

ART-110&114 Installation Instructions

1986-1996 Wrangler YJ Rear Crossmember

1997-2003 Wrangler TJ Rear Crossmember

Read ALL instructions BEFORE starting the repair!

- 1) Safety Notes <u>Follow all instructions.</u> Failure to follow instructions may result in property damage or serious or fatal injury. User assumes all liability.
 - a) Disconnect or remove the battery.
 - b) 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. Be sure to use the proper welding rod for this application.
- b) "Mig" (wire fed) welding produces a very sound weld. We suggest a 220 volt machine with .030 or .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° Fahrenheit.
- d) If you're not confident doing the 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 replace the existing rear crossmember.

4) Preparing your Jeep for a Rear Crossmember Installation

- a) Make sure you have followed all guidelines in 1b **before** you start the repairs.
- b) Jack up your Jeep and support it safely on good jack stands.
- c) Remove Fuel Tank skid plate
- d) Remove fuel tank, and then place it outside, or at least a safe distance away from where you are working.
- e) Unbolt and remove the 2 body mounts, now is a good time to replace the mounts and hardware
- f) Using a plasma cutter, cut away the rusted or dented rear crossmember.
- g) Trim away any remaining metal on the end of the frame rails. Set the kit in place, roughly mark the areas were you will be welding.
- h) Grind the areas clean were your rough marks are, make it as clean as you can, that will allow for better welds.
- i) Slide crossmember over frame ends using measurements from diagram to locate it correctly.
- j) Use clamps and make sure kit is in correct location. Take your time it's important to get it right. Double check the diagram for measurements. It's critical you have the frame kit in the correct location. Our measurements show 3-1/2 inches from the outside of the frame to the end of the crossmember. Measure twice, measure again, and tack it in place, measure once more, if your sure you have it located correctly, then prepare to weld it in place
- k) Once crossmember is placed correctly, weld in 1" beads around frame ends. **Be sure to FINAL WELD IT SOLID**. Make it safe.
- 1) Replace the body mounts bolt them back in place
- m) Apply paint or undercoating to protect the new frame components





- n) Double-check that all your welds are solid. Make sure all the body mount bolts are tight, make sure the fuel tank and skid plate are reinstalled properly and are all bolted tightly in place.
- o) Lower your Jeep back to the ground and hit the trails.





