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Rough Country 66140 Installation Instructions

4-Inch Lift Kit with M1 Shocks for 1997–2006 Jeep Wrangler 4WD

Part number: 66140

trailfortress.com/rough-country-4-inch-lift-kit-66140

Scan for fitment, price and install help



92PERF1661X

97-06 JEEP TJ 4”/ 6”X-SERIES SUSPENSION KIT W/ PERFORMANCE 2.2 SERIES SHOCK ABSORBERS

Thank you for choosing Rough Country for your suspension needs.

Rough Country recommends a certified technician installs this system. In addition to these instructions, professional knowledge of disassemble/reassembly procedures as well as post installation checks must be known. Attempts to install this system without this knowledge and expertise may jeopardize the integrity and/or operating safety of the vehicle.

Please read all the instructions before beginning the installation. Check the kit hardware against the kit contents. Be sure you have all the needed parts and understand where they go. Also please review the tools needed list and make sure you have needed tools. If you have any questions please call us at 800-222-7023.

PRODUCT USE INFORMATION

As a general rule, the taller a vehicle is the easier it will roll. We strongly recommend seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur. Braking performance and capabilities are decreased when significantly larger/heaver tires and wheels are used. Take this into consideration while driving. Also, speedometer recalibration is necessary when larger tires are installed.

Do not add, alter, or fabricate any factory or after-market parts which increase vehicle height over the intended height of the Rough Country product purchased. Rough Country excludes any and all implied claims. We will not be responsible for any product that is altered.

The 4” suspension system was developed for 33x12.50x15 tire on an after market wheel with 3.75” of back spacing, on an 8” wide wheel. The 6” kit was developed for a 35x12.50x15. Due to the inconsistency of vehicles when manufactured and the various options available, the amount of actual lift gained by this lift kit will vary. On models outfitted with extra bolt-on equipment and accessories, Rough Country offers new coil spring isolator pads made from polyurethane to boost ride height 3/4". These are available for the front or rear.

The included control arms are adjustable and approx adjustments are covered in this instruction sheet. Adjusting/ Extending the control arms beyond the recommended length could cause clearance issues on the vehicle especially with the new front track bar and the vehicle differential housing. It is imperative to adjust only as needed for alignment purposes.

With the installation of this kit and larger tires it is highly recommended that an aftermarket stabilizer be added. This kit assumes the installation of a rear CV drive shaft. If a CV drive shaft is not going to be installed, a transfer case drop and a shift control bracket will be required. Additionally this kit assumes the use of Rough Country’s 2.2 Series Shocks with their integrated bump stops, if these shocks are not used bump stops will be required.

This kit features Rough Country’s adjustable joint design. Adjustable end tool is included in kit. Assemble the joints per the separate instruction sheet Part # 92RCJ120 provided

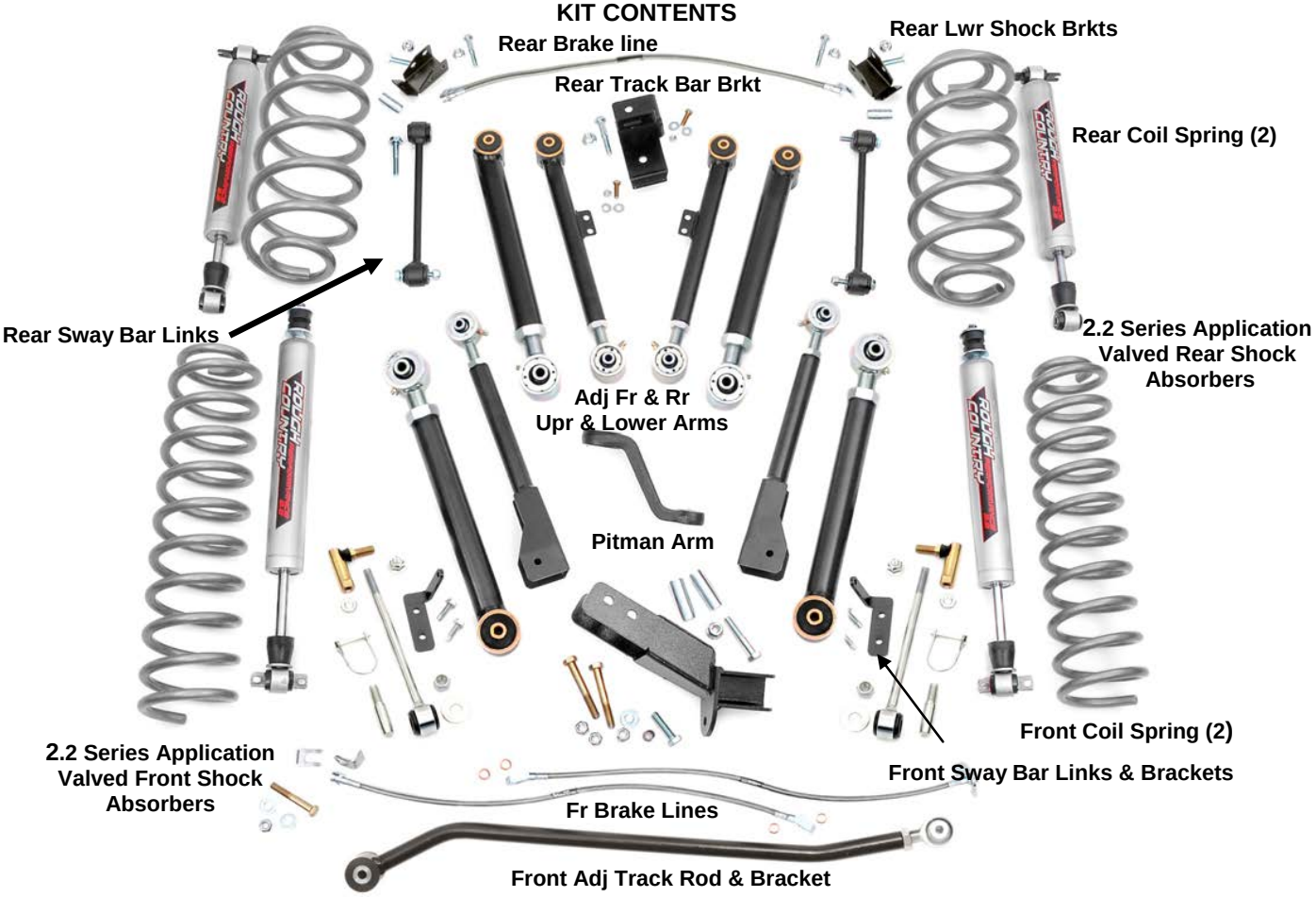
NOTICE TO DEALER AND VECHICLE OWNER

Any vehicle equipped with any Rough country product must have the “Warning to Driver” decal installed on the sun visor or dash. The decal is to act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics. **INSTALLING DEALER**—It is your responsibility to install the warning decal and to forward these installation instructions on to the vehicle owner for review and to be kept in the vehicle for its service life.

TOOLS NEEDED:

- Spring Compressor
- Silicone spray
- Drill assortment
- Hammer
- Combination wrenches
- Torx key socket
- File
- Floor jacks
- Wheel chocks
- 1/2” drill motor
- Torque wrench
- 1/2 drive ratchet and sockets
- Allen wrenches
- Large “C” clamps and /or bench vise
- Heavy duty jack stands
- Safety glasses
- Anti-seize compound

KIT CONTENTS



Kit Contents

1661C:
- Fr Coil Springs
- Rear Coil Spring

1085 Fr Adj Track Rod Kit
- 1-Track Rod Body
- 1-Track bar Bracket
- 1-Heim End

1661XBox1:
- 2-Front Lower Adj Arms
- 2-Rear Lower Adj Arms
- 2-Front Upper Adj Arms
- 2-Rear Upper Adj Arms

Perf2.24TJ:
- 2.2 Series RCX Front Shock (2)
- 2.2 Series RCX Rear Shock (2)
- Rear Shock Relocation Brkts (2)

1661XBox2 (4") *OR* 1662XBox2 (6"):
- 1-Dr Side Frame Mount Disconnect Brkt
- 1-Pass Side Frame Mount Disconnect Brkt
- 2-Front Sway Bar Links
- 2-Rear Straight Sway Bar Links
- 2-Front Stainless Brake Lines
- 1-Pitman Arm
- 1-Rear Track Bar Bracket

Fastener Breakdown:

1085Bag

For Front Track Rod Bracket
- 2-Track Bar Frame Sleeves
- 1-1/2" x 1 3/4" Bolt
- 2-1/2 x 3 1/2" Bolt
- 1-1/2" Flat Washer
- 3-1/2" Lock Nuts

For Adjustable Track Rod
- 2-7/16" x 2 3/4" Bolt
- 4-7/16" Flat Washers
- 2-7/16" Lock Nut
- 1-3/4" Jam Nut
- 2-Track Bar Bushings
- 1-Track Bar Sleeve (ID 7/16")
- 2-Heim Spacers

1668XBag3: In Shock Box

For Rear Shock Reloc Bracket
- *2-12mm x 65mm Bolts*
- *2-12mm Flange Lock nuts*
- *2-5/16" x 3/4" Bolts*
- *2-5/16 Lock Nuts*
- *2-Crush Sleeves*
- *4-Flat Washers*

For Fr Sway Bar Disconnect:
- *2-Upper Sway Bar Mounts*
- 4-1/4" x 3/4" Bolts
- 4-1/4" Flat Washers
- 2-1/2" Lock nut
- 2-3/8" x 1 1/4" Bolts
- 2-3/8" Flat Washers
- 2-3/8" Lock Washers
- 2-Disconnect Pins
- 2-Moutnting Pins
- 2-1/2" Lock nut
- 2-1/2" Flat Washers
- 2-Rod Ends
- 2-1/2" Jam Nuts

1661xBag2

For Fr Brake Lines
- 4-3/8" Brake Washers
- 2-Frame Brackets
- 2-Brake Clips

1661XBag3:

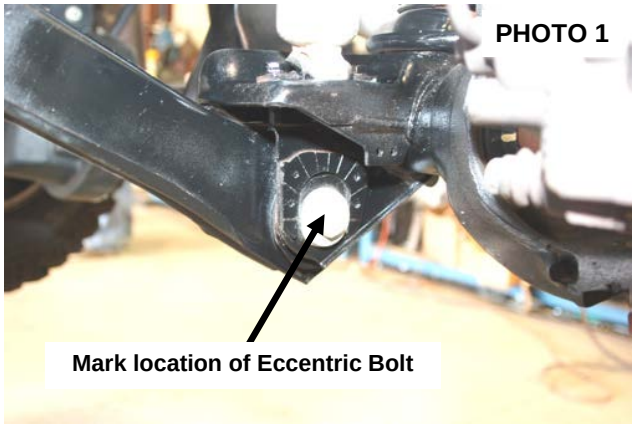
For Rear Track Bar Bracket
- 2-5/16" x 1" Bolt
- 4-5/16" Flat Washers
- 2-5/16" Lock Nuts
- 1-12mm x 65mm Bolt
- 1-12mm Flange Lock nut

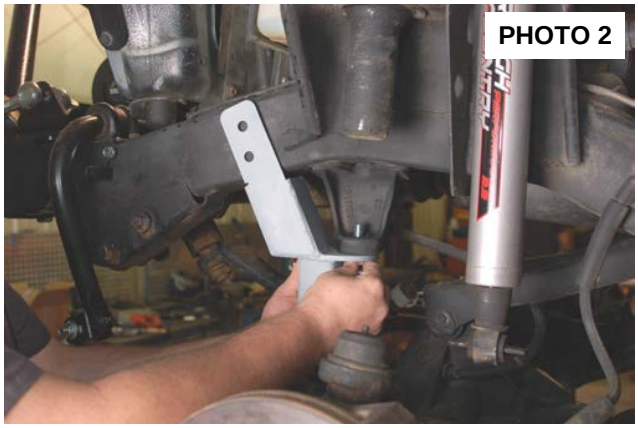
For Rear Sway Bar
- 4-10mm ID Sleeves
- 4-10mm x 65mm Bolts
- 2-10mm Lock Nuts
- 4-10mm Flat Washers

For Rr Brake Line
- 1-Frame Brackets
- 1-Brake Clips

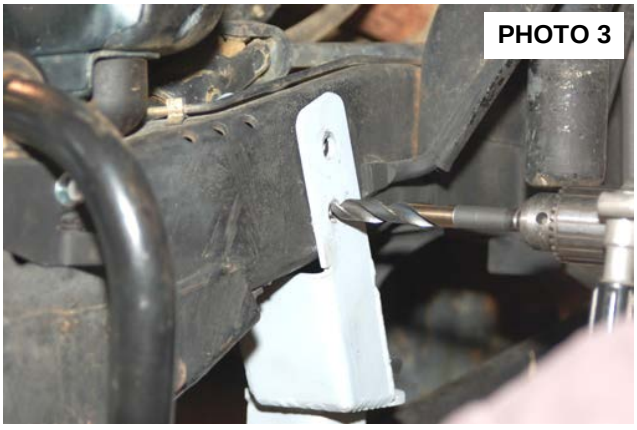
FRONT INSTALLATION

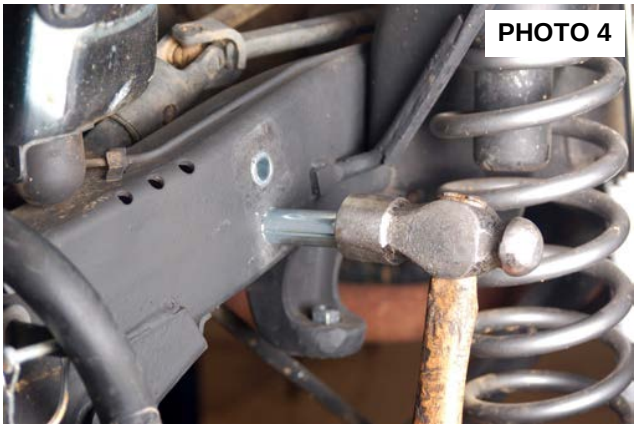
1. The front-end components are installed first.
2. Place the vehicle on a level surface. Set the parking brake. Center front wheels and chock rear wheels. From inside the engine compartment, remove the upper stud nut, retainer and grommet from both of the front shocks using a 15mm socket.
3. Place jack stands on the frame rail behind the lower control arm mount on the frame and jack up the vehicle. Installation is done one side at a time.
3. Remove the front tires and wheels.
4. Remove both of the front sway bar end links. Retain lower link hardware for re-use using a 15mm wrench for the upper and a 18mm wrench for the lower.
5. Place a floor jack underneath the axle for support and complete the removal of the front shock absorbers. Retain the stock lower hardware for reuse.
6. Do not reuse the original factory shocks
7. If your axle is equipped, mark the position of the lower control arm cam bolt and axle brackets for installation reference. **See Photo 1**. If equipped with ABS brakes, remove the sensor wires and clamps for the inside of the lower arms and save clamps for re-use.
8. Remove the track rod from the axle and from the frame using a 15mm (axle) & 18mm wrench (frame).
9. Install the track rod bracket as shown with the 1/2" x 1 3/4", washer & nut in the stock track rod mount. Make sure the bracket is flat against the frame. Snug but do not fully tighten at this time. **Photo 3.**



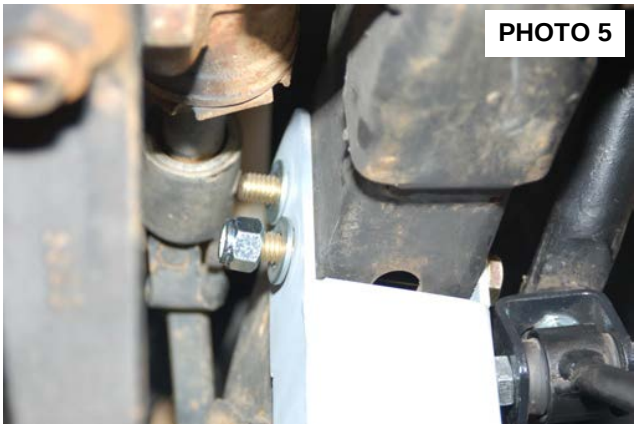


10. Using the bracket as a guide, mark and drill the two side holes through the inner and outer frame as shown in **Photo 3** using a 17/32" drill bit. **Make sure to keep the drill level when drilling.**
11. Remove the bracket and enlarge the outside holes only using a 29/32" bit.
12. Install the supplied crush sleeves as shown in **Photo 4** and reinstall the bracket.

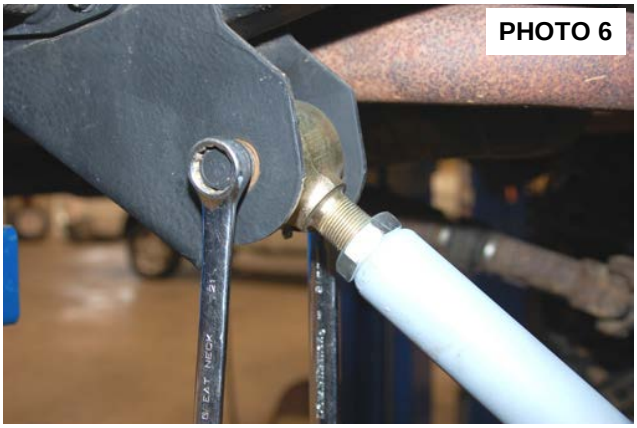


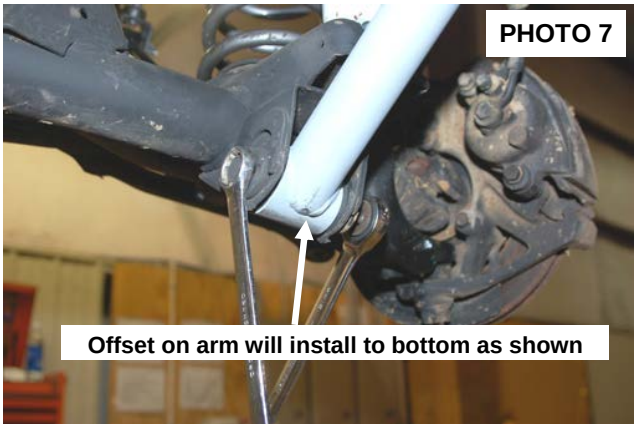


13. Secure to the frame using the supplied 1/2” x 3 1/2” bolts, washers and nuts & 1/2” x 1 3/4” bolts & nuts. Tighten the 1/2” x 1 3/4” bolts to 65ft/lbs with a 19mm socket and the 1/2” x 3 1/2’ bolts using a 19mm wrench /socket to 80ft/lbs. **See Photo 5.**
14. Remove the coil spring clip located on the bottom coil seat on the driver side of the vehicle. Lower the axle and remove the coil spring. A coil spring or strut compressor may be needed to remove the stock coil spring.
15. Remove the stock lower control arm by removing the nut, cam, and cam bolt (if equipped) from the axle bracket and then removing the nut and bolt from the frame bracket doing one side at a time using a 21,, socket & wrench.

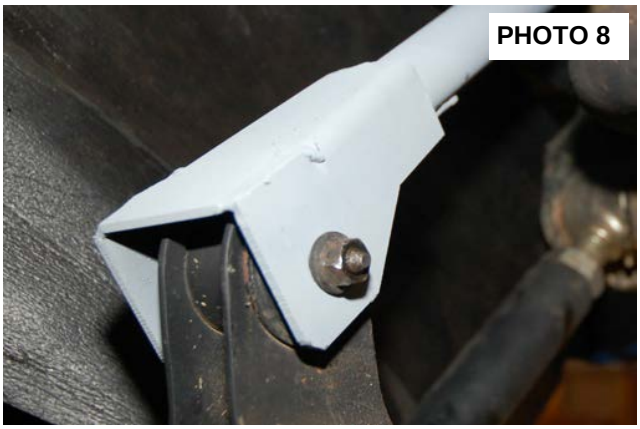


16. Adjust the arm to 3/8” longer than the stock arm for a pre-alignment starting point. Tighten the jam nut using a 1 1/8” wrench. Check to make sure the snap ring is fully engaged on the joint and install on the vehicle making sure the joint is centered in the mount with the offset to the bottom using factory hardware as shown in **Photo 6 & 7**. Do not tighten at this time. If applicable, drill a 23/64” hole into each lower link and reinstall the ABS sensor wires. Use the original clamps. Adjust arms only as need for alignment purposes. Do not over adjust the arms.





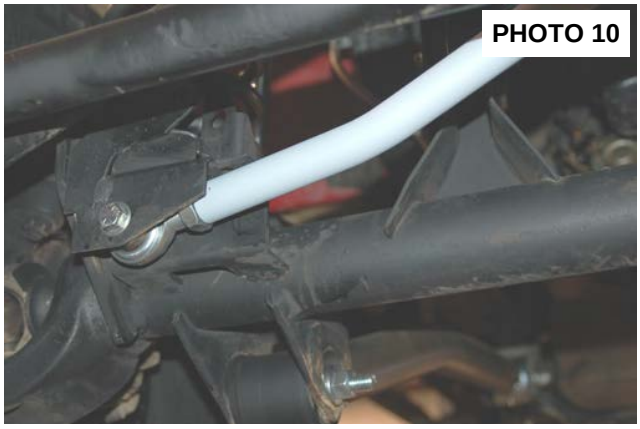
17. Remove the stock upper control arm by removing the factory hardware from the axle & frame bracket using a 15mm wrench, doing one side at a time.
18. Adjust arm to a 1/4” longer then the stock arm for a pre-alignment starting point. Tighten the jam nut using a 1 1/8” wrench. Make sure the snap ring is fully engaged on the joint and install arm on the vehicle using factory hardware making sure the joint is centered in the mount. **Note** Make sure flex joint housing is centered in mount before tightening jam nut. Should not be touching either side.**** Do not tighten at this time. **See Photo 8.** Adjust arms only as need for alignment purposes. Do not over adjust the arms
19. Install the coil spring. A coil spring or strut compressor will be needed for the new coil spring installation**.** Compress the new coil spring and install the new spring into the upper and lower spring pockets. Carefully remove the compressor and make sure the coil is seated properly in the coil seat by rotating the spring so the pig tail end fits in the spring pocket. Install the coil spring clamp and torque the spring clip bolt to 16ft. -lbs.
20. Repeat steps on other side.

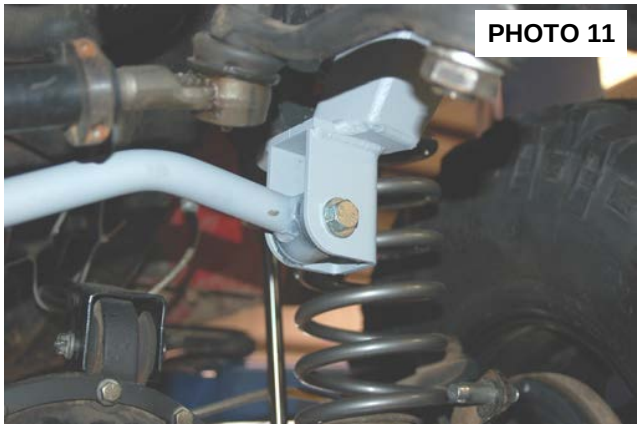


22. Remove both of the front sway bar end links. Retain lower link hardware for re-use.
23. Remove the cotter pin and nut from the drag link at the pitman arm. Retain the nut to be reused. Separate the drag link ball stud from the pitman arm with a puller tool. Do not use a pickle fork.
24. Mark the position of the original pitman arm. Remove the nut and washer from the steering gear box. Align and install new pitman arm on the steering gear shaft. Install the washer and nut. Tighten to 185 ft. lbs.
25. Locate the front 2.2 Series shock absorber and install in the factory lower mounts—these shocks are designed to have piston mounted down. **See Photo 9**. Install the new upper stud bushings and tighten the upper mounting point, slightly bulging the bushing. Do not over tighten stud bushing. Tighten the bar pin on the bottom of the shock with the stock hardware using a 12mm wrench.

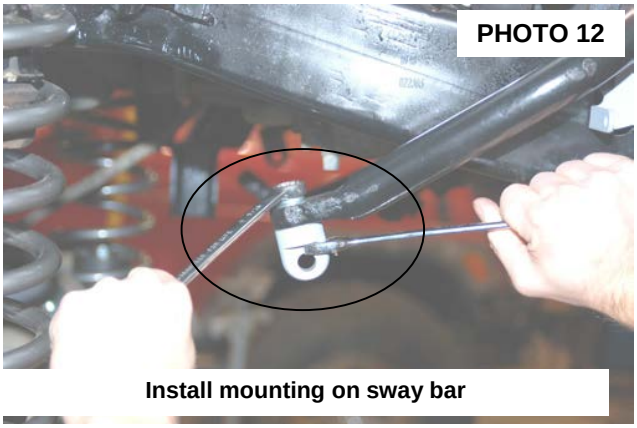


26. Repeat this on the opposite side of the vehicle. Install the tires, wheels and tighten lug nuts to factory specs.
27. Lower the vehicle to the ground.
28. Install the supplied heim end, spacers and jam nut on the track rod body and install the bushings. Adjust the track rod to **33 1/2"** from end to end.
29. Install the track rod in the factory mount on the axle with the supplied 7/16" x 2 3/4" bolt, washers & nut and tighten using a 15mm socket / wrench. **See Photo 10.**
30. Swing up the track rod and install in the new track rod bracket with the supplied 7/16" x 2 3/4" bolt, washer and nut. Tighten using a 15mm wrench and snug the jam nut using a 1 1/2" wrench. **See Photo 11. It is important to center the vehicle over the axle to ensure proper tracking and alignment. If needed, remove the axle end and adjust to center the body over the axle.**





31. Install the upper sway bar mount on the top of front sway bar where the stock link was secured, using the supplied 3/8" x 1.25" bolt and washer**.** Tighten using a 9/16" wrench making sure the mount is straight. **See Photo 12.**
32. Assemble the sway bar link with the link body, the jam nut and rod end Adjust the sway bar to a length of 11 1/4" from top to bottom. Tighten the jam nut against the rod end using a 5/8" & 3/4"wrench.
33. Install the link on the upper sway bar mount with supplied 1/2" flange lock nut as shown in **Photo 13**. Tighten using a 5/8" & 3/4" wrench.



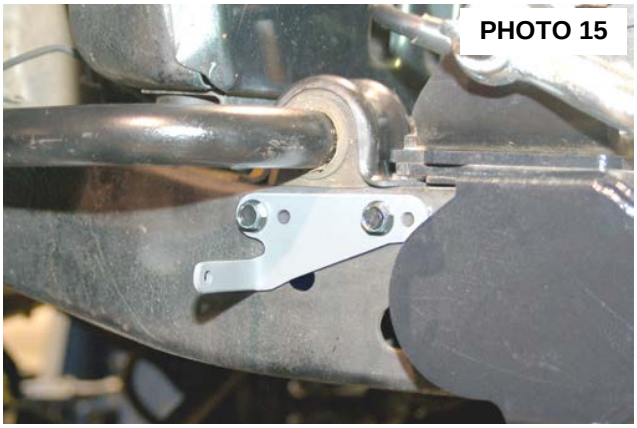
Install mounting on sway bar



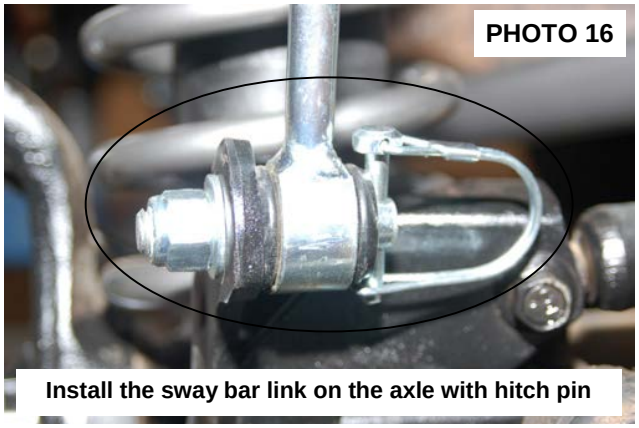
Tighten the end link

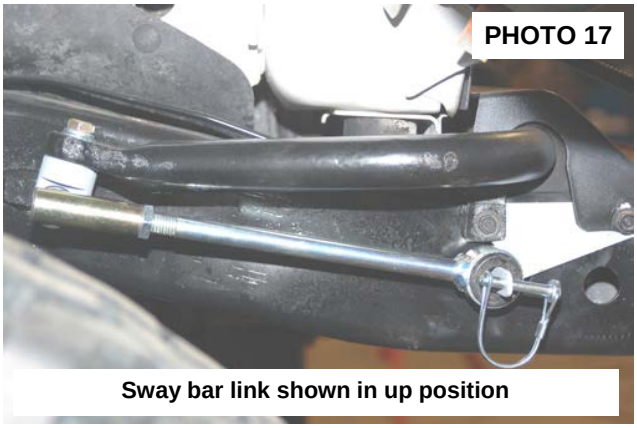
34. Install the supplied pin on the axle as shown in **Photo 14**. Tighten using a 3/4" wrench.
35. Remove the bolts securing the plastic shroud to the frame and install the driver and passenger side frame mount brackets in the holes shown for the 4" disconnect kit using the factory holes and the supplied 1/4" x 3/4" bolts & washers. **See Photo 4.** Tighten using a 7/16" wrench, be careful to not over tighten. **Please note there is a passenger and driver side bracket**.


PHOTO 14
Install mounting pin on axle

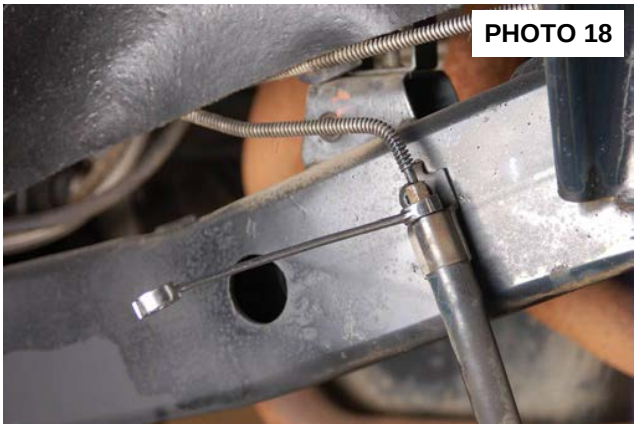

PHOTO 15

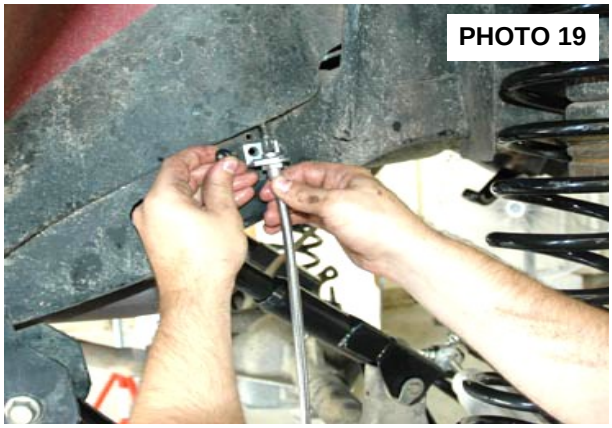
36. Swing the sway bar link down and install on the lower axle mounting pin. Install the disconnect pin & washer. **See Photo 16.**
37. When disconnecting the sway bar, remove the sway bar link / washer and place it on the frame mount as shown in **Photo 17** to keep the sway bar link from interfering with front end components.


PHOTO 16
Install the sway bar link on the axle with hitch pin


PHOTO 17
Sway bar link shown in up position

38. Remove the stock brake line from metal line at frame rail and also on caliper. Retain stock hardware to reinstall the brake line. A catch pan is recommended to avoid a fluid mess. **See Photo 18.**
39. Install the new brake line bracket on the frame rail as shown with supplied brake line clip. Install the new Rough Country brake line on the stock metal line and install on the caliper with stock caliper bolt and brake line washers**. See Photo 19.**

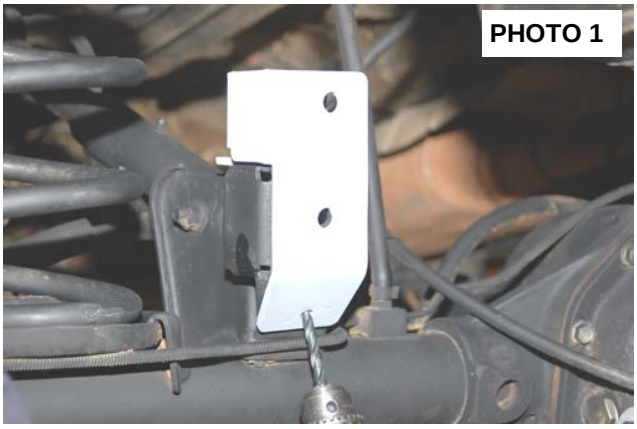

PHOTO 18


PHOTO 19

40. Bleed the brake system. **Do not skip this step.**
41. Tighten the lower suspension arm to frame bracket nut and bolt to 65 ft. lbs. (both sides).
42. Align the reference marks on the adjustment cams and lower arm axle brackets and tighten to 85 ft. lbs.

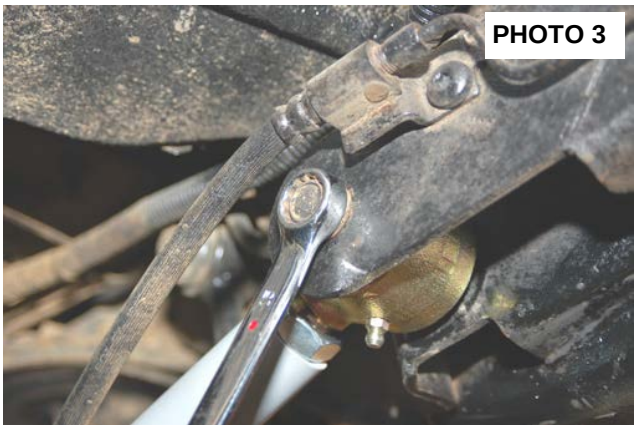
REAR INSTALLATION

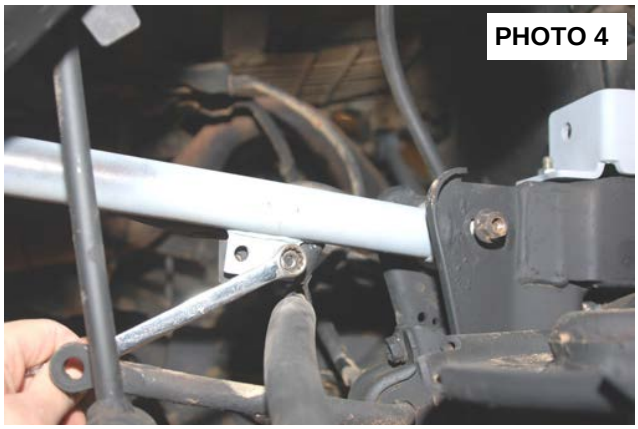
1. Chock the front wheels. Jack up the rear of the vehicle and remove the tires and wheels. Place jack stands on the frame rail to support the vehicle. Place a floor jack under the differential. Remove the stock shock absorbers and sway bar links. Retain the factory shock hardware it will be reused.
2. Remove the metal lines from the brake line on the axle using a 3/8" brake line wrench and remove the brake line from the axle using a 9/16" wrench. Retain the stock hardware.
3. Carefully lower the axle with the floor jack and remove the coil springs. NOTE: It may be necessary to use a coil spring or strut compressor to remove the stock coil springs. Be careful not to overextend the vent tube on the axle. **It may be necessary to disconnect the hose during installation and reroute after installation.**
4. Disconnect the track bar from the axle bracket on driver side of vehicle using a T55 Torx bit and install the new track bar relocation bracket in the stock location. **See Photo 1**. Secure to the stock location using the factory hardware as shown in the picture.
5. Enlarge the holes in the factory mount to accommodate the two 5/16" bolt, using the bracket holes as a guide. Install the 5/16" bolts, washers, nuts. Tighten using a 7/16" wrench.. **Do not** install the track rod in the new bracket at this time. **See Photo 1.**
5. **Remove and replace one suspension arm at a time.**
6. Remove the lower arm from the axle and frame mount using a 21mm wrench & socket. Retain hardware.
7. Adjust to a 3/8" longer then the stock arm for a pre-alignment starting point. Tighten the jam nut using a 1 1/8" wrench. Check to make sure the snap ring is fully engaged on the joint and install on the vehicle making sure the joint is centered in the mount and with the offset to the bottom using factory hardware as shown in **Photo 2.** Adjust arms only as need for alignment purposes. Do not over adjust the arms.





8. Repeat these steps on the other side.
9. Remove the rear upper stock control arms from both the frame and axle mounts using a 15mm socket & wrench. Retain the stock hardware for reuse. Remove the emergency brake line bracket from the stock control arm using a 1/2" wrench. Retain hardware for reuse.
10. Adjust the control arm to a length of 3/4" longer then stock arms (1/4" if using stock drive shaft) for a pre-alignment starting point. Check to make sure the snap ring is fully engaged on the joint and install the adjustable arms in the stock location making sure the joint is centered in the mount and reuse factory hardware to install. Do not tighten at this time. **See Photo 3**.Adjust arms only as need for alignment purposes. Do not over adjust the arms
11. Reinstall the emergency brake bracket onto tab on upper control arm. Reuse factory hardware and tighten using a 1/2" wrench. **See Photo 4.**

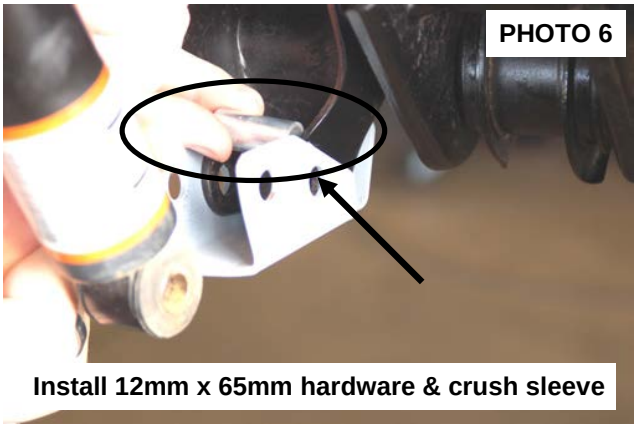




14. Install the new Rough Country coil springs making sure the rubber damper in positioned in the upper mount. It will be necessary to use a coil spring or strut compressor to install the new coil springs.
15. Jack up the axle to compress the coil spring and to align the track rod with the new mounting point. Install using the supplied 12mm x 65mm bolt and flange lock nut. No washer is needed at this mounting location.
16. Remove the stock brake line from the drivers side frame rail using a T30 torque bit. Remove the stock hard line from the rubber line using a 3/8" wrench.
17. Install the supplied brake line in the stock location with the supplied bracket and brake line clip. Tighten using a 17mm wrench and 3/8" brake line wrench. **See Photo 5.**


PHOTO 5

18. Install the lower shock bracket as shown in **Photo 6** with the supplied 12mm x 65mm bolts, flange locknuts with supplied crush sleeves.
19. Install the supplied 5/16" x 3/4" bolts, washers & nuts as shown in **Photo 7** in the shock bracket. Tighten the 5/16" bolts using a 13mm socket and wrench.

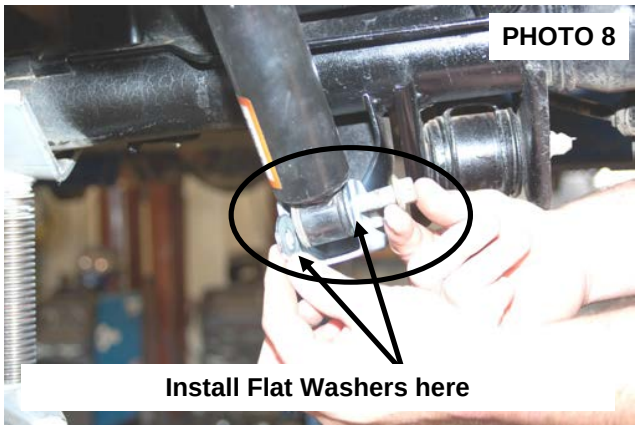

PHOTO 6

Install 12mm x 65mm hardware & crush sleeve


PHOTO 7

Install 5/16" x 3/4" Hardware

20. Install the rear Rough Country **2.2 Shock absorber Part #660576** on the upper mount and install the supplied flat washers as shown in **Photo 8** on the lower shock mounts with the factory hardware. Tighten using a 15mm & 18mm wrench. (Stock shocks shown in picture). **RCX 2.2 Series shock absorbers are designed to be installed with the piston down and body up.**
19. Reinstall the wheels and tires. Lower the vehicle to the ground and tighten the lug nuts to the factory specifications using crossing pattern (80-110 ft. lbs).
20. On the rear, assemble the sway bar bushings and 10mm sleeves in the new rear extended sway bar links. Secure the links to the stock location, using the 10mm x 60mm bolt, washers and nuts supplied. On the upper mounts you will reuse the factory flag nut. Tighten to 40 ft. lbs.


PHOTO 8

Install Flat Washers here

21. Tighten lower arm pivot bolts to 130 ft. lbs using a 21mm wrench & socket and the rear track bar mounting bolts to 74 ft. lbs. using a 18mm wrench. **Note** Make sure flex joint housing is centered in mount before tightening jam nut. Should not be touching either side.****
22. **A transfer case drop or drive shaft/SYE combination is recommended for this vehicle. Install at this time per the instructions included in packaging**.

POST INSTALLATION

1. Bleed brake lines and test brakes before driving. Check for leaks.
2. Have a qualified alignment center realign front end to factory specs. As a general rule you set caster to the minimum of the factory spec and set toe-in to the maximum.
3. Install Warning to Driver decal on sun visor.
4. Adjust headlights to proper settings
5. All components must be retightened after 500 miles, and every three thousand miles after installation.