

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

INSTALLATION MANUAL

FOR

ROCK KRAWLER SUSPENSION, INC.

Pro – X Steering

Tie Rod and Drag Link

2024 2nd EDITION

11/1/24



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

Dear customer: Thank you for purchasing the best steering set up 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

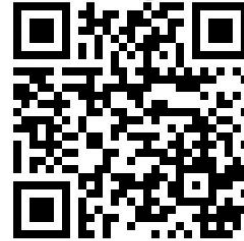
Share your before & after pictures, install photos & wheeling images.

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 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 action.

MAINTAINING TIE ROD/ DRAG LINK ENDS

We recommend Mobil Lux EP1 or Red and Tacky. 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 in our Krawler Joints only our tie rod and drag link ends.

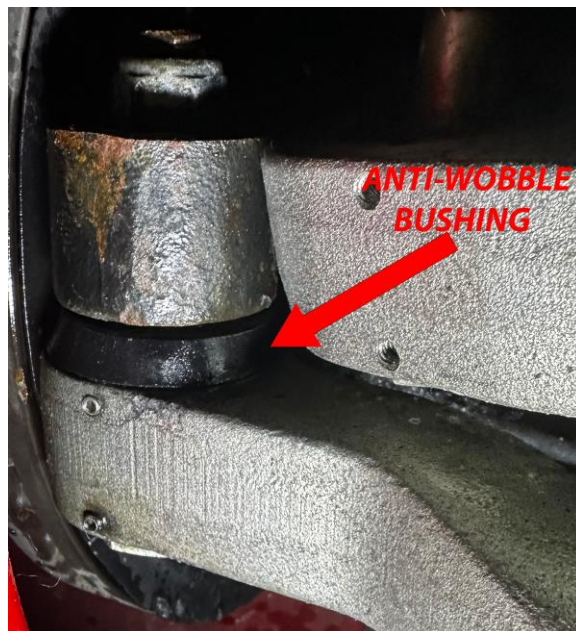
After 500 miles of "Run in" undo the set screws on the joint retainer with the large hex. Using a 1 3/8" socket retorque to 30 ft/lbs. then go to the next mill flat in retainer for set screw. Reinstall set screw.

Perform this procedure as the joints wear, (typically every 25k to 30k miles per interval) until the raceways are completely worn out and the joints go metal to metal. A typical joint life is 75k to 100k miles. At that time its time for a rebuild with RK08239

PRO X TIE ROD INSTRUCTIONS

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 vehicle with safety jack stands. Locate jack stands on the frame in front of the axle.
 - a. If you are using a vehicle lift, place the lift arms according to the specific vehicles lifting procedures. Ensure that the lift arms will not interfere with the components that are being replaced.
4. Remove the front wheels and tires while the axle is supported by a floor jack.
5. Disconnect the steering stabilizer from the steering stabilizer bracket. Remove steering stabilizer bracket from tie rod and discard. You will need a 1.75" mount to go on the new tie rod for your steering stabilizer. (RK08071K would work for a steering stabilizer mount.)
6. Remove the cotter pins if applicable and nuts from the ends of the existing tie rod. Using a ball joint separator or dead blow technique, remove the Tie Rod Ends from the knuckles.
 - a. If you are doing a drag link install also now would be a good time to start that as the passenger knuckle side gets very tight for installation of drag link end.
7. Assemble the PRO-X Tie Rod. Apply Neverseize to the threads of bar and thread in PRO-X Tie Rod Ends.

Note: Make sure that there is not any Neverseize on the threads where the jam nut will need Loctite applied or it will not function properly.
8. Set new PRO-X Tie Rod to the same length as the old one. Balance the number of threads on each end. Discard old tie rod.
9. Put the UHMW Anti Wobble Bushing on the tie rod stud with the wider part touching the tie rod end. Pictured below. This part along with



ROCK KRAWLER

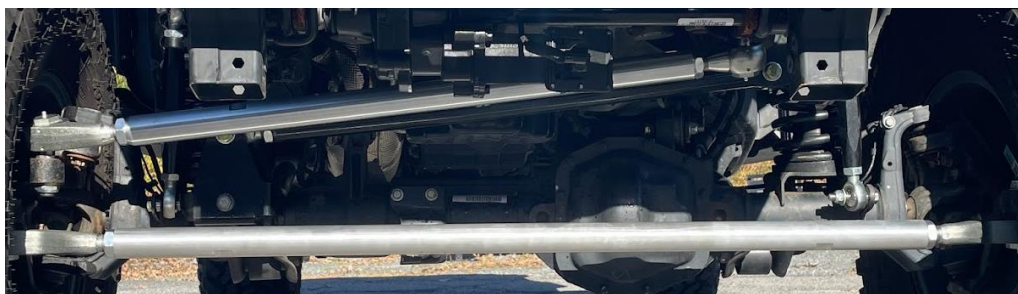
S U S P E N S I O N

10. Install tie rod into the vehicle using the supplied washer and 14mm nylock nut. Torque to 60-70 ft/lb.
11. Set your tow to the OEM Specifications or suspension manufacturer recommendation.
12. **While turning full passenger against the steering stop**, lock down the Jam nuts to the bar to 275-325 ft-lbs. This is to accommodate Ackerman Sweep.

Note: When you straighten the wheel, you should have some movement up and down in the tie rod assembly. This is required to satisfy the Ackerman Sweep and prevent the steering from binding up. If you do not have slight up and down movement, contact Rock Krawler Suspension Immediately.

Straighten the wheel and install steering stabilizer or hydraulic ram, wheels, and tires. **Note: Make sure the ends move freely and you have threads showing past the Jam nut on each end.**

Lower Vehicle to the ground. Installation complete.



PRO X BOTTOM MOUNT DRAG LINK INSTRUCTIONS

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 vehicle with safety jack stands. Locate jack stands on the frame in front of the axle.
 - a. If you are using a vehicle lift, place the lift arms according to the specific vehicles lifting procedures. Ensure that the lift arms will not interfere with the components that are being replaced.
4. Remove the front wheels and tires while the axle is supported by a floor jack.
5. Remove current drag link.
6. Assemble PRO-X Drag link. Apply Anti-seize to the threads of bar and thread in PRO-X Drag link Ends.
7. Set the new PRO-X Drag link to the same length as the old one. Balance the number of threads on each end. Discard old drag link.

ROCK STAR KRAWLER

S U S P E N S I O N

8. Install new PRO-X Drag link at pitman arm using supplied washer and 14mm nylock nut. If installing on Jeep JL/JLU or JT use the supplied thick washer on top of the pitman arm as shown below. The thick washer is not required for JK/JKU applications.



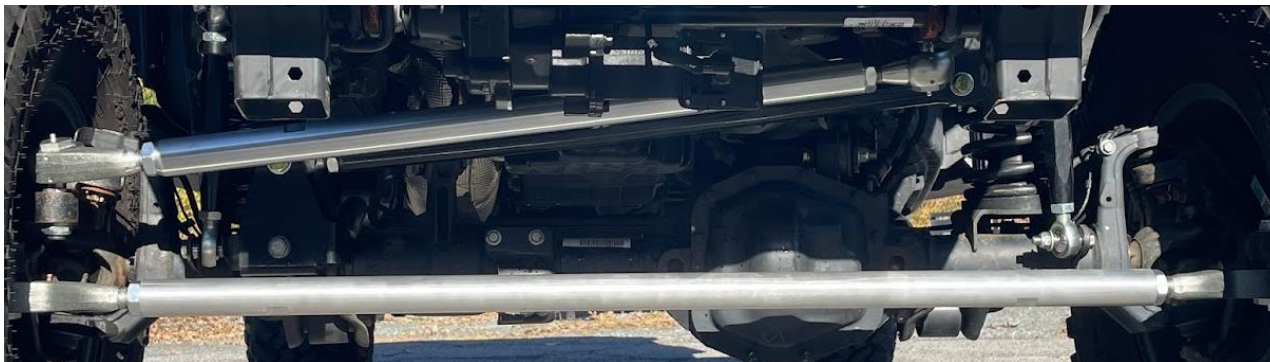
9. Install knuckle side with supplied washer and 14mm nylock nut. Tighten to 60-70 ft/lbs. (Shown below).



10. Center your steering wheel.
11. Ensure that both joints are in phase with each other (misaligned in the same direction) as shown in the images below before you tighten the jam nuts on the joints.

Note: There should be 15 degrees of rotation in the drag link. This is required to support long travel suspension as the axle moves forward and aft through out its range of motion without steering bind.

12. Reinstall tie rod, wheels and tires.



PRO X TOP MOUNT DRAG LINK INSTRUCTIONS

****Please make sure you have the proper front track bar bracket for high steer application. Welding is required. ****

JK Raised track bar mount P/N: RK04481K

JL Raised track bar mount P/N: RK08236K

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 vehicle with safety jack stands. Locate jack stands on the frame in front of the axle.
 - a. If you are using a vehicle lift, place the lift arms according to the specific vehicles lifting procedures. Ensure that the lift arms will not interfere with the components that are being replaced.
4. Remove the front wheels and tires while the axle is supported by a floor jack.
5. Remove current drag link.
6. Remove track bar from axle end, secure out of the way.
7. Assemble PRO-X Drag link. Apply Anti-seize to the threads of bar and thread in PRO-X Drag link Ends.
8. Set the new PRO-X Drag link to the same length as the old one. Balance the number of threads on each end. Discard old drag link.

ROCK KRAWLER

S U S P E N S I O N

- Using a 7/8" drill bit, drill out knuckle. It is recommended to start with a slightly smaller drill bit to start and work up to 7/8". Also, a drill lubricant is helpful. (Shown below)



- Install new PRO-X Drag link at pitman arm using supplied washer and 14mm nylock nut. If installing on Jeep JL/JLU or JT use the supplied thick washer on top of the pitman arm as shown below. The thick washer is not required for JK/JKU applications.



- Install knuckle end with supplied washer and 7/8" nylock nut. Tighten to 80-90 ft/lbs. (Shown below).

ROCK KRAWLER

S U S P E N S I O N



11. Check your steering wheel alignment.
12. Reinstall track bar, tie rod, wheels and tires.

JL/JLU/JT PRO X FRONT TRACK BAR RELOCATION INSTRUCTIONS

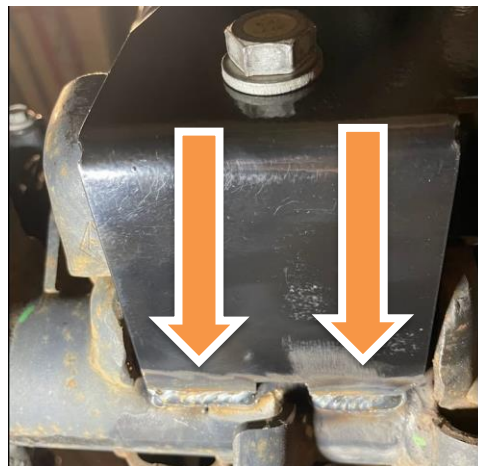
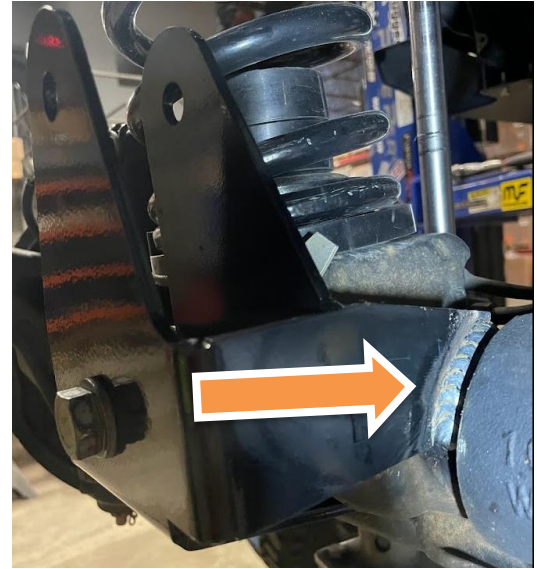
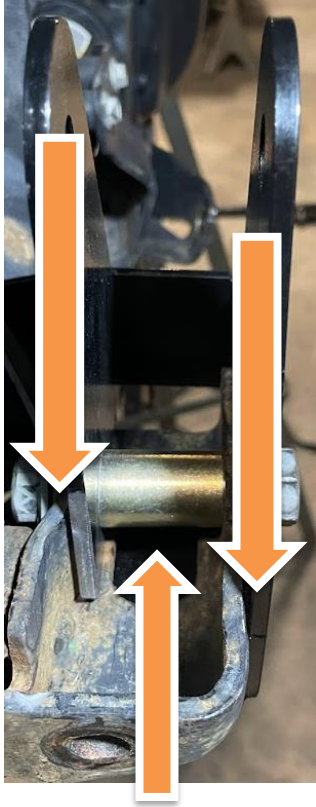
1. Make sure vehicle is on a level, hard, working surface if you are using a floor jack and jack stands.
2. Block the rear wheels so the vehicle cannot move and make sure the emergency brake is applied.
3. Raise and support the front of vehicle with safety jack stands. Locate jack stands on the frame in front of the axle.
 - a. If you are using a vehicle lift, place the lift arms according to the specific vehicles lifting procedures. Ensure that the lift arms will not interfere with the components that are being replaced.
4. Prep new high steer track bar bracket and axle for welding by properly cleaning the surfaces. (Shown below)



5. Unbolt Track bar from axle mount. Secure out of the way.
6. Locate new raised mount onto factory track bar bracket using OEM hardware and supplied crush sleeve. Weld Bracket to axle. Be sure to weld the inner of the new mount to the factory mount as well where the front touched OEM track bar mount. Also, the full length on bottom and the area of bracket that touches the tube by the FAD. (Arrows show weld point, minus one for sleeve.) **Note: This bracket was built with a slight gap on the bottom for ease of installation. When bolted in place you may have to hit the bottom with a dead blow hammer or use a clamp to make the new bracket contact the axle tube for proper welding. See images that follow for weld surface areas.**

ROCK KRAWLER

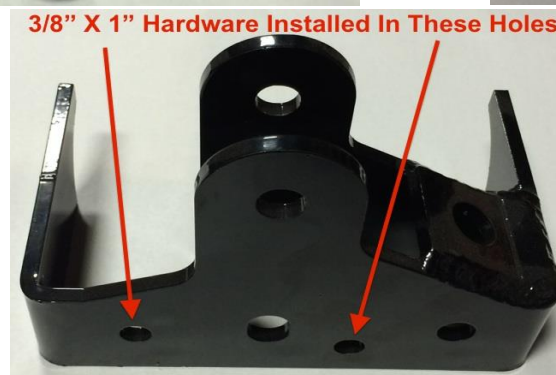
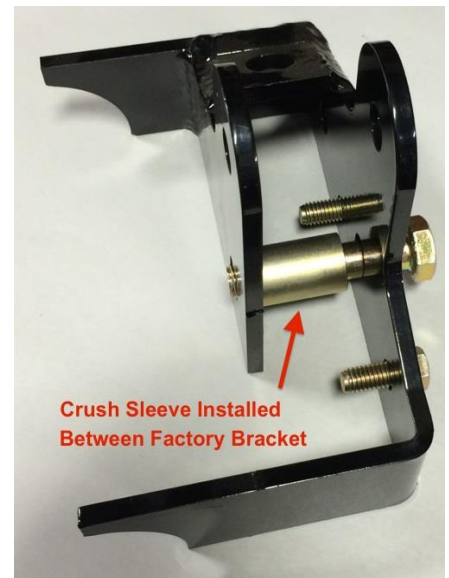
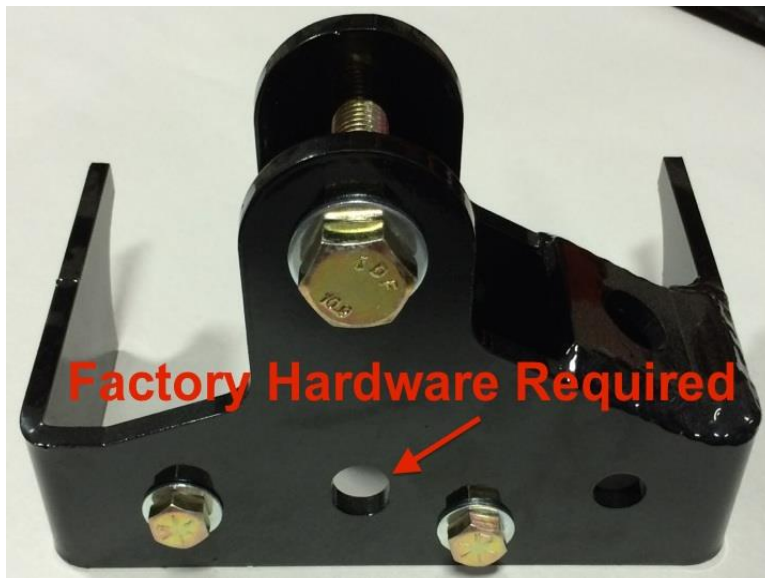
S U S P E N S I O N



7. Reinstall Track bar into new relocated mount.

JK/JKU PRO X FRONT TRACK BAR RELOCATION INSTRUCTIONS

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 vehicle with safety jack stands. Locate jack stands on the frame in front of the axle.
 - a. If you are using a vehicle lift, place the lift arms according to the specific vehicles lifting procedures. Ensure that the lift arms will not interfere with the components that are being replaced.
4. Unbolt Track bar from axle mount. Secure out of the way.
5. Install the supplied front track bar bracket using the factory hardware in the hole marked below to secure the new bracket. Place the supplied crush sleeve between new relocation bracket and the factory bracket.
6. Install the supplied 3/8" x 1" hardware with washers and nyloc nuts through the holes in the front of the new relocation bracket that line up with the OEM holes in the factory track bar bracket.
7. Weld the new bracket to the axle tube using a 1/4" fillet weld around the radii of the bracket that contact the axle tube. Apply a durable finish of your choice.
8. Reinstall Track bar into new relocated mount.





It is a requirement that your vehicle be taken to a professional alignment shop for an alignment. You should also get the printout of the alignment specs so you can reference back to them. If your steering wheel is off at all the ESP will be activated. This will be corrected once the vehicle is aligned by a certified alignment shop. Centering the steering wheel "by eye" is usually not good enough for ESP!

Typical alignment specs

Jeep JK/ JKU

1.5" Lift Height: 5.0 to 6.5 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.)

2.5" Lift Height: 4.5 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.)

3.0" 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.)

3.5"/4.5" Lift Height: 4.2 to 5.5 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: 0 to slightly towed in but within factory specifications.

Jeep JL/ JLU/ JT

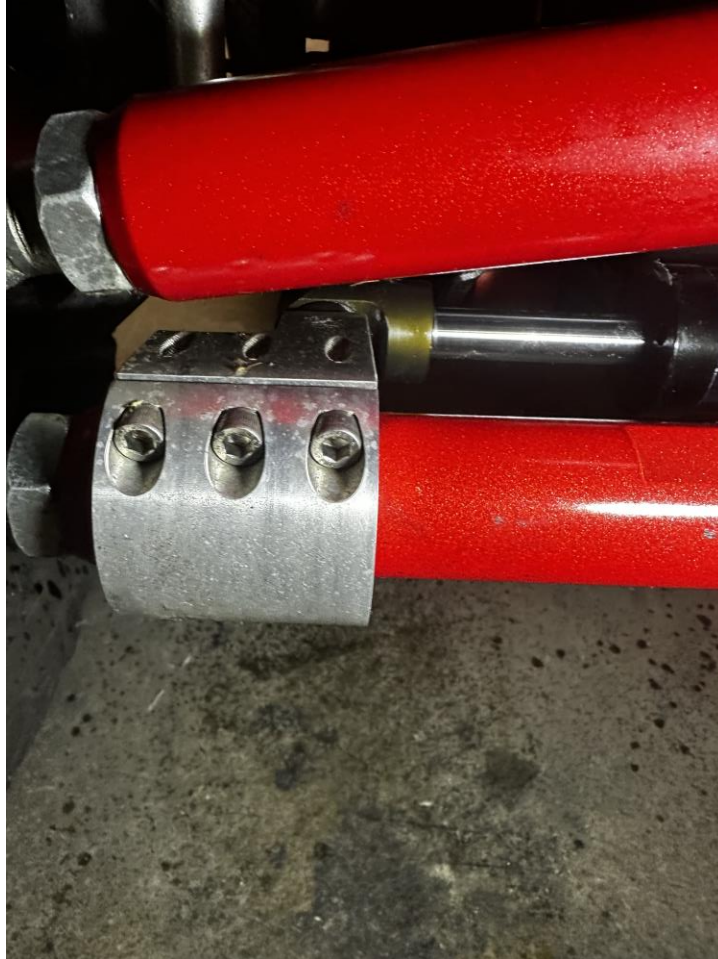
2.5" Lift Height: 5.0 to 6.5 degrees of Caster with a .2 to .4 Cross Caster Split (.2 to .4 degrees more caster on the pass. side than the driver's side.)

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.

JL/JLU/JT HYDALIZER KIT INSTALLATION INSTRUCTIONS

1. Make sure vehicle is on a level, hard, working surface if you are using a floor jack and jack stands.
2. The billet clamp can go on two ways. The stabilizer mounting hole goes toward the inside for wide track and Rubicon axles. For narrow track or standard axles the stabilizer mounting hole goes the outside of the vehicle. Loosely set the clamp around the tie rod with the stabilizer mounting hole in the proper direction as mentioned above. Shown below on a Rubicon or wide track axle.

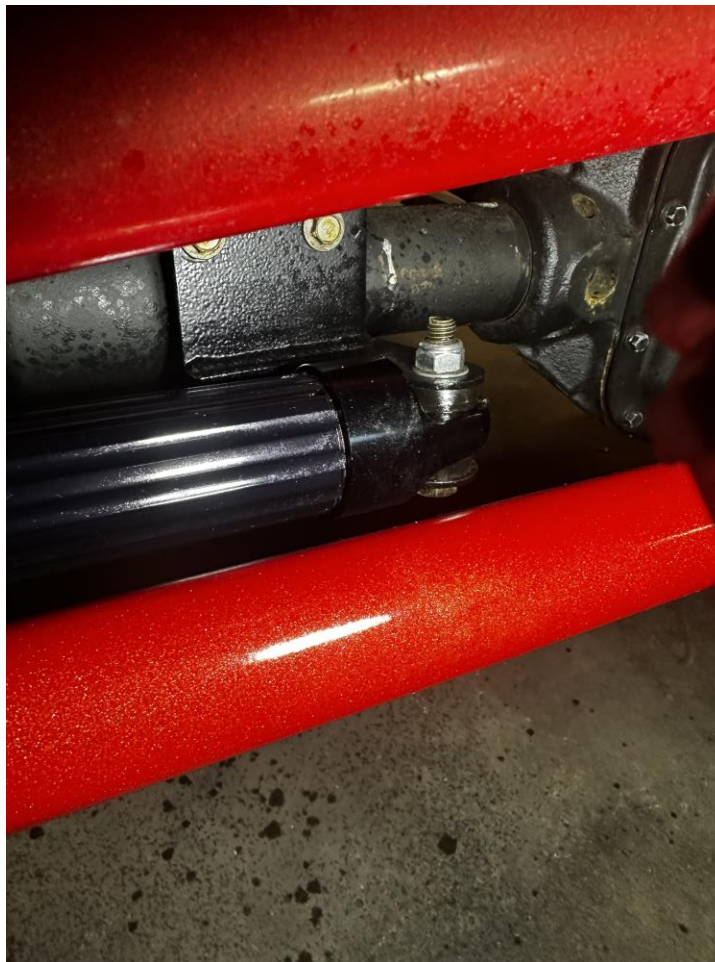


3. Remove the OEM steering stabilizer mounting bracket from the axle. Save the OEM hardware to reattach the newly supplied Hydalizer Mounting Bracket.

ROCK KRAWLER

S U S P E N S I O N

4. Install the Hydalizer steering stabilizer mounting bracket as shown using the OEM hardware as shown below.



5. Install the steering stabilizer. The Schrader Valve goes in towards the axle as shown above to keep it protected. Attach the steering stabilizer to the bracket at the axle with the bolt facing upward. The supplied hardware for this is a 12mm x 70mm bolt, with 12mm washers and nylok nut. Attach the steering stabilizer to the billet clamp with the supplied 12mm x 60mm bolt and large flat washer under the head of the bolt. Blue Loctite is recommended on the 12mm bolt going into the billet clamp. To ensure you have the billet clamp in the proper position, make sure $\frac{1}{2}$ of the stabilizer shaft is exposed (approx. 3.5") with the steering wheel straight. Loosely tighten the billet clamp mounting bolts. Then have someone cycle the steering lock to lock ensuring you are getting full turning ability. You can rotate the billet clamp up as high as possible. We recommend having $\frac{3}{16}$ at the closest point during the steering cycle between the stabilizer shock body and the track bar bracket above it. Again, cycle the wheel lock to lock to determine the closest point. The steering stabilizer will actually rise and fall as the steering is cycled. This is normal and do to the Ackerman Sweep. Once the proper position of the billet clamp is finalized torque the clamp bolts.

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