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INSTALLATION INSTRUCTIONS FOR: RE6330 XJ EXTREME DUTY LONG ARM UPGRADE

Congratulations on purchasing the ultimate control arm upgrade available for the front of the Jeep XJ Cherokee. This kit is designed to upgrade our short control arm lifts in the 4.5" – 5.5" range. The kit includes the same extreme duty upper and lower control arm design as the front of our famous TJ Long Arm System, plus an extreme duty crossmember specifically designed for the XJ uni-frame.

Safety Warning:

Suspension systems or components that enhance the off-road performance of your vehicle may cause it to handle differently, on and off-road, than it did from the factory. Care must be taken to prevent loss of control or vehicle rollover during sudden maneuvers. Failure to drive the vehicle safely may result in serious injury or death to driver and passengers. We recommend you always wear your seat belt, drive safely and avoid quick turns and other sudden maneuvers. Constant maintenance is required to keep your vehicle safe. Thoroughly inspect your vehicle before and after every off-road use.

Installation Warning:

We recommend that certified technicians perform the installations of our products. Attempts to install these products without knowledge or experience may jeopardize the safety of the vehicle. These instructions only cover the installation of our products and may not include factory procedures for disassembly and reassembly of factory components. Read instructions from start to finish and be sure all parts are present before disassembling the vehicle. Included instructions are guidelines only for recommended procedures and in no way are meant to be definitive. Installer is responsible to insure a safe and controllable vehicle after performing modifications. Do not perform test drives on public roads with partially completed installations. Always double and triple check your work before use.

KIT CONTENTS

RE4000 Front Lower Left Extreme Duty Control Arm w/ hardware
RE4010 Front Lower Right Extreme Duty Control Arm
RE4020 Front, pair Upper Extreme Duty Control Arms w/ hardware
RE9920 XJLA Crossmember Sides (Box 1 of 2)
RE9922 XJLA Crossmember Center Section (Box 2 of 2)

TYPICAL TOOLS REQUIRED

1-1/8" hole saw for steel, 1/2" drill motor & drill bits, angle grinder,
Basic mechanical hand tools, several C-clamps or vise grips
Floor jack & jack stands (2 for the axle, one for the transfer case and another pair for the frame if not using a lift)
Plasma cutter, or reciprocating saw w/metal cutting blades and Mig Welder

PRE INSTALLATION NOTE:

Control arm bushings are pre-lubed during initial assembly at Rubicon Express. As general maintenance the control arm bushings should be lubed with a silicone base grease as needed. Silicone base grease can be purchased at your local auto parts store.

The Super-flex joints are also pre-lubed during initial assembly at Rubicon Express. As general maintenance the super-flex joints should be greased as needed and the outer spanner nut tightened on the joint. Any type of grease will work on the Super-flex joints. Spanner nut tools are available through Rubicon Express (RE3771 & RE3772) if needed for tightening of the joints.

INSTALLATION OVERVIEW

The installation process can be broken down into the following tasks:

1. Removal of factory lower control arm mounts from uniframe.
2. Front 3- piece crossmember.
3. Control arms.

Step 1 - Removal of factory lower control arm mounts on frame.

First, support vehicle by uni-frame (preferably on a lift) and work on a stable level surface. Support axle with jack stands and remove factory control arms. Be sure to keep the rear bolts from the upper arms and the front bolts from the lower arms as they will be reused. It may be helpful to disconnect one end of the track bar to allow some axle movement for aligning control arm bolts during assembly.

- A. Cut off the factory lower control arm mounts from the uni-frame. **Use extreme care** as not to damage the uniframe, or cut into existing brake, fuel, or electrical lines.
- B. Grind rough areas smooth and repaint – refer to Photo 1 for typical bracket removal.



Photo 1

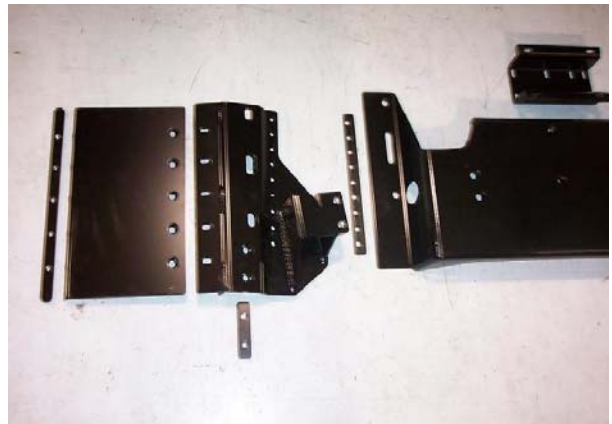


Photo 2

Step 2 - Front 3-piece crossmember

- A. First, support transmission/transfer case and remove factory crossmember (and skid plate if there). Loosely bolt transmission adapter plate to transmission mount so fitment can be checked with new crossmember in position. The adapter should be positioned with the eight-hole surface up and off set to one side just like the factory crossmember holes.
- B. Note that the factory crossmember is held up by two bolts and two studs. The studs will have to be removed with a stud remover tool or it may be possible to double nut them and back them out.
- C. Refer to Photo 2 for a layout of the right side components of the “3-Piece Crossmember”. Generally align the center slots of the crossmember over the center slots of the left and right control arm mounts and loosely bolt them together (through the counter sunk holes in the crossmember into the PEM nut of the control arm mounts) with the four supplied 1/2” flat head bolts. Loosely bolt assembly up into position with the four supplied 10mm bolts and flat washers (early models use the front and middle slots and later models use the middle and rear slots) – refer to Photo 3. Align control arm mounts so their nine holes can be transferred through the horizontal pinch welds along the inside of the uni-frame rails and tighten the four 10mm and four 1/2” flat head bolts.



Photo 3



Photo 4

- D. Place 9-hole bolting strips on top of the pinch welds and clamp tightly into position so the holes align with the holes in the uni-frame plates. Carefully lower the crossmember by removing the 10mm and ½" flat head bolts. **Be sure control arm mounts have not moved** and drill 5/16" holes through pinch weld at front and rear holes of the 9-hole pattern of the control arm mounts – refer to Photo 4. Loosely secure up through the bolting strips with supplied 5/16" hex head bolts. Repeat drilling and bolting for remaining seven holes.

- E. Drill a 1-1/8" hole in the bottom of each uni-frame about 1-1/2" behind the control arm mounts. These will be used to feed the short PEM nut strips up into the uni-frame to secure the rear of the control arm mounts. Drill 3/8" holes through the bottom of the uni-frame at the two rear (counter-sunk) holes in the control arm mounts. Slide the PEM-nut strip up into the 1-1/8" hole (with nuts on top) and position so nuts align with the two control arm holes (NOTE: It will be very helpful to tape a stiff wire to the PEM-nut strips before feeding them into the uni-frame so you can align them without losing them). Install and loosely tighten four supplied 3/8"- 16 flat head bolts through the control arm mounts/uni-frame and into the PEM nuts. Now, fully tighten the nine 5/16" bolts in the control arm mounts, and then tighten the four 3/8" flat heads.

- F. Loosely bolt side braces to control arm mounts with supplied 3/8" flat head bolts and tightly clamp the side braces to the outside of the vertical body pinch weld - refer to Photo 5. Drill 5/16" holes through the pinch weld at the five holes in the side braces. Place the 5-hole PEM-nut strips on the inside of the pinch welds and bolt through brace/pinch weld with supplied hex bolts. Now, tighten the 3/8" flats heads holding braces to control arm mounts.



Photo 5

- G. Carefully skip weld the very front and rear edges of the control arm mounts along the bottom and side of the uni-frame. **CAUTION** - a certified welder that can weld thick metal to thin should do this and care should be taken to protect wiring, fuel lines, brake lines, etc, and to not ignite coatings etc. on fire. Paint welded areas.

- H. Reinstall crossmember and bolt transmission adapter bracket to it with the supplied 5/16" flat head hardware. Tighten the transmission mount nuts.

Step 3 – Control Arms

- A. Adjust front lower control arms' length to an initial setting of 37-3/4" from bolt center to bolt center. Install adjustable end of arm to control arm mount with supplied 9/16" hardware (zerk on bottom). If the fit is too tight you may have to slightly grind the ends of the ball. Position the arms so the welded on brackets for the front upper arms are on top and leaning toward each other– refer back to Photo 3. If necessary, final length can be adjusted after putting vehicle back on ground and checking for axle position and clearance of track bar to differential etc.
- B. Adjust front upper control arms' length to an initial setting of 15-3/4" from bolt center to bolt center. Install front upper arms' rubber bushing end into the welded-on bracket of the lower arms with supplied hardware. The upper arms will be used to adjust final caster and pinion angle after the lower arms are set at their final length.
- C. Attach front lower control arms to axle with factory hardware, and attach upper arms to axle with supplied 10mm hardware.
- D. Reinstall any previously removed items and check all hardware to factory torque specs.
- E. Align front end as soon as practical. Minimum factory caster and maximum factory toe-in seem to work best.
- F. Recheck all bolts after 50 miles and again after every off road excursion.