INSTALLATION MANUAL

FOR

ROCK KRAWLER SUSPENSION, INC.

JL/JLU T-REX LONG ARM SYSTEMS

2022 1st EDITION

04/18/2022

Dear customer: Thank you for purchasing the best system on the market for your Jeep Vehicle. We are sure you will be happy with this system after your installation is complete. Please take your time during the installation and be sure to do it correctly. Completely read the directions before starting your installation so you know what to expect. Remember, your personal safety depends on it. Should you have any questions during this installation feel free to give our tech line a call **(518-270-9822)** and we will be happy to help you.

Welcome to TEAM RK

Share your before & after pictures, install photos & wheeling images.

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Note: BE SURE TO CHECK ALL FASTENERS FOR PROPER TORQUE BEFORE TEST DRIVE. RECHECK AFTER 500 MILES AND BE SURE TO CHECK PERIODICALLY.

WARNING

- Properly block and secure vehicle prior to installation.
- Always wear safety glasses when using power tools.
- Rock Krawler Suspension recommends the use of Loctite on all hardware, unless noted otherwise.
- The use of limiting straps is recommended to avoid possible damage from over extending the suspension of your vehicle.
- Read and understand all instructions, warnings and safety precautions in these instructions and your owner's manual before attempting to install these components.
- Proper installation of Rock Krawler Suspension products requires knowledge of recommended procedures for disassembly/assembly of OE vehicles and components. Access to OE shop manuals and special tools are required. Attempting to install this kit without knowledge of these procedures may affect the safety of your vehicle and or the performance of these components. Rock Krawler Suspension, Inc. strongly recommends that this system be installed by a certified mechanic with off road experience.
- Rock Krawler Suspension does not recommend combined use of suspension lifts, body lifts or other lift devices. Combined use of lifts may result in unsafe and unexpected handling characteristics. Also, many states now have laws restricting Vehicle lift, bumper heights and other alterations. Consult local laws to determine if your proposed alterations (including installation of this system) comply with your state laws.
- Rock Krawler Suspension does not condone or authorize the use of any other suspension components with its products. Should Rock Krawler Systems or components be installed in junction with other products or not per the provided instructions Rock Krawler Suspension warranty is void and is not to be held accountable for any resulting actions.

Driving and Handling Tips

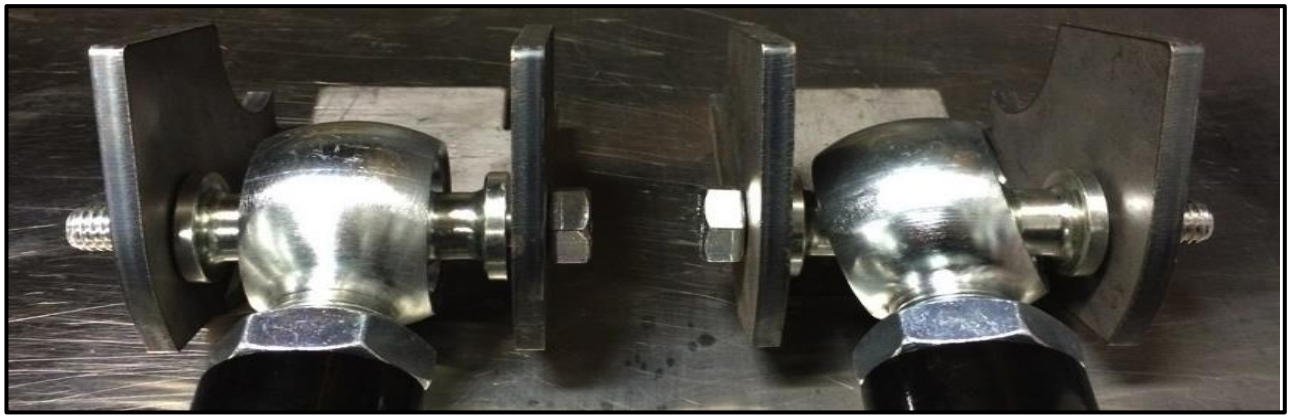
- For Highway driving it is best to have the front sway bar connected. This will give you the on highway ride and handling characteristics you expect. **If you choose otherwise, you do so at your own risk.**
- The ride quality and handling that Rock Krawler is known for is based on using OEM sway bars front and rear with approved shocks. Using any components other than directed can result in adverse handling characteristics and poor ride quality.
- For Off-Road use it is best to have the front sway bar disconnected and the rear sway bar connected. This will allow your suspension to do its intended function. Our suspension will give your vehicle unmatched articulation which will proved traction and feed back to keep your vehicle moving in almost all conditions. Let the suspension do the work! Even if you are a Rubicon Owner for most situations we recommend manually disconnecting the front sway bar.

IMPORTANCE OF JAM NUTS

This is a note about jam nuts and the consumer's responsibility. The installer is the person or persons initially responsible for the proper setup of the suspension system and/or components and the initial tightening of the jam nuts. The jam nuts not only hold the orientation of the joint it is on but it is the single component that puts the necessary pre-load on the joints threads. The consumer or vehicle owner is the person or persons responsible for maintaining the jam nuts tightness. Failure to do so will result in the rapid deterioration of the threads in the control arm and will impose a "cause for concern" for the occupants of the vehicle. Failure to comply with the warnings heeded in the directions regarding the amount of threads showing past the jam nut will also result in the same "cause for concern" for the occupants of the vehicle. All of the above items are the responsibility of the vehicle owner and or installer. If a threaded section of a component is bad it will show itself defective immediately. Threads that fail over time are due to improper maintenance of jam nuts and can be proven very easily. Thread sections and jam nuts not properly maintained or setup, are not covered under warranty. This is the end user and installer's responsibility.

ORIENTATION OF JOINTS

Orient the Krawler Joint for maximum amount of movement with the head of joint perpendicular to bolt / head of the joint vertical in the mounting bracket. This same rule for orientation needs to be followed for all heim joints. The photo below shows the right way (LEFT SIDE) and the wrong way (RIGHT SIDE) to orient a joint.



^RIGHT WAY^ **^WRONG WAY^**

MAINTAINING JOINTS AND SUSPENSION COMPONENTS

Krawler Joints/Pro Flex Joints, Anti-Wobble Joints and Pro Disconnect Joints

Before Jan 1 2020 **The Pro Series Krawler Joints, Pro Flex Joints, Anti-Wobble Joints and Pro Disconnect Joints are greaseable. They come pre-greased from the factory. The grease valley is machined into the housings. We require Triple Zero (000) grade grease for lubrication of all our joints. They will not take a lot of grease nor do they need a lot of grease. Approximately every 4 to 6 months under normal operating conditions they should be greased. This is condition and use dependent so please use common sense. Over lubrication or using the incorrect grade of grease can do damage to the joints and hydraulically displace the race way material causing a sloppy joint condition. Never ever use red and tacky.**

After Jan 1 2020 **The Pro Series Krawler Joints, Pro Flex Joints, Anti-Wobble Joints and Pro Disconnect Joints are greaseable. They come pre-lubed from the factory. The grease valley is machined into the housings. Grade 1 grease can be used in all joints. They will not take a lot of grease nor do they need a lot of grease. Approximately every 4 to 6 months under normal operating conditions they should be greased. This is condition and use dependent so please use common sense. Over lubrication or using the incorrect grade of grease can do damage to the joints and hydraulically displace the race way material causing a sloppy joint condition. Never ever use red and tacky.**

If the joint is not loose, it is not bad. Only if the ball is sloppy in the joint housing is it a bad joint and should be rebuilt. Krawler Joint Raceways, Pro Flex Joint Raceway, or Anti-Wobble Joint Raceways are available through Rock Krawler Suspension or an authorized dealer.

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Please note: If you are not using the full range of motion of the Krawler Joint, Pro Flex Joint or Anti-Wobble Joint very often, the lubrication will not be moving inside the joint. In such cases we recommend spraying down the outside of the Joint with WD-40 or Liquid Fluid Film to ensure the race ways do not dry up. In highly corrosive environments it is also recommended to spray down the suspension components with WD-40 or Liquid Fluid Film. This will minimize corrosion of the components do to exposure to the elements.

HEIM JOINTS (Non- rebuildable spherical joints)

All Rock Krawler Heim Joints use Teflon Liners and thus are self lubricating. They too can also benefit from spraying down the outside of them liberally with WD-40 or Liquid Fluid Film. Grease should never be applied to them! Take caution when using cleaners and detergents on your vehicle as it can ruin the adhesives used on the Teflon liners yielding a bad heim joint!

THE USE OF ANTI SEIZE

If you are in a corrosive environment and would like to prevent rusting and or seizing of joints, Rock Krawler recommends the installer removes all thread in joints before installation to apply anti-seize inside the threaded connections. This will make future adjustments much easier if needed years down the road.

THE USE OF LIQUID FLUID FILM OR WD-40

If you are in a corrosive environment and would like to protect the finish of the underside of your

vehicle, suspension components etc., Rock Krawler recommends cleaning thoroughly a few times during the winter months and applying Liquid Fluid Film or WD-40 to the underside of your vehicle. This will help minimize corrosion do to Rock Salt, Liquid Salt, Mag. Chloride and combination with sand and salt.

SUGGESTED STARTING LENGTHS

3.5" Front Track Bar Assembled Length = 34 5/16"
3.5" Rear Track Bar Assembled Length = 37 13/16"
3.5" Front Lower Control Arm Assembled Length = 24 5/8"
3.5" Front Upper Control Arm Assembled Length = 20 9/16"
3.5" Rear Lower Control Arm Assembled Length = 36 3/16"
3.5" Rear Upper Control Arm Assembled Length = 28 9/16"

4.5" Front Track Bar Assembled Length (Stock Axle Mount) = 34 7/16"
4.5" Rear Track Bar Assembled Length = 37 7/8"
4.5" Front Lower Control Arm Assembled Length = 24 11/16"
4.5" Front Upper Control Arm Assembled Length = 20 5/8"
4.5" Rear Lower Control Arm Assembled Length = 36 1/4"
4.5" Rear Upper Control Arm Assembled Length = 28 5/8"

Please Note:* All Control Arms, Track Bars, and Sway Bar Links come preassembled, but require adjustment to the above recommended starting dimensions. These measurements are taken from the center of one bolt hole to center of the other bolt hole (i.e. straight line). **Please check out our Rock Krawler Youtube Channel if need be for how to set the control arms properly and the importance of Jam Nuts...

When measuring control arms, make sure to go from center to center. You can get a rough estimate by measuring like that shown above, then make sure the center balls are straight and get a final measurement that way.

TORQUE VALUES FOR HARDWARE AND JAM NUTS

- All **10mm and 3/8"** bolts are torqued to **30-35 ft-lbs.**
- All **12mm and ½"** bolts are torqued to **75-80 ft-lbs.**
- All **14mm and 9/16"** bolts are torqued to **90-100 ft-lbs.**
- All **16mm and 5/8**" bolts are torqued to **120-140 ft-lbs.**
- All **7/8"** Jam Nuts are to be torqued **200-220 ft-lbs**. Up to 3/4" of threads showing past the jam nut is safe for final adjustment. These specifications are critical for the overall longevity of the threaded section.
- All **1"** Jam Nuts are to be torqued to **250-300 ft-lbs.** Up to 3/4" of threads showing past the jam nut is safe for final adjustment. These specifications are critical for the overall longevity of the threaded section.
- All **1 1/4"** Jam Nuts are to be torqued to **275-325 ft-lbs.** GET YOUR BIG BOY PANTS ON! Up to 1.0" of threads showing past the jam nut is safe for final adjustment. These specifications are critical for the overall longevity of the threaded section.

FRONT OF VEHICLE (Perform all Steps for the System You Are Installing

1) Make sure vehicle is on a level, hard working surface if you are using a floor jack and jack stands**.**

2) Block the rear wheels so the vehicle cannot move and make sure the emergency brake is applied.

3) Raise and support the front of the vehicle with safety jack stands. Place them on the frame in front of the axle.

4) If you are using a vehicle lift, place the lift arms according to those specific vehicles lifting procedures. Ensure that the lift arms will not interfere with the components that are being replaced.

5) Remove the front rims and tires with axle supported by a floor jack.

6) Remove the front shocks. Save the OEM hardware to install the new shocks.

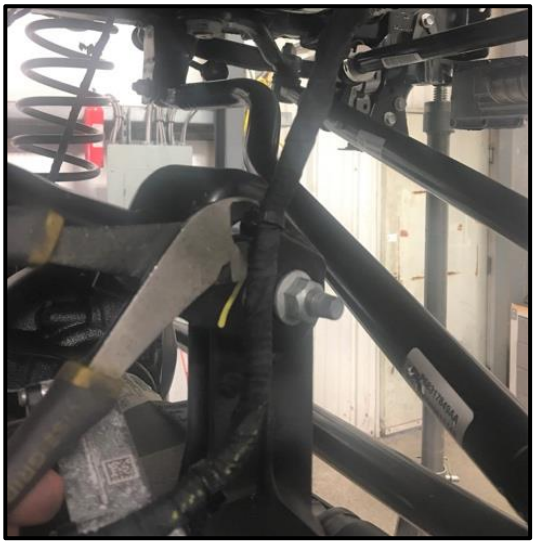
7) Remove the nut holding the factory brake line to the OEM lower control arms. Clip the ties holding the pass. side disconnect motor cable from the passenger side front upper control arm and disconnect motor housing. Be sure to add slack to the breather tube as well.

8) Remove the metal bracket that held the factory brake line to the control arm from the brake line itself by prying it off the line or gently cutting it off. This will provide you with more than enough extra brake line slack.

Note: *use 2 pair of vice grips, one pair to hold the bracket and one pair to peel the bracket back off the line.*

Remove Brake Lines from Arms

Clip for Breather Line Slack



Remove the plastic clips holding the pass. disconnect motor cable from the upper arm and motor housing as shown prior.

9) Lower the front axle assembly onto jack stands.

10) Remove the front track bar from the vehicle and save the OEM hardware for reuse.

11) **For the 3.5" and Taller Systems**, the drag link end will be your limiting factor without shocks to allow the axle to droop. For these systems, we recommend you separate the drag link from the knuckle connection to allow for ease of axle movement. Do not ignore, If the joint is damaged from overextension, adverse handling can result.

12) Remove the front springs from the vehicle.

13) Remove the front control arms from your vehicle.

NOTE: CUSTOMERS WITH COIL OVER KITS – PLEASE SEE THE COIL OVER SUPPLEMENT AT THE END OF THE INSTRUCTIONS.

14) To make servicing your front lower control arms easier and to have the Zerk fitting facing upward at the axle; we recommend you cut a little relief in the upper control arm mount as shown. A hole saw is a simple way to make a nice, clean cut. Then add some paint of your choice to minimize rust later on.

15) If you received or purchased separately the Rock Krawler front stackable bump stops, now is a great time to drill the lower bump stop pad with a ½" drill bit. Drill your hole in the center of the pad. We recommend 3 pads for 3.5" of lift and 4 pads for 4.5" of lift. Choose the proper ½" bolt.

16) Remove the OEM spring isolators or spring seats on the axle and replace them with the supplied Rock Krawler spring seats. They are not side specific and use the locating pin on the axle to set their orientation. Please see below.

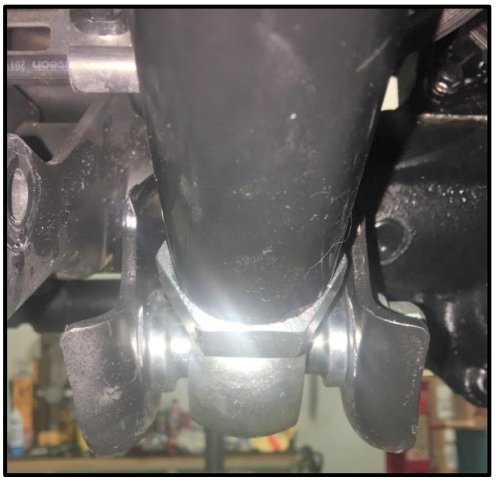
New Bottom Spring Seats Shown with Bump Stop Stack in Place

Driver Side Front Upper Arm Showing Proper Bend Orientation (Away from the frame)

17) **All Systems;** Install the front lower control arms set to the specified length for your kit according to our measurements using the OEM hardware.

Please Note: The bend in the arm is for improved ground clearance and goes up. The Krawler Joint (Zinc Plated Spherical Joint) goes to the axle and the Pro Flex Joint (Bushing Joint) goes to the frame.

Frame Side



Axle Side

18) Install the supplied front coil springs. Make sure the bottom winding of the coil butts up against the stop in the new bottom spring seat and the top winding is properly centered using the OEM spring pad on the frame. If the coil is not seated properly it will bow more than it should and can damage your coil.

19) Install the front shocks using OEM hardware.

***Note: It your OEM shock bolt runs into the control arms, swap them with the rear sway bar link top bolts.*

20) As you are compressing the suspension, install the front track bar reusing the OEM hardware. Be sure to set it to the starting dimensions for your system as specified above. The rebuildable Anti-Wobble joint goes to the frame connection and the heim joint with high misalignment spacers go to the axle connection as shown below. Helpful hint. Be sure to have the steering column unlocked so the axle will swing side to side freely.

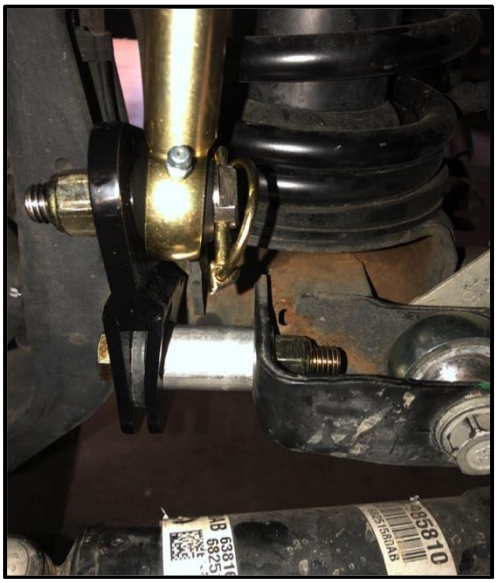
Frame Side

Axle Side

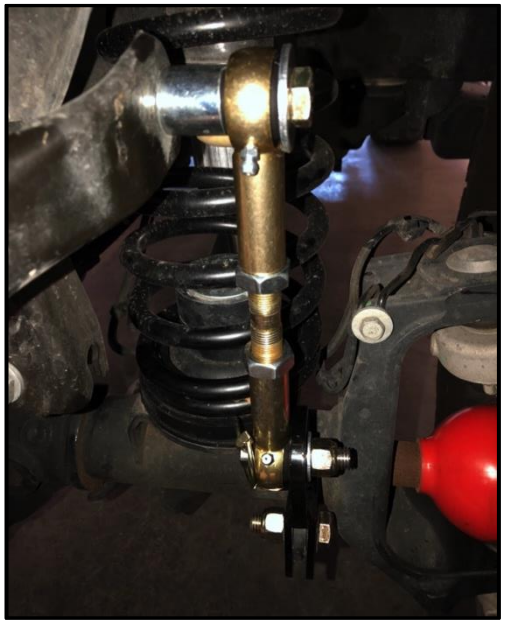
21) Reattach the drag link to the passenger side knuckle.

22) Choose your front sway bar link package (Either Gen 1 Disconnects or Gen 2 Disconnects or No Limits Links (Rubicon Models)). For Gen1 Disconnects follow steps A and B. For Gen 2 Disconnects follow steps C and D. For No Limits Links follow step E.

A. For **Gen 1** Sway Bar Disconnects (No Limits Rubicon Applications Proceed to No Limits Section) Install the newly supplied Sway Bar End Link Relocation Brackets, Pro Disconnects and Sway Bar Straps. Set the center to center length of the assemblies as noted below. Please note: There is a specific Driver Side and Passenger Side Sway Bar Link Relocation Bracket. The Driver Side is thicker and has a wider gap.

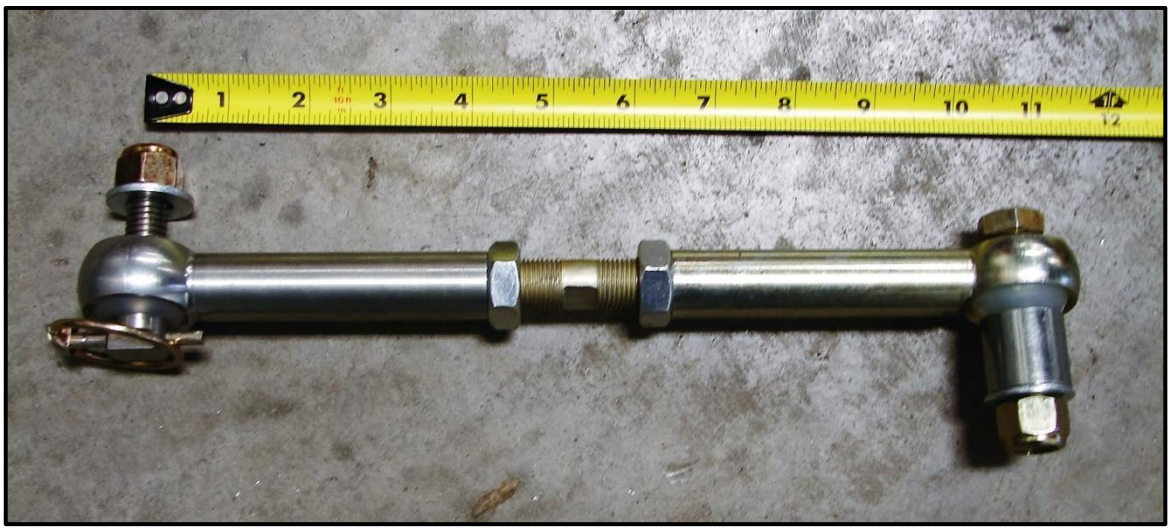


Pass. Side



Driver's Side

The driver side sway bar link relocation bracket has the wider gap of the two brackets. Attach it to the OEM sway bar link tab on the axle. Push it down until it rests on the stock mount and secure it with the supplied ½" x 1.5" bolt, two ½" washers, and ½" nylok nut as shown.

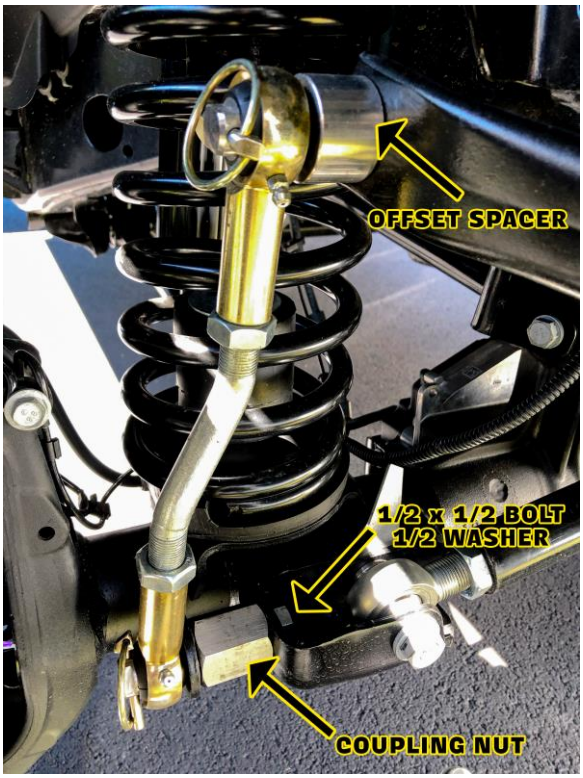


The pass. side sway bar link relocation bracket has a narrower gap than the driver side. Attach the relocation bracket with the supplied 1" long aluminum spacer between the supplied bracket and the OEM track bar mount as shown using the supplied ½" x 3.0" bolt, washers and nylok nut as shown.

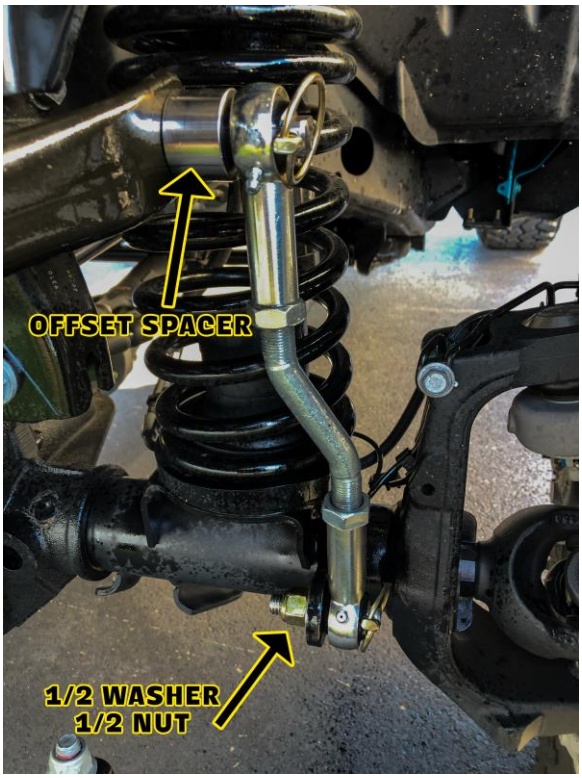
Recommended Starting Lengths 3.5" Systems 8.25" / 4.5" Systems 9.00"

B. To install your sway bar link straps use the supplied 5/16" Bolt, Washers and Nut to attach them as shown to the coil spring bucket. Or you can drill a hole in a more preferred place of your liking.

C. For **Gen 2** Sway Bar Disconnects.



Pass. Side



Driver Side

Recommended Starting Lengths **3.5" Systems 9 1/4" – 9 ½" / 4.5" Systems 9.3/4" – 9 7/8"**

For the Driver Side, the Offset Spacer with Disconnect Pin goes against the sway bar and is secured with a ½" washer and ½" nylok nut. The bottom disconnect pin gets secured to the outside of stock sway bar link mounting tab as shown with a ½" washer and ½" Nylok Nut.

For the Passenger Side, the Offset Spacer with the Disconnect Pin goes against the sway bar and is secured with a ½" washer and ½" nylok nut. The bottom disconnect pin threads into the stainless steel coupling nut as shown. From the inside of the track bar mount, tighten into the coupling nut the ½" bolt with ½" washer. ***Helpful Hint:*** *Do not tighten to spec until all the hardware is installed.* ***Please note:*** *An extra ½ washer and nylok nut is included for the passenger side lower mount for aftermarket axle housings that will not support the coupling nut like the OEM housings do.*

Slide the sway bar links on the disconnect pins top and bottom. ***Helpful Hint:*** *lubricate the pins with WD40 or Liquid Fluid Film to make them easier to slide on and off the stainless steel disconnect pins.*

Please Note: *when locking the jam nuts, the offset in the sway bar link pin is to the outside of the vehicle as shown. Some aftermarket axle housings may not line up exactly like the OEM housings so you can rotate the center link to a front and back offset on those housings as needed.*

Secure the removable sway bar links with the supplied Lynch Pins top and bottom.

D. To install your sway bar link straps use the supplied 5/16″ Bolt, Washers and Nut to attach them as shown to the coil spring bucket. Or you can drill a hole in a more preferred place of your liking.

E. For No Limits Links

Set your sway bar links to the lengths below based on lift height. Torque the jam nuts to 60-75 ft-lbs with the joints in line with one another. This can be done in the vehicle.

Recommended Starting Lengths 3.5" Systems – 11.25" / 4.5" Systems - 12"

Passenger's side connection shown

Start with the side of your choice – Use the supplied 12mm x 70mm bolts, four washers and locknut for each side. Refer to the images below for the orientation of hardware. One washer connects the head of the bolt, that bolt goes through the sway bar link and through the sway bar hole. Then attach another washer followed by a locknut.

23) Tighten all connections per the recommended torque specs above.

24) Put the tires and wheels back on the front end and carefully lower the vehicle to the ground.

REAR OF VEHICLE (Perform all Steps for the System You Are Installing)

1) Make sure vehicle is on a level, hard, working surface if you are using a floor jack and jack stands

2) Block the front wheels so the vehicle cannot move.

3) Raise and support the rear of vehicle with safety jack stands. Locate jack stands on the frame behind the rear axle.

4) If you are using a vehicle lift, place the lift arms according to those specific vehicles lifting procedures. Ensure that the lift arms will not interfere with the components that are being replaced.

5) Remove the rear rims and tires with axle supported by a floor jack.

6) Remove the rear shocks. Save the OEM hardware for reuse.

7) Remove the OEM rear sway bar links and discard them for they will not be reused.

8) For Rubicon models only; remove the electric locker line from the plastic clips holding it to the cross member as shown below to gain slack in the line.

Remove E Locker Line from this connection point to add slack in the line.

9) Disconnect the E Brake Cables from the axle and reroute them ahead of the upper cross member instead of behind the cross member to gain the necessary slack in the E Brake Cables and reattach them to the axle as shown below. Be sure to remove and discard the clip that holds the E brake Cables to the bottom of the floor.

E-Brake cables routed ahead of the cross member

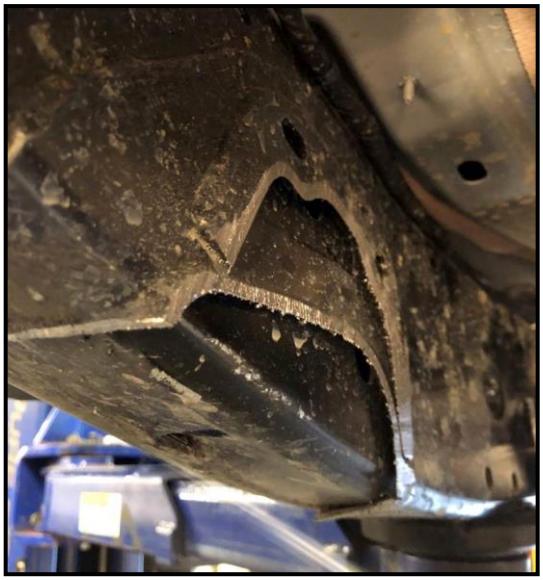
10) Add slack to the breather hose and lower the rear axle assembly onto jack stands.

11) Remove the rear coil springs and bottom spring seats.

12) Remove the OEM rear track bar and save the OEM hardware for reuse.

13) Remove the upper and lower control arms from the vehicle. Except for the upper bolts at the frame side, save the OEM hardware for reuse.

14) Begin removing the upper and lower control arm brackets from the frame. In this example, a reciprocating saw was used to make a large cut. Smooth the frame with a flap wheel disk.

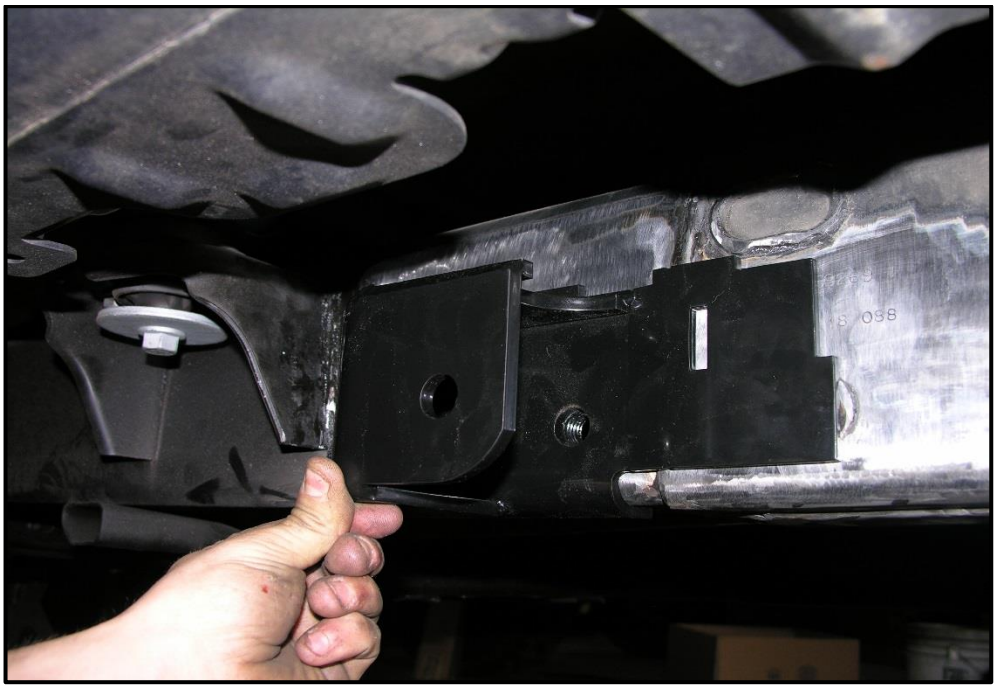


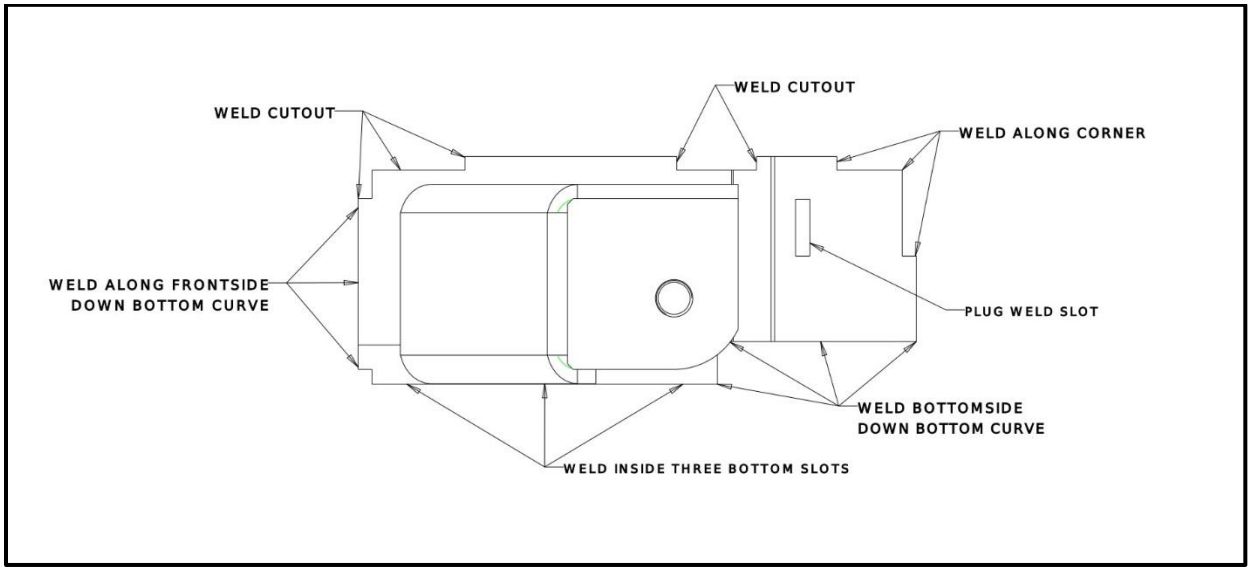
15) Trim the rear lower body mount as shown below to allow for clearance for the high clearance lower control arm.

Trimmed body mount

16) Using a Unibit that steps up to 1" in diameter, upsize the hole in the frame as shown below so the newly supplied rear lower control arm mount welded nut allows the mount to sit flush on the frame. (Driver Side Shown).

17) Align the new control arm bracket to your frame and use C-clamps to hold it in position. Tack the bracket in place once in position. Similarly, to the front brackets, weld inside the designated cutouts on the bracket. It is important to weld the plug weld area, which is the vertical slot in the bracket. Driver Side Shown Below. Make sure the mount sits flush to the frame on the side and bottom with the nut recessed.

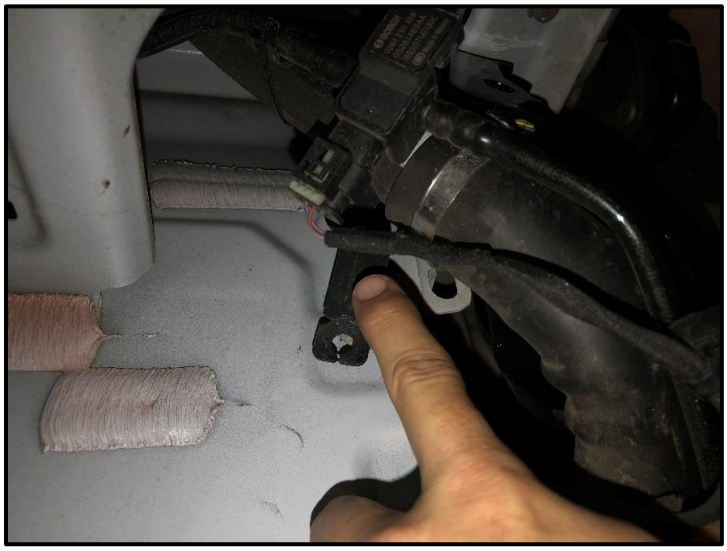




18) Install the rear upper raised shock mounts as shown below.

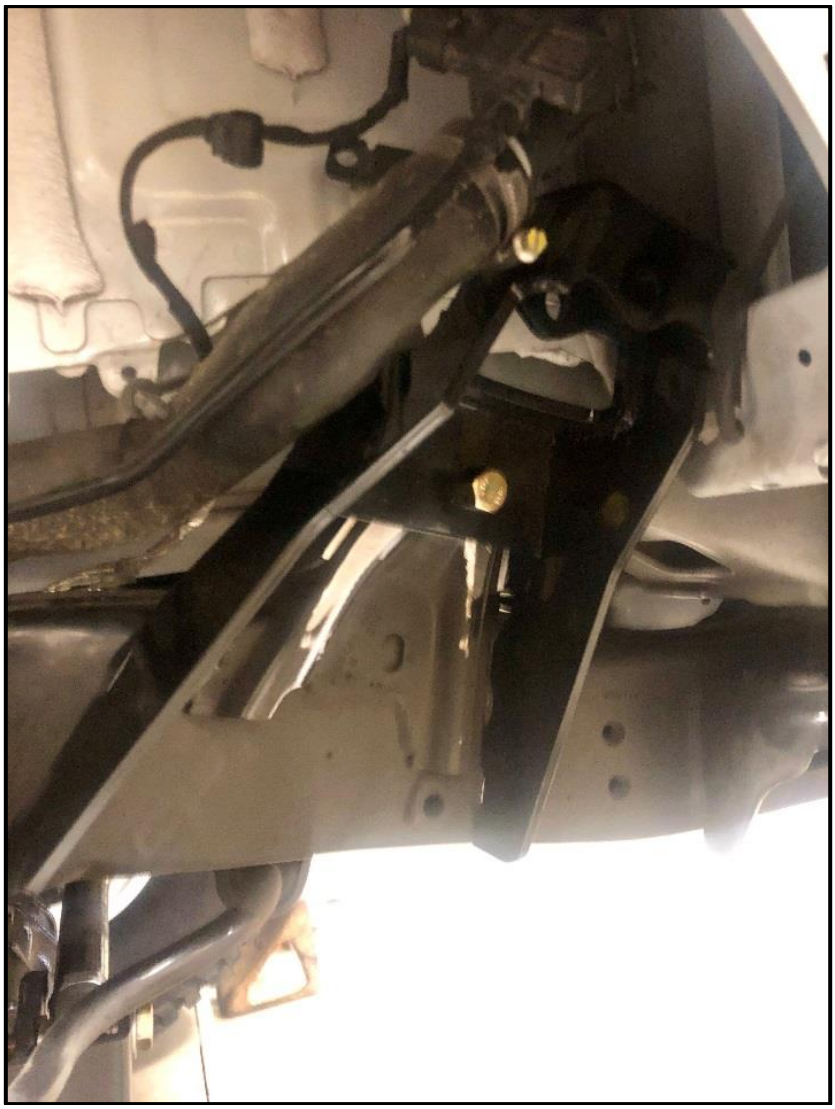
A) Remove the outside of the OEM shock mounts down to the flat face as shown below. This will be used to attach the new mount too for location and structure.

B) On the Pass. Side, you will have to fold over two areas of the pinch weld seam gently for the mount to fit flush as shown above. On the Driver Side, you will want to re-drill the hole in the fill tube mount and bolt it back to the OEM bolt, so it is pulled away from the newly supplied raised shock mounts.



C) Prior to welding on the new raised shock mounts, apply a durable finish to the face of the old back surface of the OEM shock mount to minimize rust and or corrosion.

D) Grab the mounts, bolt them to the OEM shock mount with the supplied 12mm x 30mm bolt and washer as shown. **Please note:** there is a specific driver side and passenger side mount. A good helpful hint is when the mounts are fastened in place on the proper side, the rear leg of the mount will be almost vertical. Prepping the surfaces, weld the new raised rear shock mounts where they make contact with the frame.



Driver Side Shock Relocation Mount Shown

Customers with Remote reservoir shocks should orient them rearwards and

19) Install the rear upper 3rd link mount.

A) Prep the surfaces for welding the third link mount to the OEM cross members by removing the OEM finish as shown below.

Forward Cross Member

Rear Most Cross Member Ahead of the Axle

B) Align the hole in the forward cross member with the hole in the third link mount. Make sure the mount is going straight back and weld it in place on all contacting surfaces on both the front and rear cross members.

20) Now that everything is welded to the frame, prep all the surfaces that have been welded or stripped of paint and apply a durable finish of your choice.

21) Time to tackle the rear axle and make it into a high clearance bad boy.

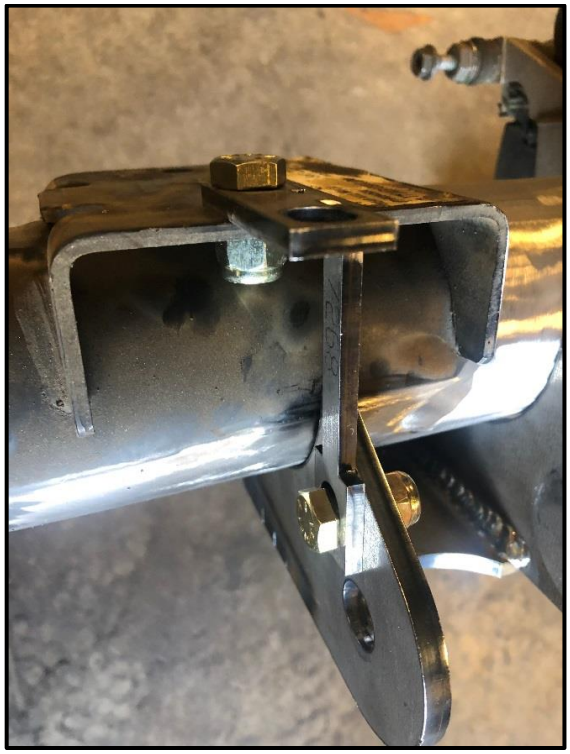
A) **Before doing anything to the rear axle, mark your rear track bar bracket mounting hole location side to side. This will be an important step to line up the new track bar bracket when it gets welded to the axle housing.**

B) Time to cut some stuff off the rear axle.

- Remove the rear lower control arm mounts from the axle
- Remove the rear track bar mount from the axle
- Remove the rear upper control arm mounts from the axle
- Toss them all in the garbage

22) Time to make the rear axle into a high clearance bad a$$ axle by adding all the new brackets

A) Weld the new high clearance lower control arm mounts. Please note: There is a specific driver side and pass. side. The mounts will have a hole on the inside of each mount and the shock mounts are offset to the outside of the mount as is the sway bar link attachment point. We will cover the driver side (The pass. side is the mirror of the driver side). Using the alignment tool, bolt it to the top of the bump stop pad and to the side of the inside of the lower control arm mount. Make sure the new bracket is tight to the tube, then tighten the hardware and fully weld the mount in place all the way around the mount both front and back where it makes contact with the axle tube. Perform the same operation on the passenger side with the passenger side mount.



Driver Side Shown In Both Views Above For Reference

C) Weld the Rear Truss using the supplied truss offset tool as shown below. The truss itself gets mounted physically centered on the axle. The upper 3rd link mount is slightly offset from center as it should be. If you have a thick after market diff cover or something other than stock, be sure to compensate for the difference in thickness. The OEM diff covers are approximately .150-.188 (3/16) thick for reference.

C) Weld the newly supplied rear track bar bracket to the axle housing by lining up the marked bolt hole location from step A with the hole in the bracket, then orient the back surface of the new track bar bracket so it is parallel to the diff. cover and new rear cradle.

D) Weld on the two brake line mounting brackets supplied with the kit. The pass. side is shown below. The bracket is just off the weld for the outer bearing hub and the back surface is parallel to the rear diff. cover, rear cradle and rear track bar bracket.

E) Here is a back view of the completed rear axle assembly for reference.

23) Install the rear upper control arm. Set the arm to the length specified on page 5 of the instructions. This is a double adjustable arm with a bend in it. The long leg of the arm goes to the front of the vehicle. Alongside the joint housing for the frame connection are anti-wobble bushings. Make sure there is one on each side of the joint housing. Attach the front of the arm using the supplied 14mm x 100mm bolt, washers and nylok nut. Attach the joint at the axle connection with the supplied 14mm x 100mm bolt, washers and nylok nut. We suggest starting in the middle hole at the axle connection. To increase Anti-Squat move it to the top hole. To degrease the anti-squat move it to the bottom hole. Please note: The bend in the arm goes down.

24) Install the rear lower control arms. Set your lower arms to the lengths specified on page 5 of the instructions. Attach the Pro Flex (Welded End) to the new frame mount using the supplied 5/8 x 4.5" Bolt and Washer. Attach the Krawler Joint (Adjustable End) to the new mount on the axle using the supplied 5/8 x 4.5" Bolt, Washers, and Nylok Nut. Please note: the bend in the arm goes up. It is a high clearance lower control arm, not a low clearance arm.

24) Install the spring seats on the axle. The thick part of the spring seats goes toward the rear of the vehicle. There is a specific driver and passenger side marked by a 1 or D and 2 or P on the bottom of the spring seats. The passenger side is thicker than the driver side. They key in on the OEM spring pad hole for proper orientation. **For the 4XE Models each spring pad is a thick spring seat meaning they are both the same (The thin one is not used). For 392 Models the Thick Spring Seat is used on the passenger side rear spring seat and the Driver Side just uses the OEM spring seat (i.e. the driver side axle seat is stock).**

Driver Side Spring Seat

Pass. Side Spring Seat w/ Spring Installed

***Please note:** The markings are for LHD applications. RHD applications will be reversed.*

25) Install the Rock Krawler rear coil springs. Make sure to put the closer wound coils go up and the end coil winding is sitting in the top spring seat properly. Please note: the top spring seats are indexed as well with a pin to set their orientation. This too must be correct.

26) Slowly start to compress the suspension and attach the rear track bar to the supplied track bar bracket.

27) Install the rear track bar. Set the dimension to start based on the table on page 5. The anti-wobble joint (welded end) goes to the frame and the heim joint to the axle using the supplied 14mm x 80mm bolts, washers and nylok nuts. *Please Note: The offset in the bar (bend) goes around the rear differential. For the 4.5" lift height we recommend using the top hole. For the 3.5" lift height we recommend using the hole just below the top hole.

28) Install the rear shocks using the OEM hardware at the axle and supplied 12mm x 80mm bolts, washers, and nylok nuts at the frame connection. Please note: to fit the shocks in the rear upper relocated shock mounts a bushing and sleeve conversion will need to be done from the OEM style bushing and sleeve at the frame connection to the OEM style at the axle connection for the frame connection.

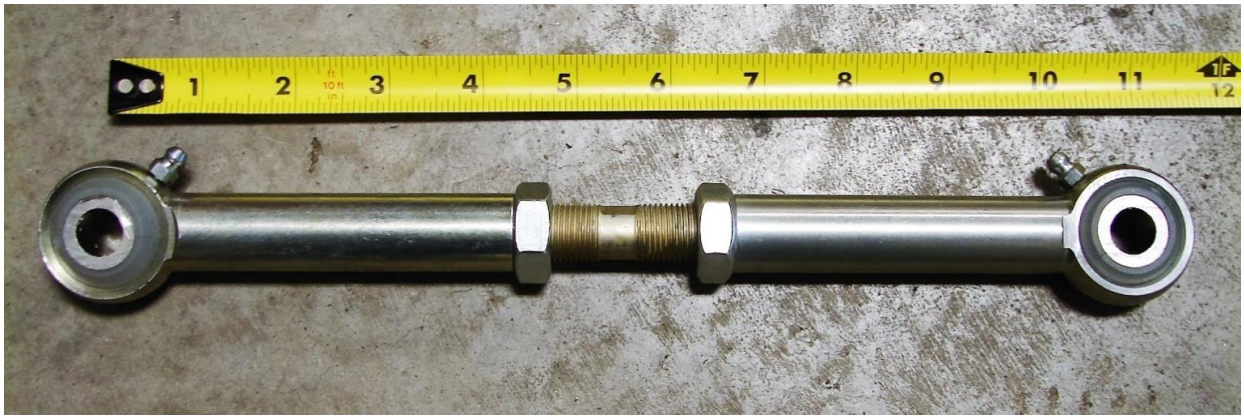
29) If purchased, install the RK fabbed rear bump stops. Our rear fabricated bump stops mount to the factory bump stop pad using the supplied 3/8 x ¾ bolts, washers, and nylok nuts. Make sure the bumps stop angles to the front of the vehicle as shown in the photo below.

For 3.5" lifts we recommend (2) 1" rubber pads stacked on top of the mounting pad, for 4.5" lifts we recommend (3) 1" rubber pads stacked on top of the mounting pad. We recommend having the rubber spacer moved to the front of the pad as far as possible for starters. We also recommend you cycle the suspension to ensure the bump stops are making contact correctly.

30) Install the Supplied Pro Rear Sway Bar Links

Finish removing the OEM rear sway bar links. Set the rear Pro Sway Bar Link assembled length as shown below.

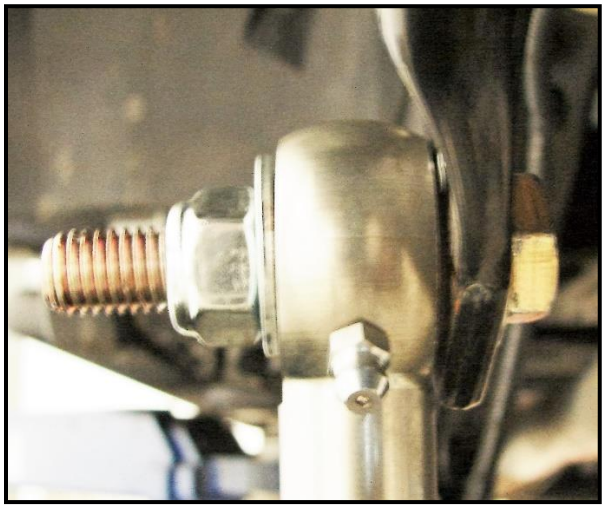
Recommended Starting Lengths **3.5” Systems – 12.5” / 4.5” Systems – 13.0”**



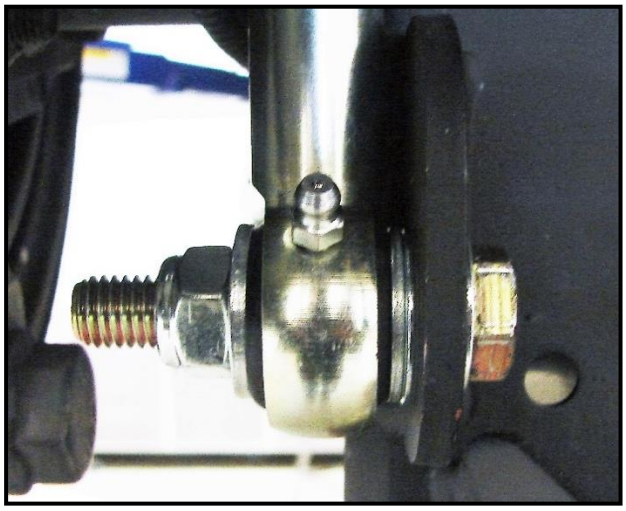
The *pro link* top connection uses the supplied 12mm x 50 mm bolt, washers and nylok nut as shown below. Under the head of the bolt, there is a washer and on each side of the sway bar link ball joint there is a washer and finally they are secured with the nylok nut.

The *pro link* bottom connection uses the supplied 12mm x 50 mm bolt, washers and nylok nut as shown below. Under the head of the bolt, there is a washer. Between the sway bar link ball joint and the OEM mounting bracket, there are two washers to provide extra clearance between the housing and the billet link end, then there is one more washer on the other side of the joint, then finally secured by the nylok nut.

Please Note: The Extra Thick Washer goes on the outside of the ball end so the housings and link assembly cannot slide off. Think of it as an extra-large retaining washer.



Pro Rear Link Top Connection



Pro Rear Link Bottom Connection

31) Install the rear wheels and tires and lower the vehicle to the ground.

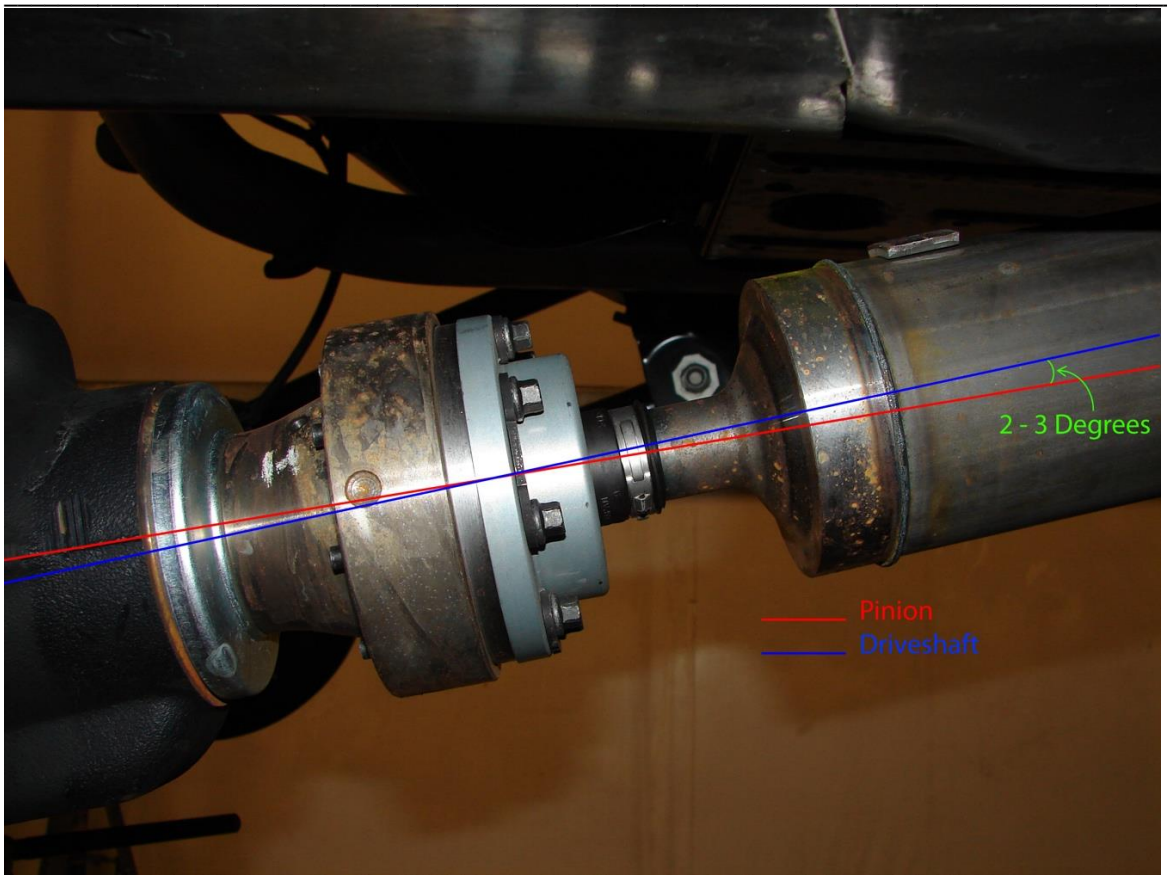
32) Tighten all mounting bolts at this time!

Recommended Alignment Specs are as follows;

3.5"/4.5" Lift Height: 5.0 to 6.0 degrees of Caster with a .2 to .4 Cross Caster Split
.2 to .4 degrees more caster on the pass. side than the driver's side.

Tow: Factory specifications

The rear pinion angle should be down 2 – 3 degrees from the driveshaft as shown.



A note about tires, wheels, tire pressure and how it effects ride quality:

Tire and Wheel combinations at a given tire pressure have their own spring and dampening rates associated with them. This plays a major part in ride quality and off-road performance. The stock tire pressure settings on your Wrangler are based on stock C rated light duty tires on 17″ wheels. Larger aftermarket tires typically have a much firmer side wall than the stock ones, thus increasing the spring rate and decreasing the dampening rate associated with the tires themselves. Going from a C to a D or E rated tire also amplifies this effect. Increasing wheel diameters cuts down on the sidewall size of the tire; for example going from a 17″ wheel to a 20″ to 22″ wheels will increase the spring rate and decrease the dampening rate of the tire and wheel combination. As you increase tire strength and wheel size it is common to have to reduce the tire pressures in order to make your aftermarket tire and wheel combination feel like a stock wheel and wheel combination.

Choose pressures wisely and safely! This is one part of your suspension tuning you can do on your own.

Before hitting the pavement or the trails be sure to make sure the control arms are oriented properly, all spherical joints (heim joints and Krawler Joints) are oriented correctly to allow for maximum movement without bind, and all jam nuts have Loctite on them and are tight. Make sure the axles are properly centered, pinion angles are correct, there is proper slack in ABS lines, and all lines are properly routed. Go back over all your hardware and make sure each connection is tightened to its proper torque spec. Check your vehicles articulation and ensure that no moving parts contact or interfere with any other components throughout the travel (brake lines, shocks, coils, sway bar links). Also check to see if at full flex your coil spring losses tension, if so you may want to look into a limit straps. You may need to look at bump stops depending on what shocks you choose to run.

Congratulations, you have just finished installing your Rock Krawler Suspension System! Your Jeep is now free to roam about the country.

Common Service Parts Listings:

Rock Krawler 000 Grade Grease – 3 oz tube – RK05494 For Systems Before Jan 1 2020

Grade 1 Grease such as Mobil Grease – Mobilux EP1 [NLGI 1] or equivalent can be used for Systems After Jan 1 2020.

Front and Rear Lower Control Arms Prior to 3/1/2021 Part Numbers RK06184 and RK06190

Pro Flex Bushings (Frame End) – RK04838K – Requires Large Joint Tool – RK04484

Front Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK05067

Rear Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK04821

Lower Control Arm Krawler Joint Rebuild Bushings – RK04034K – Requires Large Joint Tool – RK04484

Front and Rear Lower Control Arms After to 3/1/2021 Part Numbers RK06184B and RK06190B

Front Lower Control Arm Adventure Series Joint (Frame End) – RK07404K

Front Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK02256

Rear Control Arm Adventure Series Joint (Frame End) – RK07403K

Rear Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK02219

Lower Control Arm Krawler Joint Rebuild Bushings – RK04034K – Requires Large Joint Tool – RK04484

Front and Rear Track Bars Prior to 1/1/2021 (RK06187 and RK06692/RK06692B)

Anti-Wobble Joint Bushings (Frame End) – RK07836K – Requires Small Joint Tool – RK04487

Replacement Heim Joints (Axle End) – RK03426 (7/8 Shank) – Optional New Misalignment Spacers – RK03428

Front and Rear Track Bars After to 1/1/2021 (RK06187HD and RK06692B)

Anti-Wobble Joint Bushings (Frame End) – RK07836K – Requires Small Joint Tool – RK04487

Front Track Bar Replacement Heim Joint (Axle End) – RK07535 (1" Shank) – Optional New Misalignment Spacers – RK03428

Rear Track Bar Replacement Heim Joint (Axle End) – RK03426 (7/8" Shank) – Optional New Misalignment Spacers – RK03428

Front Upper Control Arms:

Replacement Krawler Joint – RK03524

Replacement Krawler Joint Bushings – RK00221K – Requires Small Joint Tool – RK04487

Rear Lower Control Arms Prior to 3/1/2021 Part Numbers RK07415 and RK07337

Pro Flex Bushings (Frame End) – RK04838K – Requires Large Joint Tool – RK04484

Front Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK05067

Rear Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK04821

Lower Control Arm Krawler Joint Rebuild Bushings – RK04034K – Requires Large Joint Tool – RK04484

Rear Lower Control Arms After to 3/1/2021 Part Numbers RK07415B and RK07337B

Front and Rear Lower Control Arm Adventure Series Joint (Frame End) – RK07404K

Front and Rear Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK02256

Lower Control Arm Krawler Joint Rebuild Bushings – RK04034K – Requires Large Joint Tool – RK04484

Rear Upper Control Arms:

Replacement Krawler Joints – RK04153 (Right Hand Thread)

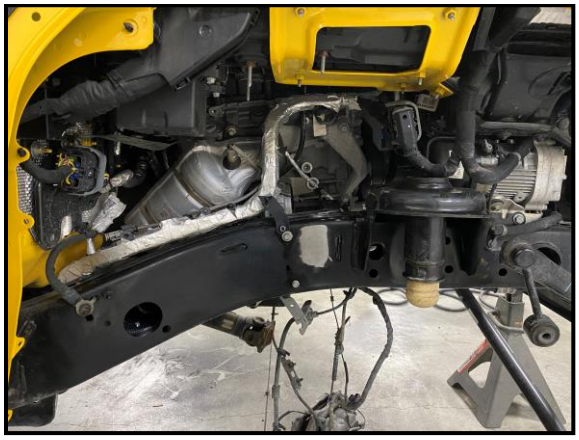
Replacement Krawler Joint Bushings – RK04034K – Requires Large Joint Tool – RK04484

Sway Bar End Links: **Ball Center – RK04573**

For the Optional Coil Over Systems and or Upgrades and Rear Big Boy Shocks Please Do The Following!

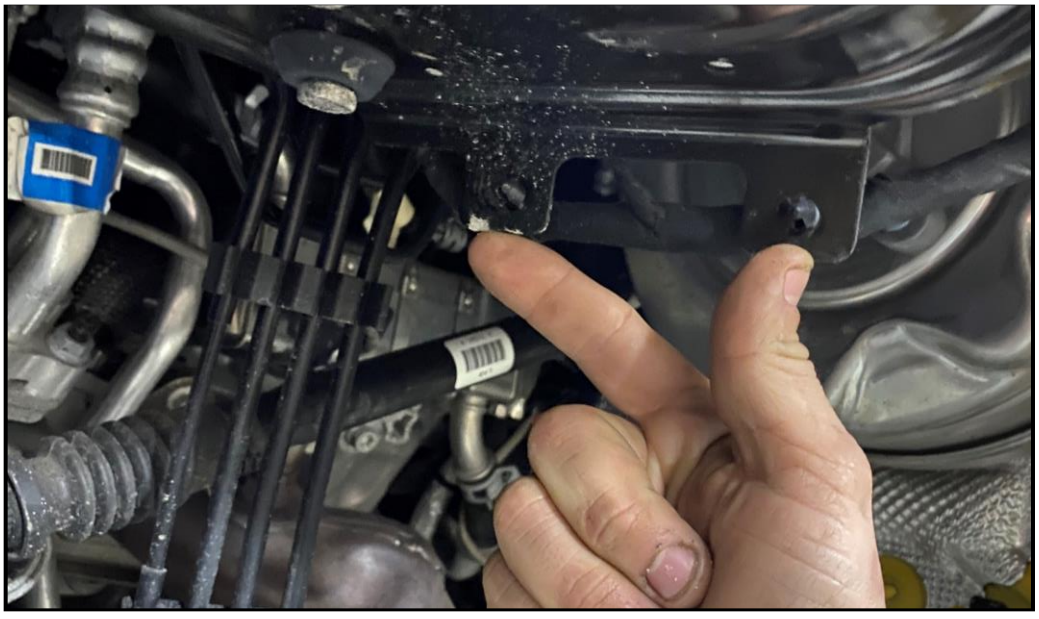
1) Remove the stock shock brackets from your Jeep. It's easiest to score the weld marks and cut the OEM shock tower into pieces. Be sure not to cut any important hoses or wires behind the shock tower. Re-paint any exposed areas with a durable coating after the towers have been removed.

Passengers Side Bracket Removed

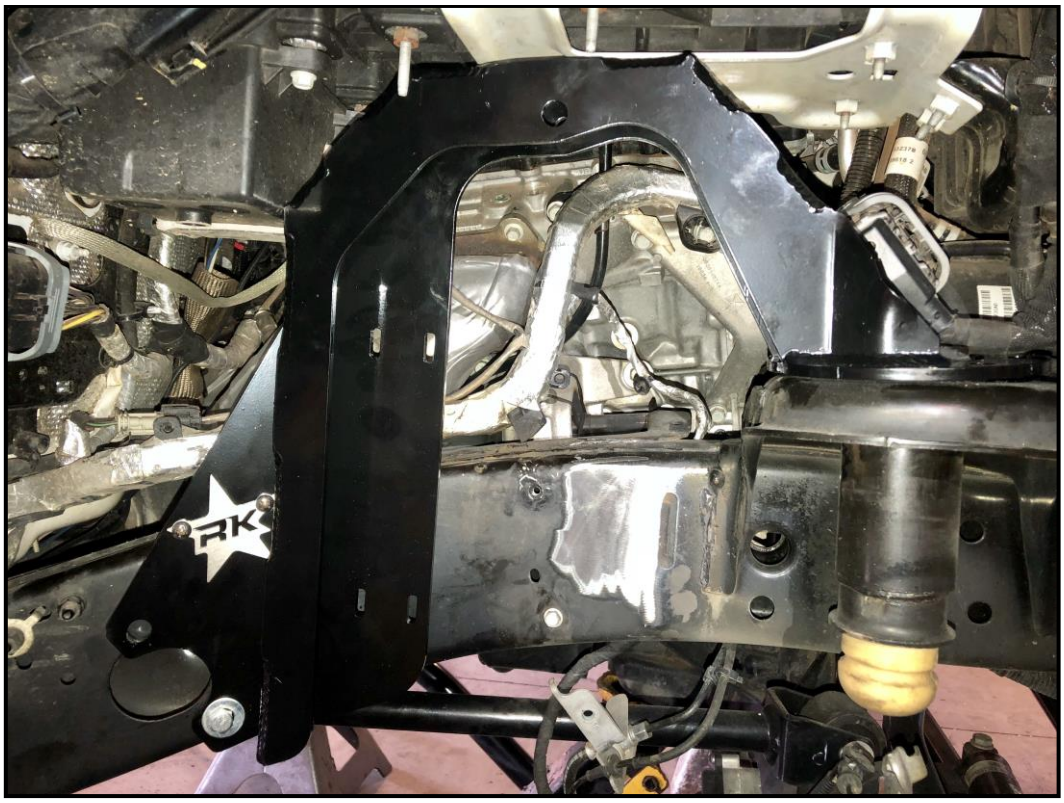


Drivers Side Bracket Removed

2) Make sure to bend the driver's side bracket upwards before test fitting your coil over towers. This will stop the new towers from hitting.



3) Test-fit your coil over brackets as shown below. Clamp the mount about the oval frame side hole and center punch one of the ½" holes. Remove the tower and drill out one ½" hole on the side of the frame. After that, center the coil over mount on the spring tower and drill three 7/16" holes in the spring tower.

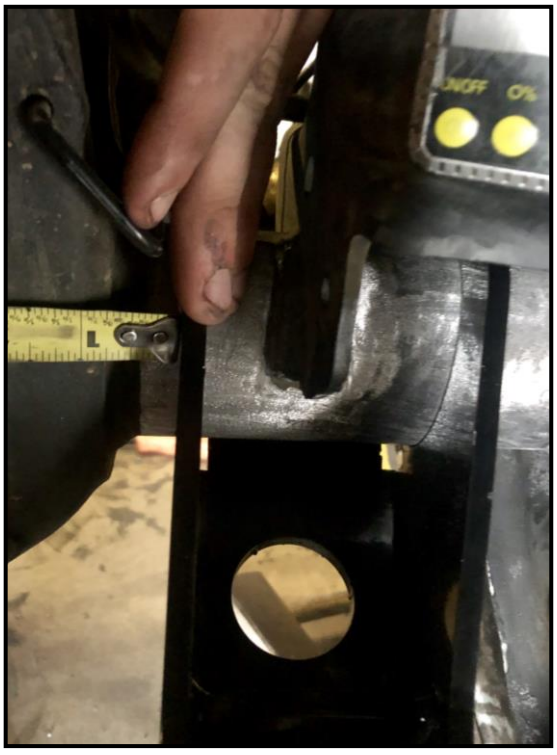


4) Bolt the tower down. The two frame connections get ½″ x 1.25″ bolts, two washers and a locknut each. The three spring tower connections get 7/16″ screws, two washers and one locknut each.

5) Next, remove the OEM bottom shock mount from the frame. You may need to use a Dremel in order to get the last of the mount off the axle cleanly.

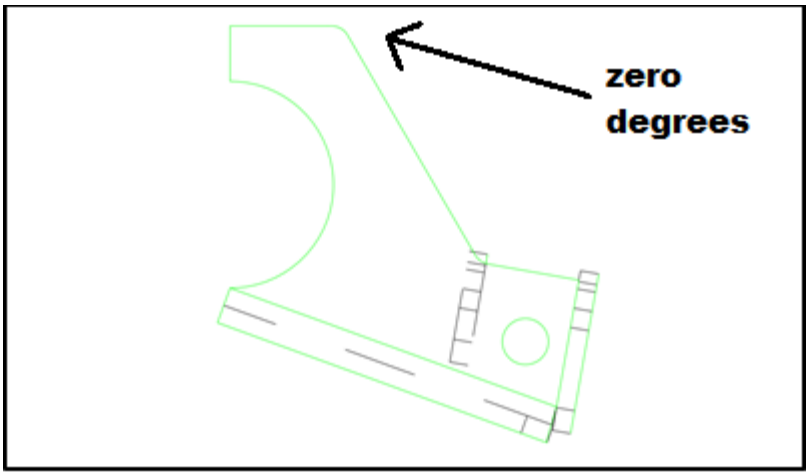
6) Set the caster on the axle to 5 degrees as shown below before welding on the new lower coil over mounts. Keep the axle at that angle for the proceeding steps. Measure from the top ball joint surface.

7) Grind the powder coat off the new mounts in all applicable weld surfaces. Measure ¾" away from the inner C for Rubicon models as shown below. For Non-Rubi models, bring the new mount as close to the axle C as possible. This is because JL Rubi Axle WMS is 68.00"/ JL Sport/Sahara WMS is 66.50".

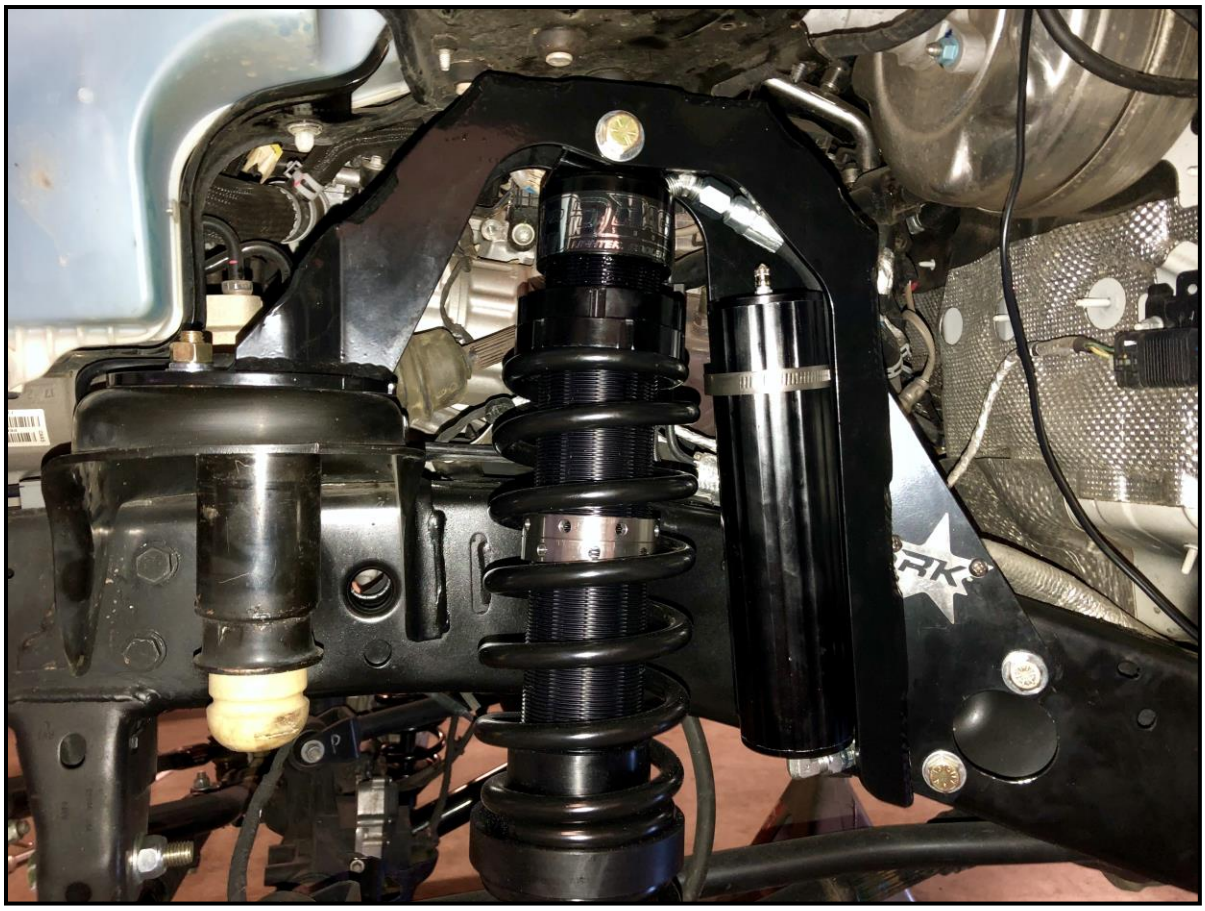


*__Please Note:__ *For some axle housings you may have to trim the OEM spring bucket at the axle for proper coil over shock clearance.*

8) While the axle caster is set to **5 Degrees**, set the top surface of the lower coil over mounts to **0 Degrees**. Make sure the outward spacing from the "C" and angle of zero are correct before you weld these mounts. After, apply a durable finish of your choice to the bracket to prevent corrosion.



9) Test fit the coil over into the vehicle. With the front coil overs, ensure the coil over with more preload attached to the passenger's side. (to account for added weight from the gas tank).



10) Place the supplied spacer on the top coil over connection on the inside of the bearing. Then secure the top connection with a ½" x 3.25" bolt with a washer on each side and locknut on the backside. Then place the ½' x 2.75" bolt through the bottom connection with a washer on each side, locknut on the back.

These mounts are designed as large shock mounts as well as coilover mounts. The spacer simply make this coilover compatible.