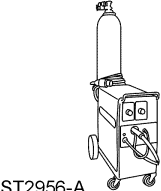


REMOVAL AND INSTALLATION

Frame Members

Special Tool(s)

	Pro 230 Mig Welder 208-00030
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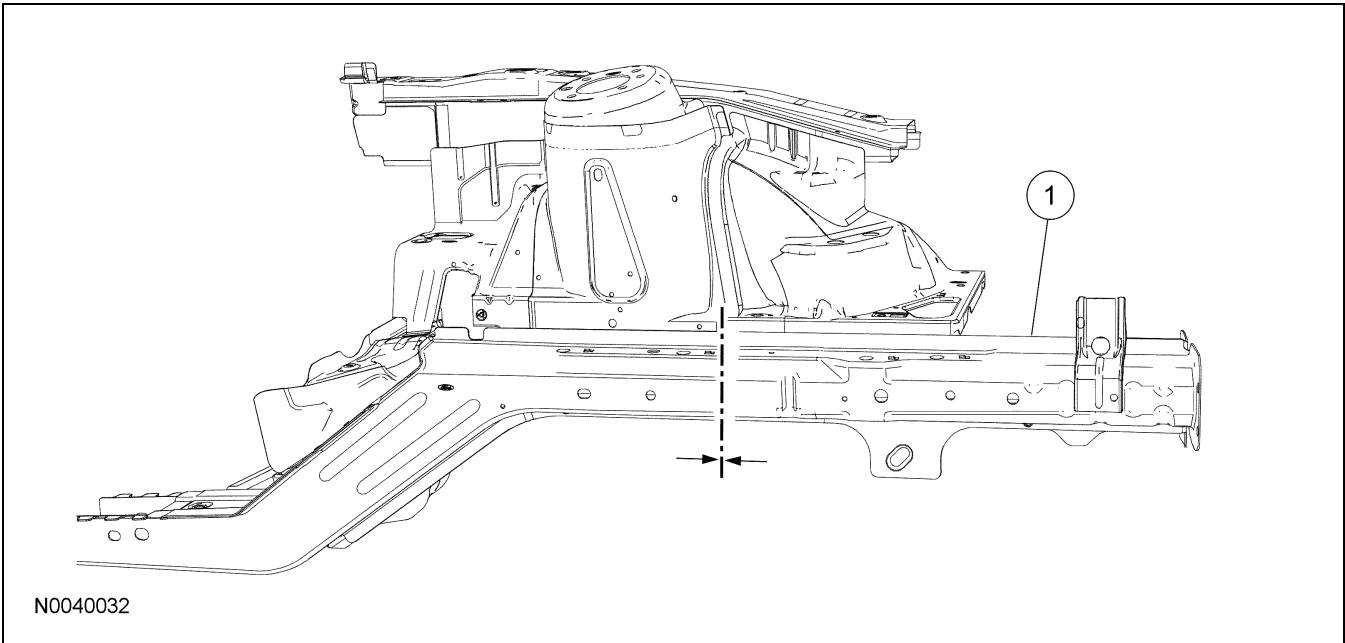
Material

Item	Specification
Low Temperature Anti-Corrosion Coating PM-12-A	—
Motorcraft Metal Surface Cleaner ZC-21	WSE-M5B392-A
Motorcraft Metal Surface Prep ZC-31	—

Front Frame Rail


NOTE: Left side shown, right side similar.

NOTE: Cut line shown in illustration is approximate, refer to the following procedure for specific cut locations.



Item	Part Number	Description
1	16055 LH/ 16054 RH	Frame rail sectioning kit

REMOVAL AND INSTALLATION (Continued)

 **CAUTION:** This sectioning procedure is only recommended when collision damage does not extend into the front shock tower area. For more severe collision damage, repairs must be made at the original factory seam and joint locations.

NOTE: Ford Motor Company does not approve or recognize structural repair procedures using anything but genuine Ford parts.

Structural repairs (frames, rails, aprons and body panels) carried out using other than Ford Motor Company parts have not been tested. In addition, structural equivalence and corrosion protection cannot be assured.


Returning a vehicle to pre-accident condition can only be assured if repair procedures are carried out by skilled technicians using genuine Ford Motor Company parts and approved methods.

Structural component repair procedures approved by Ford using genuine parts have been validated through testing by Ford Motor Company engineers. Should alternative structural component repair procedures and/or parts be used, repairers should be aware of the potential liability they incur.

NOTE: The following repair procedure illustrates the sectioning of the front side member and fender reinforcement components. In situations where collision damage is less severe, the sectioning procedure to repair only those damaged components may be determined from these procedures.

NOTE: Corrosion protection needs to be restored whenever it is necessary to sand or grind through painted surfaces or E-coat, or when bare metal repairs are made. Refer to Restoring Corrosion Protection Following Repair in this section.

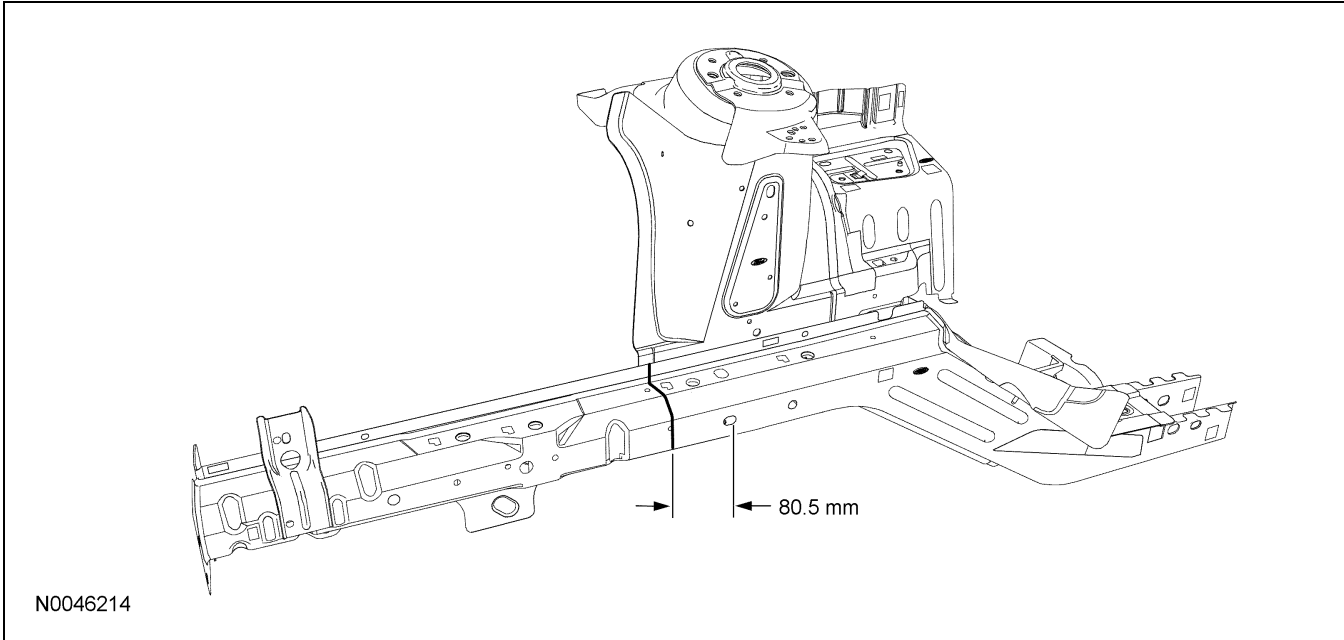
NOTE: Observe prescribed welding procedures when carrying out any repair to unibody/frame structure. For additional information, refer to Welding Precautions — Steel in this section.

1. Position the vehicle on a frame repair rack following the manufacturers recommendations. Measure the vehicle to determine if the body requires straightening and alignment. Refer to Body in this section for dimensional information.
 - Remove the front bumper. For additional information, refer to Section 501-19.
2. Remove the engine. For additional information, refer to Section 303-00.
3. Remove the suspension components. For additional information, refer to Section 204-01.
4.  **CAUTION:** The frame rail sectioning instruction kit provides the specific service procedure instructions for replacement of the frame rail sectioning kit. It is mandatory that the replacement section be installed per the installation guidelines. The frame rail service component must be located to maintain the original factory dimensions. For additional information, refer to Body in this section for correct underbody dimensional information.

Remove the radiator support assembly.

REMOVAL AND INSTALLATION (Continued)

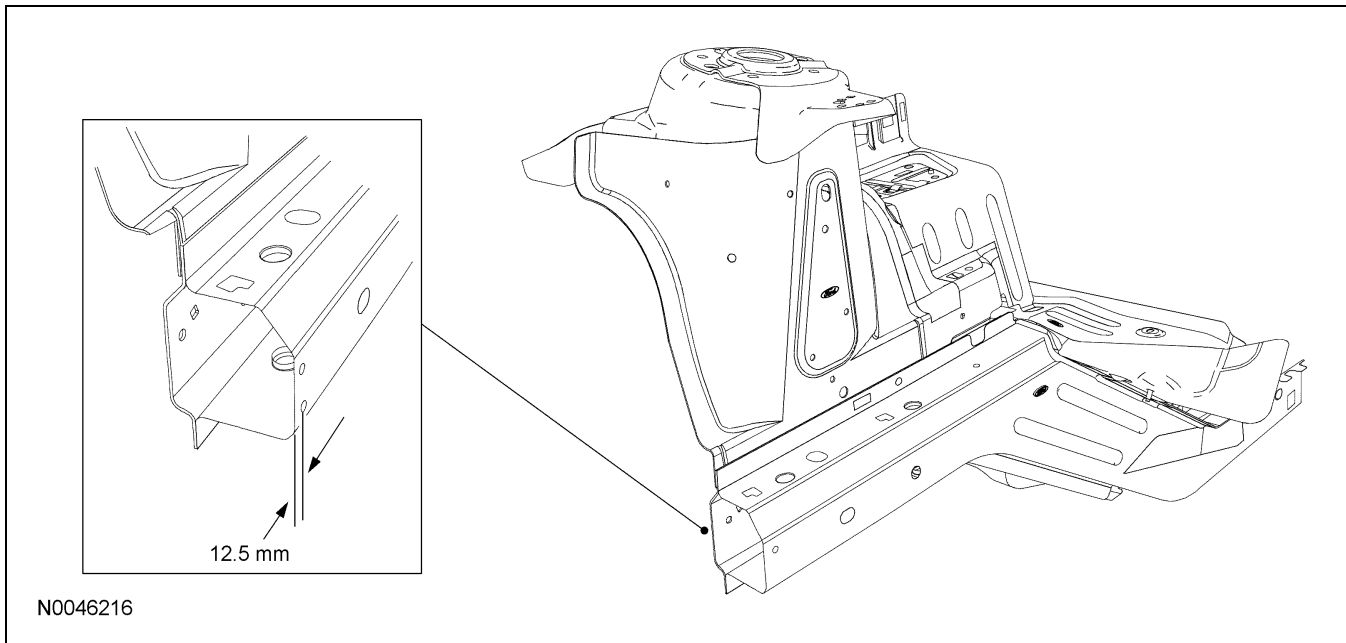
5. Cut off the front apron from the main part of the apron, 80.5 mm (3.16 in) forward of the 14 mm (0.55 in) x 20 mm (0.78 in) slot, and remove the remainder of the apron.



6. **NOTE:** Factory spot welds may be substituted with either resistance spot welds or MIG plug welds. Spot/plug welds should equal factory welds in both location and quantity. Do not place a new spot weld directly over an original weld location. Plug weld hole should equal 8 mm (0.31 in) diameter.
- Drill out the spot welds in the front fender apron reinforcement.
7. Drill out the spot welds attaching the shock tower to the apron panel, and the apron to the lower rail.
- Dress all spot weld surfaces.
8. Chamfer inner and outer side member cutline surfaces to improve butt weld surfaces.

REMOVAL AND INSTALLATION (Continued)

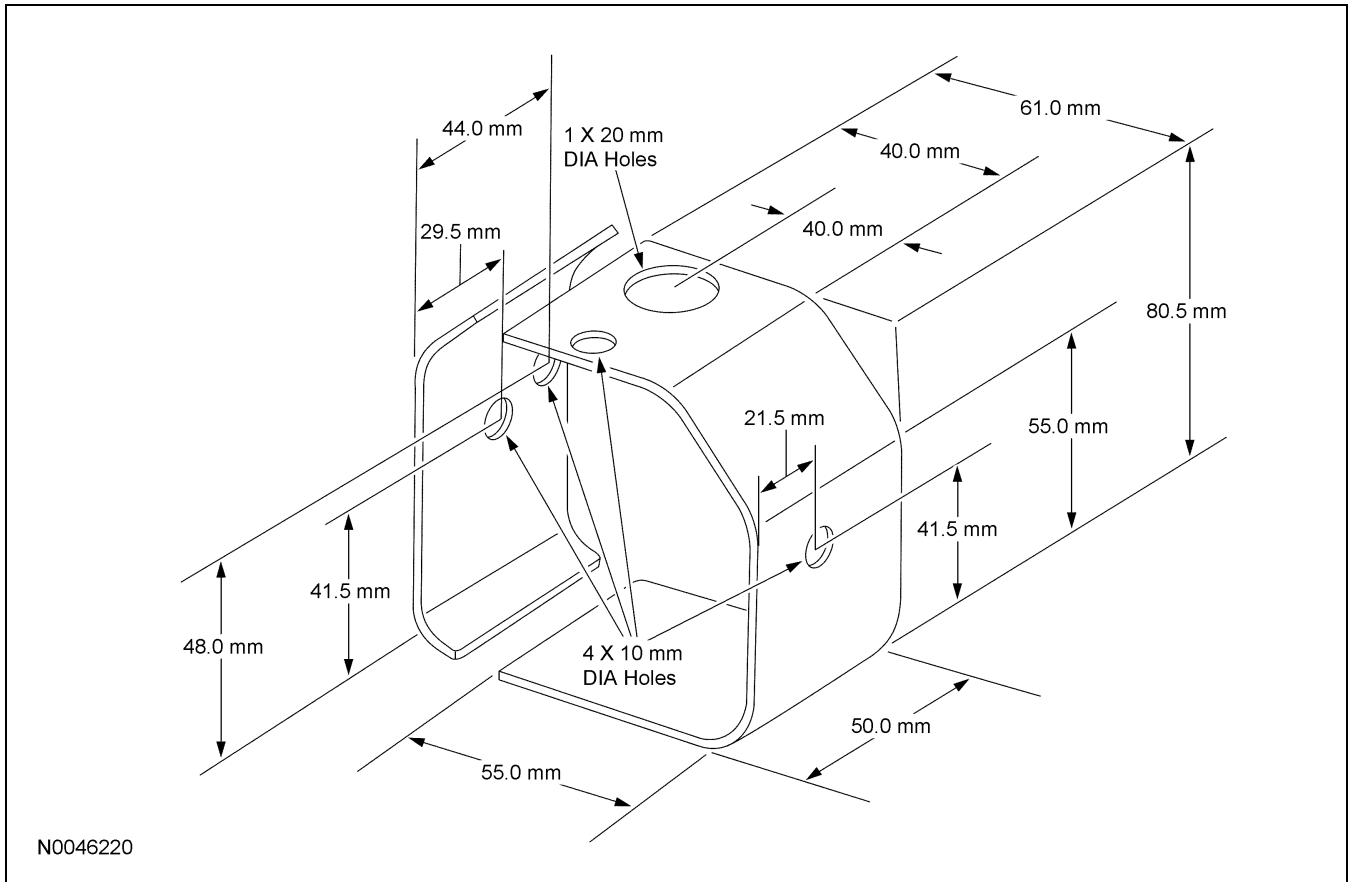
9. Measure 12.5 mm (0.49 in) rearward from the lower rail cutline. Drill seven 8 mm (0.31 in) holes in the insert overlap area flange.



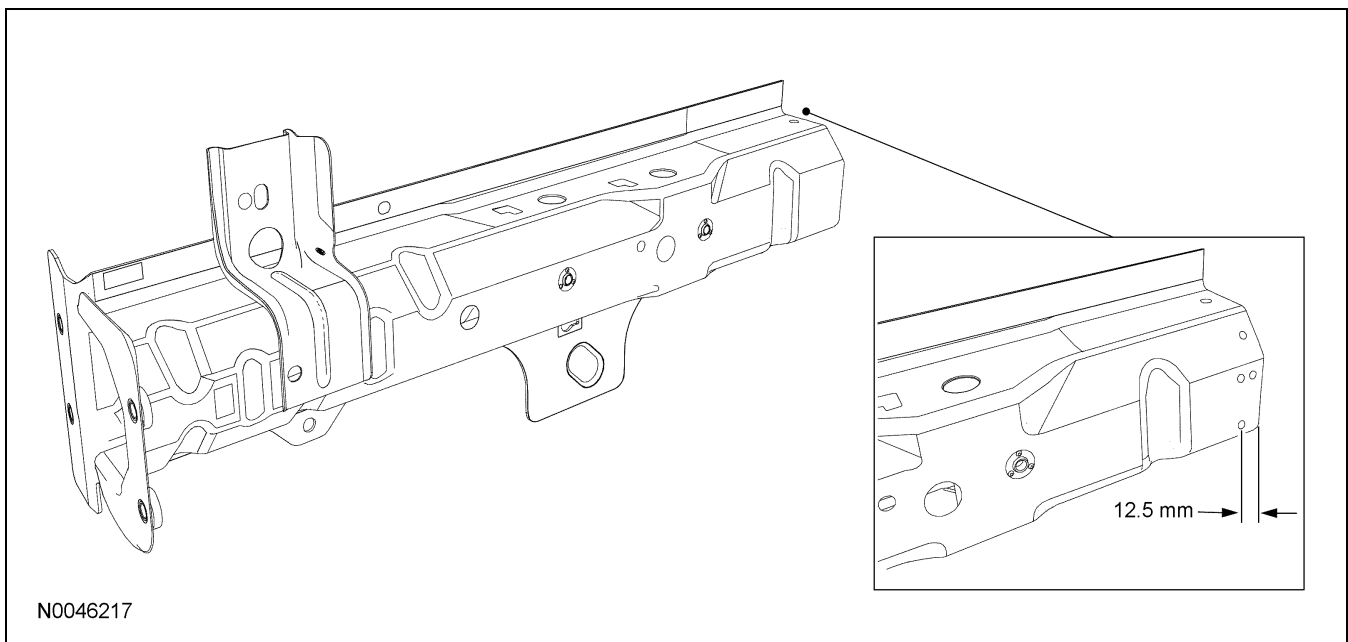
10. Transcribe the inner front side member cutline to the new lower side member, cut to length and chamfer the butt end to improve the weld surface.

REMOVAL AND INSTALLATION (Continued)

11. Construct an insert from the unused inner side member material.

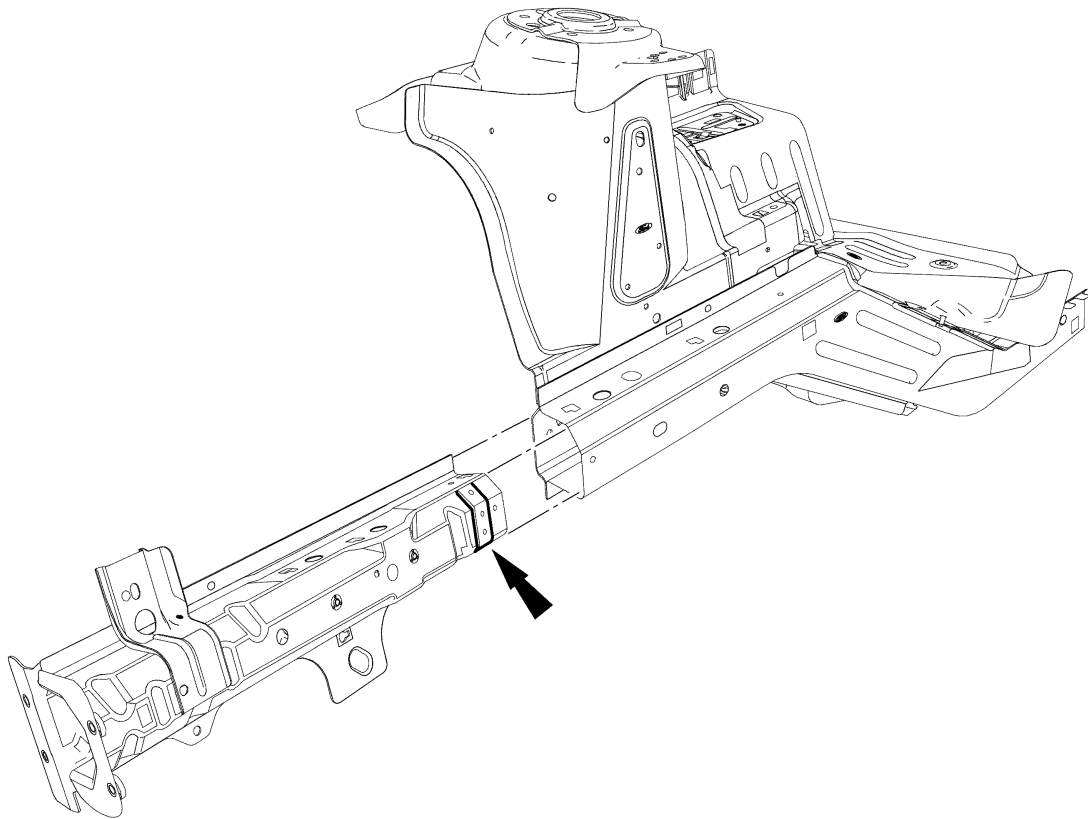


12. Measure 12.5 mm (0.49 in) forward from the lower rail outline. Drill nine 8 mm (0.31 in) holes in the new lower side member for attachment of the insert.



REMOVAL AND INSTALLATION (Continued)

13. Apply corrosion protection to the repair areas on the vehicle and service parts.
14. Position the insert to new lower side member, clamp and MIG plug weld 9 holes.

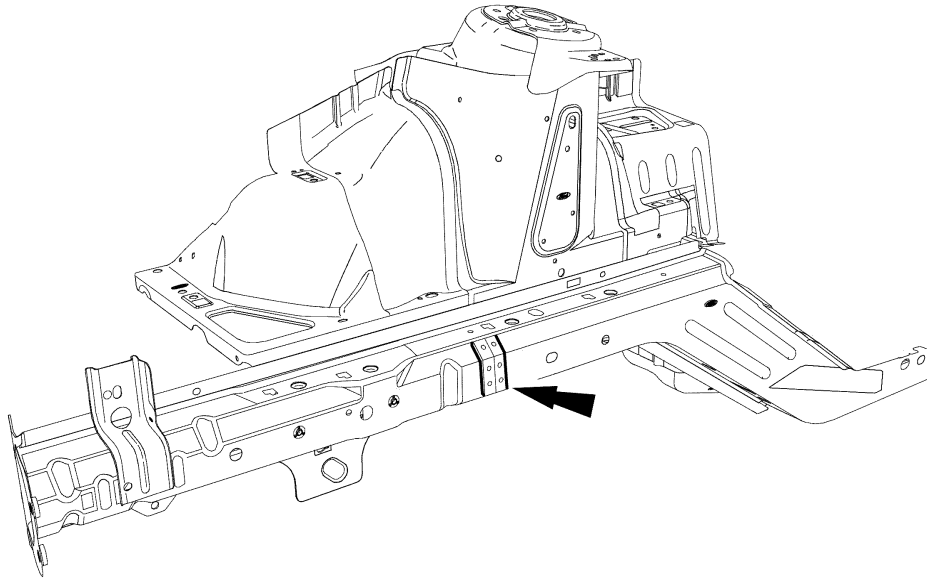


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REMOVAL AND INSTALLATION (Continued)

15. Position the new radiator support assembly, apron panel, rail assembly, front fender lower reinforcement and front fender upper reinforcement.

- MIG plug weld all holes.



N0046219

16. Fusion weld the front fender upper and lower reinforcements to the front fender apron, front fender apron to the radiator support and the seam between the old and the new side members.

- Dress all welds.