

Installation Manual

**Hard-Arm™ Suspension: Pro Series 3 Link Front Upgrade Kit
1997 - 2006 Jeep Wrangler (Standard and Rubicon Models)**

Last Revision No.: 6/2/10



Thank you for purchasing a Clayton Off Road Mfg Long arm suspension.

Please check to make sure you have all necessary parts before you start your install.



Optional Pro Series Bridge –

This item can be added to any order when using a OEM D30 or OEM Rubicon D44 front. It MUST have the stock cast in upper mount which is used as a center support.



If you are missing any of the above items, or are unclear about what parts you need to call and ask before you begin your installation process.

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WARNING: Suspension systems and their components are designed to enhance your vehicles offroad performance. This may cause your vehicle to handle differently then it did from the factory. These systems and any components should be installed by certified technicians. Attempts to install these products without proper knowledge can lead to poor performance, or possible failure, which may jeopardize the safety of the vehicle and its passengers. Take extra care when operating a modified vehicle and thoroughly inspect your vehicle before and after every offroad use.

Clayton Off Road Mfg. – 1261 Meriden Road – Waterbury – CT – 06705 – (203) 757-0339 sales@claytonoffroad.com

Note 1. The 3 Link Pro Series front upgrade kit has been designed around a 5-6 inch lifted TJ or LJ. Depending on coils used, shock travel, vehicle weight, axle positioning and the size of the front axle, it maybe used from 4-8 inches of lift however you will want to check for proper clearance during articulation. Adjust bumpstops accordingly .

Note 2. Our Pro Series arms feature forged Johnny joints at both ends of our arm. This lower Johnny joint is susceptible to rock damage while using stock control arm brackets. We highly recommend adding a front skid plate to the stock lowers, upgrading to our ¼ heavy duty lower control arm brackets which feature a front skid plate, or using our high clearance axle bracket kit.

Tool requirements

1. 175A or greater mig welder
2. Plasma cutter and or a good 4.5" grinder with cut off wheels.
3. Four large jack stands, ramps or a 4-post drive on lift works best.
4. Various wrenches and shop tools for removing and installing control arms.
5. A 1 7/16 wrench is needed to tighten the upper control arm jam nuts, and a 46mm wrench is needed to tighten the lower control arm jam nuts.

Front Arms Installation Procedures

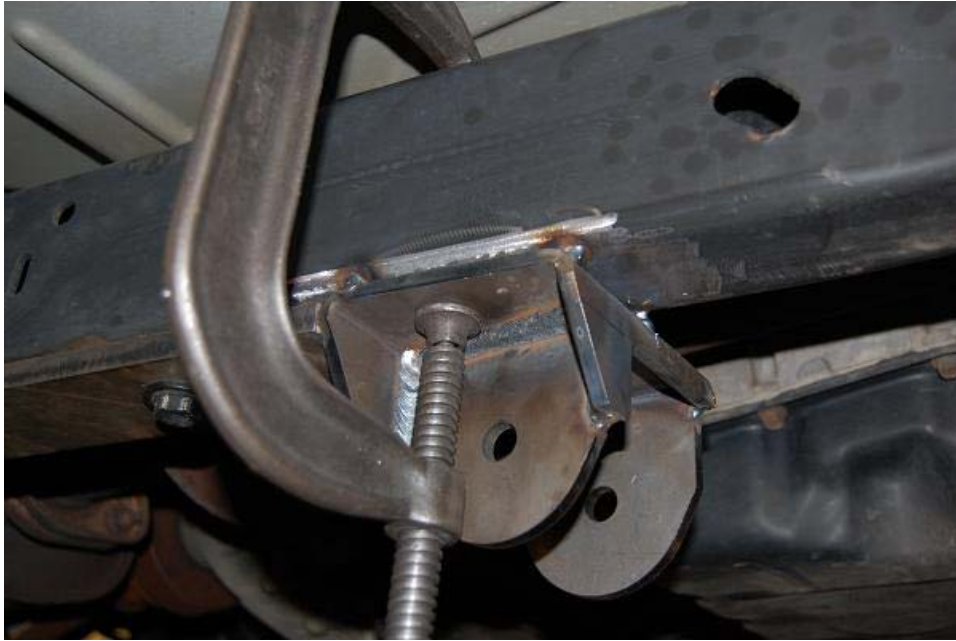
1. Use provided AutoCAD drawing to locate lower weld on control arm brackets. Depending on your current skid plate, or model year, you may need to modify the skid plate to clear these brackets.
2. Put the truck up on jack stands or lift.
3. Support the transmission using a floor jack.
4. Remove belly pan.
5. Remove front driveshaft.
6. Remove the paint from the frame rail from the front belly pan bolt forward about 6" on the bottom and about ½" up each side.
7. Clamp a piece of flat metal to the outside of the frame rail about 1" forward from the front belly pan bolthole.
8. Clamp the front control arm bracket in place:
 - a. For 1997-2002 models it should be 1.625" from the center of the front belly pan bolthole.
 - b. For 2003+ models (including Rubicon) it should be 3.625" from the center of the front belly pan bolthole.
9. Tack the bracket in at the four corners.
10. Remove clamps and weld all four sides. It may be easier to weld the inside with the drive train pushed way up or the exhaust removed.
11. Repeat steps 4 through 8 on the other side. See Photo Below.

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12. Next you will need to prep the driver side frame right above the new lower control arm bracket. You will need to unclip the brakeline, fuel line and any other wires running down the frame in this location. We carefully removed these lines, saving the frame clips as they will be reused. We also wrapped the lines in tin foil to help prevent any weld spatter getting on the lines or wires.
- 13. WARNING!!! The line running down the frame rail include the brakelines and gas lines. Be extremely careful not to damage them in any way. They also pose a serious fire hazard if cut or heat is applied to them. You may want to remove the lines completely, and then reroute them above the bracket once all the welding is complete.**
14. The new frame side 3 link bracket will need to be properly clearanced to fit above the new frame bracket. There is a top and bottom. The hole should be higher up. Depending on your welding above, this bracket may need to be grinded down more or less until it fits nicely above this bracket. See photo below.

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- 15.
16. The 3 link bracket will be in line with the back of the lower control arm brackets. Clean and grind the frame so it is ready to weld. **Make sure you cover the lower slot so you do not get any weld spatter in this location. Weld spatter or any debris will be difficult to clean out and may not allow proper installation of the flat plate.**
17. Pictures below show front and back of the new bracket ready for welding.



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- 19.
- 20. You may want to run the lines over the top of the bracket. This may make welding easier.



- 21.
- 22. Once the 3 link bracket above is welded top, bottom and inside to the lower control arm bracket, make sure to let it cool, then reinstall all lines and wires against the frame. Do not install them into the frame clips yet. Leaving them loose will make installing the flat plate easier. Picture below shows the flat plate inserted into the slot and ready to weld. Once again we put

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tin foil on the lines, and make sure they will not come in contact to any of the lines or wires. Make sure you can put a bolt through both holes before welding. There is a top and bottom to the flat plate.



- 23.
24. Once both brackets are welded, let cool, paint, and reinstall all lines back into the OEM frame clips.
25. The next step is to get the axle ready for the upper 3 link mount. Instructions below are for OEM D30 or OEM Rubicon D44 axles with optional Pro Series Bridge.
26. You will need to remove the stock rubber bushing. We found the easiest way was to cut a slit in the top and then you should be able to hammer out the bushing. See picture below.
27. With the bushing removed you should be able to take the new Pro Series bridge and fit it into place.

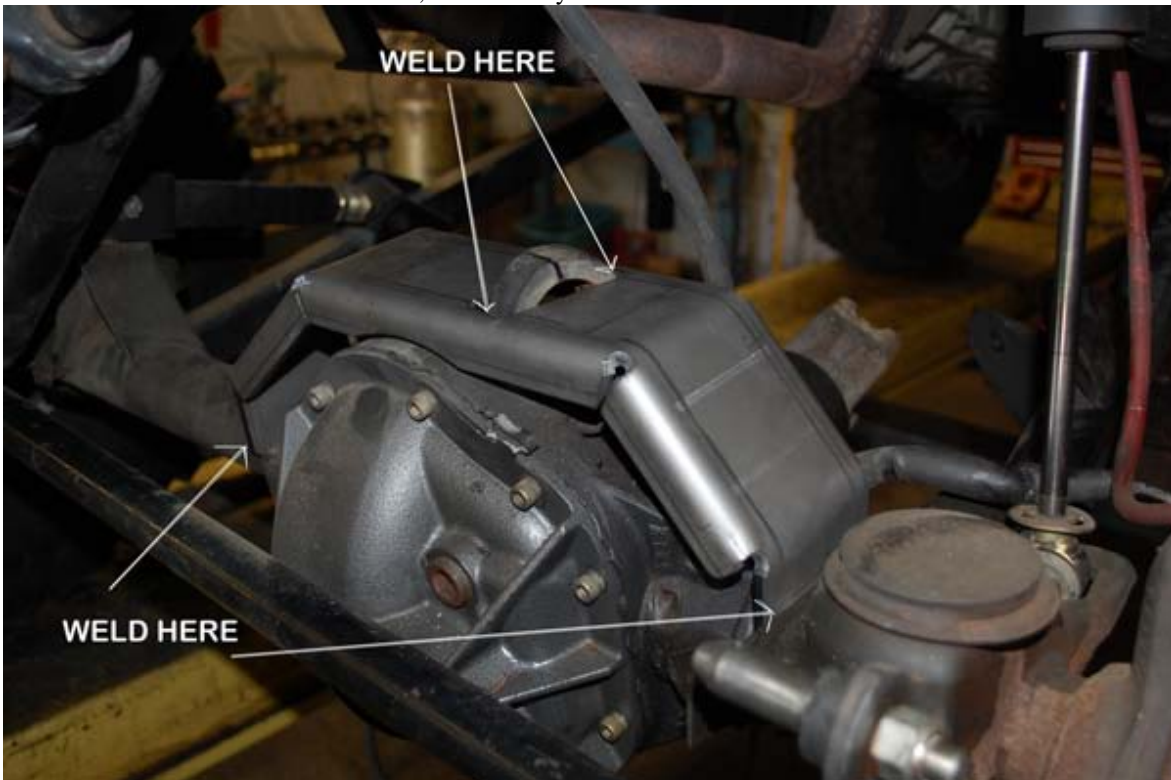
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- 28.
- 29. Mark where you will need to weld and grind the paint off the tubes on both sides of the axle. You will also need to weld the bridge to the driver side lower coil bucket mount.
- 30. You will need to weld the upper OEM mount to the Pro Series Bridge. Weld as much as possible to the bridge, front, back, and the sides. Where it meets the tubes, as much as you can of both sides and down each side.



- 31.

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32. Welding to both sides of the tubes, and the upper mount gives it superior strength. You can cut the top of the mount off after welding for a clean look, or leave the top mount sticking up. It should not be in the way for the 3 link mount.
33. If you ordered the complete upgrade kit with the Pro Series Bridge, we already welded on the top 3 link mount to the bridge.

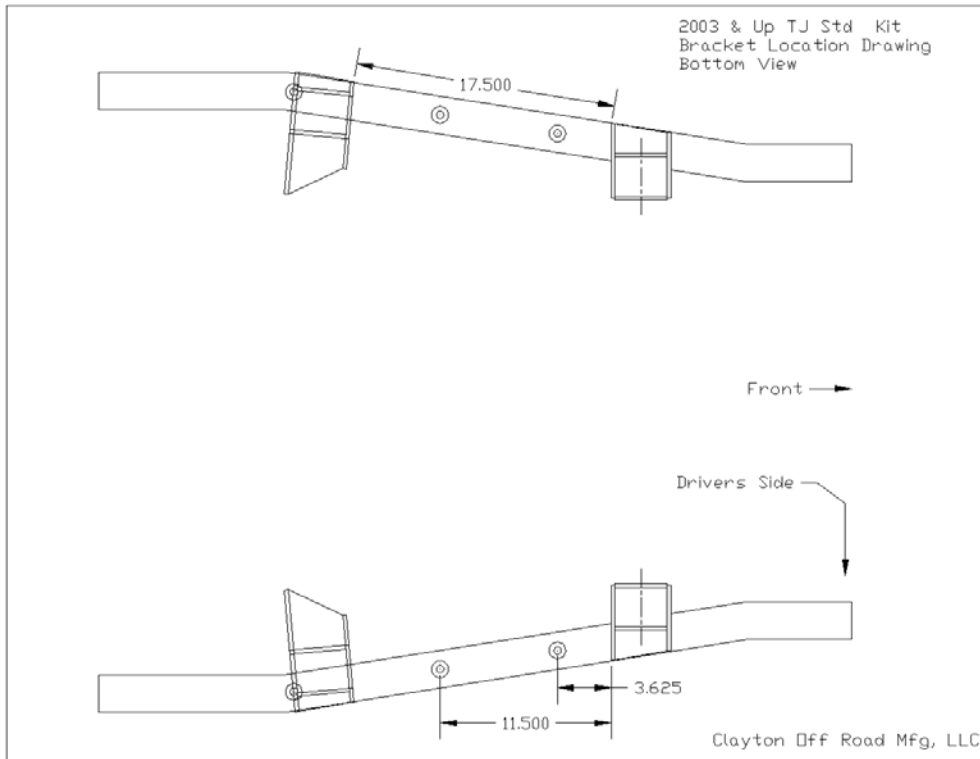
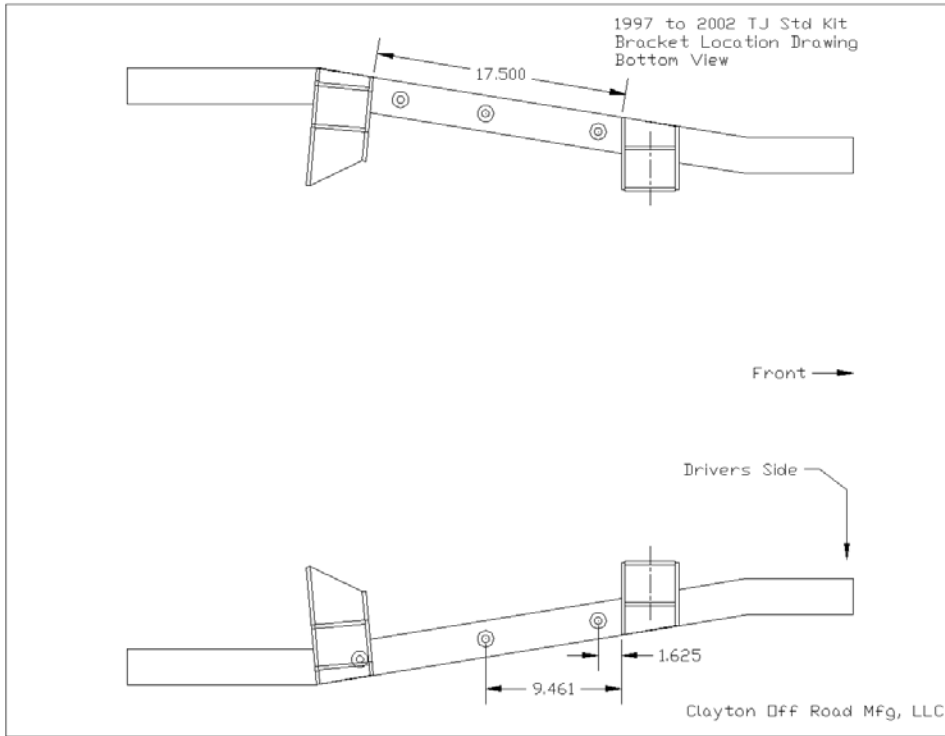


- 34.
35. The complete kit also comes with a powder coated arm with double adjusters. Adjust your pinion angle at ride height, and install new upper arm. Make sure you have at least 1 inch of thread engaged into the arm at each end. Try to keep thread engagement the same on the top and bottom.
36. Rear install all lines in their proper mounting location. Tighten all bolts to factory specs.

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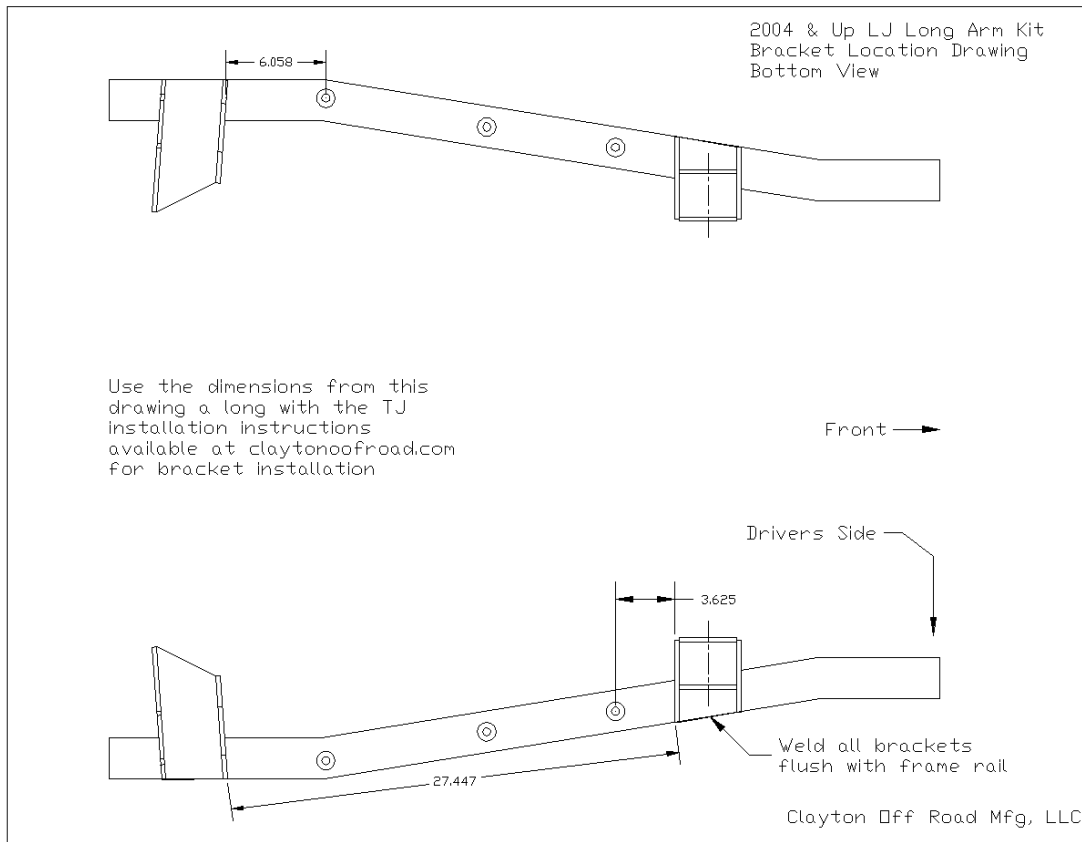
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Damage or Missing Parts Policy: If you receive a product that is damaged or missing parts you must contact us within 14 days to arrange replacement. You may be required to submit photos of damaged parts before new parts are sent. Damage parts may be returned for inspection.

Return Policy: You have 30 days to return a product in its original packaging. Parts cannot have been installed, painted and/or modified in any way. You must contact us to obtain a RGA # (Return Goods Authorization) before shipping your product back. All returns are subject to a 15% restocking fee. Your return must have the return authorization number clearly marked on the outside of the package and must be shipped prepaid. Packages shipped COD will be refused. Returns are subject to inspection and may be refused if they are damaged or used. You are responsible for proper shipping to ensure product is not damaged or lost. We recommend insuring your product for the full amount in the case it is damaged or lost during return shipment.

Warranty Policy: Clayton Off Road Mfg. comes with our abuse proof limited lifetime warranty against bending or breaking our control arms only. This covers the original purchaser of our suspension lift. This warranty cannot be transferred to a secondary purchaser and is void if the control arm is modified in any form or not used in its proper application. Original purchaser must obtain a RGA # and is responsible for shipping the product back and agrees to return shipment charges. This warranty does not cover worn bushings, missing snap rings, or any kind of rust damage to the threads or inserts or actual arm.

What is not covered:

Clayton Off Road Mfg. components may have minor finish damage to powder coated or plated surfaces, which may occur during shipping and is not covered under warranty. Johnny Joint bushings, washers, snap rings, OEM rubber bushings, hardware, brake lines, shocks, springs, skid plates, trackbars, and any mounting brackets are not covered. These parts are subject to wear and are not considered defective when worn. They are warranted for 90 days from the date of purchase for defects in workmanship only. Products or components which have been subjected to abuse, accident, alteration, modification, improper installation, tampering, negligence, misuse, or products installed on a vehicle used in sanctioned racing events. A race is defined as any contest between two or more vehicles, or any contest of one or more vehicles against the clock, whether or not such contest is for a prize.

Clayton Off Road Mfg. is not responsible for any retail parts that may be sold.

Clayton Off Road Mfg. shall not be liable for any loss, damage or injury, whether ordinary, direct, special, incidental or consequential damages, arising from the manufacture, sale, installation, resale, delivery, possession, handling or use of its products.

Clayton Off Road Mfg. is not responsible for typographical errors either in pricing or in content.

Warranties, policies and prices subject to change without notice.