

## Jeep ZJ Long Arm Kit Installation Instructions

### Front Arms & Bracket Hardware

- (2) 5/8" x 6" bolts
- (6) 5/8" x 1.5" bolts
- (2) 5/8" x .25" thick spacers
- (10) 5/8" washers
- (6) 5/8" welded nut tabs
- (2) 5/8" top-lock nuts
- (4) 9/16" x 4" bolts
- (4) 9/16" x 1.75" bolts
- (16) 9/16" washers
- (8) 9/16" nuts
- (2) 1/2" x 3.5" bolts
- (2) 1/2" washers
- (2) 10mm x 80mm bolts
- (4) 10mm washers
- (2) 10mm top-lock nuts

### Rear Arms & Bracket Hardware

- (2) 5/8" x 1.5" bolts
- (2) 5/8" x 1.5" bolts w/ low profile hex
- (2) 5/8" x 5" bolts
- (8) 5/8" washers
- (4) 5/8" welded nut tabs
- (2) 5/8" top-lock nuts
- (2) 1/2" x 7" bolts
- (4) 1/2" washers
- (2) 1/2" top-lock nuts
- (4) 9/16" x 4" bolts
- (8) 9/16" washers
- (4) 9/16" top-lock nuts
- (2) 10mm x 80mm bolts
- (4) 10mm washers
- (2) 10mm top-lock nuts

### Torque Specs:

- 5/8": 165 ft-lbs
- 9/16": 125 ft-lbs
- 1/2": 90 ft-lbs
- 12mm: 65 ft-lbs
- 10mm: 55 ft-lbs
- 1-1/2": 200 ft-lbs
- 1-5/8": 225-250 ft-lbs

### Index

- Installation Notes: 2
- Control Arm Identification: 3
- Front Frame Bracket and Crossmember Installation: 4
- Rear Frame Brackets: 6
- Front Control Arm Installation: 7
- Upper Control Arm Axle Upgrades: 8
- Rear Control Arm Installation: 9

### Required Tools

- Basic hand tools
- Torque Wrench
- Tools to torque down jam nuts can be an adjustable wrench or appropriate-sized crow foot adapters.
- Sawsall or a grinder with a cut-off wheel
- Safety Glasses
- 5/8" drill bit

### **Installation Notes:**

- We leave the grease fittings out of our control arm when we assemble them so that they do not break off during shipping. They are tapered fittings and may not sit flush with the sleeve on the control arm. Do not force the grease fitting to be flush as it might break the fitting off in the sleeve resulting in needing to extract the broken part or to send it back in to us to repair the threads.
- The installation of the long arm brackets involves cutting off the factory control arm mounts on the frame rails. If you have any questions or concerns, please reach out to us before starting the installation for questions or assistance.
- For drilling out the bolt holes on the frame, hold the bracket in position and mark the holes, then remove the bracket to drill the holes. While you are mocking up the holes it is important to ensure that the front frame brackets are positioned similar on the frame for proper crossmember alignment.
- The bend in the lower control arms can go either up or down. If you install the arm with the bend up, you can increase your ground clearance but you might need to clear the lower control arm mount on the axle to fit if you do a lot of extreme flexing.
- When ordering the kit, you have the option of purchasing axle side upper control arm bushing upgrades. These upgrades include a poly bushing or a Johnny Joint upgrade. Installation help for both of those options will be listed below.
- When installing the new cross member, keep the cross member to frame bracket bolts loose so you can align your transmission mount. Once the mount is bolted to the cross member, tighten down the cross member to frame bracket bolts.
- Ensure that your vehicle set up is stable and secure as you will be doing a lot of work under the vehicle and you want to prevent it from shifting while you are working.
- You will need to support the frame and the front axle separately. Be careful where you put your jack stands or lift points as you don't want to interfere with the frame bracket installation.
- Our kit is designed to work with frame stiffeners. The crossmember bolt holes on the frame brackets are slotted to allow for the brackets to move in or out on the frame to account for the thickness of your frame stiffeners. However, you cannot use the same bolt holes as intended with frame stiffeners, so you might need to weld or attach them a different way. Give us a call or an email if you have any questions on how the brackets will work on your application.

### Control Arm Identification

1. Adjustable Front  
Upper Control Arms.

2. Adjustable Front  
Lower Control Arms.

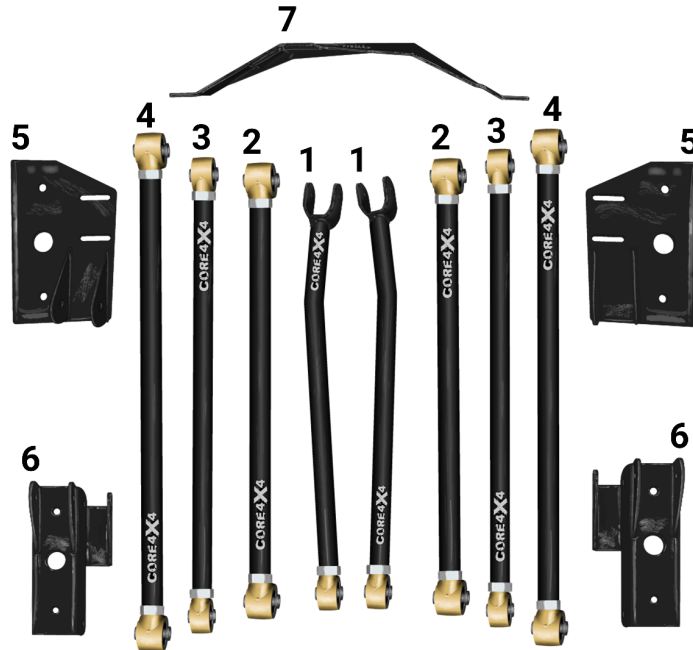
3. Adjustable Rear  
Upper Control Arms.

4. Adjustable Rear  
Lower Control Arms.

5. Plate Steel Front  
Frame Brackets.

6. Plate Steel Rear  
Frame Brackets.

7. Plate Steel  
Crossmember.



### **Front Frame Brackets and Crossmember Installation Guide**

- 1) Raise and support the vehicle from the frame away from where you are going to be working. You will be removing the factory crossmember and installing new frame brackets and crossmember.
- 2) Support the front axle and remove the front four control arms.
- 3) With the front control arms removed, you can start with clearing up the frame and prepping the bracket installation.
- 4) With a cutting tool, start cutting the lower control arm brackets off of the frame. We recommend cutting them out in sections instead of trying to get the entire bracket in one piece. When cutting the inside of the drivers side lower control arm bracket, watch out for any fuel lines, brake lines, or wiring harnesses running along the inside of the frame rail.
- 5) While cutting the lower control arm mount on the passenger side frame rail, you might need to cut down the inside of the frame rail for upper control arm clearance. The passenger side control arm bracket has some side bracing that can interfere with the travel of the new long arm upper control arm.
- 6) Once both factory lower control arm brackets are cut and trimmed, we recommend using some spray paint or rust sealer to prevent any rust starting from the freshly cut metal.
- 7) Support the transfer case on the transmission and remove the factory cross member. If you let the transmission hang after the removal, it can cause damage to the motor mounts and make reassembly harder.
- 8) The frame brackets are installed just in front of the seam of the frame. This seam is in the same position on each side of the vehicle and will help with locating the two brackets evenly with each other before drilling.
- 9) Test fit the new frame brackets with the control arm mounts facing towards the front of the Jeep and the slotted crossmember bolt holes towards the back of the Jeep.
- 10) The upper control arm mounts are on the top of the bracket and some trimming on the inside of the frame might be necessary to allow the bracket to sit flush on the frame and line up with the factory cross member bolt holes.
- 11) Once the bracket can fit flush with the frame, start marking the holes you need to drill to mount the brackets to the frame. There will be two  $\frac{5}{8}$ " holes to drill into the side of the frame rails and one 1.5" hole to drill in the bottom of the frame.
- 12) Once the two  $\frac{5}{8}$ " holes are drilled and deburred, you can install the frame brackets onto the vehicle. Use the two  $\frac{5}{8}$ " x 6" bolts through the side of the bracket with the bolt being inserted from the outside of the frame. Use the large metal spacers on the back of the bolt on the inside of the frame, doing this helps spread the force of the bolt when torqued and prevents the bolt from damaging the frame.
- 13) Through the 1.5" hole, insert two of the  $\frac{5}{8}$ " welded nut tabs one at a time and use two of the  $\frac{5}{8}$ " x 1.5" bolts for each of the nut tabs.

## Installation Instructions

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- 14) Align and bolt your new crossmember up to the transmission mount. The new crossmember can be installed in either direction so you don't need to worry about finding the "front" of the crossmember.
- 15) Ensure that your transmission is still in the correct spot and that it didn't shift to one side while the old crossmember was out. Once the transmission is in the correct spot, install the transmission mount to the crossmember.
- 16) Torque down all the bolts to the specified torque specs listed above.

### **Rear Frame Brackets Installation Guide**

- 1) Raise and support the vehicle from the frame away from where you are going to be working. You will be removing the factory crossmember and installing new frame brackets and crossmember.
- 2) Support the front axle and remove the front four control arms.
- 3) With the front control arms removed, you can start with clearing up the frame and prepping the bracket installation.
- 4) With a cutting tool, start cutting the lower control arm brackets off of the frame. We recommend cutting them out in sections instead of trying to get the entire bracket in one piece. When cutting the inside of the drivers side lower control arm bracket, watch out for any fuel lines, brake lines, or wiring harnesses running along the inside of the frame rail.
- 5) Once all the rear control arm frame brackets are removed, you can use rust sealer or spray paint over the cuts to prevent the frame from rusting.
- 6) There are seams on each frame rail roughly under the footwell of the rear seats. Use these seams to help with lining up the rear brackets. Use the holes on the brackets to mark the holes that need to be drilled and remove the bracket.
- 7) Once you have verified that the brackets are at the same spot on the frame rail, drill and debur the holes.
- 8) With the bracket slid over the frame, install the two  $\frac{5}{8}$ " nut tabs one at a time into the 1.5" hole on the bottom of the bracket. Install a  $\frac{5}{8}$ " x 1.5" bolt into the front-most nut tab and then the  $\frac{5}{8}$ " x 1.5" bolt with the low-profile head in the rear-most nut tab.
- 9) Install the  $\frac{5}{8}$ " x 5" bolt into the front-most hole on the side of the bracket.
- 10) Insert the  $\frac{1}{2}$ " x 7" bolt into the rear-most hold on the side of the bracket. This bolt is used to hold the rear upper control arm on the bracket so it will go through the frame and then through the rear upper control arm mount. Inserting this bolt now will help with lining up the bracket to all the mounting holes and to the frame.
- 11) Torque down all bolts to the mentioned torque specifications above but do not torque down the  $\frac{1}{2}$ " x 7" bolts. Those two bolts are used to hold the rear upper control arm in the bracket and will need to be removed during the control arm installation.

### **Front Control Arm Installation**

1. Install the upper control arm into the frame bracket and then onto the axle bushing. To do this, you might need to thread the control arm over the front axle and then into the control arm mount.
2. The frame side of the upper control arm needs to have the Johnny Joint installed with the grease fitting pointed upwards to prevent it from hitting and breaking on the frame bracket. Use the provided  $\frac{1}{2}$ " x 3.5" bolt and washer to bolt in the control arm.
3. Use the provided 10mm x 80mm bolt, washers, and nut to bolt the control arm onto the axle side upper bushings.
  - a. If you are using the axle side upper bushing poly upgrade or the Johnny Joint Tombstone upgrade, refer to page 7 for further details.
4. Install the lower control arm (25" tube length for 0"-6" applications) using the supplied 9/16" x 4" bolts, washers, and nuts. Because the arm is straight and double threaded, the control arm can be installed in either direction, as long as the grease fittings are easily accessible.
  - a. Note: when installing the control arm with the bend upwards, you might need to trim the axle side lower control arm mount if you are lifted over 5". At full droop there is a chance that the control arm can hit the axle side control arm bracket and interfere with the articulation of the Jeep.
5. Torque down all bolts to the provided torque specs listed above.
6. Torque down all jam nuts to the provided torque specs listed above.
  - a. Ensure that the threads underneath the jam nuts are clean from any oils or anti-seize. Any oils or anti-corrosive materials can prevent the jam nut from staying tight and can introduce damage the adjustable ends of the control arm once the jam nut comes loose. You can use loc-tite if desired, but it is not necessary to keep the jam nuts from moving after they are torqued to the correct spec. Damage caused by loose jam nuts are not directly covered under our warranty as that damage is preventable during the regular maintenance of the control arms.
7. Grease all the pivoting ends with the correct grease. Drive the Jeep for 50-100 miles and recheck the torque on all the bolts for the control arms and brackets.
  - a. The road vibrations, drivetrain vibrations, and bumps from off-roading (NVH) can cause hardware to come loose over time or come loose if they were not tightened to the correct spec. Ensuring that everything stays tight is part of the regular maintenance of the Jeep.
  - b. You can use something like a paint pen to mark the bolts to quickly check if anything has moved during the regular maintenance on your Jeep.

### **Front Upper Control Arm Axle Bushing Mount Upgrades**

- If you purchased the poly bushing upgrade for the axle upper control arm mount, the replacement poly bushing only replaced the rubber insert and not the entire rubber bushing. The factory rubber bushing comes with an outer metal sleeve that the new poly bushing will be installed into. There are many ways to remove the old rubber insert from pressing it out, cutting it out, drilling it out, or melting/burning it out.
- When installing the new poly bushing into the old rubber bushing metal housing, you will need to grease the outside and inside of the poly bushing so it does not get installed dry, causing the bushing to prematurely fail.
- If you purchased the Johnny Joint Tombstone upgrade, cutting and welding will be required to get them installed. Rock Jock instructions can be found on our website or on [rockjock4x4.com](http://rockjock4x4.com) under the part number on the Johnny Joint Tombstone box.
- The Johnny Joint upgrade can come with either a 10mm bolt or a 12mm bolt size. When you select which one you want, we will match the u-bracket bolt hole to that kit so you don't have to drill out the u-bracket and it will bolt right up.

### **Rear Control Arm Installation**

- 1) Insert the upper rear control arm (32.5" tube cut length for 0"-6" applications) with the 10mm Johnny Joint in the rear upper control arm mount and loosely install the bolt.
- 2) Remove the 1/2" x 7" bolt from the frame bracket and slide the 1/2" Johnny Joint into the frame bracket mount and loosely install the 1/2" bolt back into the bracket.
- 3) Slide the lower control arm (29.5" tube cut length for 0"-6" applications) into the axle lower control arm mount, loosely install the bolt, and then rotate the lower control arm into the frame bracket control arm mount and loosely install the bolt.
- 4) With both control arms installed, torque all the bolts to the torque specs listed above.
- 5) With the bolts torqued, it will be easier to adjust the control arms on the vehicle to get your desired pinion angle and axle placement. You can adjust the control arms before installing them on the vehicle, but because they are double-threaded with left and right-hand threads they can be lengthened or shortened while installed on the vehicle for more fine-tuning.