JK Ultimate Front 3-Link/Rear 4 Link Long Arm Kit Instructions

Thank you for purchasing the RPM Steering front & rear long arm upgrade kit. Please take your time during the installation and be sure to do it correctly. Please read the directions before starting your installation so you know what to expect. Remember, your safety and the safety of others depend on it. Feel free to call with any questions you may have, 480-476-2073.

Kit Includes:

(1) Transmission crossmember with link mounts

(1) Bolt in Passenger side 3-link frame mount

(1) Bolt in Driver side reinforcement bracket w/ back plate

(1) Axle side 3-link mount (welding required)

(2) 2” Aluminum control arms w/ Rock Jock narrow joints (2.25’’ links available with upgrade)

(1) 1.75” Upper control arm w/Rock Jock narrow joints

(1) Rear 4 Link Crossmember with Lower Link Mounts

(2) Passenger and Driver Side Upper Control Arm Frame Mounts

(2) Axle Side Lower Control Arm Mounts

(1) Axle Side Truss Top Weld on Upper Control Arm Mount

(1) Skid Plate

(2) 1.75’’ Upper Control Arms w/ Rock Jock narrow joints

(2) 2” Aluminum control arms w/ Rock Jock narrow joints (2.25’’ links available with upgrade)

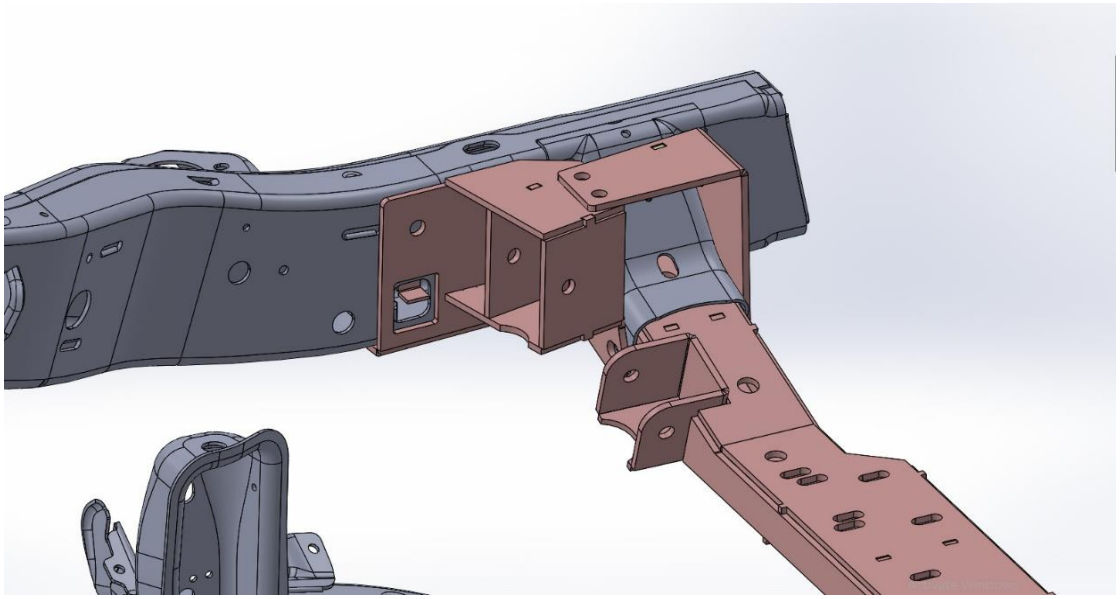
(1) Hardware Pack

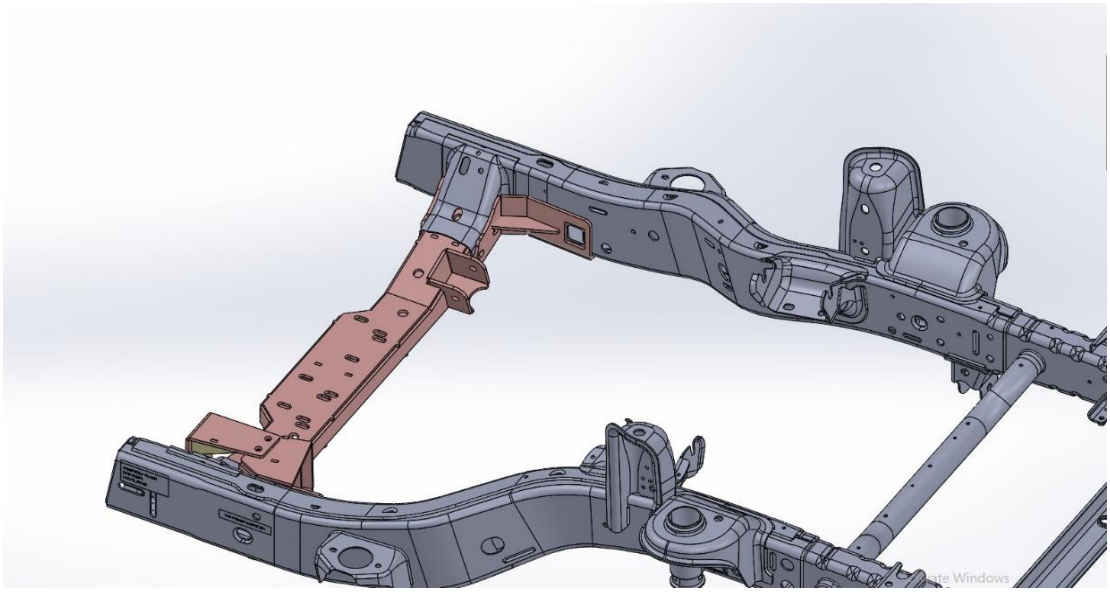
Warranty:

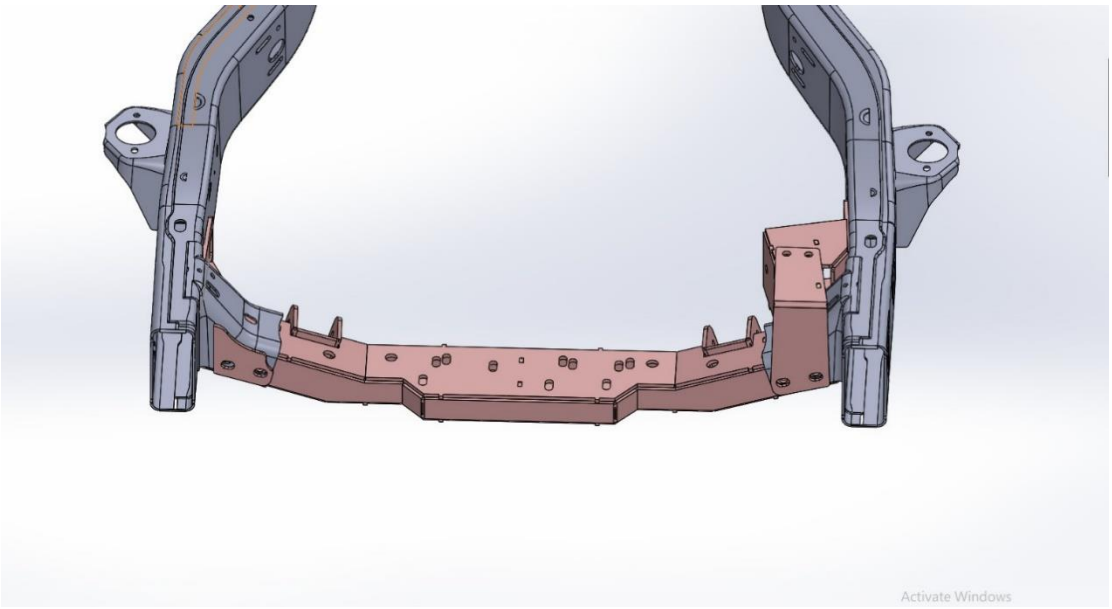
Center aluminum section is lifetime warrantied for failure, including bending, cracking or breaking. Should any of these failures occur please send the center section to RPMSTEERING for replacement. (Shipping and handling additional).

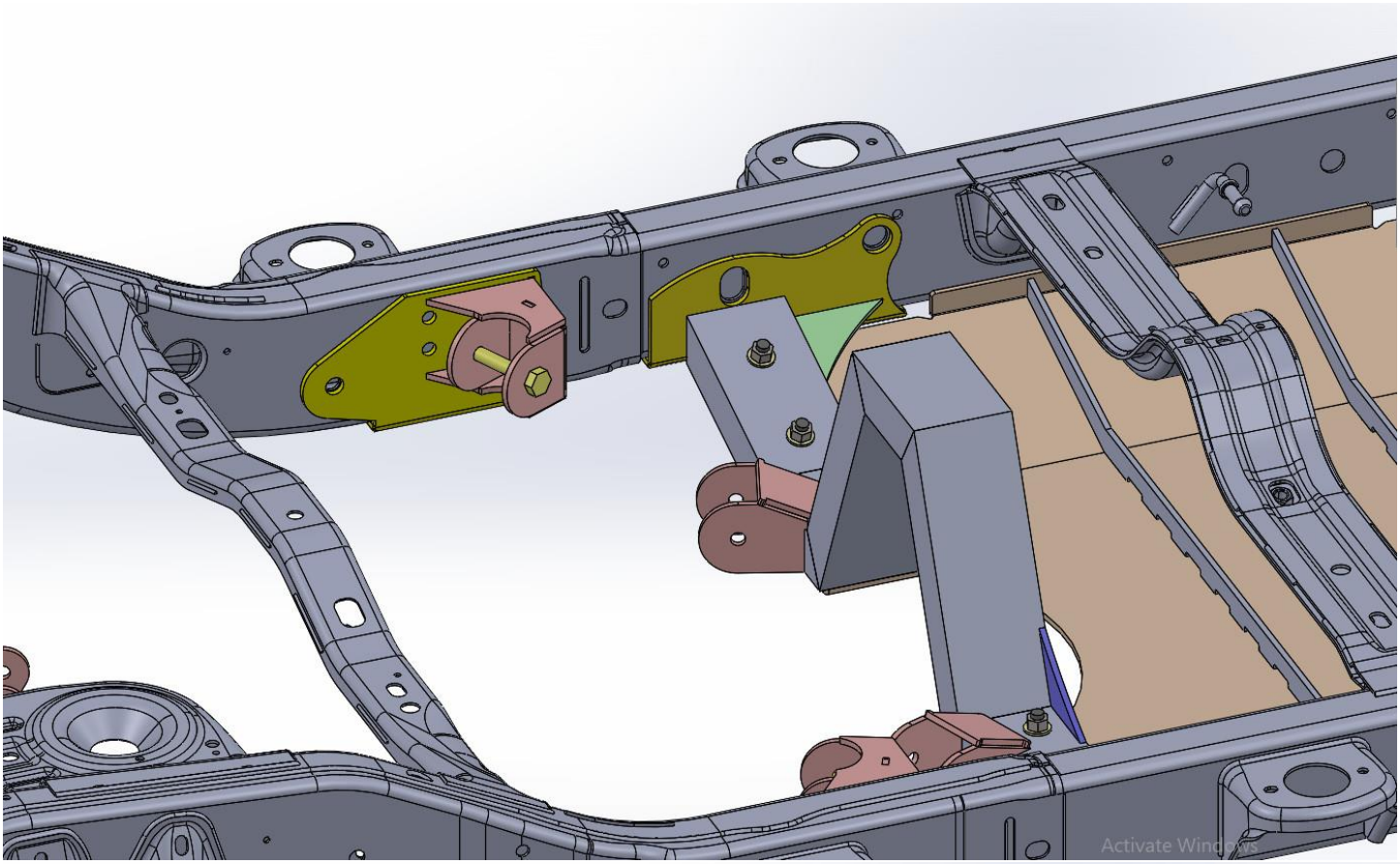
Disclaimer:

Customer assumes full responsibility for use, installation and routine maintenance. RPM Steering is not responsible for damage as a result of improper installation, use or maintenance.





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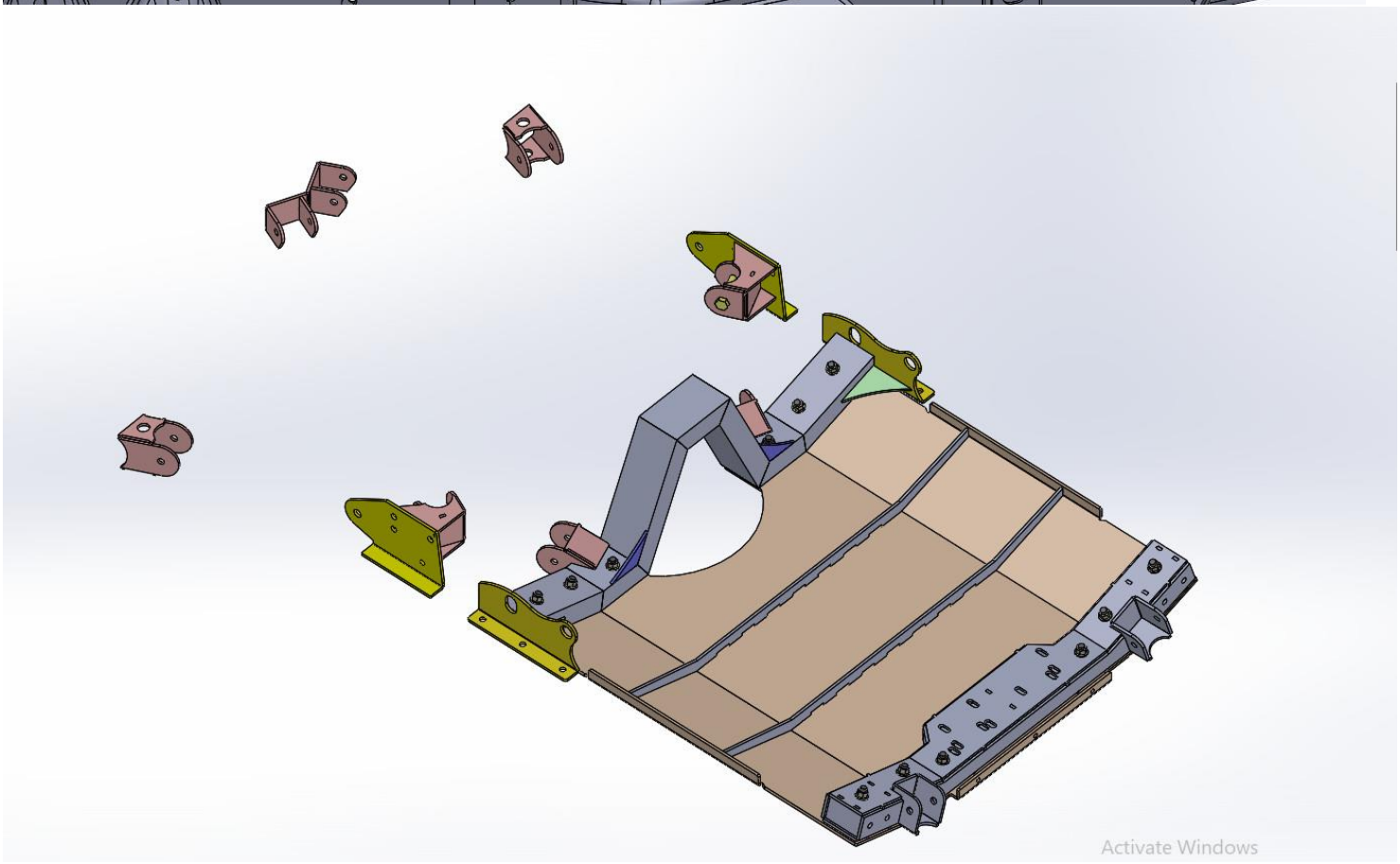
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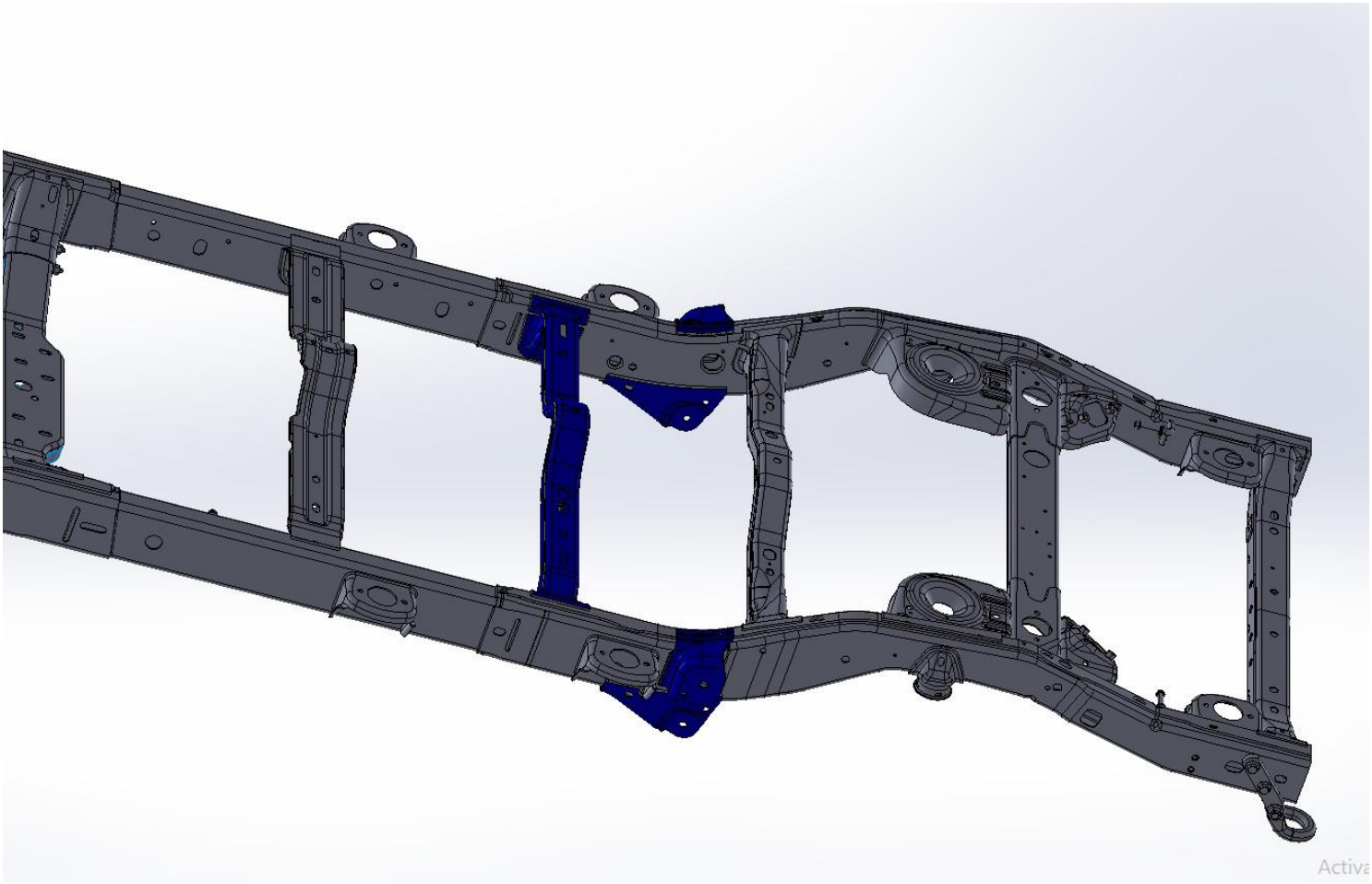
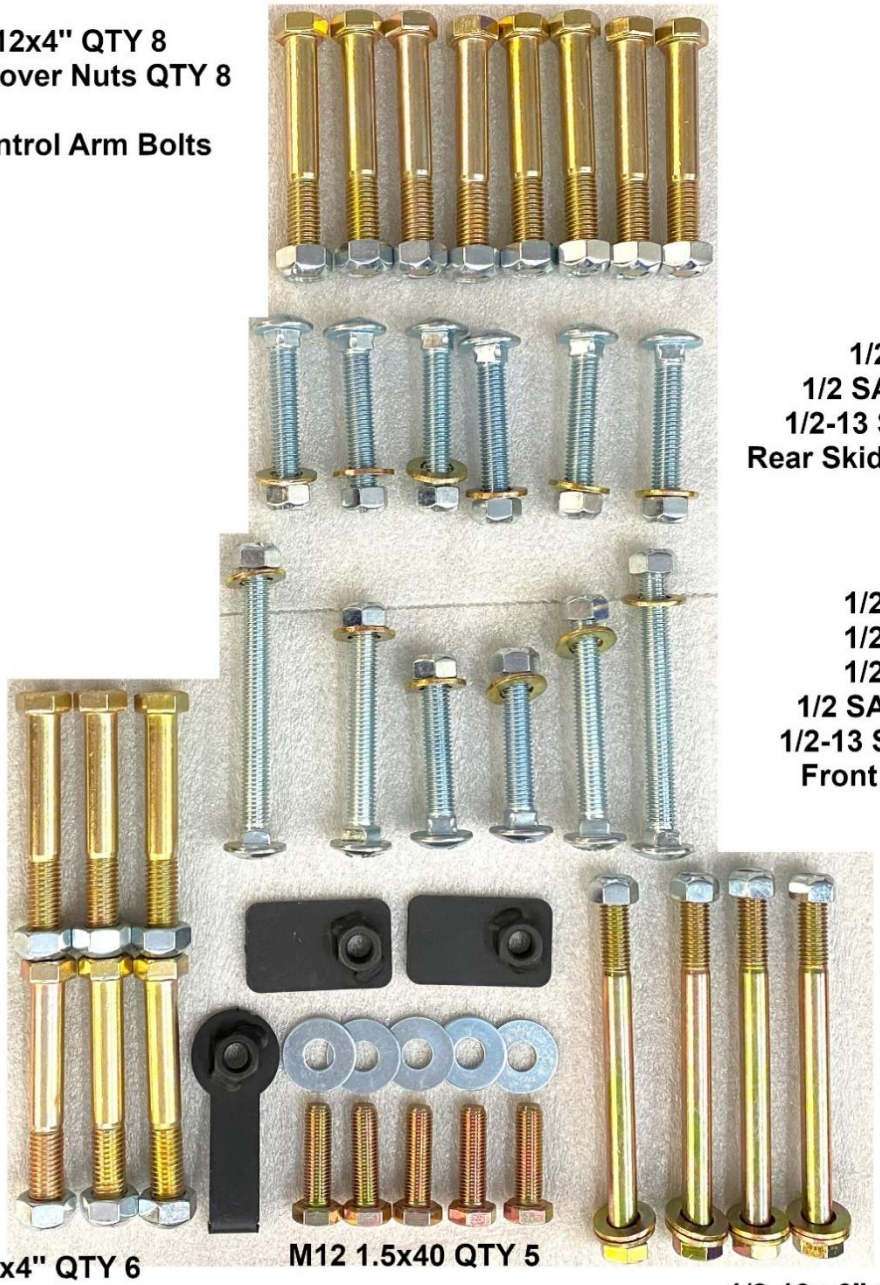


JKU Ultimate 3 Link Front 4 Link Rear Long Arm Suspension Kit Hardware Pack

9/16-12x4" QTY 8
9/16-12 Stover Nuts QTY 8

Rear Control Arm Bolts



1/2-13x3" QTY 6
1/2 SAE Washer QTY 6
1/2-13 Stover Nuts QTY 6
Rear Skid Plate Carriage Bolts

1/2-13x3" QTY 2
1/2-13x4" QTY 2
1/2-13x5" QTY 2
1/2 SAE Washer QTY 6
1/2-13 Stover Nuts QTY 6
Front Skid Plate Bolts

9/16-12x4" QTY 6
9/16-12 Stover Nuts QTY 6

Upper and Lower Control Arm Bolts

M12 1.5x40 QTY 5

7/16 USS Wide Washers QTY 5

M12 Flat Nut Plate QTY 2

M12 Flanged Nut Plate QTY 1

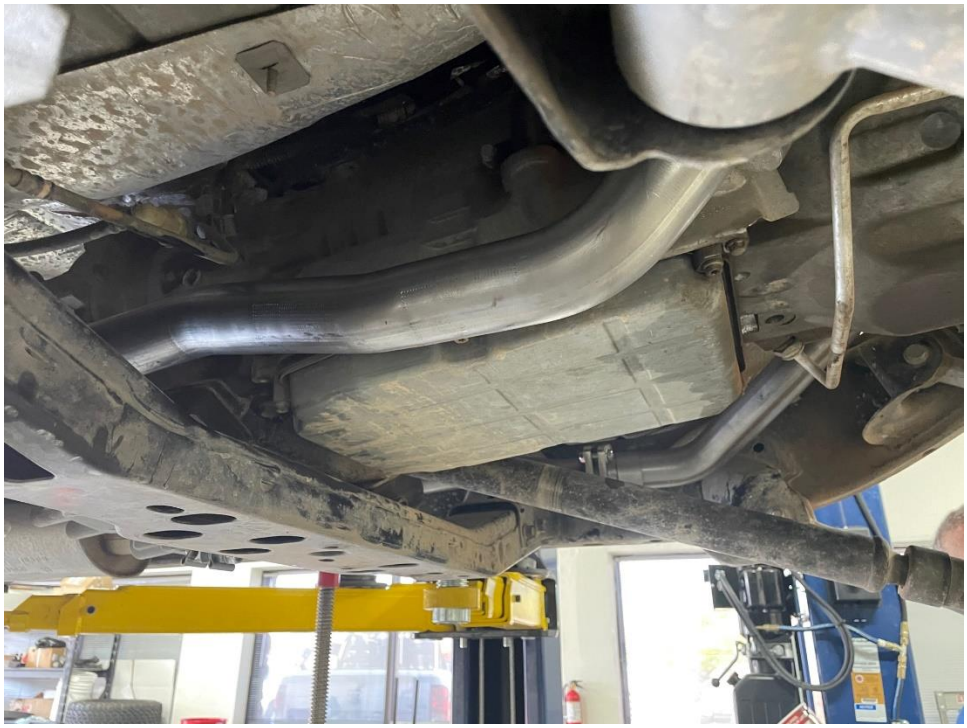
3rd Link and Reinforcement Bracket Hardware

1/2-13x 6" QTY 4
1/2 SAE Washers QTY 8
1/2-13 Stover Nuts QTY 4
Crossmember Hardware

Exhaust modifications:

This kit requires that the exhaust Y-Pipe be routed behind the transmission crossmember. This MUST be done before starting the installation process. The 2012-2018 Model JK and JKU has (2) aftermaket options. Use of either of these part numbers will be needed, Magnaflow P/N 19211 or AFE P/N 48-06210.

On the 2007-2011 JK and JKU you will need to have the exhaust done at a local exhaust shop. See picture below for proper routing.



Front Crossmember install:

1) With the vehicle on a level surface place a floor jack under the transmission/transfer case tail end to support the driveline while removing the factory transmission crossmember.

2) Unbolt and remove the factory transmission crossmember (keep all transmission hardware it will be reused).

3) Loosely install the passenger side 3-link mount using the two flag nuts and the factory frame threaded hole using the provided 12-1.5x40 bolts (see hardware pack image above).

4) Mark the upper hole in the bracket and drill frame using a 9/16 drill bit (do not drill through both sides of the frame).

5) Now reinstall the 3-link bracket by placing the flat nut plate inside the frame rearward hole. Use bent nut plate to install the upper bolt hole that was drilled and use the extra 12mm bolt in the forward hole that is factory threaded. Only loosely snug the bolts at this time.

6) Install the driver side brace using the remaining flat nut plate and supplied 12mm bolts and leave loosely set in place.

7) Install the crossmember into place and use the supplied ½ x 6” bolts (use the backing plate on the drivers side to help strengthen the crossmember supports).

8) Tighten both side frame brackets and then the (4) crossmember bolts.

9) Reinstall the factory transmission nuts from step 2.

Front Axle bracket mount:

Trussed axle

1) For trussed axles remove the upper passenger control arm, slide our provided link mount over the existing link mount and use a marker or paint pen to mark the angle and correct location.

2) Remove the existing upper mount and cut it flush with the truss top.

3) Tack the new mount into place for test fitment later.

Non Trussed axle

1) Remove the upper control arm.

2) From the front of the axle slide the provided mount over the factory mount and center it. Mark clearly this locationing for later.

3) Remove the existing mount and clean the axle tube for welding.

4) Using marked location tack the new mount into place for test fitment later.

Installing front control arms:

1) We found that it was easiest at this time to install the upper 3rd link at suggested length (see chart below) using the new provided 4" 9/16 bolts and stover lock nuts.

2) Now you can remove the driver side upper control arm and start replacing lowers one at a time.

3) The control arms are threaded LH and RH so you can install the arms and simply turn the bar in and out to adjust lengths.

4) Remove the upper link at the axle side and finish welding in the mount if everything lined up.

2.5"
Upper Control Arms – 34 11/16'' Lower Control Arms – 35 1/8''

3.5''
Upper Control Arms – 34 3/4'' Lower Control Arms – 35 1/4''

4.5''
Upper Control Arms – 34 13/16'' Lower Control Arms – 35 3/8''

Rear Crossmember Install:

1) With the vehicle on a level surface support the rear with large jack stands under the frame and chock the front tires.
2) Remove all suspension components and axle (Control arms, Springs, Shocks, Sway Links, Track Bar, Drive shaft, Axle. Brake Calipers can be hung out of the way with some wire or a hook on a frame hole.)
3) Relocate gas tank per the instructions provided by the manufacturer of the tank you selected.
4) Unbolt the charcoal canister and hang out of the way until installation of the suspension kit is complete. You will then need to relocate and mount the canister to an area of your choosing based on clearance from the shocks/ bump stops/exhaust routing you selected.
5) With the rear end cleared, begin by cutting off the factory control arm mounts on the frame, any spot that overlaps with the new crossmember frame plates or the upper control arm frame plates will need to be ground down flush to the frame. There is a factory crossbar that will need to be removed in order to install the upper control arm plates. (See image attached highlighting all brackets to be cut off.)
6) With the brackets removed and the frame smooth use a flap disk to remove any paint where you will be welding.
7) Refer to the pictures above for placement of the crossmember. Note the holes in the side plates will line up with holes in the frame itself. This ensures you are mounting the crossmember in the proper location.
8) Once in position, clamp the crossmember side plate to the frame and tack weld in a few spots.
9) Once satisfied with the placement and alignment of the holes begin to weld around the frame plates in stitches being sure to bounce from one side to the other between each stitch and allowing some time for cooling. Be cautious not to overheat the frame and weaken the metal. Each frame plate also has 3 butt weld holes on the bottom.
10) With the crossmember in place line up the upper control arm mounts next referencing the images above for placement. Again, the plates will have holes that line up to factory holes to ensure proper alignment.
11) Again, with the mounts clamped into plate, tack weld and ensure you are happy with alignment. Weld in stitches bouncing between each side just like the cross member. Butt weld holes are provided for additional strength.
12) Once cooled paint any unfinished areas to avoid rust.
13) Moving to the axle next cut and remove the lower control arm mounts.
14) Following the images below set your axle near ride height on a pair of jack stands under the vehicle and set your desired pinion angle and support the pinion with another jack stand at that angle.
15) Following the images below tack weld the lower control arm mounts 47.5'' apart center to center and relatively parallel to the ground.
16) At this stage it is best to set all your control arm starting lengths as provided below. Bolt the arms in place but no need to install a nut just yet.
17) With the lowers installed on the crossmember go ahead and carefully bolt them into the tacked in lowers. Strong tacks help here.
18) Bolt the uppers in place on the frame side but again no nut needed just yet for test fitting.
19) You may lightly tack weld the upper control arm mount onto the truss top following the images below as a starting point. Once you have done this you can put the upper arms into the mount and recheck your pinion angle at ride height. If you find it needs small adjustments, you may extend or collapse the arms a few turns to achieve the desired pinion angle. If the adjustments need to be larger, we recommend removing the tack weld on the upper mount and moving the mount back or forward as needed to retain the desired pinion angle. Take your time on this step to avoid any issues down the line. DO NOT make large adjustments using the control arms. We designed the lengths to provide optimal thread engagement with some small adjustments longer or shorter.
20) Once satisfied with mount locations you may remove the control arms from the axle sides and let them hang to allow room to finish welding the mounts to the axle. Complete welding of the lower and upper control arm mounts on the axle side. Finish with paint to avoid rusting.
21) Following the hardware pack image above you may now fully install the control arms.
22) The skid plate can now be installed using the provided carriage bolts. The rear section has a cutout to allow clearance of the driveshaft at full extension.

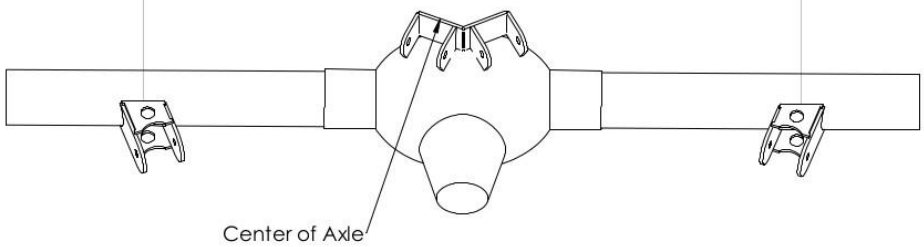
23) The front, longest bolts go toward the frame sides and will require you to run a 9/16 drill bit up to make a hole in the front crossmember factory bracket.
24) Loosely install all bolts before tightening down.
25) Finish any other suspension work as needed such as coil overs, ORIs, bump stops, etc.
26) Find a mounting mount for the charcoal canister we left hanging before.
27) Reinstall brakes and tires.
28) Square the rear end with an alignment.
29) Enjoy having the coolest rig on the trail!

Link Starting Measurements Eye to Eye:

Rear Upper Control Arms: 34 3/4''

Rear Lower Control Arms: 35 5/8''

47.5" To Center Of Mounts



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TITLE:

Truss UCA Link Mount Instructio

SIZE	DWG. NO.	REV
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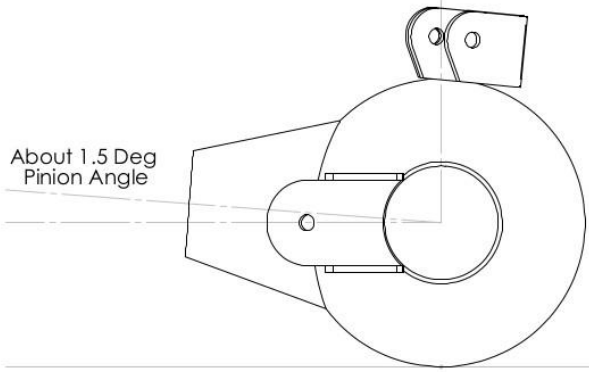
SCALE: 1:24	WEIGHT:	SHEET 1 OF 1

Top Link Mounts Set Back About 0.5" From Centerline of Axle to Center of Joint



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