

# ROCK KRAWLER S U S P E N S I O N

## INSTALLATION MANUAL

FOR

**ROCK KRAWLER SUSPENSION, INC.**

**JT 2" STARTER KIT**

2025 1st EDITION  
01/01/2025



# ROCK KRAWLER S U S P E N S I O N

**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)

## Welcome to TEAM RK

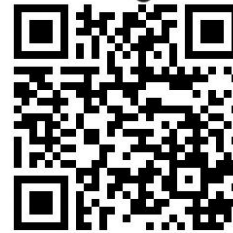
Share your before & after pictures, install photos & wheeling images.

facebook



@RKSuspension

Instagram



@rock\_krawler

**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.

# ROCK KRAWLER

S U S P E N S I O N

## Driving and Handling Tips

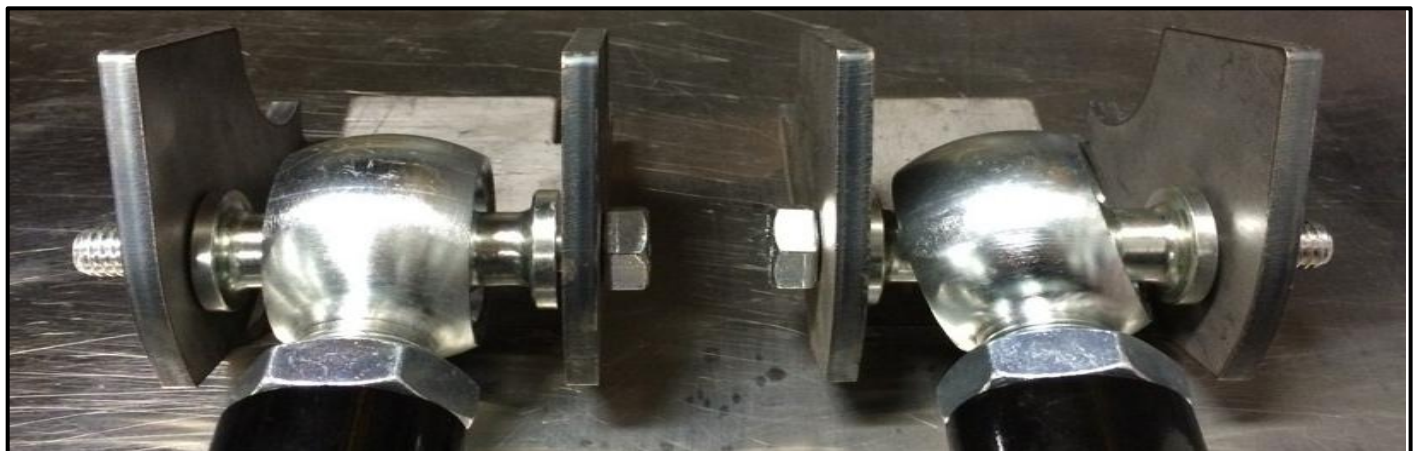
- For Highway driving it is best to have the front sway bar connected. This will give you the on-highway ride and handling characteristics you expect. **If you choose otherwise, you do so at your own risk.**
- The ride quality and handling that Rock Krawler is known for is based on using OEM sway bars 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 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 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^**

# ROCK KRAWLER

S U S P E N S I O N

## MAINTAINING JOINTS

### Krawler Joints/Pro Flex 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.

### 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!



## SUGGESTED STARTING LENGTHS

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

### Front Track Bar (RK06187HD) (OPTIONAL and SUGGESTED)

2.0" lift – 34 1/4"

*\*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 to learn how to set the control arms properly and the importance of Jam Nuts...**

## TORQUE VALUES FOR HARDWARE AND JAM NUTS

- All 10mm and 3/8 bolts are torqued to 30-35 ft-lbs.
- All 12mm and 1/2" 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

# ROCK KRAWLER

S U S P E N S I O N

threaded section.

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

- 1) If you are using a floor jack and jack stands, make sure vehicle is on a hard, level, working surface, then, block the rear wheels so the vehicle cannot move and make sure the emergency brake is applied.
- 2) Raise the front of vehicle. Support with safety jack stands. Locate jack stands on the frame in front of the axle. 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) Lower the front axle assembly onto jack stands.
- 4) Do not overextend the front drive shaft. Disconnect front driveshaft from axle and mark holes to reassemble in same orientation if needed. Secure out of the way.
- 5) For all OEM components being reused, loosen the mounting hardware at all connections so you do not overstress the OEM vulcanized rubber bushings. Failure to do so can result in a rougher than expected ride, adverse handling, and premature wear of the OEM components.
- 6) Remove the front wheels and tires.
- 7) Remove the front shocks. Save the OEM hardware to install the new shocks.
- 8) Unbolt the front sway bar links at the top mount or bottom mount (which ever is easier for you). This will allow the front axle to droop out easier.
- 9) 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. 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. All are shown below. *Helpful hint: 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**

# ROCK KRAWLER

S U S P E N S I O N

- 10) Remove the front springs, as well as the OEM Spring seats and discard all.
- 11) Remove the front lower control arms, discard, and save the OEM hardware for reuse.
- 12) If you have long shocks where the control arms contact the stock lower control arm mounts, we recommend you cut a little relief in the upper part of the lower control arm mount as shown. Otherwise, skip this step. Helpful Hint: a 2.5" hole saw is a simple way to make a nice, clean cut. Then add some paint of your choice to minimize rust later on. (Shown below)



- 13) 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 in the center with a 1/2" drill bit to make installation of the stackable bump stops easy. We recommend 2 or 3 pads for 3.0" of lift, 3 or 4 pads for 4.5" of lift based on tire size/wheel/fender/shock options. Choose the proper 1/2" bolt from the bump stop kits. Picture on following page.



# ROCK KRAWLER

S U S P E N S I O N

- 14) Install the supplied Rock Krawler spring seats on the axle. 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**

- 15) Install the front lower control arms. The arms are fixed length and non-directional. The bend in the arm are for improved ground clearance and goes up.



**Axle Side**

- 16) Install the supplied front coil springs with newly supplied Neutral Top Spring Isolators up top. 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.

# ROCK KRAWLER

S U S P E N S I O N

17) Install the front shocks using OEM hardware.

*\*\*Note: If your OEM shock bolt runs into the control arms flip the lower shock hardware around.*

*\*\*Note: Mojave Specific: If you order the Stage 1 RRD Shocks, the upper and lower shock mount will need to be swapped for larger diameter sleeves. Please contact Rock Krawler for proper sleeves*

18) Reconnect the sway bar end links and tighten all connections per the recommended torque specs above.

19) If disconnected, reinstall front driveshaft in the same position it was originally for balance.

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



# ROCK KRAWLER

S U S P E N S I O N

## REAR OF VEHICLE

- 1) If you are using a floor jack and jack stands, make sure vehicle is on a hard, level, working surface, then, block the rear wheels so the vehicle cannot move and make sure the emergency brake is applied.
- 2) Raise the rear of vehicle. Support with safety jack stands. Locate jack stands on the frame behind the rear of the axle. 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) Lower the rear axle assembly onto jack stands.
- 4) For all OEM components being reused; loosen the mounting hardware at all connections so you do not overstress the OEM vulcanized rubber bushings. Failure to do so can result in a rougher than expected ride, adverse handling, and premature wear of the OEM components.
- 5) Remove the rear wheels and tires.
- 6) Remove the rear shocks. Save the OEM hardware for reuse.
- 7) Unbolt one end of the rear sway bar links and save them for reuse.
- 8) Remove the wire from retainer from the back of the axle on the ABS lines to add slack to the lines as shown below.



**Brake Line Wire Form to be removed**

- 9) Add slack to the breather hose and lower the rear axle assembly onto jack stands.
- 10) Remove the rear coil springs and discard them

# ROCK KRAWLER

S U S P E N S I O N

11) Install the Rock Krawler rear coil springs and lean correction pads. 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 must be correct.

11A) The top lean correction seat goes on top of the OEM isolator at the frame on the passenger side as shown below.



**Top lean Correction Seat on Top of OEM Upper Spring Seat**

11B) Top bottom lean correction seat sits right on the axle as shown below.



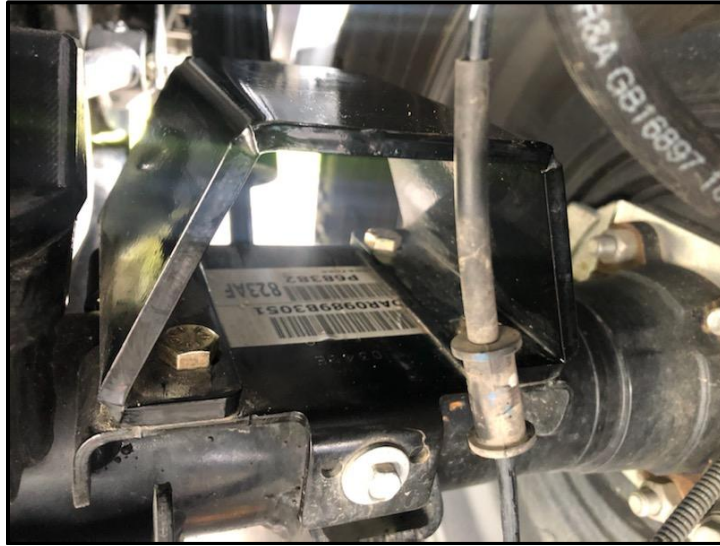
# ROCK KRAWLER

S U S P E N S I O N

12) Install the rear shocks using the OEM hardware.

**\*Please Note: For Big Boy Rear Shocks (2.265" body) the Ressay will strap to the body of the shock and face toward the axle.**

13) If purchased separately or if you bought RK shocks and they were included in your system, 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 3/4 bolts, washers, and nylok nuts. Bolt up two of the holes, mark two of the holes and drill them with a 3/8 drill bit.



**Pass. Side Rear Bump Stop Pad Installed**

14) Reattach the rear sway bar end links.

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

16) Tighten all mounting bolts at this time!

# ROCK KRAWLER S U S P E N S I O N

**Recommended Alignment Specs are as follows.**

**2.0" Lift Height:** 5.0 to 6.25 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

## **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 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:**

### **Front Lower Control Arms - RK08194**

Replacement Adventure Series Joint Center - RK07404K

### **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 due to Rock Salt, Liquid Salt, Mag. Chloride and combination with sand and salt.