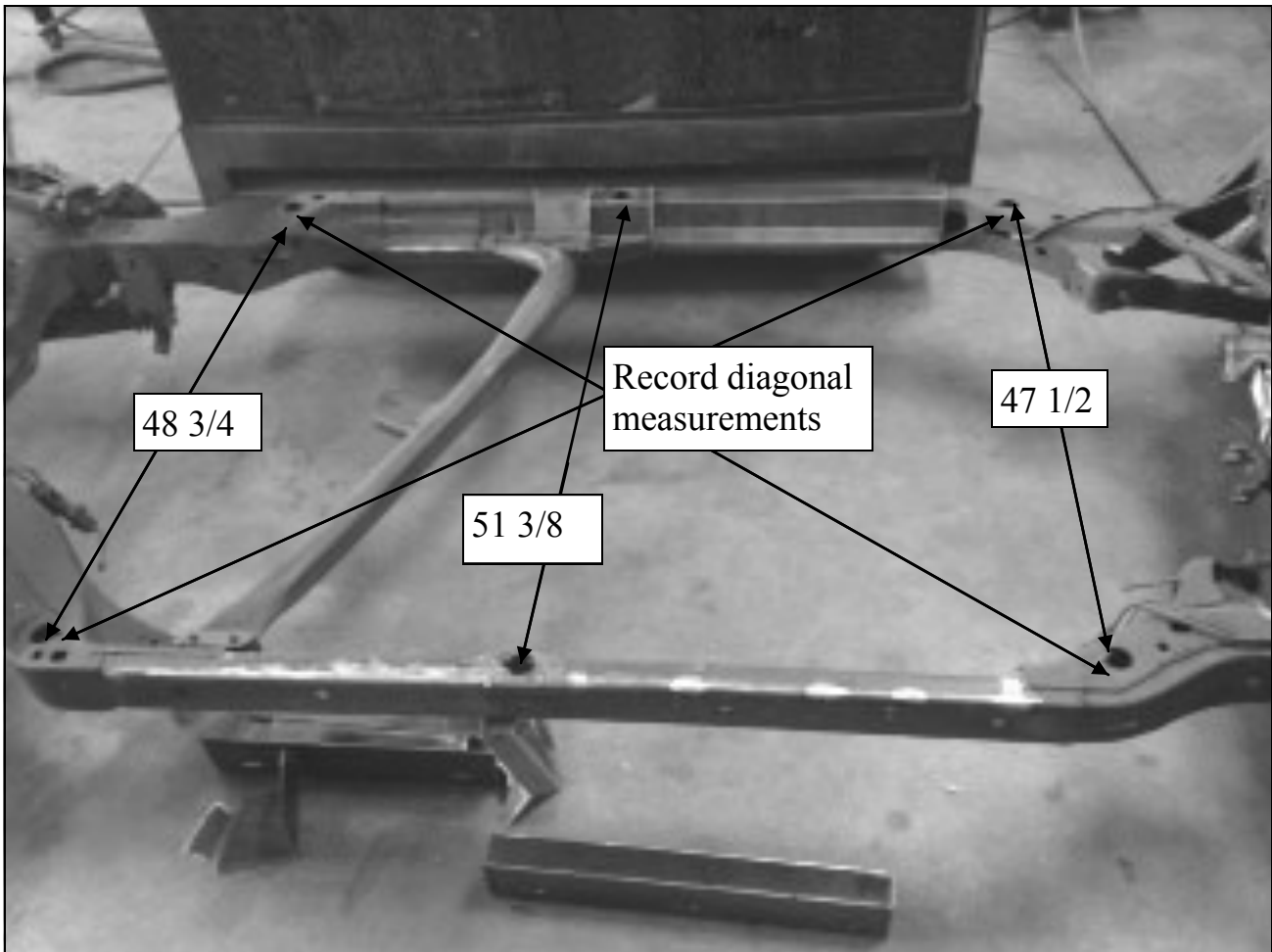
1. Jack up vehicle and place securely on jack stands. Remove wheels and tires.
2. If vehicle is assembled, disconnect and remove battery, remove front and rear bumpers.  
**Remove fuel tank, fuel lines, and brake lines.** Disconnect steering linkage from steering column. Disconnect throttle cable.
3. Disconnect emergency brake cable from body.
4. Disconnect engine compartment wiring harness from bulkhead.
5. Disconnect wiring harness from starter
6. Disconnect wiring harness from heater blower motor.
7. Disconnect wiring harness from distributor, alternator and any other engine mounted components.
8. Remove front clip from vehicle by removing bolts as shown in pictures below.

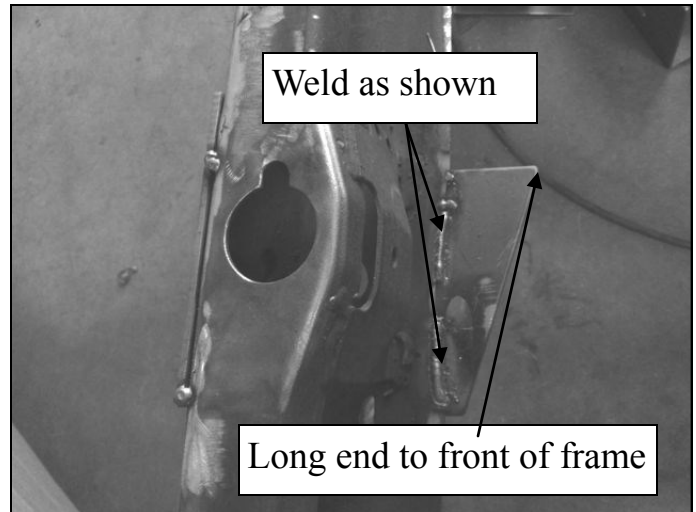
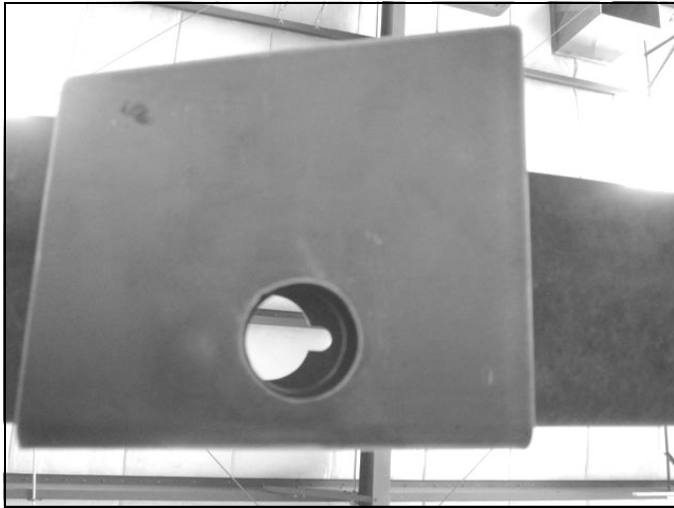


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9. Lift Front Clip off of frame and body.
10. Remove body mount bolts, then raise body off frame about 6" and support body so that it is secure.
11. Record measurements as shown below before proceeding with any modification. These measurements are critical to ensuring that the frame will bolt back on to the body properly. Measurements shown are approximate. Your frame dimensions will vary slightly. Record these dimensions and check frequently while modifying frame to check if rails are moving from welding heat.





12. Align hole in lower transition piece with clearance hole for body mount in center of frame. Long end of the transition will point forward. Tack into place. Weld inside of transition to bottom flange of rail as shown.



13. Install upper transition piece as shown. Align with lower piece for best fit and tack into place.

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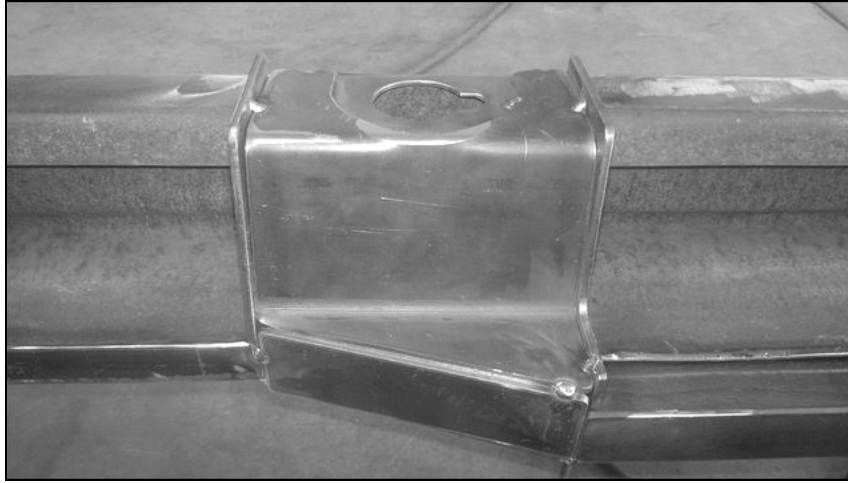
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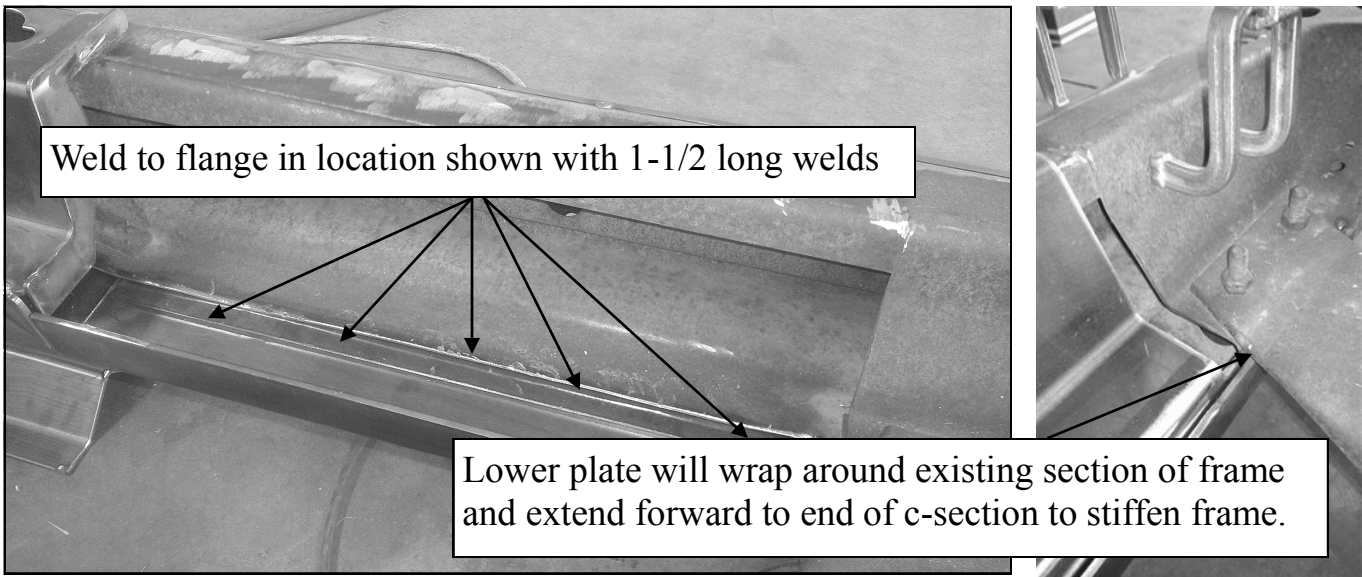
14. Install forward transition piece as shown. Tack into place



15. Install rear transition piece as shown. Tack into place



16. Install transition flat plate as shown.

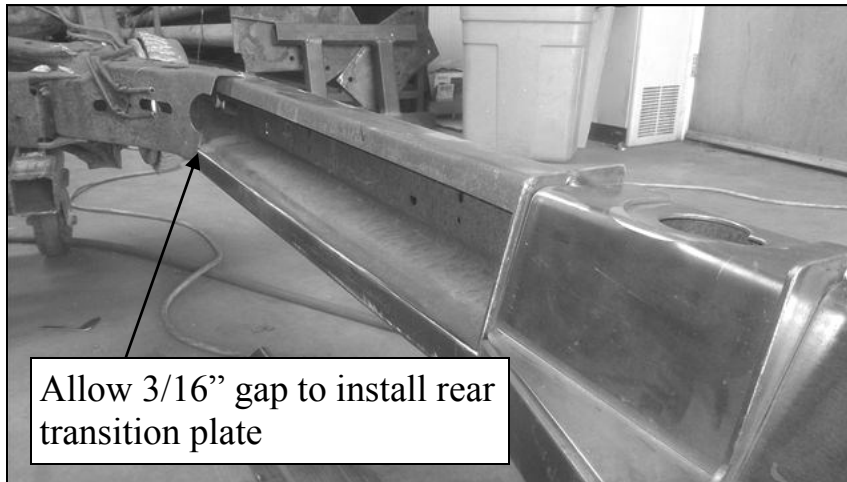


17. Install lower forward plate as shown. The lower plate is designed to wrap around the existing section of frame rail. It will extend to the end of the c-section of frame rail on both the driver and passenger rail even though the existing frame section is longer on the passenger side. The plates are designed like this to provide additional stiffness to the rail.



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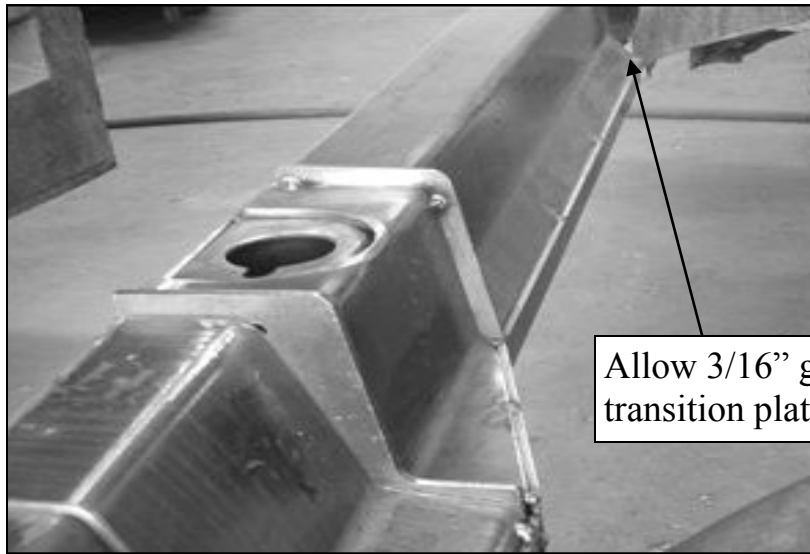
18. Install rear lower plate. It will need to be cut to length to fit between center transition and rear frame transition. Allow 3/16" gap at end of plate to install rear transition plate.



19. Install upper forward plate as shown. Cut to length so that it butts up against existing frame section.

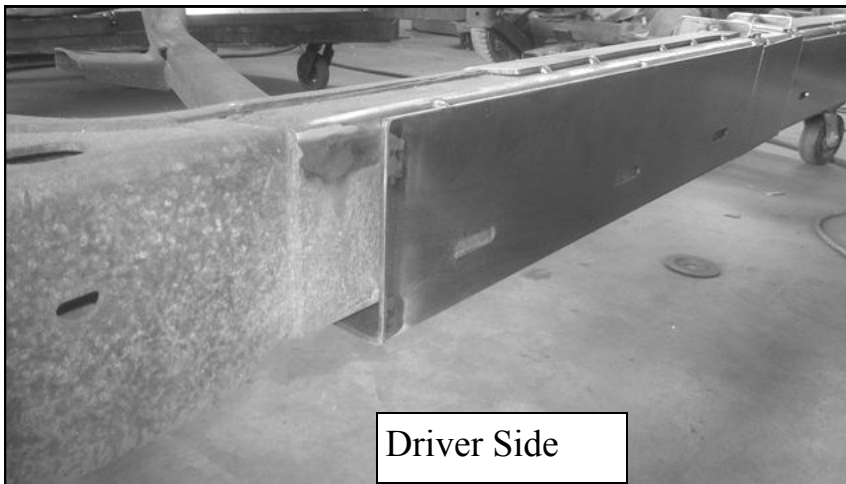
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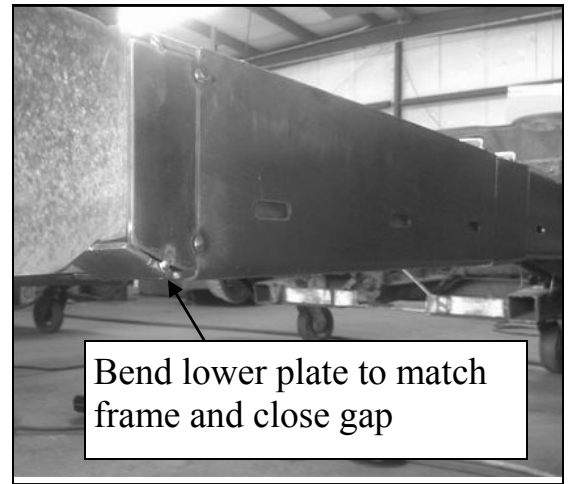


Allow 3/16" gap to install rear transition plate

20. Install rear upper plate. It will need to be cut to length to fit between center transition and rear frame transition. Allow 3/16" gap at end of plate to install rear transition plate.



Driver Side



Bend lower plate to match frame and close gap

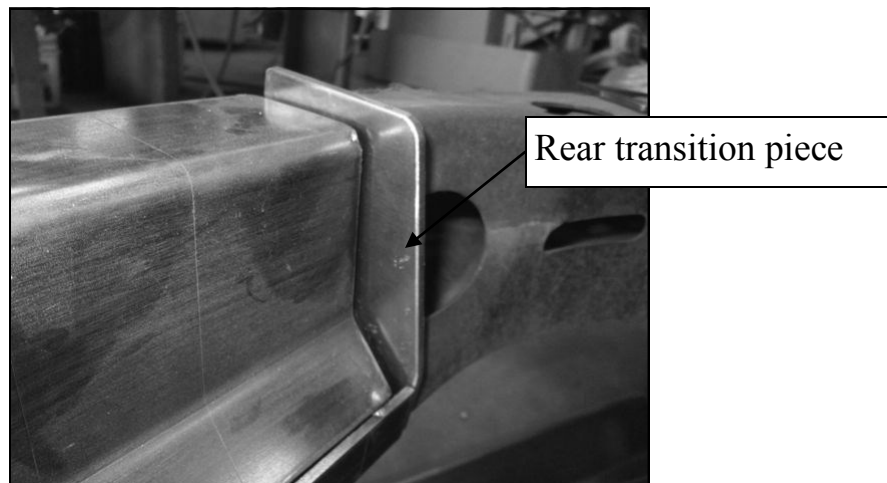
21. The front of the rail section has a gap to the oem frame rail that will collect water if not capped. Install front transition pieces as shown to close gap. Lower transition plate will need to be bent to match frame.

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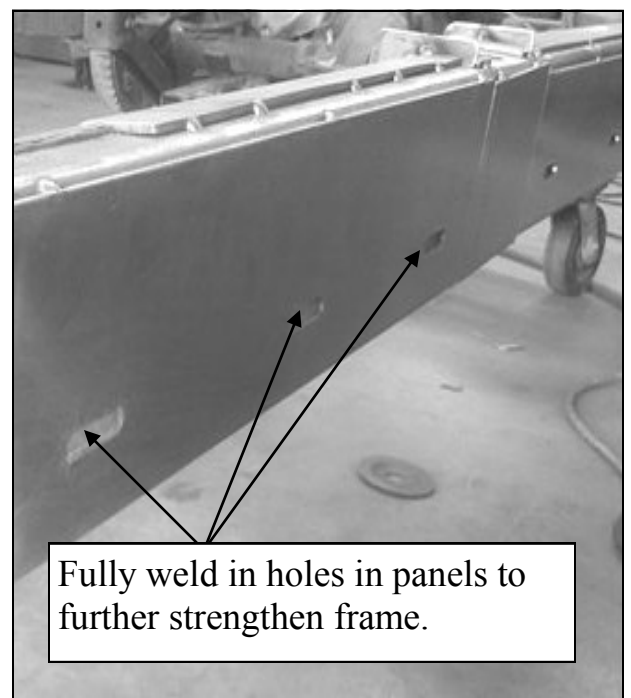
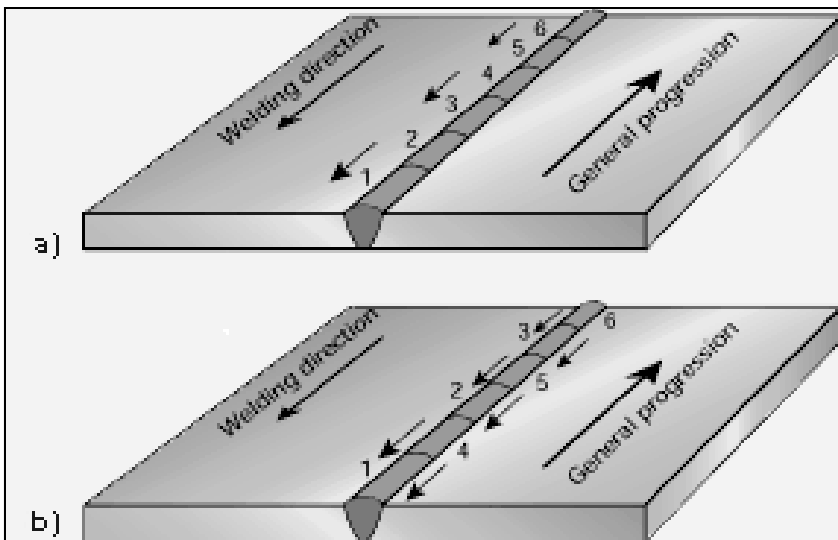
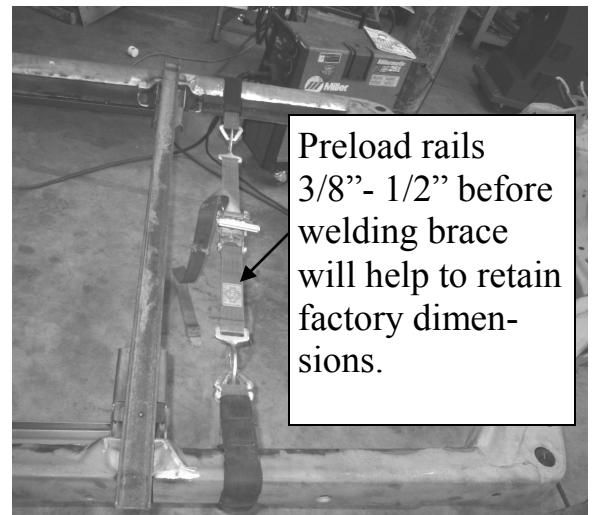
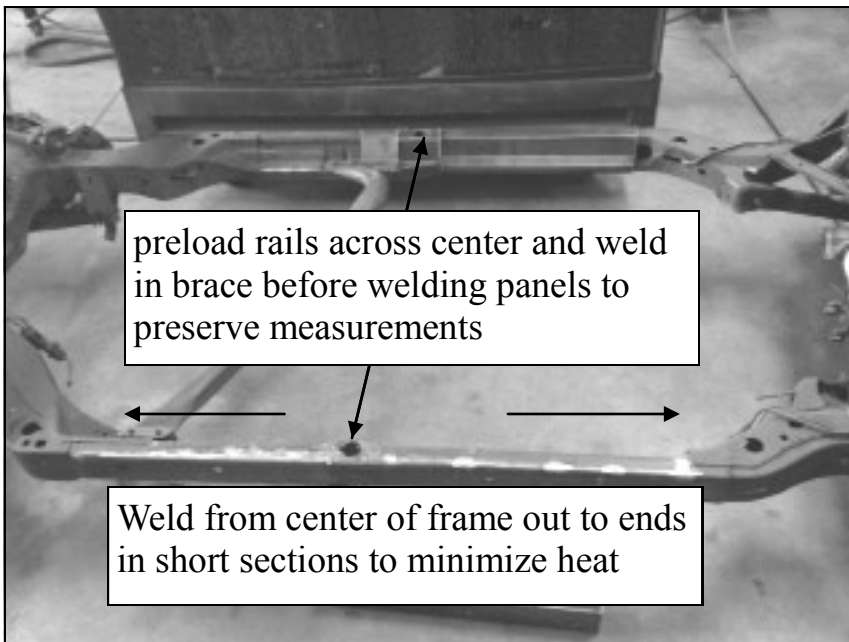


22.. Install rear water cap as shown on frame rail. This will keep water from entering the rail section.



23. Install rear transition piece as shown to bridge new panel to existing rail. Tack into place.

24. The panels are now ready to weld to frame rail. Extreme care must be taken to prevent heating the rails too much. Too much HEAT WILL BOW the center section of the rail. Only weld 1-1/2 inches at a time while skipping around the rail to prevent buildup of heat. It works best to weld from the center section/body brace outward. When welding the panels to the rail, the backstep or skip welding technique will help to minimize warpage. The key to a successful install is to TAKE YOUR TIME. Make 3-4 welds in various locations, then allow it to cool. This will keep warpage to a minimum. The rails will move 1/8-3/16" from your initial dimensions by the time you finish welding. With this amount of movement, the rails will still bolt up properly to the vehicle. If you do manage to warp your rails much beyond this amount, a good frame shop can bring them back into shape—for a fee. Its much easier—and cheaper—to take your time and not be in a hurry. Our experience has shown that the rails will bow outboard in the center from the welding heat. If you apply 3/8" -1/2" of preload at the center body mounts of the rails with a ratchet strap before welding the brace, the rails will return to their original dimension when the brace is removed



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# FX

25. You are now ready to enjoy your newly strengthened frame. Coat rails with the paint of your choice and reassemble to vehicle with new body mounts.

