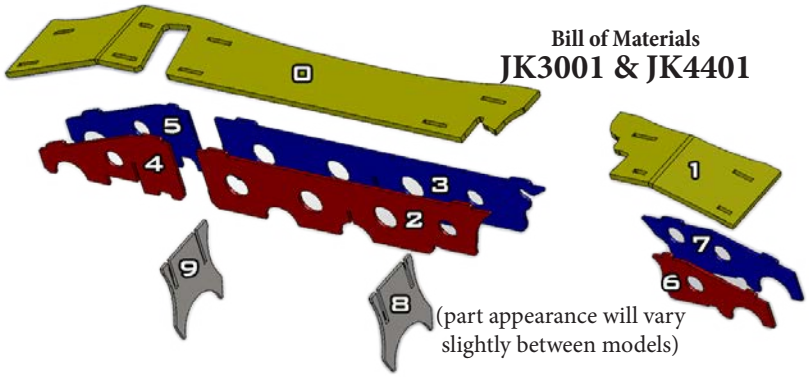
Artec Industries
JK Front Axle Truss
Installation Instructions



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



Bill of Materials
JK3001 & JK4401

(part appearance will vary slightly between models)

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. Slide piece 8 into jigging slots of pieces 2 and 3. All jigging slots are of varying depth and can only be installed one way. If the tops of 2 and 3 aren't level when jigged, try reversing piece 8. Follow same procedure with pieces 9, 4, and 5. Place assembly 823 on axle tube between the casting and passenger side upper control arm mount as shown in the picture (below). Place assembly 945 between passenger side upper control arm mount and coil bucket as shown. For driver side, place piece 7 on the backside of the axle between the casting and drivers side spring perch. Place piece 1 on top of piece 7 and line up jig holes. Holding 1 and 7 in place with one hand, slide piece 6 up from underneath on the front of the axle and jig into 1. Arrange until the assembly holds together on its own.



STEP 3. 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, upper control arm mount, and coil perch until bare steel is exposed. Clean surfaces on drivers side casting, tube, and coil perch in a similar fashion.

Repeat step 2 and place assemblies 823, 945, and 167 on axle.

STEP 4. With assemblies on axle, place piece 0 on truss by sliding large slot underneath upper control arm bushing. Jig 0 into place with rest of pieces and ensure truss pieces are straight.

STEP 5. Place large tack welds between the axle and the ends of pieces 2, 3, 4, 5, 6, and 7 to secure these pieces in place. DO NOT WELD TOP IN THIS STEP, TOP PIECES (0 AND 1) ARE USED ONLY TO ENSURE PROPER LOCATION OF PIECES 2, 3, 4, 5, 6, AND 7.

STEP 6. With bottom pieces secured, remove pieces 0 and 1 from assembly to weld inside the truss. Weld piece 8 to pieces 2 and 3 inside the truss for maximum strength. Repeat procedure for assembly 945.

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. Before welds cool too much, replace pieces 0 and 1 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.

STEP 8. 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 9. 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 10. 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.



Inner C Gussets

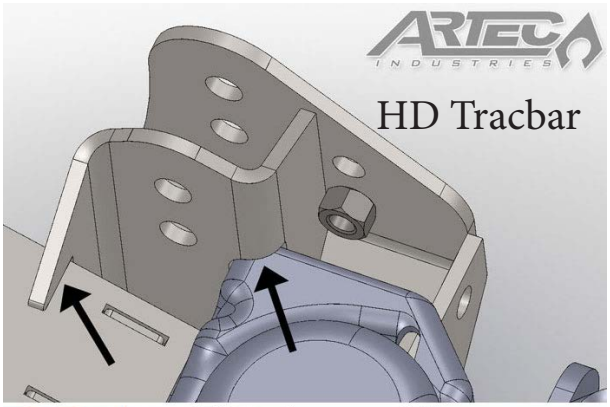
Strip all paint from the inner c, axle tube, and spring perch where the gussets touch. Removal of the ball joints is recommended but not necessary if care is taken during welding. Bottom gussets are directional to accomodate factory swaybar mounts, so switch sides if they make contact. Fully weld all areas where gusset makes contact with axle.

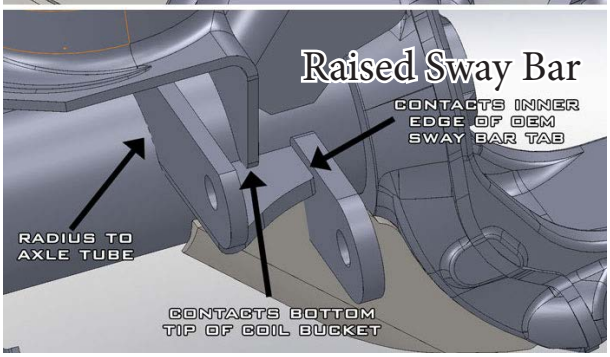
ARMOR KIT

The components for the armor kit are shown in the mounting diagrams below. Welded areas should be prepped by removing paint. All these parts have a precise fit to the axle components so no major fabrication is needed. Some parts are directional.

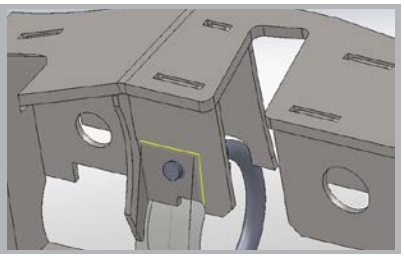
LCA Skids







If using a bolt-on raised tracbar bracket that uses a U-bolt, trim piece 4 on the line as shown here.



TYPICAL INSTALL TIMES
TRUSS ONLY: 3-4 hours
ARMOR KIT: 4-6 hours

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

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