

2004 - 2008 F-150 FRONT FRAME REPLACEMENT SECTION INSTALLATION INSTRUCTIONS

4 X 2 LIGHT DUTY FRONT FRAME STUB REPLACEMENT KIT - 8L34-5E029-AA				
Part Number			Description	Quantity
8L34	5C145	AA	Front Frame Stub - 4 x 2 Light Duty	1
SK8L34	5C145	AA	Front Frame Stub Instruction Sheet	1

Services all F-150 4 x 2 Frames from 2004-2008 except Trucks with GVW ratings exceeding 7200 lbs or Trucks with Manual Transmissions.

4 X 4 LIGHT DUTY FRONT FRAME STUB REPLACEMENT KIT - 8L34-5E029-CA				
Part Number			Description	Quantity
8L34	5C145	CA	Front Frame Stub - 4 x 4 Light Duty	1
SK8L34	5C145	AA	Front Frame Stub Instruction Sheet	1

Services all F-150 4 x 4 Frames from 2004-2008 except Trucks with GVW ratings exceeding 7200 lbs or Trucks with Manual Transmissions.

NOTE: Not included in this kit, sold separately.

Other Frame Service Parts Required For Front Frame Stub Replacement	
Model Year of Frame Being Repaired	Additional Service Parts Required
2004-2006	ABS/HCU Module Bracket and Fastener Service Kit <i>Reference part number 7L3Z-2C325-C make sure the latest level part is used</i>
2004-2005 J1 <i>Produced from 6-2-2003 to 11-24-2004</i>	Latest Left Hand Engine Mount and Hardware
2004	Latest Right Hand Engine Mount and Hardware

SERVICE PROCEDURE:

Preliminary Steps:

1. Remove the front bumper assembly as outlined in Workshop Manual, Section 501-00.
2. Remove the grille assembly and reinforcement. Refer to Workshop Manual, Section 501-00 for information.
3. Remove both front fenders as outlined in Workshop Manual, Section 501-00.
4. Remove the front skid plate (if equipped).
5. Remove the engine mount retaining bolts and loosen the exhaust manifold to head pipe connections. Refer to Workshop Manual, Section 303-00.



6. Loosen the radiator shroud retainer bolts per Workshop Manual, Section 303-03.
7. Pull vehicle up on frame rack and anchor in place following frame rack company guidelines and precautions.
8. Remove the front wheels.
9. Perform detailed measurement of the frame, and perform any required pulling operations. This is critical to ensure proper installation of the replacement frame section.
10. Perform complete removal of the front suspension and steering components as outlined in the Workshop Manual, Sections 204-00 and 211-00. This includes upper and lower control arms, steering gear, idler arm, and center linkage, tie rod assemblies, sway bar, and springs/shocks.
11. Remove front driving axle assembly and half shafts per Workshop Manual, Section 205-00 (if equipped).
12. Raise and support the engine/transmission assembly, and remove the transmission support crossmember.
13. Loosen the body mount to frame bushing bolts from the radiator support and the forward cab support per Workshop Manual, Section 502-00.
14. Using the frame rack towers and light tension, support the front radiator support of vehicle by raising it slightly above the frame rail mounts.
15. Disconnect and remove any remaining wiring, lines, and related fittings from the frame section.

FRONT FRAME SECTION REMOVAL AND REPLACEMENT STEPS:

The front frame section on this vehicle is retained by welded lap joints. This procedure calls for grinding of the original welded joints for removal, followed by welding of the new section into position.

1. Using proper eye, face, and ear protection, grind through the original welded joints retaining the forward frame section to the center section. Any high speed grinder may be used.
2. Using a chisel gun with a sharp 1 inch wide wedge chisel, separate the ground area of the joints.
3. Remove the complete front section with an assistant's help.
4. With the assistant's help, position the new front frame section into place on the vehicle.
5. Support the new section, and loosely clamp the replacement section in a preliminary position.
6. Perform measurements to ensure proper placement of the new unit, then clamp firmly into position.
7. Perform a final measurement, then solid weld the new section to the original on all overlap joints, following the weld procedure on page 3, (refer to Figures 4 and 5).
8. Reinstall the transmission crossmember, and lower the engine/transmission assembly, torque fasteners to specification.
9. Apply Motorcraft Rust Inhibitor - PM-24-A or B to the inside of the repair area, and then apply Motorcraft PM-25-A or B Premium undercoating to the area.
10. Inspect for damage, and reinstall all removed suspension, steering, braking, and driveline components, following the appropriate Workshop Manual Sections.
11. Remove the vehicle from the frame rack, and perform other required reassembly procedures following the appropriate Workshop Manual Sections.



Repair and Welding Procedure Overview:

Welding of the frame replacement section may be done by Arc or MIG welding. It is imperative that the following welding specifications be determined and followed exactly. **For safety, this repair must be performed by a certified welder.**

WELD PROCEDURE SPECIFICATION:

Joint Design Used:

Single: (x) Double: ()

Backing: Yes () No (x)

Material Specification:

Material: Carbon Steel (ESA M1A33-C P&O)

Thickness: Side rail: 3.2 mm nom/3.0 mm minimum

Bracket: 3.1 mm nom/2.9 mm minimum

Option 1: GMAW – MIG Welding

Stringer or Weave Bead: Stringer
Multi or Single Pass (per side): Single
Electrode Angle: Leading w/45 (horizontal), Trailing w/45 (v-down)
Vertical progression: vertical down
Working Amperage: 145 amps
Wire Feed Speed: 140-150
Volts: 18-19
Gas: 85Ar-15CO2, flow rate: 14 CFI
Amperage (GMAW): 140-150 amp

Option 2: SMAW – Stick Welding

Stringer or Weave Bead: Stringer
Multi or Single Pass (per side): Single
Number of Electrodes: As Needed
Electrode Angle: Trailing w/45
Working Amperage: 90 amps
Vertical progression: vertical up
Filler Metal AWS Specification: E-6011
AWS Classification: A5.1-91
Amperage (SMAW): 70-110 amps



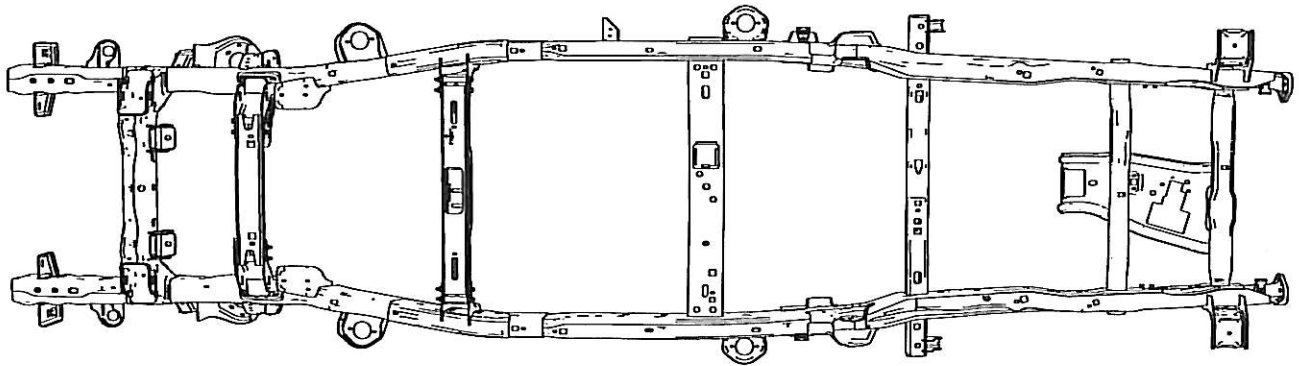


FIGURE 1

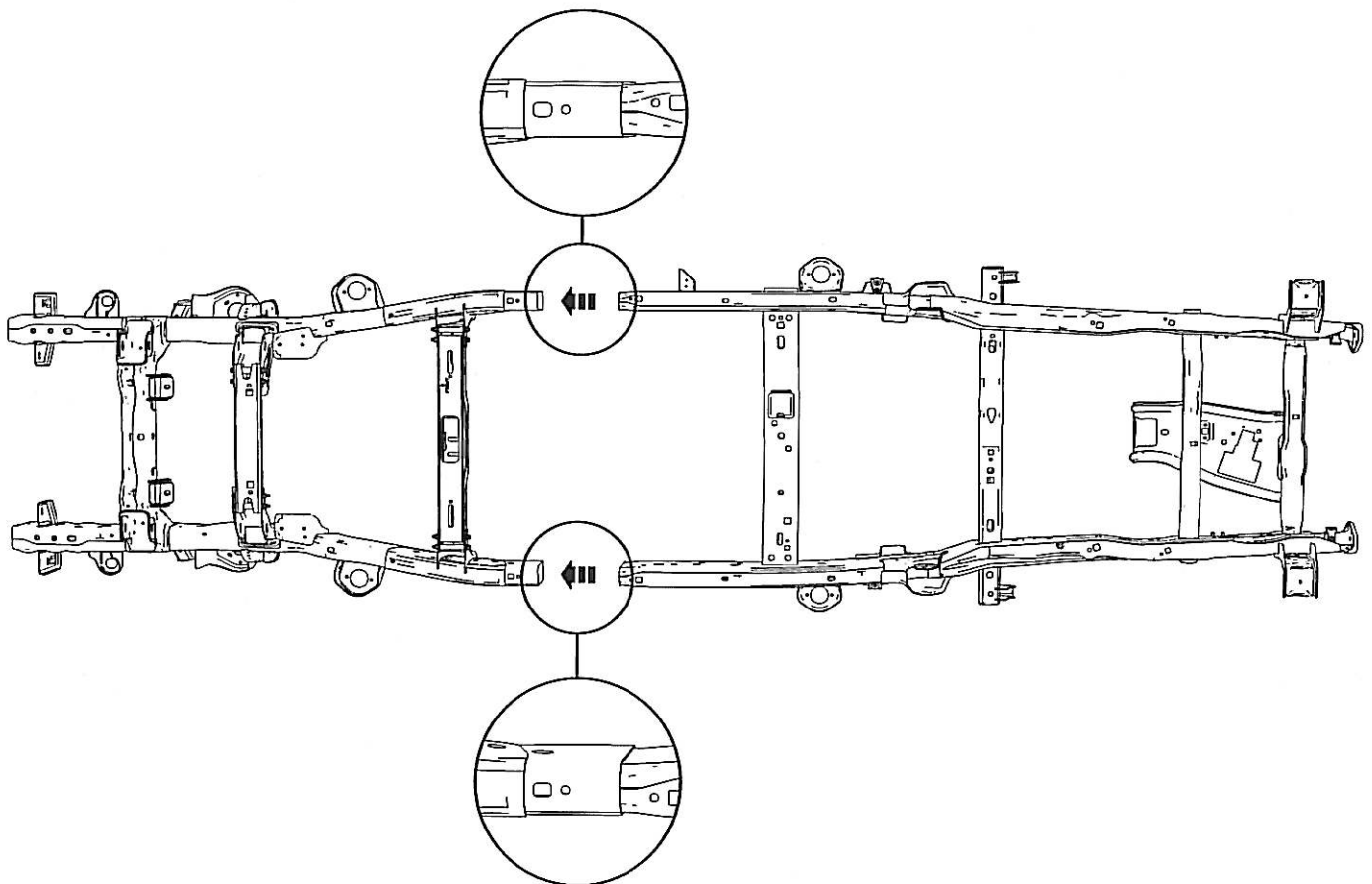


FIGURE 2



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5-07

SK 8L34-5C145-AA

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2004 - 2008 F-150 FRONT FRAME REPLACEMENT
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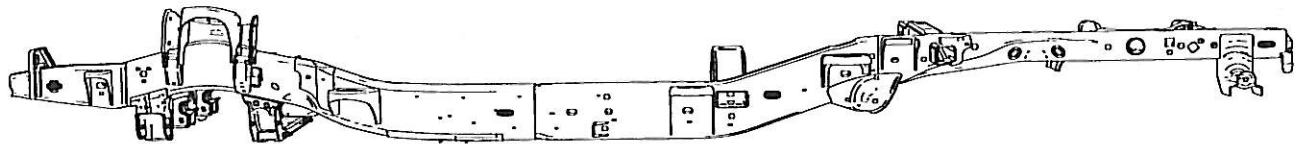
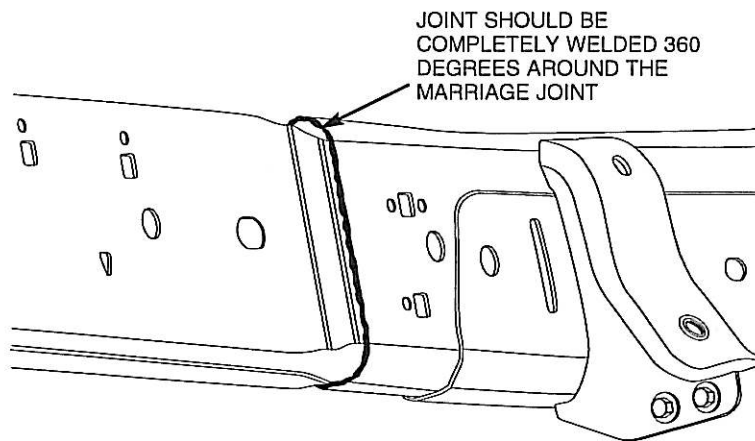
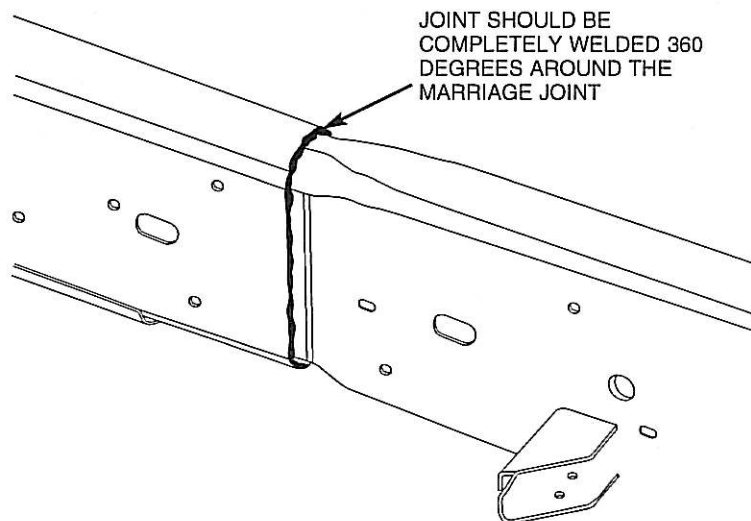


FIGURE 3



**FRONT RAIL TO MIDDLE FRAME RAIL MARRIAGE WELD INBOARD
VIEW LEFT HAND SIDE OF FRAME SHOWN/RIGHT HAND SIDE
SYMMETRICALLY OPPOSITE**

FIGURE 4



**FRONT FRAME RAIL TO MIDDLE FRAME RAIL MARRIAGE
JOINT OUTBOARD VIEW LEFT HAND SIDE OF FRAME
SHOWN/RIGHT HAND SIDE SYMMETRICALLY OPPOSITE**

FIGURE 5

