## **ART-102 Installation Instructions**

Front Shackle & Steering Box Mount Kit

Wrangler YJ 1987-1995



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# We make it easy to make it safe!

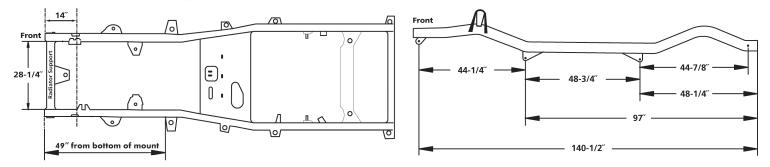
This patented kit is designed to replace a section of the stock frame, providing you with the affordable DIY solution to serious frame rot issues. Our kits maintain factory dimensions and mounting points while bringing your frame back to a strong, safe and secure state with new, mig-welded steel. Safe-T-Cap<sup>TM</sup> frame repair kits are guaranteed to fit factory stock frames and are designed and manufactured in the USA.

### **READ** "Instructions for Installing" Safety Sheet **BEFORE** Starting the Repair!

CAUTION! If you are not fully confident doing the installation yourself, have a professional welder install it, or at least have one inspect your repairs before you finish coat your installation.

#### Preparing your Jeep for kit installation:

- 1. Support the Jeep properly over a solid, level surface. Use heavy duty jack stands, do not rely on a pump jack to hold your Jeep up! use all precautions for your safety. Support the Jeep by the frame so that the suspension is unloaded, or hanging; this will make it easier to lower the leaf spring out of the way.
- 2. Remove the front bumper and any body panels that attach to the frame section to be repaired.
- 3. If repairing the driver side frame rail, remove the steering box or you can unbolt it from the frame and push it away from the repair area, then lower the sway bar out of the way.
- 4. Remove the bracket that attaches under the frame and to the steering box.
- 5. Remove the front shackle bolt and the mount bushing if you are not replacing with a new one.
- 6. Lower the front leaf spring down and out of your way to give yourself plenty of work space.
- 7. This kit is engineered as a frame section replacement to be butt welded into place. Before you start cutting the old frame away, take several measurements for reference. The new frame section must be welded in at the stock specs; frame bottom to level ground and 28-1/4" between frame rails. The factory frame diagrams below show the other critical dimensions; 14" cut off of frame rail and 44-1/4" for leaf spring mount points.

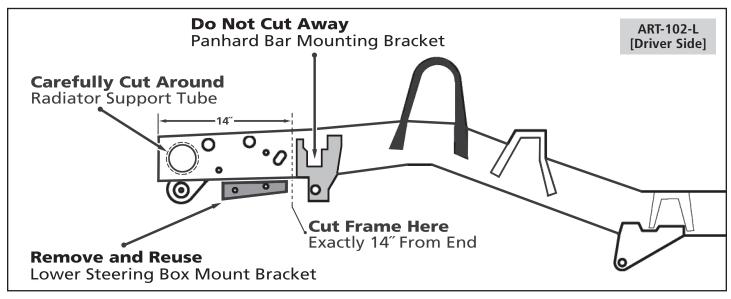


Thank you for using our Safe-T-Cap $^{TM}$  products. We appreciate your business.

This kit is a replacement frame section, not a Safe-T-Cap<sup>TM</sup> style component. Kit replaces the first 14'' of the front frame rail on either the driver side (ART-102-L) or passenger side (ART-102-R). The rotted frame section is cut away, ground down clean and straight, then the kit is fit tightly edge-to-edge to the frame and butt welded into its final position.

### **ART-102 Installation Procedures and Tips**

- A. Because this is a frame replacement section, steps should be taken to brace the frame BEFORE you cut the rusted section away. If the engine is still in place, it will help keep it from moving; however you should plan to weld a support brace across the frame to keep it from shifting laterally. You should also weld a second support brace in place to keep the frame from shifting up or down while you're doing this repair.
- **B.** Start by cutting the section of frame rail away from the tubular radiator support. **Then cut back 14**" **to just before the panhard bar mounting bracket. Do not cut beyond this mount, the kit does not go beyond that.** You will need to remove one of the ears on the panhard bar bracket where our replacement section joins up. If you do have rust beyond that point you will need to fabricate a repair. Cut the frame away carefully, and make sure to not cut too much; measure once, measure twice...then cut. We find that cutting the frame away in several sections relieves any remaining support pressure and helps to insure an accurate fit of kit to frame.
- C. Remove the cut section(s) and carefully grind down the factory welds around the tubular radiator support. The tube will now slide into the kit as the stock frame section did. This is a key anchoring and measuring point to achieve the factory set inside frame measurement of 28-1/4" for driver to passenger frame rails. Grind all frame-to-kit contact surfaces clean to prepare for positioning and tacking.
- **D.** Now, fit the kit in place and clamp it up, and support the kit from underneath. Run a 4' level across the frame rails to be sure the new frame repair kit is in the correct place, both vertically and horizontally. Measure the distance between your new frame section, and the frame on the opposite side. **It must be exactly 28-1/4" or 717.55 mm.** Be 100% accurate, take your time and adjust the kit as required. When satisfied with your measurements, tack weld the kit in place, measure one last time to be completely accurate.
- E. Once the kit is in the correct location and matches the measurements taken before cutting anything, you are ready to weld. Weld all connection points and surfaces do not overheat. Run beads 1-2" long, then move to another area. Take your time and do it right; 100% solid and smooth welds. Quality welding is the most important factor in this installation. Reinstall leaf spring, steering box. panhard bar, and any other frame attachments.





Warranty Notice: Safe-T-Cap $^{TM}$  Frame Repair Kits are precision made to fit FACTORY STOCK FRAME dimensions and WILL NOT FIT as designed on any MODIFIED or ALTERED FRAMES. We offer NO GUARANTEE of fit on MODIFIED, ALTERED or OFF-ROAD vehicles. NO PRODUCT RETURNS on kits that have been altered in any manner from OUR PATENTED DESIGNS. Our repair kits are designed for NORMAL USAGE/WEAR set to factory specs.

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