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ART-81 Installation Instructions

1967-86 Jeep CJ-7 Forward Leaf Spring Mount Kit

Read ALL instructions BEFORE starting the repair!

1) Safety Notes – *Follow all instructions. Failure to follow instructions may result in property damage or serious or fatal injury. User assumes all liability.*

- a) Remove the battery.
- b) If you are working within 36" of a fuel tank, remove the fuel tank. Check for leaking fuel. Clamp off or disconnect fuel lines near the tank. If anything leaks, remove it.
- c) Remove interior panels and carpets that may burn in the area to be worked on.
- d) Keep flammable materials at least 20 feet from car.
- e) Keep fire extinguisher and water hose near vehicle.
- f) Wear safety gloves and full eye protection.
- g) Use a fire watch person when torch cutting or welding on any car.

2) Welding Styles

- a) "Stick" or "arc" welding is difficult for some people, but can produce a sound weld.
- b) "Mig" (wire fed) welding produces a very sound weld. We use a 220 volt machine with .035 wire (E7056) and a 75% Argon, 25% CO₂ gas mix.
- c) "Tig" is also an option, but due to the rust and other imperfections of the old material, we do NOT recommend it unless you are an experienced professional welder and know what you're getting into.

3) Welding Notes

- a) Weld kit in place using a ½" to 1" long bead, spaced every 1". You must weld the frame kit solid for maximum strength. Allow some time for cooling and move around the part.
- b) Good welds require clean surfaces, so grind, scrape or wire brush surfaces to be welded.
- c) Ambient temperature should be at least 50 degrees Fahrenheit.
- d) **If you're not confident welding yourself, have a professional welder install it, or at least have one inspect your welds before you finish-coat the repairs.**
- e) This kit is designed to slip over the remaining intact frame and weld in place. This helps keep the original dimensions and locations, which can be lost when frames are completely removed. This technique provides superior strength and allows you to get the job done more quickly than a full replacement.
- f) The life of the repair will be extended by trimming or cutting back the rust. Allow at least ½" for overlap.

4) Preparing your Jeep for a Frame Repair Kit Installation

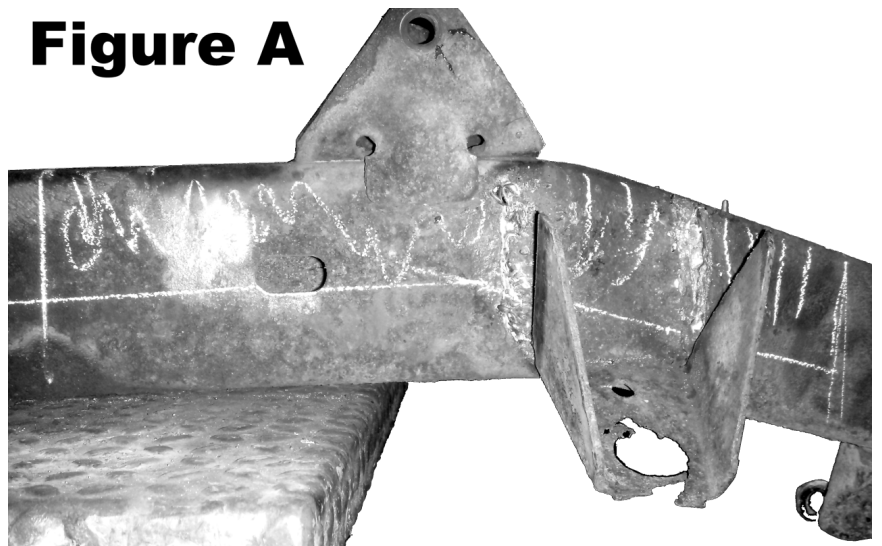
- a) Make sure you have followed all guidelines in **1b** before you start the repairs.
- b) Raise your Jeep up to a comfortable working height, and put it on a good set of jack stands or an automotive lift. Make sure it is properly supported (no wiggles!) before you begin.
- c) Remove tire.
- d) Once the tire is off, take a measurement from the rear crossmember (RCM) to the hole in the middle of the spring mount. **Write down this measurement.** It should be around $47\frac{3}{4}"$ ($\pm \frac{1}{16}"$).
- e) Measure from the front leaf spring mount to the rear leaf spring mount. **Write down this measurement.** It should be around $49\frac{1}{4}"$ ($\pm \frac{1}{16}"$).
- f) Review the frame diagram on back page of instruction sheet to get your bearings.
- g) Remove the bolt that holds the front of the spring in the hanger.

rear crossmember to spring mount
middle hole **measurement** is

front leaf spring mount to rear leaf
spring mount **measurement** is

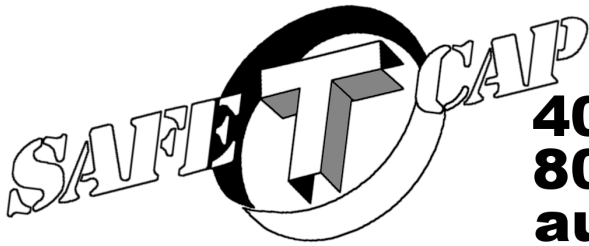
- h) Lower the axle and the spring out of your way. It might be jammed, and you might need to use a bar to help pry it out of the old spring mount.
- i) Measure 37" and $56\frac{1}{2}"$ from the back of the RCM. Those marks are approximately where the kit will rest when installed. **See Figure A**

Figure A



- j) Measure 1" toward the spring hanger on both sides,
- k) Unbolt the original body mount and remove the bushing.
- l) Cut the sides of the body mount off of the frame. You need to reuse it, so trim it away carefully.





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m) Cut rusted parts of frame away.

See Figure B

n) Slide kit over frame.

o) Use clamps to make sure the leaf spring hole is $44\frac{1}{2}$ " ($\pm \frac{1}{16}$ ") from the center of the rear hanger, and $49\frac{1}{4}$ " ($\pm \frac{1}{16}$ ") from the center of the front spring hanger. Keep it square.

p) Take your time positioning the kit in place. It must be in the proper location before you weld it. Measure twice, measure again, weld once.

q) Weld in 1" beads around kit. Relocate the frame to mount and tack into place. If it lines up with the original mount location, weld it in solid and reinstall the body mount and bolt into place.

r) If everything is welded in place, now is the time to apply paint or undercoating to protect the new frame components.

r) Raise the axle and spring back up into place and put the bolt back through the new spring mount.

s) Double-check that all the welds are solid, and that all the leaf spring mounting bolts and body bushings are tightened properly.

t) Put your tires back on and lower the Jeep onto the ground.

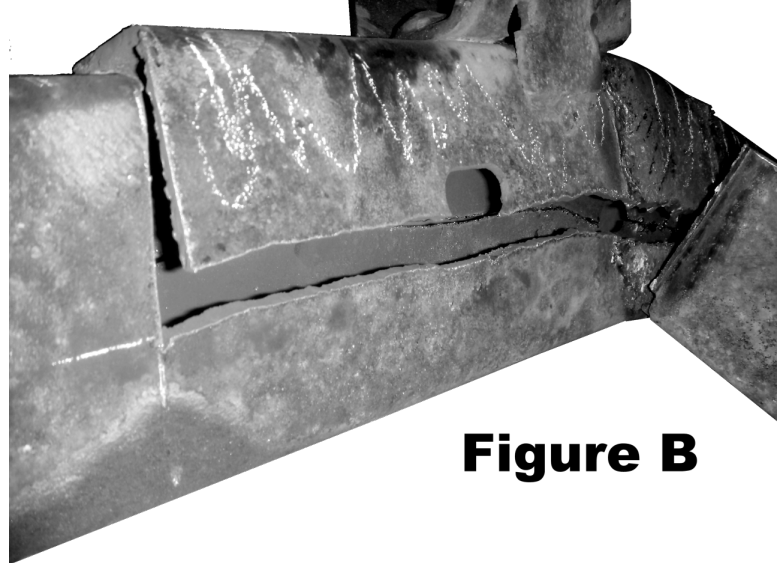
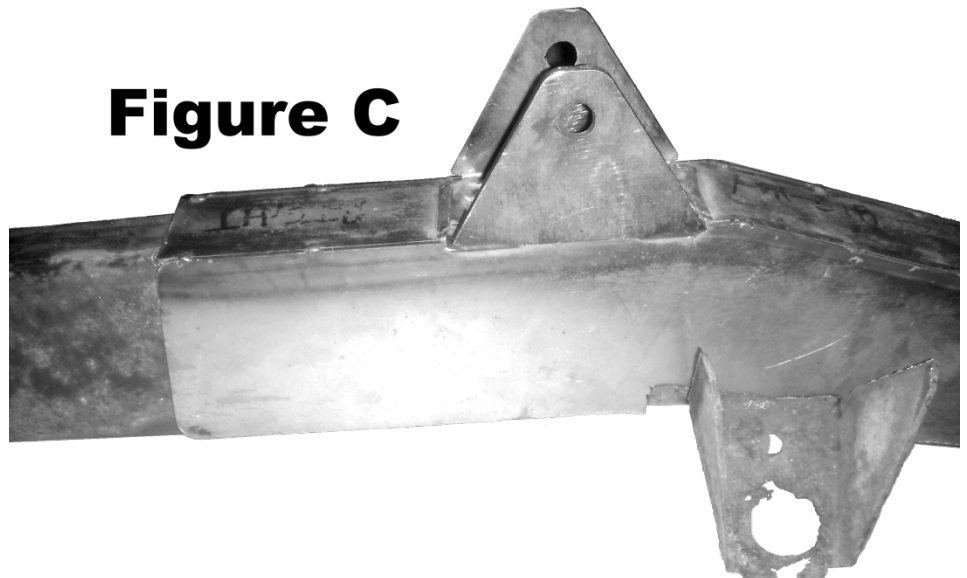
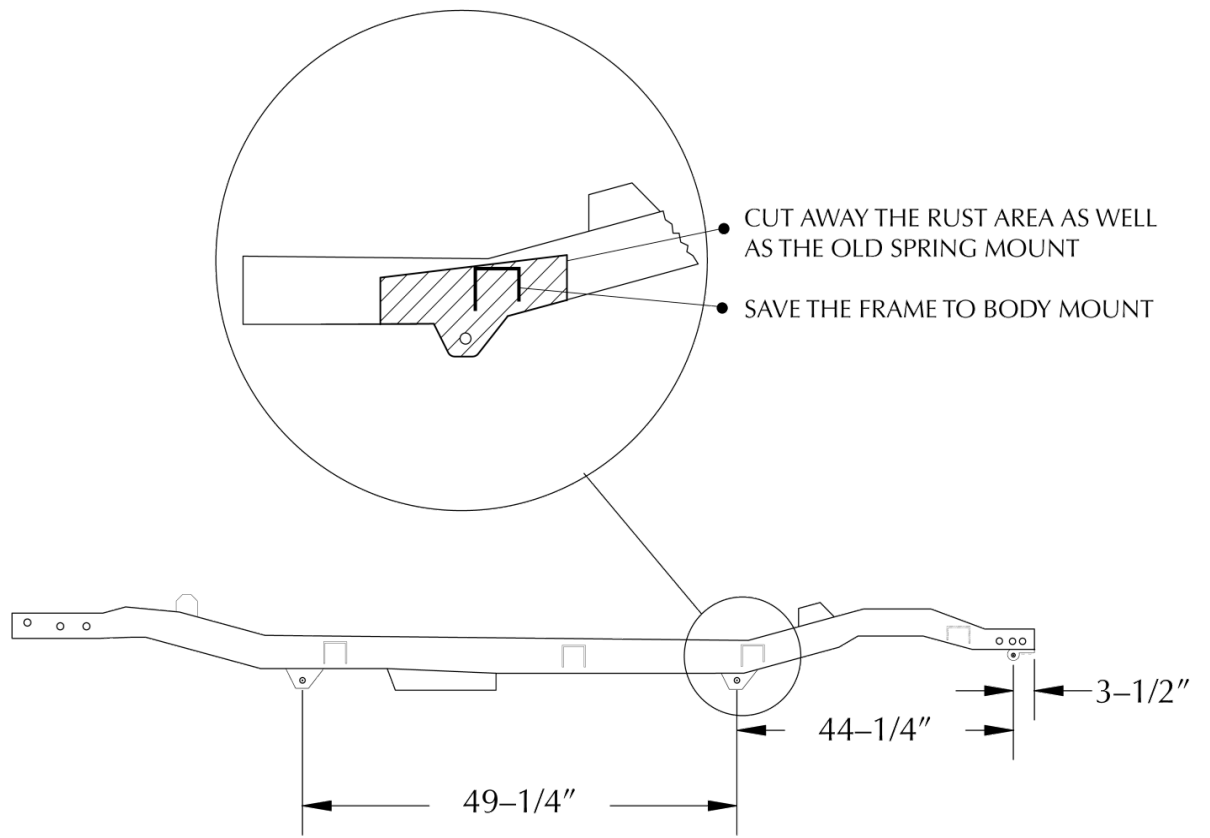


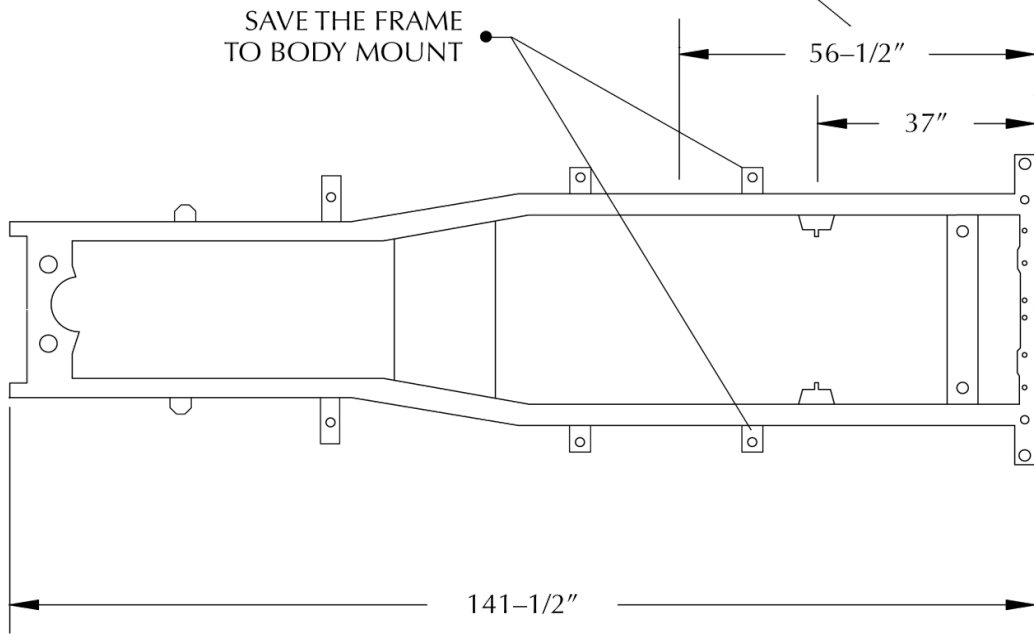
Figure B

Figure C





MARK FRAME AT THESE POINTS THEN CUT WITHIN 1" OF THE MARKS



ART-81 Frame Repair Kit for Jeep CJ-7

