



JEEP JK 4" SUSPENSION KIT W/ CONTROL ARMS

Thank you for choosing Rough Country for your suspension needs.

Rough Country recommends a certified technician install 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 instructions before beginning installation. Check the kit hardware against the parts list. Be sure you have all needed parts and know where they go. Also please review tools needed list and make sure you have needed tools.

PRODUCT USE INFORMATION

As a general rule, the taller a vehicle is, the easier it will roll. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Generally, braking performance and capability are decreased when larger/heavier tires and wheels are used. Take this into consideration while driving. Do not add, alter, or fabricate any factory or after-market parts to increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands is not recommended.

Rough Country makes no claims regarding lifting devices and excludes any and all implied claims. We will not be responsible for any product that is altered.

This 4" suspension system was developed using a 35X12.50X17 tire with 4.5" to 4.75" of back spacing on aftermarket wheels. Stock wheels can be used with this kit with up to a 35x12.5 tire, but different tire manufactures designs may result in a tire width that could result in contact with the lower control arm and/or front sway bar link in a sharp turn. Please consult with your tire and wheel expert before purchasing. Also note that if wider tires are desired, offset wheels will be required.

IMPORTANT NOTE : Upon completing the install of this kit the draglink must be adjusted to center the steering wheel BEFORE the vehicle is driven. Failure to do so will cause a computer error, odd handling, and poor performance.

If question exist we will be happy to answer any questions concerning the design, function, and correct use of our products by calling 1-800-222-7023.

NOTICE TO DEALER AND VEHICLE OWNER

Any vehicle equipped with any Rough Country product should have a "Warning to Driver" decal installed on the inside of the windshield or on the vehicle's dash. The decal should 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 forward these installation instructions on to the vehicle owner for review. These instructions should be kept in the vehicle for its service

Tools Needed:

10mm Wrench	21mm Socket	Jack
21mm Wrench	Jack Stand	Grinder
18mm Wrench	7/16" Wrench	13/32" Drill Bit
18mm Socket	9/16" Wrench	Drill
19mm Wrench	9/16" Socket	Pitman arm puller
19mm Deep Well Socket		Reciprocating Saw
33mm Socket		
7/8" Wrench		
13/16" Socket		

KIT CONTENTS

Kit Box 1681/1682		
Qty	Part #	Description
2	94506400	Rear sway bar links
1	94004003	Rear track bar bracket
4	94001159	Brake line bracket
2	660585	Front RCX 2.2 shocks
2	660586	Rear RCX 2.2 shocks
1	1681Bag	Kit bag
1	1681Bag2	Shock Bag
1	1681Bag3	Kit Bag
1	94004014	Front Track bar bracket
1	6618	Pitman arm
1	94004009	Rear track bar brkt brace
For 4 Door Applications		
2	91924206	Front coil spring 4 door
2	91924306	Rear coil spring 4 door
For 2 Door Applications		
2	91924606	Front coil spring 2 door
2	91924706	Rear coil spring 2 door

1681 Kit Bag		
Qty	Part #	Description
1	411001	Track bar bracket sleeve
4	90500418	.250- 20 x 1.00" bolt
4	90500420	.250-20 nylock nut
8	90500404	.250 flat washer
2	81078	.375-16 top lock nut
2	90500304	.375 washer
1	90500302	.375-16 x1.25 bolt
1	90503102	.562-12x3.0 bolt
6	90508001	.562 washer
1	90509301	.562 Top lock nut
4	81079	Cross-member washer
2	41-8256T	Cam-bolts
1	90500316	.375-16 x 1" bolt
1	90500850	.500 x 1" bolt
1	81059	.500 lock washer
1	90601031	Front track bar crush sleeve
2	90500319	14mm X 80mm Bolt
2	90500332	14mm Nylock nut
1681 Kit Bag2		
Qty	Part #	Description
4	403646	Shock sleeve
1681 Kit Bag3		
4	403646	Sleeve
4	90500416	.50-12 x 2 3/4" bolt
4	90500254	.50-12 lock nuts
7	970-0686	.50 washer
1	81079	Thick Flat Washer
1683 Kit Bag1		
2	90601030	Control Arm Sleeve
12	90602106	Rear Control Arm Bushing
8	90606009	Control Arm Sleeve
16	90602257	Control Arm Bushing
4	90601028	Control Arm Sleeve

KIT CONTENT



TORQUE SPECIFICATIONS			
Size	Grade 5	Grade 8	
5/16"	15 ft/lbs	20 ft/lbs	
3/8"	30 ft/lbs	35 ft/lbs	
7/16"	45 ft/lbs	60 ft/lbs	
1/2"	65 ft/lbs	90 ft/lbs	
9/16"	95 ft/lbs	130 ft/lbs	
5/8"	135 ft/lbs	175 ft/lbs	
3/4"	185 ft/lbs	280 ft/lbs	
Metric (Grade)	8.8	10.9	12.9
14MM	85ft/lbs	120ft/lb.	145ft/lbs

FRONT INSTALLATION INSTRUCTIONS

1. Prior to installing this kit, with the vehicle on the ground, measure the heights of your vehicle. This measurement can be recorded from the center of the wheel straight up to the top of the inner fender lip. Record the measurements.

LF: _____ ,RF: _____ ,

LR: _____ , RR: _____

2. Place vehicle in park and chock the rear wheels. Raise the front of the vehicle with a jack and secure a jack stand beneath each frame rail behind the front control arms. Ease the frame down onto the stands.
3. Remove the front tires/wheels, using a 19mm deep well socket.
4. Using a 21mm socket, remove bolt securing the front track bar to the frame. Retain stock hardware. **See Photo 1.**
5. Using a 18mm socket and wrench remove the bottom sway bar bolts. Using a 21mm socket and 21mm wrench, remove the top of the sway bar link. Retain hardware for later use. **See Photo 2.**



PHOTO 1

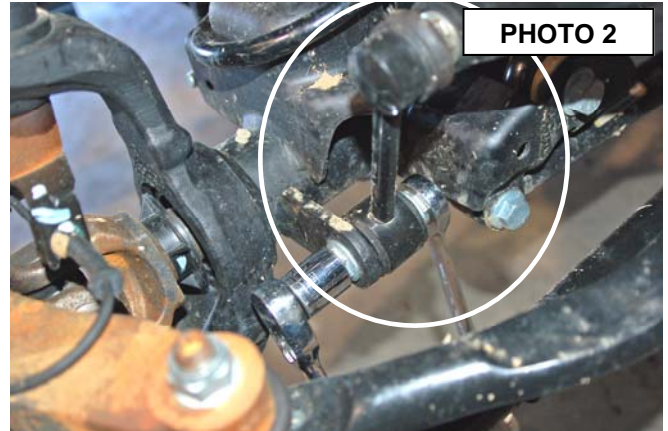


PHOTO 2

6. Remove the lower shock bolt using a 18mm socket and wrench. Using a 14mm wrench unbolt the top of the shock and remove. **See Photo 3.** Retain stock hardware.
7. Using a 21mm socket and wrench loosen the upper and lower control arm bolts at the axle and frame, but do not remove.
8. On some models it will be necessary to remove the brake line bracket from the frame to allow the coils to be removed. Using a 10MM socket, remove the brake line bracket from the stock location.
9. Push down on the axle to allow room for the coils to be removed. Remove stock coil springs. Retain coil isolators.
10. Using a 21mm wrench, remove the bolts that secure the lower link arms to the axle. The OE lower control mounts are perforated from the factory. The perforated sections must be removed to accept the new cam bolts supplied in the kit. The perforated sections can be removed with a rotary grinding tool or a chisel. **See Photo 4.**
11. Assemble the lower control arms with the bushings, sleeves & install in the lower mounts with the supplied cam bolts. The cam bolts should be installed from the outside. Snug, but do not tighten at this time. **See Photo 5.** The bend on the lower control should be facing inward to allow for the tires to achieve full lock to lock turning.



PHOTO 3



PHOTO 4



PHOTO 5

12. Remove the bolts securing the upper control arms to the axle using a 18mm wrench/socket. It will be necessary to cut out the passenger side upper bolt as shown in **Photo 6** to remove the control arm.
13. After the stock control arms have been removed assemble the bushings /sleeves in the upper control arms and install in the upper mounts with supplied 12mm x 80mm bolt on the passenger side, and stock hardware on the driver side. Do not fully tighten at this time. **See Photo 7.**



PHOTO 6



PHOTO 7

14. Be sure the factory rubber isolators are in place and install the front coil springs. Insert the coil into the upper tower first, followed by the lower seat. Be sure that the coils are rotated so that they seat properly. Raise the axle enough to hold the coil springs in place.
15. Using a 21mm socket remove the tie rod end from the pitman arm. Remove the pitman arm nut using a 33mm socket.
16. A pitman arm puller will be needed to remove factory pitman arm. **See Photo 8.**
17. Install the new pitman arm with the stock hardware and using a 33mm socket. **See Photo 9.** Reinstall the drag link on the new pitman arm with the stock nut and using a 21mm wrench.



PHOTO 8



PHOTO 9

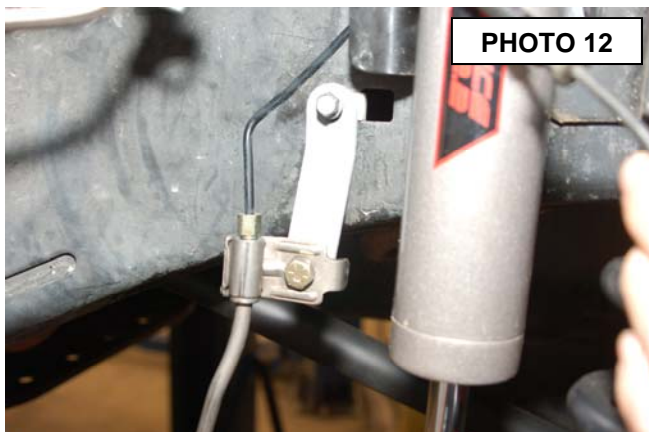
18. Install the bushings and sleeves from 1681bag2 into the **RCX shock absorber Part # 660585**. Position the cup washer and stem bushing on the stem end of the shock and insert the stem in the upper shock tower. Install the remaining bushing and washer and loosely secure using the supplied nut. Tighten until the bushing swells slightly using a 9/16" wrench.

NOTE: The RC 2.2 Series shocks are built to run piston down and have a built in bump stop thus a longer bump stop or bump stop extension is not needed with this kit.

19. Attach the lower end of the shock to the axle and secure using the stock hardware. Tighten to 80 ft/lbs.
20. Locate new track bar bracket and install into the stock mount as shown with supplied 9/16 x 3" bolt & crush sleeve. **See Photo 10.**
21. Using the supplied 1/2" x 1 3/4" bolt/washer & lock washer, install into stock hole on track bar mount. The thicker 1/2" washer must be used in this location. **See Photo 11.** Tighten hardware



22. Install the stock track bar into the new track rod bracket using the stock bolt/nut. Torque all fasteners to specifications.
23. On the rear of the vehicle remove the factory sway bar link using a 18mm socket and wrench on the lower. Remove the upper hardware using a 18mm wrench and a 19mm wrench on the ball joint end.
24. Install the factory rear sway bar link in place of the factory front sway bar link. Attach the swivel end of the link to the factory sway bar using the stock hardware. Line up the eye end of the link to the factory mount on the axle, attach using the factory hardware. Tighten the upper using a 18mm and 19mm wrench, and lower using a 18mm socket and wrench.
25. Locate the brake line bracket and install using the stock hardware. Install the stock brake line on the other end of the bracket using the supplied 1/4" X 1" bolts. **See Photo 12. Use caution when moving the brake line to not kink the metal line.**
26. **This step will be performed on vehicles equipped with the optional front transmission skid plate only.** One side at a time, using a 18mm socket remove the bolt that holds the cross member to the frame in front of the rear upper control arm. Insert 2 washers to each side supplied in 1681bag, between the frame and cross member as shown in **Photo 13.** This will space the cross member down enough to allow driveshaft clearance at full flex. Tighten using the stock bolt. Repeat on opposite side.



27. Reinstall the front tires/wheels, using a 19mm deep well socket.
28. Lower the vehicle to the floor.

REAR INSTALLATION INSTRUCTIONS

1. Chock front wheels. Jack up the rear of the vehicle and support the vehicle with jack stands, so that the rear wheels are off the ground. Position a jack so it supports, but does not raise the rear axle.
2. Remove the rear tires/wheels, using a 19mm deep well socket.
3. Using a 21mm socket remove the track bar from the frame on the passenger side. Using a 21mm socket remove the track bar bolt at the axle and remove the track bar from the vehicle. Retain the frame side stock hardware for reuse.
4. Using a 21mm socket loosen, but do not remove the bolts securing the lower control arms at both the axle and frame.
5. Using a 10mm wrench, unbolt the brake hose bracket at the frame. Retain hardware for later use.
6. Remove and discard the rear shocks using a 18mm wrench. Retain stock hardware.
7. Lower the axle enough to remove the stock coil springs.
8. Remove the upper control arms from the frame and axle using a 18mm wrench. Retain the upper flag nut in the frame and all other factory hardware. **See Photo 14.**
9. Assemble the bushings/sleeves in the upper control arms and install in the stock location with factory hardware using a 18mm wrench. **See Photo 15** showing the passenger side rear flag nut install & **Photo 16** showing rear axle install. Do not fully tighten at this time.

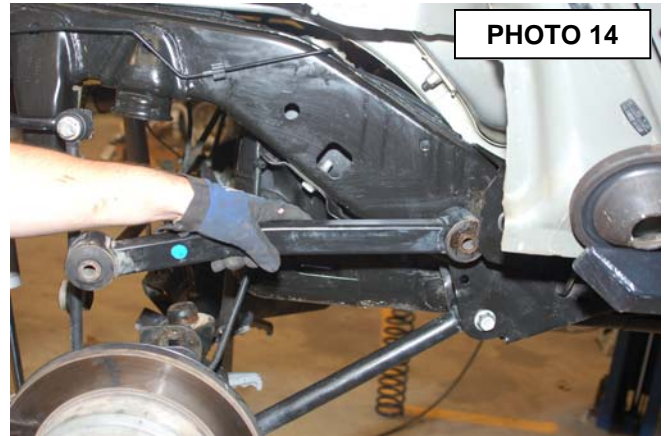


PHOTO 14



PHOTO 15

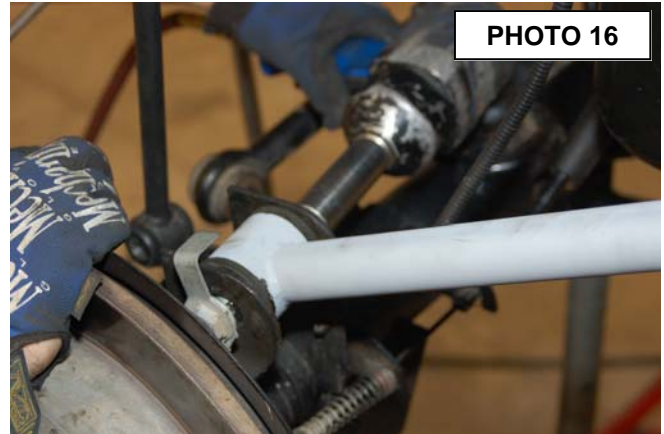


PHOTO 16

10. Using a 21mm socket remove the bolts securing the lower control arms at both the axle and frame. Passenger side lower shown in **Photo 17 & 18**. Remove the control arms and retain the hardware for reuse.



PHOTO 17

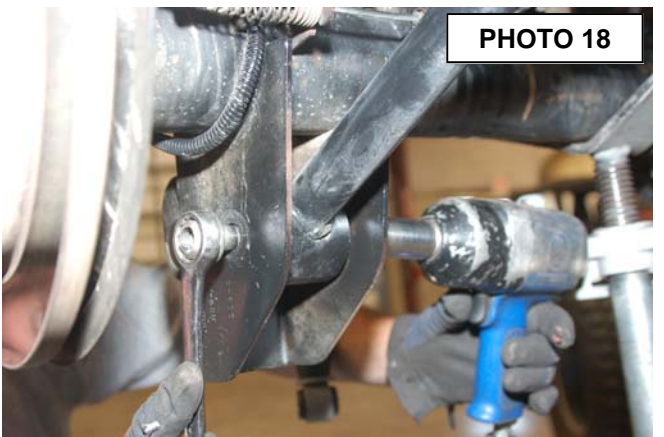
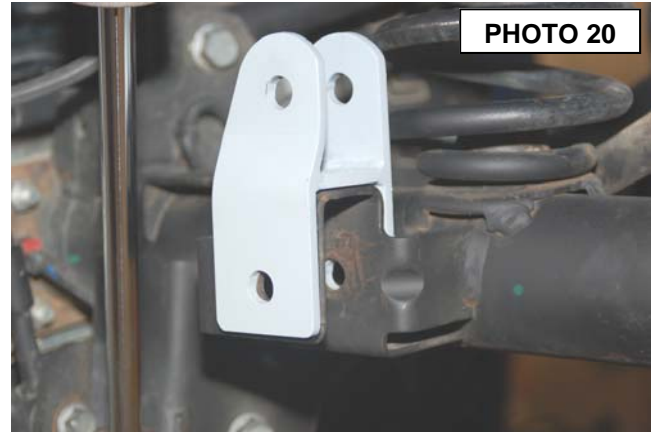
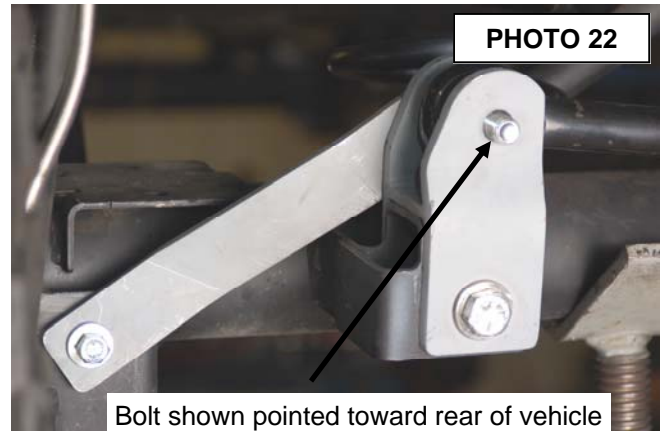
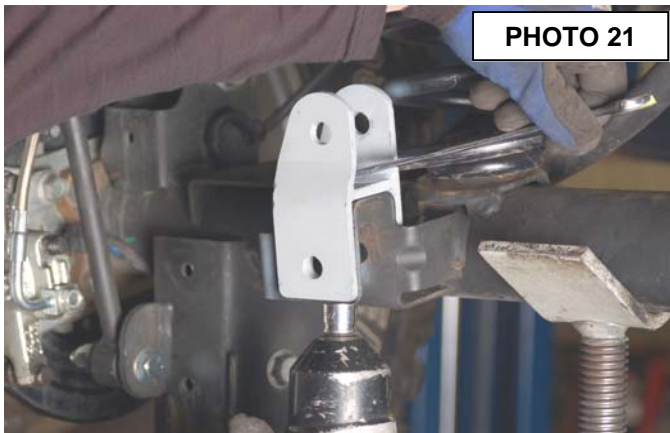


PHOTO 18

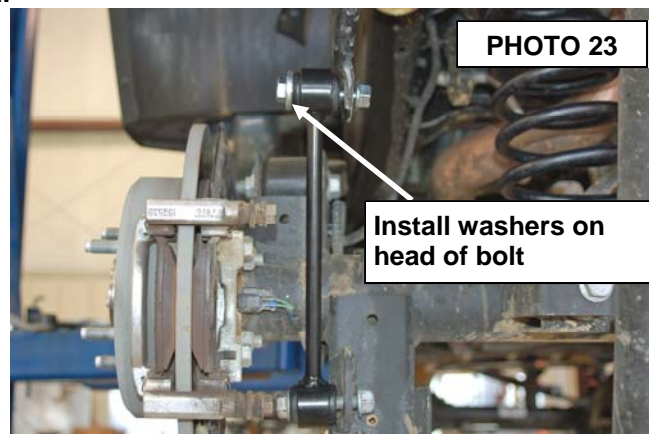
11. Assemble the bushings/sleeves in the new lower control arms and install in the factory location with the factory hardware using a 21mm wrench. **See PHOTO 19.** Do not fully tighten at this time.
12. Install the supplied rear coil springs. Rotate the coils so that they seat properly in the coil seat, raise the axle enough to seat the coil springs.
13. Position the rear track bar bracket over the rear factory track bar mount. **See PHOTO 20.** Verify that the original track bar mounting hole and the hole in the new track bar bracket are aligned vertically. Using the track bar bracket as a template mark and drill a 13/32" hole in the top of the original track bar mount from the top.



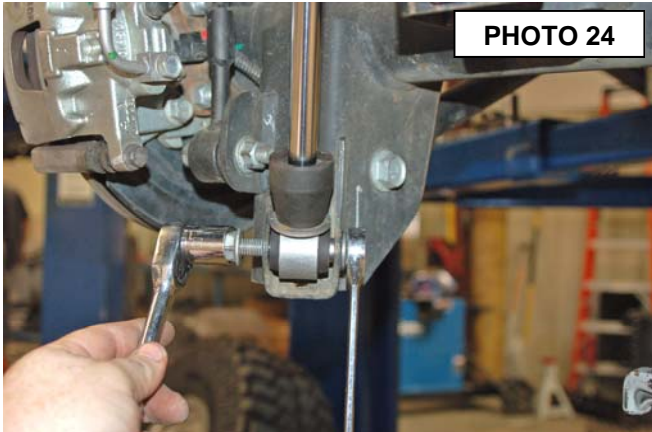
14. Insert the supplied sleeve, inside the factory track bar mount. Insert the supplied 14mm x 80mm bolt through the bracket, factory mount, and sleeve secure using the washer and nut. Tighten.
15. Install using the .375-16 x 1" bolt, washer through the drilled hole from the top and secure with flange nut using a 9/16" wrench and socket. **See PHOTO 21.**
16. Install strap as shown in **PHOTO 22.** The bracket / factory track bar will install in place with the supplied 14mm x 80mm bolt washers & nut (upper hole) with the head of the bolt on the front by the coil spring. Install the supplied 3/8" x 1 1/4" top lock nut /washer on the shock mount and brace. The passenger side mount on the track bar will be installed in a later step.



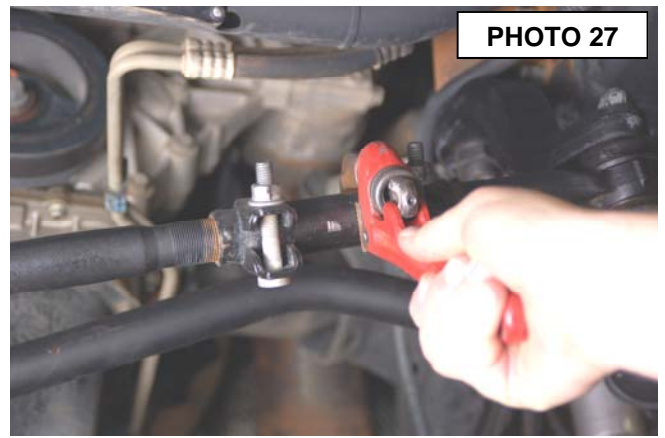
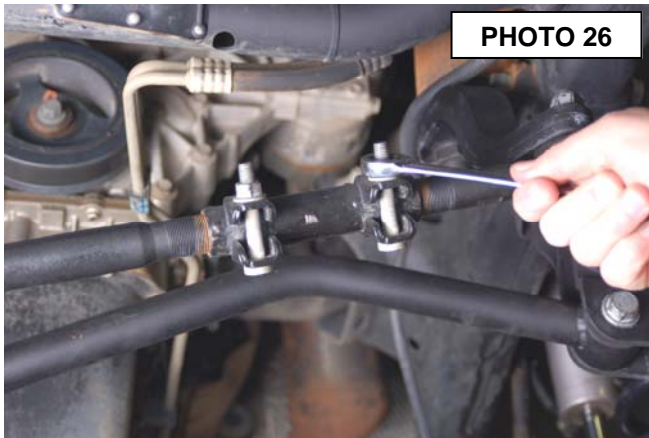
17. Locate the 4 sway bar link sleeves. Insert the sleeves into the sway bar link bushings. Using the supplied .500-16 x 2.75" bolts, washers and nuts from 1681bag, install the sway bar links to the sway bar, and axle mount., and tighten using a 13/16" socket and 7/8" wrench. **See PHOTO 23. Make sure the bolts are installed with the head of the bolt toward the tire as shown.**



18. Install the supplied bushings and sleeves from 1681bag2 to part # 660586 rear shocks. Install the RCX 2.2 series shocks using the factory hardware, using a 18mm socket for the top, and a 18mm socket for the bottom. Shaft end of the shock will be pointed down. The shocks have a built in bump stop. A longer bump stop will not be needed. **See PHOTO 24.**
19. Attach the brake line bracket to the location on the frame where the factory bracket was attached. Tighten using a 10mm wrench and stock hardware. Secure the factory bracket to the bottom hole of the relocation bracket using a 7/16 socket and the supplied .250-20 x 1" bolts, washers, and nuts. **See PHOTO 25.**



20. Reinstall the rear tires/wheels, using a 19mm deep well socket
21. Lower the vehicle to the floor.
22. Using a 21mm socket tighten the front and rear lower control arms, both ends to 130 ft.lbs.
23. Using a 18mm socket tighten the front upper control arms, both ends to 80 ft.lbs
24. Using a 21mm socket tighten the rear upper control arms to 130 ft. lbs.
25. Make sure the body is centered over the rear axle and install the rear track rod bracket in the factory location on the frame with the factory hardware and using a 21mm wrench.
26. Adjust front draglink to center the steering wheel before driving by loosening the two bolts and turning the adjustment collar. **See PHOTO 26 & 27.**



IMPORTANT NOTE : The draglink must be adjusted to the center steering wheel **BEFORE** the vehicle is driven. Failure to do so will cause a computer error, odd handling, and poor performance.

POST INSTALLATION

1. Confirm that the draglink was adjusted to the center steering wheel **BEFORE** the vehicle is driven. Failure to do so will cause a computer error, odd handling, and poor performance.
2. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering for interference and proper working order. Test brake system.
3. Perform steering sweep. The distance between the tire sidewall and the brake hose must be checked closely. Cycle the steering from full turn to full turn to check for clearance. Failure to perform inspections may result in component failure.
4. Re-torque all fasteners after 500 miles and recheck after 1000 miles. Alignment must be checked by a qualified mechanic. Visually inspect components and re-torque fasteners during routine vehicle service.
5. Readjust headlights to proper settings.
6. Have a qualified alignment center realign the front end, to the factory specifications immediately.

Caster preferred	4.6 degree	range +,- 1 degree
Camber preferred	-0.25 degree	range +,- 0.63 degree
Toe-in preferred	0.15degree	range +,- 0.15 degree

MAINTENANCE INFORMATION

It is the ultimate buyers responsibility to have all bolts/nuts checked for tightness after the first 500 miles and then every 1000 miles. Wheel alignment steering system, suspension and driveline systems must be inspected by a qualified professional mechanic at least every 3000 miles.

JK Receiver Hitch
\$99.95



RCX Hat
\$5.00



Spare Tire Spacer
\$49.95



Winch Mount / D-ring Kit
\$239.95



Quick Disconnects
\$49.95



Thank you for purchasing a Rough Country Suspension System.

**ROUGH
COUNTRY**
SUSPENSION SYSTEMS