

# ARTEC INDUSTRIES

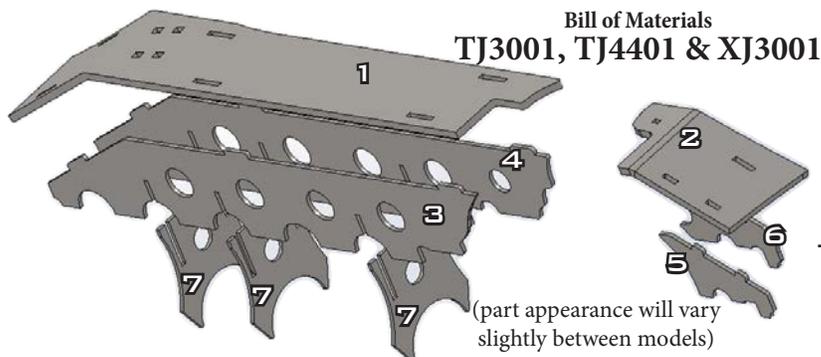
## FRONT AXLE TRUSS

### FOR TJ, LJ, ZJ, XJ



### INSTALLATION INSTRUCTIONS

Thank you for your purchase of our truss kit specifically designed to strengthen the vulnerable front axle in your Jeep TJ, LJ, ZJ, or XJ. All the pieces of this truss are designed to fit very closely to the axle and each other for a tight assembly.



STEP 1: Unpack contents of shipment. Remove axle from vehicle for best results and easiest installation. Prior to mockup make sure axle is clean and uninstall any oem and aftermarket bolt-on accessories that may conflict with truss installation. Remove axle breather hose and uninstall any electric locker wires from casting. This area will be welded so care should be taken to prevent these components for melting.

STEP 2: Using either an angle grinder, reciprocating saw, or handheld plasma cutter remove the passenger side upper control arm tower bracket. For easiest cleanup, cut close to the axle tube but TAKE CARE NOT TO CUT INTO THE AXLE TUBE. With a flapper disc, clean the tube until smooth. If you do cut into the axle tube, weld cut and grind smooth. Save bracket if reusing bushing or discard if using Daystar bushings or Currie Johnny Joints and optional Artec bracket.



STEP 3: Slide pieces 7 into jiggling slots of pieces 3 and 4. All jiggling slots are of varying depth and can only be installed one way. If the tops of 3 and 4 aren't level when jiggled, try reversing pieces 7. Place piece 1 onto assembly 347 and place entire assembly on the axle tube between the casting and passenger side coil bucket. Rotate assembly toward the front until piece 1 stop rotation by contact with the casting. This means it is properly located. For driver side, place pieces 2, 5, and 6 as shown on the axle tube between the casting and coil perch until the assembly holds together on its own.

STEP 4: Using a marker or paint pen, indicate the areas on the axle where the truss touches the axle to prepare for welding. Remove truss pieces from axle. Using an angle grinder with either a flapper disc or wire wheel brush, clean the surface of the axle tube, casting, and coil perch until bare steel is exposed on both the driver and passenger side. Clean any grease, dirt, or other contaminants that reduce the quality of weld



STEP 5: Repeat step 3 and place assemblies 1347, and 256 on axle.

STEP 6: Place large tack welds between the axle and the ends of pieces 3, 4, 5, 6, and 7 to secure these pieces in place. DO NOT WELD TOP PIECES (1 and 2) IN THIS STEP.

## PLEASE READ NEXT PAGE FOR WELDING INSTRUCTIONS

**NOTE: THIS KIT INVOLVES EXTENSIVE WELDING AND GENERAL FABRICATION SKILLS. ONLY COMPETENT WELDERS SHOULD ATTEMPT TO INSTALL THIS KIT.\***

## GENERAL WELDING INSTRUCTIONS

Place about 3/4" long stitch welds between the axle tube and the truss pieces taking care to not let axle tube heat up too much in one area. For best results, weld one stitch and move to a completely different part of the axle for the next weld. This will allow the first area to cool. Take your time. If welded too hot, the axle may warp upon cooling. A welding blanket may help slow the cooling and reduce the chance of warpage.

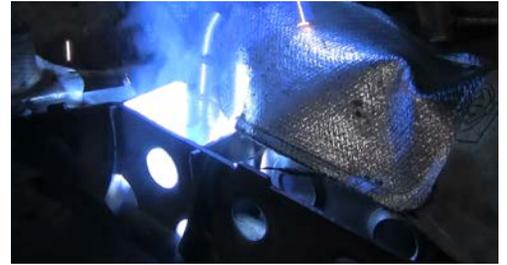
STEP 7: With bottom pieces secured, remove pieces 1 and 2 from assembly to weld inside the truss. Weld all pieces to axle tube using guidelines above. Also weld pieces 7 to pieces 3 and 4 inside the truss for maximum strength. Repeat procedure for assembly 56 after long side is done.

STEP 8: Before welds cool too much, replace pieces 1 and 2 back on assembly and tack weld them to assembly. Once all welds have sufficiently cooled, proceed to weld exterior of truss in a similar manner as in step 6. Remember to take your time and spread out your welds. It is not necessary for every seam to be completely welded. For a smooth look, weld key slots in truss top and grind smooth until it blends with rest of truss top.

STEP 9: To weld truss to cast section with best results, preheat casting evenly around where truss contacts to approximately 400 degrees. **DO NOT HEAT UNTIL GLOWING RED AS THIS MAY DAMAGE THE CASTING.** Once preheated, weld truss to casting before it cools. For best results, use a needle scaler or peening hammer to relieve the weld directly after welding. Post heat the area to approximately the same temp you used to preheat. Wrap axle in a welding blanket to slow the cooling process, the cooling should be slow (18-24hrs.) and uniform. (The idea behind this method is to relieve the stresses in the materials prior to welding, and ensure that the plate steel does not cool quicker than the cast resulting in stress cracks.)

STEP 10: When completely cooled, check for any cracks in weld especially around the casting. If cracks are discovered repeat the necessary steps above, grinding out any cracked welds and prepping the area.

STEP 11: Refer to steps below for UCA install. Once axle is ready, paint truss and axle where bare steel is exposed to prevent rusting. After paint is dry, reinstall axle breather hose, electric locker wire, and any other components. Install axle according to manufacturers specs.

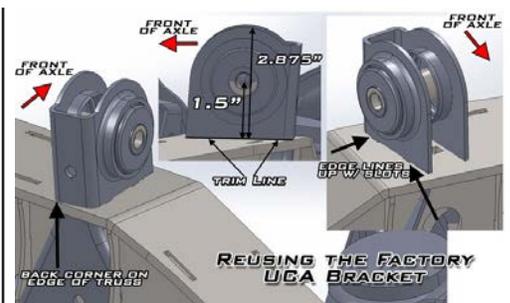


## Passenger Side Upper Control Arm Mount

This truss calls for the removal of the weak factory UCA mount in order to maximize truss structural reinforcement. Most lifts will require a passenger side UCA mount, however some lifts eliminate this bracket altogether. If your lift requires this bracket, you can either trim and reuse the factory bracket or order a new bracket with this truss that includes either Daystar Poly Bushings or Currie Johnny Joints.



Whether you chose the Bushings or the Johnny Joints, the install is the same. Jig the supplied tabs into the slots on top of the truss as shown here. Once they are perpendicular to the truss top, place a small tack weld between the tab and truss. Insert the bushing/joint steel housing in the tabs and center is between the tabs. Place tack welds between the housing and tabs. Once the housing is firmly located on the tabs, either weld the housing to the tabs in place on the truss or grind the tab/truss tack and weld off the truss. Once completely welded, place the assembly back on the truss and weld to it. Once completely cooled, insert inner components of bushing in joint and completely assemble. You may choose to wait until after painting to assemble bushing/joints but do not paint inside of housing. The driver side cast mount will require removal of the factory bushing and pressing in the new bushing/joint.



If you chose TRUSS ONLY, and need to reinstall the factory UCA mount, use the graphic above to modify the bracket and weld it to the truss top. Take care not to melt the bushing.

### TYPICAL INSTALL TIME 3-4 hours

\*Artec Industries, LLC is not responsible or liable for improper installation of this kit. Use common sense when installing.

**NOTE: THIS KIT INVOLVES EXTENSIVE WELDING AND GENERAL FABRICATION SKILLS. ONLY COMPETENT WELDERS SHOULD ATTEMPT TO INSTALL THIS KIT.\***