INSTALLATION MANUAL

FOR

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ROCK KRAWLER SUSPENSION, INC.

JLU Rockzilla Lite and Rockzilla Suspension Systems

Rev B (02/2024)

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 and we will be happy to help you. **(518-270-9822)**

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 damage from overextending 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 provide traction and feedback 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 joint's 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 number 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 set up, are not covered under warranty. This is the end user and installer's responsibility.

ORIENTATION OF JOINTS

Orient the 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

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

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.

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 due to exposure to the elements.

HEIM JOINTS (Non- rebuildable spherical joints)

All Rock Krawler Heim Joints use Teflon Liners and thus are self-lubricated. 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!

Tools

An installation of this caliber requires the use of a broad range of general hand tools. Do not attempt this installation if you do not have a basic tool set and understand how to use them. Beyond your typical wrenches, socket set, pry bars, hammers, etc. there are a few unique tools you may not realize will be helpful and you should gather before starting. Such as:

- **Hole saw or Step bit up to 1.5 inch and angle drill**
- **Tin snips/ end nippers**
- **C Clamps**
- **Paint Pen/ Marker**
- **Angle Grinder with cut off wheels, sanding disks and flap wheels. Plasma torch is helpful but not required**
- **Welder (required)**
- **Pickle fork (if removing Drag link)**
- **Plasma Cutter (Very Beneficial)**
- **Fuel Line Components (See Fuel System Section of Instructions If Going With The RK Mid Mounted Fuel Cell)**

SUGGESTED STARTING LENGTHS

Measured from Bolt hole to Bolt hole in a straight line not along the bar

Front Track Bar – RK06187HD
3.5" lift (stock axle bracket)– 34 5/16"
4.5" lift (stock axle mount)– 34 7/16"
4.5" lift (raised axle bracket RK08236K)– 34.25"

Rear Track Bar - RK06692B
3.5" lift (w/ bracket RK06718K) – 37 13/16"
4.5" lift (w/ bracket RK06718K) – 37 7/8"

Front Lower Control Arms
3.5" lift heights – 35 13/16"
4.5" lift heights – 35 7/8"

Front Upper Control Arms
3.5" lift heights – 35 1/8"
4.5" lift heights – 35 3/16"

Rear Lower Control Arms
3.5" lift heights – 37 1/2"
4.5" lift heights – 37 5/8"

Rear Upper Control Arm
3.5" lift heights – 36 5/8"
4.5" lift heights – 36 3/4"

Front Sway bar links
3.5" lift heights – 11.25" (No limit links RK07346K)
4.5" lift heights – 12" (No limit links RK07346K)
3.5" lift heights – 9.25" (Gen 2 links RK07331K)
4.5" lift heights – 9.75" (Gen 2 links RK07331K)

Rear Sway Bar links
3.5" lift heights – 12.5"
4.5" lift heights – 13"

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. **Please check out our Rock Krawler YouTube Channel if necessary, for how to set the control arms properly and the importance of Jam Nuts…

Please Note: The front upper arms can be tricky to set properly. Measure from the center of the mounting bolt to the center of the joint as shown.

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 5/8" 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.** GET YOUR BIG BOY PANTS ON! 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 7/8" of threads showing past the jam nut is safe for final adjustment. These specifications are critical for the overall longevity of the threaded section.

❖ **Please note: You will be needing to convert your rear shocks from offset top to narrow width sleeve.**

❖ **Exhaust modifications will be required.**

❖ **If using Rock Krawler front coil over towers you may need to relocate the AUX battery depending on model.**

THE USE OF ANTI SEIZE

If you are in a corrosive environment and would like to prevent rusting and or seizing joint shanks, 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 due to Rock Salt, Liquid Salt, Mag. Chloride and combination with sand and salt.

Vehicle Tear Down

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

2) Raise the front and rear of your vehicle. Support with safety jack stands. Locate jack stands on the frame in front of the axle and as far reward as possible. 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.

3) Remove the front and rear wheels and tires.

4) Remove the front shocks and discard.

5) Do not overextend the front drive shaft. Disconnect the front driveshaft from axle and mark holes to reassemble in the same orientation if needed. Secure out of the way.

6) Lower the front axle assembly onto jack stands.

7) Remove the front sway bar links and discard.

8) Remove the front track bar from the vehicle, discard and save the OEM hardware for reuse.

9) The drag link end will be your limiting factor without shocks to allow the axle to droop. We recommend you separate the drag link from the knuckle connection to allow for ease of axle movement. If the joint is damaged from overextension, adverse handling can result.

10) 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.

11) Remove the metal bracket that held the factory brake line to the control arm from the brake line itself. **Note:** Use 2 pairs 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

12) Remove the front springs and discard them.

13) Remove the front lower control arms and discard, save the hardware for reuse.

14) Remove the front upper control arms and discard arms and hardware.

15) Remove the front OEM shock mounts from the frame, but leave the OEM coil buckets.

a) Remove inner fenders on each side. Also remove the main battery and plan to relocate the AUX battery if needed.

b) 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

c) 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.

16) Remove the OEM front lower and front upper control arm mounts from the frame. Pictures on following page.

a) Remove the four downward facing bolts from the OEM crossmember. Also, remove the second cross member towards the front of the vehicle, closer to the engine. *These bolts will be reinstalled back to front after the new long arm mounts are installed.

b) Temporarily remove sections of the exhaust which will get in your way for the installation. This includes the driver's side loop and the passenger's side crossover pipe. Now you will have room to work. Save the hardware for this will be reused and needs to be put back together.

c) Once most of the brackets are removed, use a worn-out flap disk to slowly smooth the frame until the bracket is no longer visible.

Driver's Side Front Frame Rail

Pass's Side Front Frame Rail

17) Do not over extend the drive shaft. Disconnect the rear driveshaft from axle and mark holes to reassemble in the same orientation if needed. Secure out of the way.

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

19) Remove the rear sway bar links and discard.

20) Remove the rear coil springs and spring seats and discard. Save OEM upper isolators for reuse.
Note: Retain one OEM seat if you have a **392**.

21) Remove the rear track bar and discard, save the OEM hardware for reuse.

22) Remove the rear lower control arms, save the OEM hardware for reuse. Discard arms.

23) Remove the rear upper control arms. Discard arms and hardware.

24) **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. **(Shown Below)**

25) 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. **(Shown below).**

26) Remove all of the OEM rear upper and lower control arm mounts from the frame. Smooth the frame with a flap wheel disk for a nice clean look.

27) Remove the outside of the OEM shock mounts down to the flat face as shown below. The new mounts will mount over the top for placement and structure.

28) Fold over two areas of the pinch weld seam gently for the mount to fit flush as shown below. On the driver's side you will want to redrill the hole in the fill tube mount and bolt it back to the OEM bolt so it is pulled away from the new shock bracket.

29) 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.

30) 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. Prep the surfaces, weld the new raised rear shock mounts where they contact the frame. Paint with a durable finish once cooled.

Driver Side Shown

31) Remove the Gas tank entirely and set it a long long way from the vehicle. Disconnect all the fuel lines, electrical connections, and evap system connections with care.

Long Arm Mount Installation

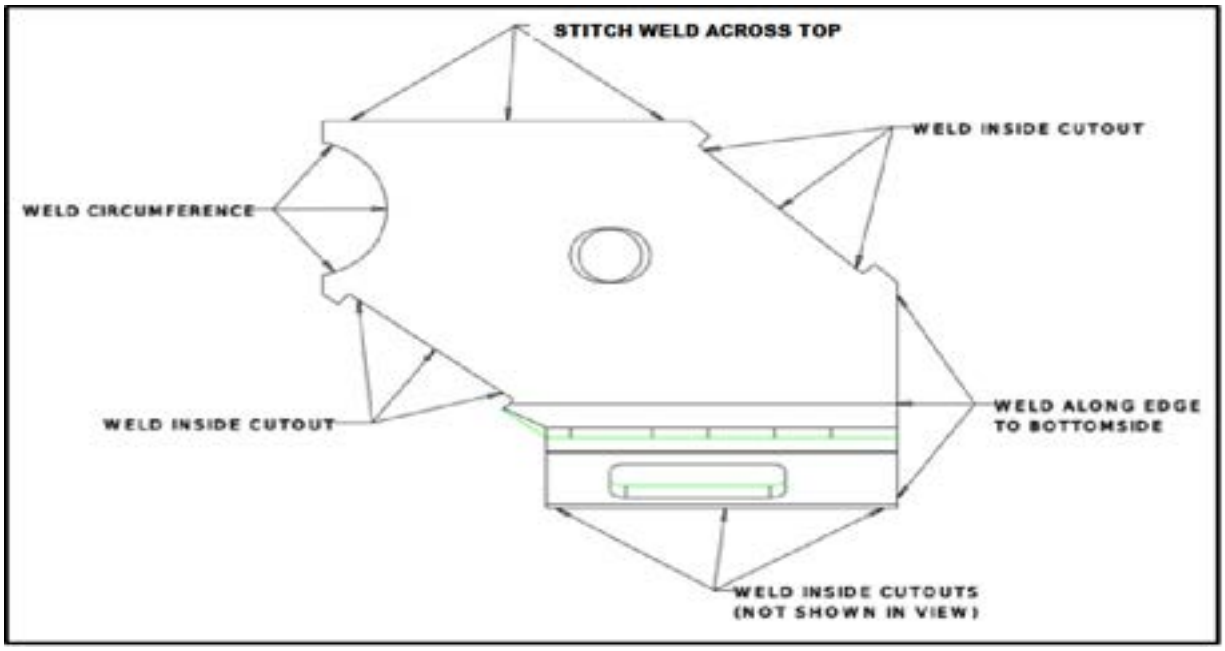
***Please note:** All the front long arm mounts and rear cross member is positioned solely by the center skid plate so there is absolutely no guess work. Make sure to flip the hardware for the stock cross member mounting so it goes back to front as mentioned prior during the tear down process.

1) Position the skid plate loosely under the OEM Cross member using the OEM hardware in the factory cross member.

2) Grab the front long arm mounts. You will notice a nut welded to the back side of the mount that will need to be recessed into the frame for the passenger side. Position the mounts loosely with the supplier ½" x 1.25" carriage bolts, spiral lock washers and free running ½-13 jam nuts. Mark the nut position on the frame. The driver side, this is not required.

3) Using a Step Bit is the best solution for drilling the frame for the clearance hole marked for the welded nut. Drill out the hole using a right angle drill (easiest option) to 1.125 to 1.25" using the Step Bit. If you mismarked the hole in the frame for the weld nut, you can go up to 1.5" if needed

4) Prep the front long arm mounts and frame surface for welding as shown below. Make sure the mounts sit squarely against the frame. Weld in as shown with a 3/16 fillet weld

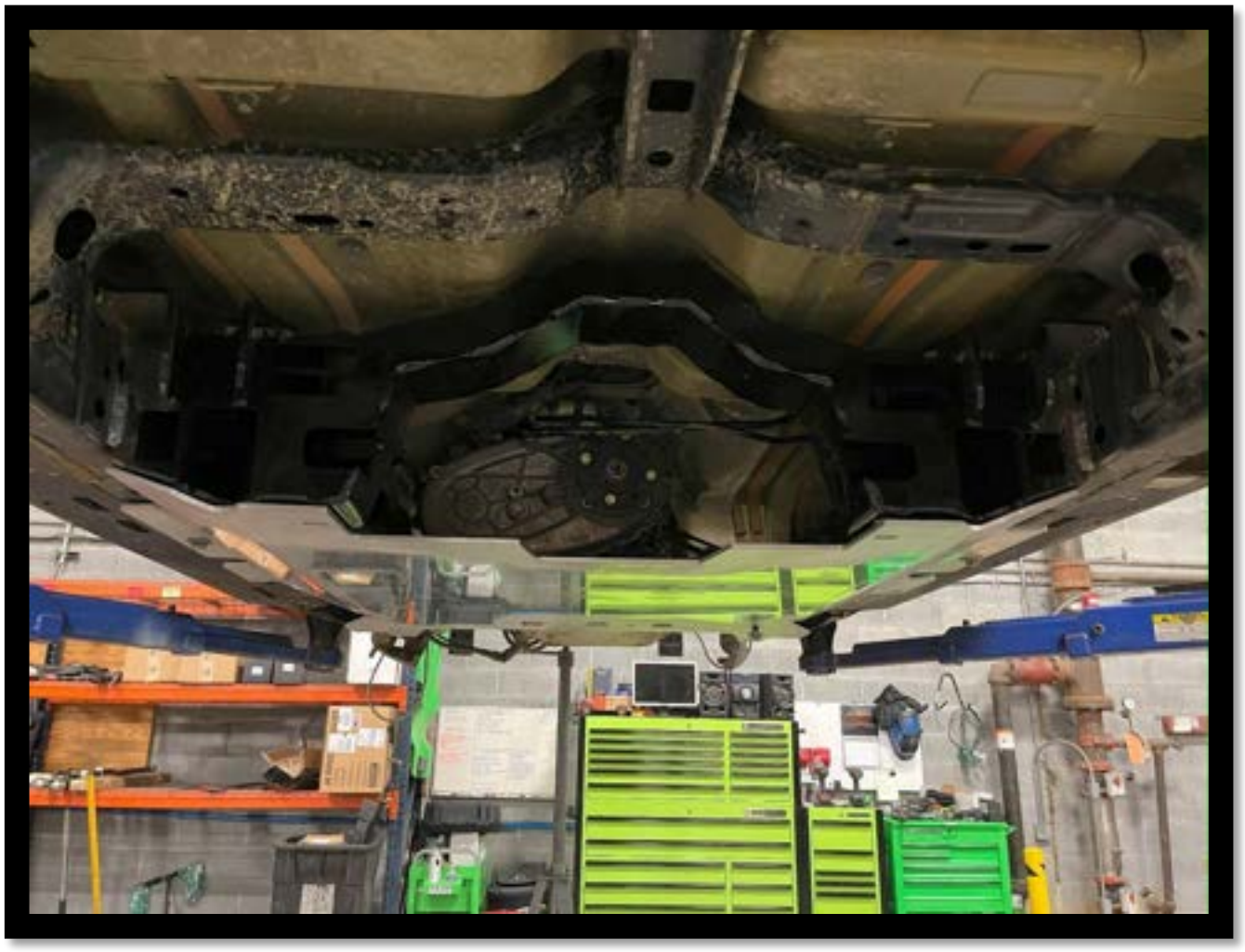


5) Apply a durable finish to the raw steel surfaces to prevent or minimize rust.

6) Position the rear cross member, using the supplied ½"x 1.25 carriage bolts, spiral lock washers and ½-13 jam nuts and the bolt holes in the skid plate. Please note: you may have to flap disk just a little off the ends of the rear crossmember. We make is ever so slightly wide to account for factory frame variances. Mark all the surfaces and prep them for welding.

Prepping the surfaces and ensuring a snug fit for the rear crossmember

7) Weld all mating surfaces using a ¼" fillet technique both front and rear of the crossmember and on each side of the vehicle. Then apply a durable finish of your liking on the bare surfaces to minimize rust and or corrosion. *Please note: minor dimpling of the floor pan may be required with a dead blow mallet for clearance purposes.



This makes for a bad ass, super clean assembly once installed.

8) If you are using the RK mid mounted fuel cell, then do the following. Otherwise skip this step and proceed to step 9….

a) The RK mid mounted fuel cell mounts above the skid plate and shares some of the holes, but secures with a few non shared holes so if you ever have to drop the skid plate, the fuel cell remains in place.

b) The RK mid mounted fuel cell locates using ½ of the skid plate bolts as well. Use the OEM 12mm bolts that were in the frame prior to disassembly for the majority of the holes. For the holes that are in the frame, mark the center of the hole, drill the holes with a 7/16 drill bit and use the supplied ½" thread former bolts and ½" washers to secure the remaining mounting mounts.

c) Use the supplied cross member bracket as shown below, cut the cross member and weld the newly supplied bracket in place. This will allow for the fuel fill hose to clear without pinching when attaching it to the RK Mid Mounted Fuel Cell. After the weld cools, apply a durable finish of your choice.

d) OK. Here is where we said, we keep some separation from fuel system liability, and you have to get a few items to complete the fuel system plumbing.

- You will need the following items and or helpful hints for your fuel system connections; to shorten the fuel line to the engine we used Dorman push to lock union 730-6767. The fuel return line stayed stock. The over flow hose from the sending unit to the filler neck must get lengthened. In a straight section cut the hose, install a line extension using (2) push to lock unions and a piece of 5/16 nylon hose. For reference we used (1) Dorman 5/16 fuel line tube 730-5613 and (2) Dorman 5/16" push to lock unions 730-6764. We used 3/8 hose fuel line with an inline fuel filter and (2) hose clamps for the line inside the tank from the bottom of the sending unit as shown. The inline filter for a prefilter was Wix 33003 or Napa 3003. Fuel Filler Hose and Coupler (Coupler with a Check Valve is preferred) to extend the fuel fill to the tank. HDIS-0010 Discriminator Valve (Kartek has them) to keep the fuel system Evap compliant and avoid the dreaded check engine light hose and connectors. Small gage wire and butt connectors will also be required to extend the electrical from the original sending unit location to the new sending unit location.

e) Before installing the sending unit into the RK mid mounted fuel cell, attach the hose (and optional secondary fuel filter) to the bottom of the pick up canister as shown below.

f) Install the OEM sending unit in the RK mid mounted fuel cell. We recommend positioning the optional secondary fuel filter toward the middle of the fuel cell as shown above. The weight of the fuel filter and being centered in the tank will allow it to follow the fuel through angles so you minimize the chances of ever running dry when low on fuel at odd angles. Install the OEM O Ring under the sending unit in the groove and equally tighten down the ¼"-20 carriage bolts, washers and nuts all the way around to 6 ft-lbs. *Note, make sure the fuel level sensor arm is positioned front to back so it functions properly to show you the correct fuel level on the gage at all times. This assembly will look clean and OEM once finished.

Sending Unit Installed

g) Put the fuel cell up into position using the bolts that hold it up in place (not the bolts that also hold the skid plate to make working on the fuel system connections as easy as possible). Once put up in place, attach the sending unit lines that you assembled to the OEM connection points. Attach the fuel fill line to the nipple on the on the fuel cell. Here is where the Discriminator Valve comes into play. It is recommended to install the Discriminator Valve as vertical as possible so it can function properly as shown below. The Discriminator Valve is in line to the Evap Canister and completes the emission requirements for the new fuel system.

Proper Discriminator Valve Orientation

h) Extend the electrical connections as required with simple butt connectors so they reach the new sending unit mounting position.

i) Now that the fuel system is plumbed we can move on to other portions of the installation. If you are using a different fuel cell other than the RK fuel cell, some of the tips and tricks may be very useful to you so you do not get any check engine lights or anything like that.

Axle Bracket Installation (Axle Preparation)

1) For the front axle assembly do the following:

a) If you are using the OEM front bump stop and 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 supplied.

New Bottom Spring Seats Shown with Bump Stop Stack in Place

b) Mark the position of the front upper passenger side mount on the axle housing and remove it entirely. Position the newly supplied front upper mount as shown below exactly where the removed front upper mount was. *A helpful hint on orientation is the front face of the new mount should be parallel to the front track bar mounting face on the axle. Fully weld it in place using ¼" fillet welds on all mating surfaces. After the welds cool, apply a durable finish of your choice.

If you have a Dynatrac XD Pro Rock 60 you can also run the mini truss mount that bolts to the differential mounting pads for locational purposes and then gets fully welded in place as shown below.

Dynatrac XD60 Front Upper Arm Mount Mini Truss

- *Please note, some flap disking for perfect fitment of the above items maybe required due to axle variations or welding variations.*

c) Install the front lower coil over mounts on your axle. Take your time with this one. Here is our basic orientation of the brackets and weld procedure, but due to axle variations with tube widths, track widths, etc. you will want to cycle your steering and suspension before committing to exactly where these should be.

Remove the bottom shock mount from the axle if so equipped. You may need to use a Dremel in order to get the last of the mount off the axle cleanly.

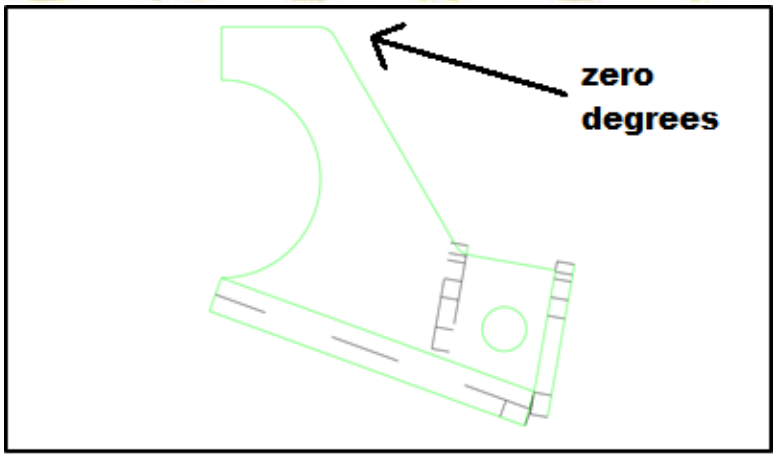
Set the caster on the axle to 5 degrees (or per the axle manufacture you are using recommended caster setting) as shown below before welding on the new lower coil over mounts. Keep the axle at that angle for the proceeding steps. Measure from the top ball joint surface.

Prep all the mating surfaces to prepare for welding. 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". For 72" WMS Dynatrac XD60's and Currie HP60's measure 1" away from the inner C. UD60's have unique lower coil over mounts that only position one way. Fusion 4x4 axles can have custom widths so you want to start with the recommended positions and tack them in ensure you optimize your clearances and suspension cycling.

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

While the axle caster is set to 5 Degrees (or your axle manufacturer's recommended caster setting), 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.



2) For the rear axle housing do the following;

a) Install the supplied rear upper axle truss! This covers the stock axle housing, Currie and Dana Low Pinion 60 Rears.

Install the cradle onto the rear axle. For Standard Trusses (Currie Low Pinion and UD60): Center the cradle left to right on the axle and make sure the third link mount on the top is open to the front. Then hold the offset tool as shown below against the factory differential cover and rotate the cradle back until it contacts the offset tool. Remove any paint where the cradle touches the axle for a good weld. Weld it in place on front and back using a ¼" fillet weld as shown below. Apply a durable finish of your choice after welding. **Please note:** If you have a thick aftermarket 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. If you have another axle contact us for proper brackets.

*Please Note Dynatrac Trusses Bolt into position using the top landing pad bolts to position the truss, then it gets welded to the tubes. Fusion 4x4 supplies the truss already on the axle.

b) Weld on the brake line mounting brackets supplied with the kit, one to each side. 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.

c) 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's 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 weld them in place using a ¼" fillet weld on all mating surfaces for final assembly. Do to the variations in axles and mounting bracket placement we advise to tack these in place and cycle the suspension to ensure the arms do not make contact with the frame anywhere prior to performing the finish welding. bracket placement we advise to tack these in place and cycle the suspension to ensure the arms do not make contact with the frame anywhere prior to performing the finish welding.

Initial Assembly Installation

1) Position the front and rear axle back under the vehicle. We are going to work our way front to back.

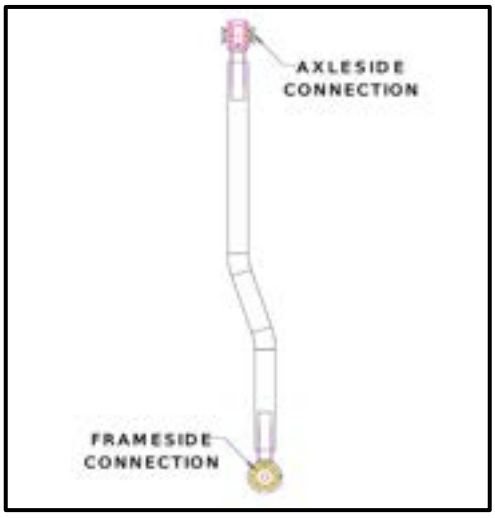
2) Install the Bolt In Upper Coil Over Mounts as shown below.

   a) 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.

   b) 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.

c) 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. Repeat the procedure on the driver side.

3) Install the front upper arm setting the assembled length to the table in the instructions at the beginning of the installation manual. Use the supplied 14mm x 100mm bolt and washer at the frame connection and the 14mm x 100mm bolt, washers and nylok nut at the axle connection. The long side of the arm goes forward and the Z shape compliments the frame curvature as shown below.



4) Install the front lower control arms again setting the assembled length to the table at the beginning of the instructions. Use the supplied 5/8 x 4.5" bolt, washers and nylok nut at the frame connections and the OEM hardware at the axle connection.

5) Install the front track bar with the antiwobble (welded end) to the frame and the custom FK rod end and high misalignment spacers at the axle connection using the OEM hardware. Please note; the two o rings go along side the antiwobble joint housing at the frame to provide the "antiwobble feature".

Frame side track bar

Axle side track bar

6) Hang the front coil over assemblies. Please note: you are not setting preload and cross over rings just yet. That is after we get everything properly dialed in properly for caster up front and rear pinion out back. Install coil over with minimal preload and transition rings in a spot where the slider won't contact. 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. *Please Note: These mounts are designed as large shock mounts as well as coil over mounts. The spacer simply makes this coil over compatible. The remote reservoir secures with the supplied hose clamps with the hose routed completely protected as shown below. The hose clamps go through the designed slots in the coil over tower.

7) Grab the rear upper arms. Set them to the assembled length at the beginning of the instructions in the table. Attach the Krawler Joint at the frame and truss connection with the supplied 14mm x 100mm bolts, washers and nylok nuts. The bend in the arms go toward the front of the vehicle and are clearance for the cross member. We typically start on the upper holes at the frame connection points and if so equipped the bottom hole on the rear truss (not all trusses have two sets of holes due to packaging).

8) Grab the rear lower control arms. Set them to the assembled length at the beginning of the instruction in the table. Attach the Krawler Joint at the frame and truss connection with the supplied 5/8 x 4.5 bolts, washers and nylok nuts.

9) Install the supplied Heat Shield Products Sticky Shield to the front long arm mounts as shown below. This will provide a heat barrier between the exhaust and the joints just like the OEM does for their control arm bushings. This is very important. Pass. Side Shown Below.

10) Choose A or B depending on which Rockzilla Kit you have (Lite or Full Blown Rockzilla)

a) Rockzilla Lite (**Full Blown Rockzilla move to B**) install the rear coil correction pads as shown to account for vehicle lean and spring bow!

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's side on the **3.6L and 2.0 Turbo as well as the Diesel**. They key in on the OEM spring pad hole for proper orientation.

- **392 Models use only a Thick Spring Seat on the passenger side rear. The Driver Side just uses the OEM spring seat.**

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

Driver Side Spring Seat

Pass. Side Spring Seat w/ Spring Installed

Install the Rock Krawler rear coil springs with the close winding up making sure the coils sit properly in the OEM spring seats at the frame and the spring seats remain centered in the sheetmetal coil spring buckets. If you do not keep everything concentric it will cause coil spring bow and issues.

Install your rear shocks with the supplied ½" x 2.75" bolts, washers and nylock nuts. If you have RK 2.625 RR Shocks, the Ressy gets attached right back to the body with the supplied Ressy isolators and stainless steel hose clamps.

b) For the Full Blown Rockzilla (**Rockzilla Lite Skip This Step and go to #10**) setup and have the RK 2.625 Coil Overs perform the following;

Grab the supplied Ressy mounting bracket as shown below. Mark the center point of the two holes and drill (2) 5/16 holes. Attach the reservoir mounting brackets with the (2) supplied 3/8 thread formers and (2) 3/8 washers as shown blow (Driver Side)

Install the Rear Coil Overs with the supplied ½ x 2.75” bolts, washers and nylock nuts as shown below. The Ressy attaches to the Ressy mount using the supplied stainless steel hose clamps. (Driver Side Shown)

11) Set the vehicle on the ground.

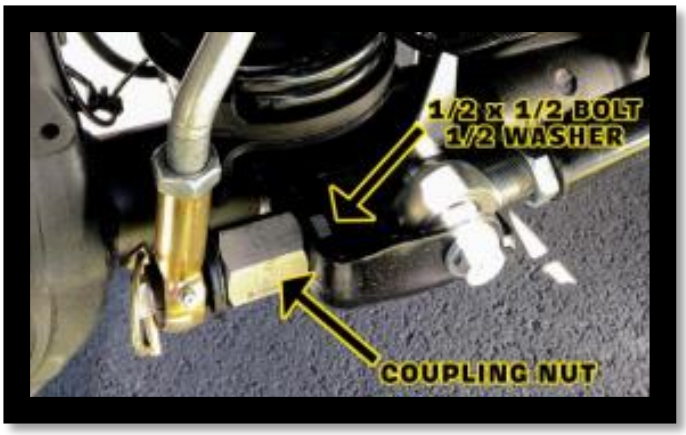
12) Install the front sway bar disconnect and sway bar straps as shown below.

Recommended Starting Lengths: 3.5" Systems 9.25" | 4.5" Systems 9.75"

a. For the **Driver** and **Passenger** Side **Top**: The Offset Spacer with the Disconnect Pin goes against the sway bar and is secured with a ½" washer and ½" nylok nut. Orient the Disconnect Pin so the lynch pin goes in vertically.

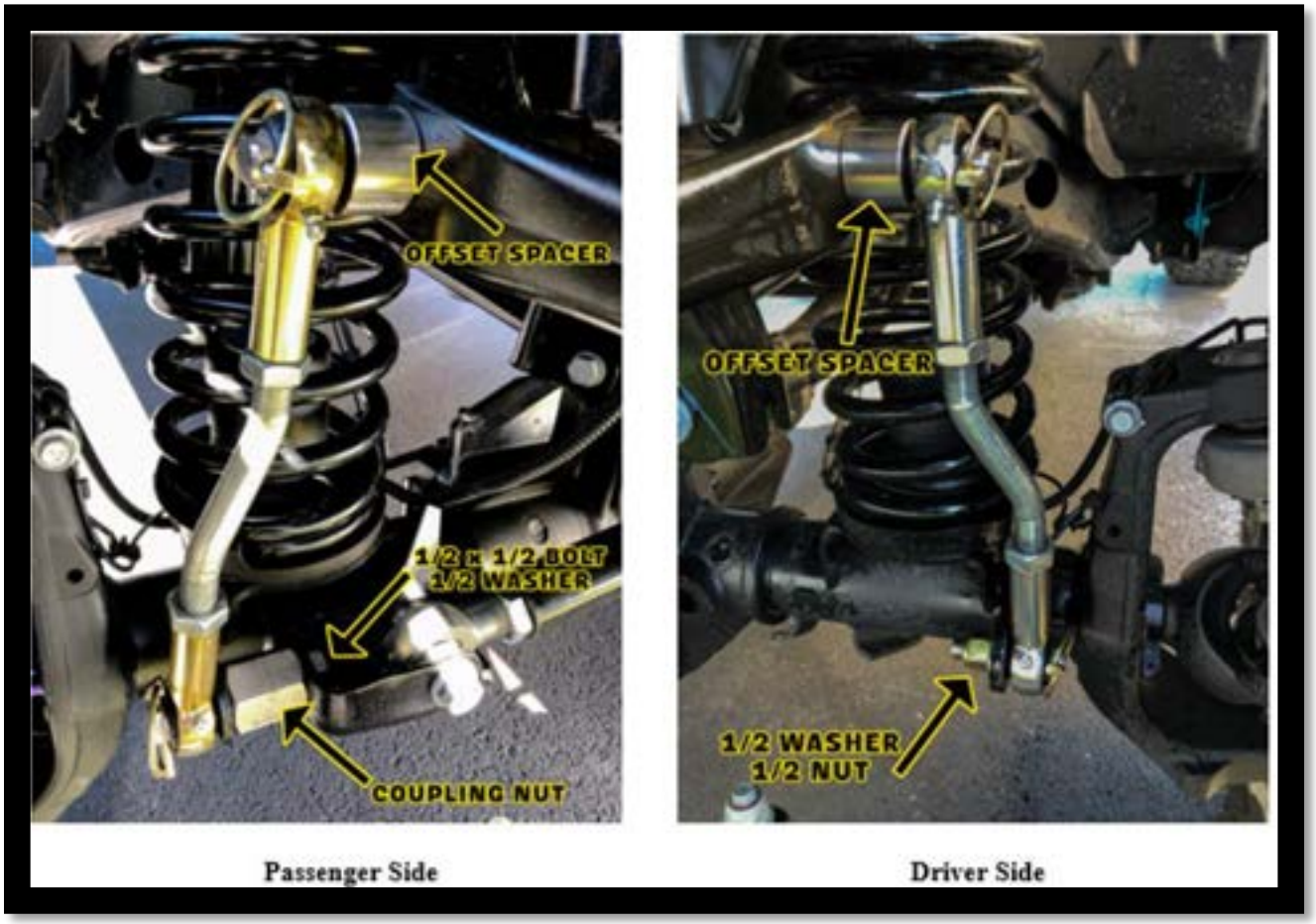
b. For the **Driver** side **Lower:** The bottom disconnect pin gets secured to the outside of stock sway bar link mounting tab with a ½" washer and ½" Nylok Nut. The bottom can be oriented in any direction you find easiest to remove the lynch pin.

c. For the **Passenger** side **<u>Lower</u>**: Starting from the inside of the track bar mount. Tighten into the coupling nut the ½" bolt with ½" washer by holding the coupling nut and tightening the bolt. You may elect to use locktite at this time.



d. Slide the sway bar links on the disconnect pins top and bottom and insert lynch pins.

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. 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.*

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.*

e. 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.

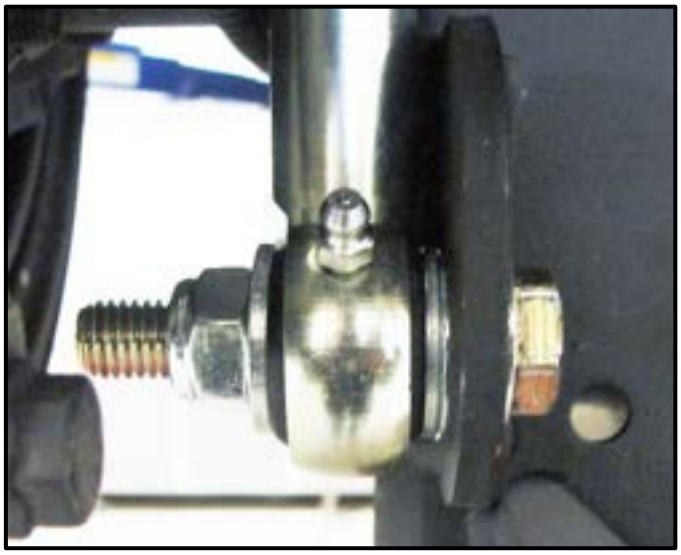
13) Install the rear sway bar links as shown below.

a) 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 small 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 large washer goes against the ball to retain the ball and socket joint.

b) 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 small 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

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

14) 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. After the full installation is complete cycle the suspension to ensure the bump stops are making contact correctly. If you elect to add additional bump stop pucks to the pre fabbed pad, we recommend having the rubber bump puck installed as far forward as possible of the pad to start.

    a. For 3.5" lifts we recommend **one** additional 1" rubber pads stacked on top of the mounting pad.

b. For 4.5” lifts we recommend **two** additional 1” rubber pads stacked on top of the mounting pad.

15) If yet not reconnected, reinstall the front and rear drive shafts and reconnect all the exhaust connections. For routing the exhaust through the new configuration for suspension, we left room down the drive side as shown below. Make sure all your brake lines are routed properly, fuel system connections are tight so on and so forth.

16) Time to make all the proper adjustments to get the vehicle to get it to sit the way you want it to sit, set the caster and pinion angles for final dialing in before you take your first drive.

    a) Adjust the preload on the front and rear coil overs to achieve your desired stance. We recommend taking all the load off the coil overs to make adjusting the preload easy. Take your measurements while the vehicle was on the ground and adjust each corner as desired. Please note: each corner will more than likely be different as the Wrangler is not a perfectly symmetrical vehicle. Typically you want to have 5" of up travel minimum at all 4 corners for a good ride and off road fun. Set the cross over rings on the coil overs 1" off the plastic sliders for your initial transition starting point. This can be adjusted based on driving style and desires after the ride height is finalized. The closer the transition rings are to the slider, the faster the spring transition thus, you will not bottom out as fast. If you find you are not bottoming out ever, then move the transition rings away from the plastic slider. We recommend incremental movements of ¼" from the initial starting position. **Please note: upon initial driving, the coil over coils will brake in fairly quickly so it is not uncommon to have to make a few adjustments to preload and cross over rings until everything has been run in.*

b) As you are setting your ride height from 15a, make sure you are keeping your axles square with control arm and track bar adjustments, you are keeping your caster set to the below recommendations or the recommendations of the axle supplier used, and you are keeping your rear pinion angle proper.

c) You are about ready to take your first test drive. But, **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 all Adventure joints are relaxed and neutral at ride height. 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 loses 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.**

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.

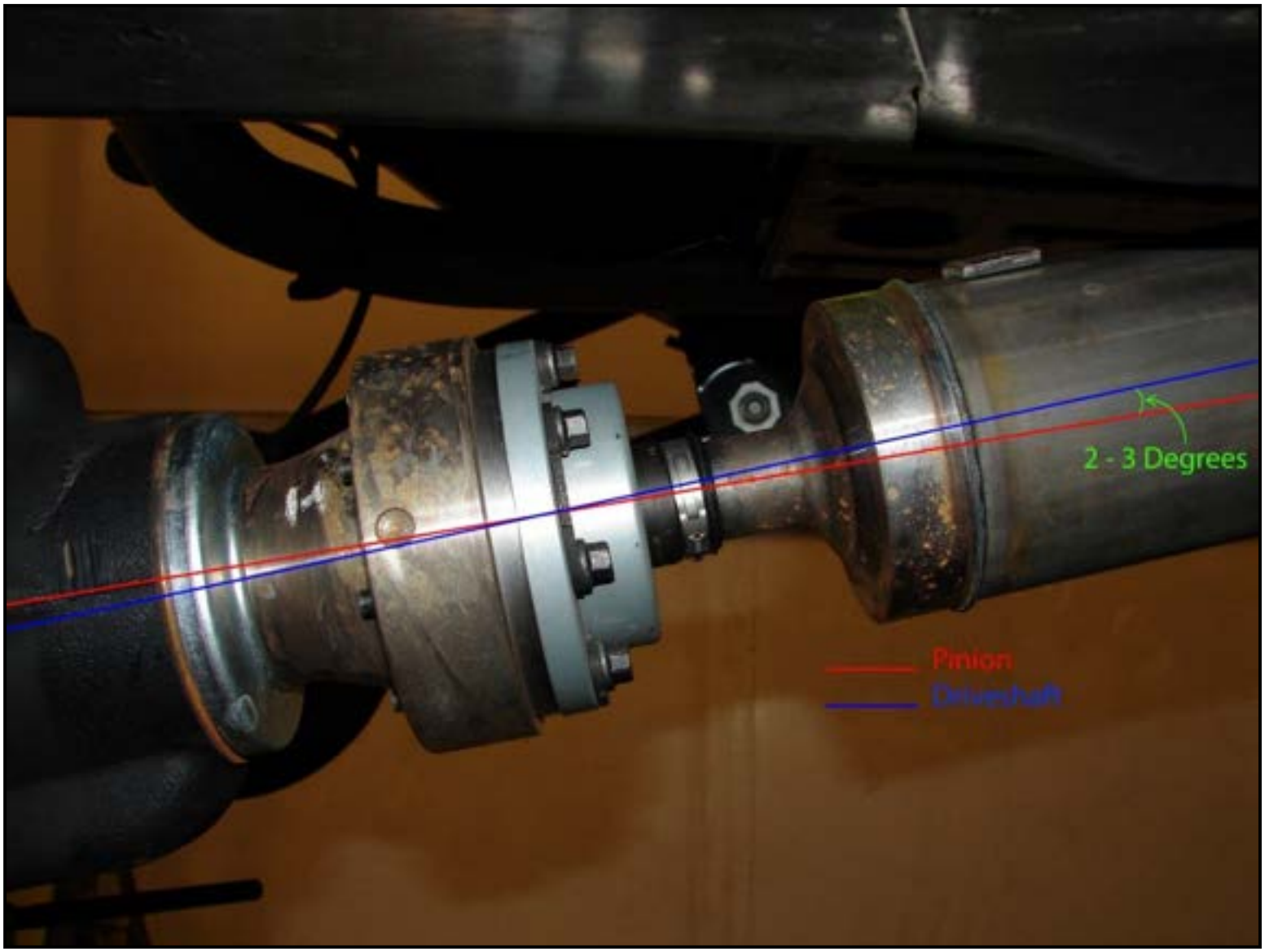
Choose pressures wisely and safely! This is one part of your suspension tuning you can do on your own.

Recommended Alignment Specs are as follows;

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. This is to account for road crown.) This is for OEM axle setups. Please consult with your aftermarket axle manufacturers to get the proper specifications for your axles.

Tow: Factory specifications or aftermarket axle specifications.

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



Common Service Parts Listings:

Grade 1 Grease such as Mobil Grease – Mobilux EP1 [NLGI 1] or equivalent can be used for all joints.

Front and Rear Lower Control Arms

(X2)-Front and Rear Lower Control Arm Full Replacement Krawler Joint (Axle End) – RK05067 and RK05067L (Left Hand Joint)

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

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

Front Track Bar Replacement Heim Joint (Axle End) – RK07535 (1" Shank)

Misalignment Spacers – RK03428

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

Anti-Wobble O-rings (Buna -318) - RK05181

Front Upper Control Arm(s):

Replacement Krawler Joint – RK04153

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

Rear Upper Control Arms:

Replacement Krawler Joints – RK04153

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

Sway Bar End Links:

Ball Center – RK04573