



07. UP TUNDRA 4 1/2+LIFT KIT

Thank you for choosing Rough Country for all your suspension needs.

This kit will fit both 4WD and 2WD models, all brackets will be used for 4WD models. On 2WD models the differential brackets will not be used. In this instruction sheet, the 4WD model is shown.

PRODUCT USE INFORMATION

As a general rule, the taller a vehicle is, the easier it will roll. Too offset, as much as possible, what is lost in rollover resistance by increasing tire track width. In other words, go "wide" as you go "tall". Many sportsmen remove their mud tires after hunting season and install ones more appropriate for street driving; always use as wide a tire and wheel combination as possible to enhance vehicle stability.

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 significantly 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.

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

This 4 1/2" kit was developed to accommodate a Maximum tire size of 35x 12.5x 18" tire on a 18x 8.5 with a maximum backspacing of 6 3/16" on a wheel. 18" or larger stock wheels can be used but no wider than a 11.5" tire can be used. Larger tires or different wheel offsets will need to be verified to work with this kit prior to usage.

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

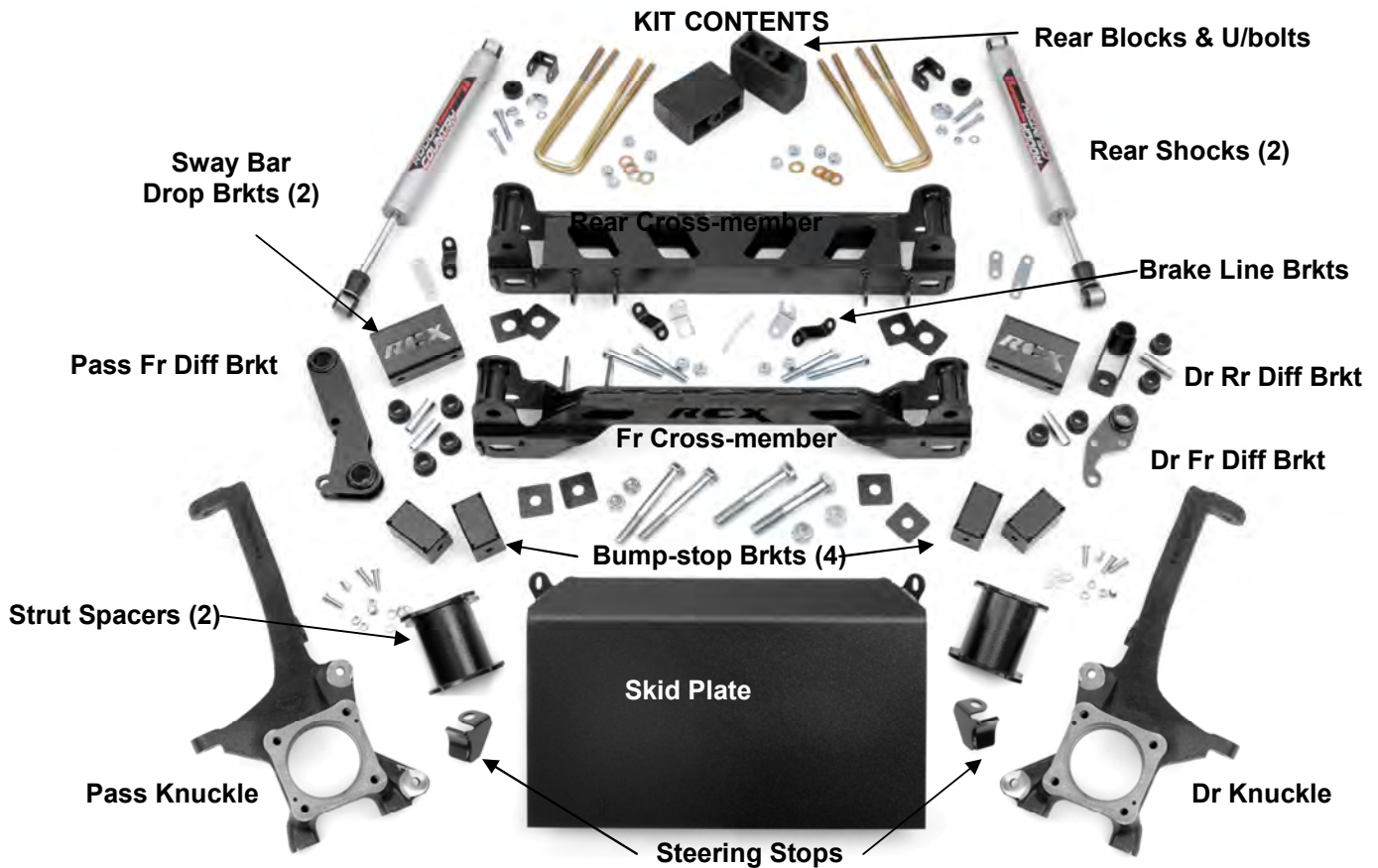
Tools Needed:

Floor Jack / Jack Stands
 5mm Allen wrench
 10mm socket / wrench
 12mm socket / wrench
 13mm socket / wrench
 14mm socket / wrench
 17mm socket / wrench
 19mm socket / wrench
 21mm socket / wrench
 22mm socket / wrench
 24mm socket / wrench
 39mm socket / wrench
 9/16 socket / wrench
 5/8 socket / wrench
 1 1/16 socket / wrench
 1 3/16 socket / wrench
 Pipe wrench
 Needle nose pliers
 Tin shears / cutters
 Shop hammer
 Reciprocating-Saw

TORQUE SPECS:

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
	Class 8.8	Class 10.9
8MM	18ft/lbs	23 ft/lbs
10MM	32ft/lbs	45ft/lbs
12MM	55ft/lbs	75ft/lbs
14MM	85ft/lbs	120ft/lbs
16MM	130ft/lbs	165ft/lbs
18MM	170ft/lbs	240ft/lbs

**ROUGH
 COUNTRY**
 SUSPENSION SYSTEMS



Kit Contents:

1775Box1:

- Front Cross-member
- Rear Cross-member
- Sway Bar Drop Bracket (2)
- Dr Side Steering Stop
- Pass Side Steering Stop

1775Box2:

- Driver Side Knuckle
- Pass Side Knuckle

1774Box3:

- Strut Spacer (2)
- Rear RCX 2.2 Shock-660564
- Rear 3+block (2)
- Rear U-bolts (4)

1775Box4:

- Driver Front Diff Bracket
- Driver Rear Diff Bracket
- Pass Diff Bracket
- Skid Plate
- Fr Crssmber Square Washer (4)
- Rr Crssmber Square Washer(4)
- Rear E-Brake Bracket (2)
- Rear ABS Bracket
- Front Brake Bracket (2)
- Front Bump-stop Bracket (4)

Kit Bag:

- For Rear Cross-member*
 - 18mm X 150mm Bolt (2)
 - 18mm Lock Nut (2)
 - Square Washers (4)
- For Front Cross-member*
 - 7/8+x 5+Bolt (2)
 - 7/8+Lock Nut (2)
 - Square Washer (4)
- For Front Driver Diff Bracket (4WD Model)*
 - Bushing (2)
 - Sleeve
 - 9/16+x 4+Bolt
 - 9/16+Lock Nut
- For Driver Rear Diff Bracket (4WD Model)*
 - 14mm x 60mm Bolt (3)
 - Bushing (2)
 - Sleeve
 - 9/16+x 4+Bolt
 - 9/16+Nut on Skid Plate
 - 14mm x 25mm Bolt
- For Pass Side Diff Bracket (4WD Model)*
 - Bushing (4)
 - Sleeve (2)
 - 9/16+x 4+Bolt (2)
 - 9/16+ Washer (1)
 - 9/16+Nut on Skid Plate
 - 9/16+Lock nut (1)
- For Front Bump-Stops*
 - 10mm x 35mm Bolt (4)
 - 10mm Washer (4)
 - 10mm Lock Nut (4)
- For Front Sway Bar Bracket*
 - 7/16+x 1 1/4+ (4)
 - 7/16+Washer (8)
 - 7/16+Lock Nut (4)

For Strut Spacers

- 3/8+Studs (8)
- 3/8+Nut (8)
- 3/8+Lock Washer (8)
- 3/8+Washer (8)

For Front Brake Line Brackets

- 5/16+x 3/4+Bolt (2)
- 5/16+ Washer (4)
- 5/16+Lock Nut (2)

For Front Skid Plate

- 3/8+x 1+Bolt (2)
- 3/8+x Washer (2)
- 3/8+Lock Nut (2)

For Rear Shock Mount

- Shock Bracket (2)
- 10mm x 55mm Bolt (2)
- Mounting Bushing (2)
- Cup Washer (2)
- 10mm Lock Nut (2)
- 10mm Flat Washer (2)
- 12mm x 65mm Bolt (2)
- 12mm Flange Lock Nut (2)

For Rear E-Brake Bracket

- 5/16+x 3/4+Bolt (2)
- 5/16+Washer (4)
- 5/16+Lock Nut (2)

For Rear Brake Line Bracket

- 5/16+x 3/4+Bolt
- 5/16+ Washer (2)
- 5/16+Lock Nut

For Rear ABS Wire Bracket

- 5/16+x 3/4+Bolt
- 5/16+Washer (2)
- 5/16+Lock Nut

INSTALLATION INSTRUCTIONS

1. Park the vehicle on a level surface and chock the rear wheels.
2. Jack up the front of the vehicle and place jack stands under the frame rails. Lower the vehicle onto the jack stands letting the front suspension hang at full droop. Remove tires and wheels with a 21mm socket.
3. Take ABS wire loose from upper control arm using a 10mm wrench & ABS/ brake line on the knuckle using a 12mm wrench. Retain the stock hardware. **Photo 1 & 2.**

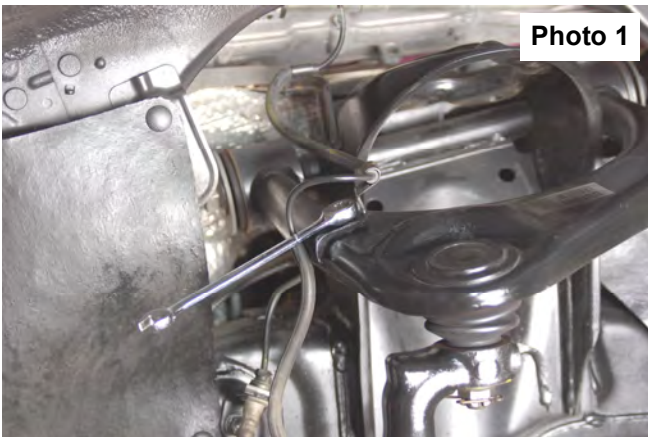


Photo 1

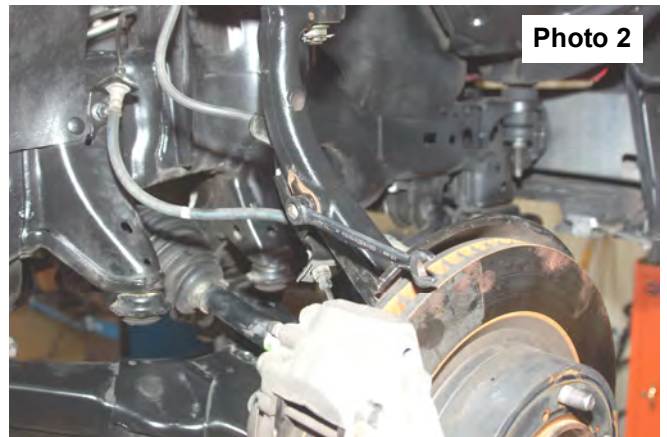


Photo 2

4. Remove the sensor as shown in **Photo 3** using a 5mm allen wrench.
5. Remove the ABS bracket from the knuckle and remove the wire from the bracket. Cut the bracket as shown to install on the new knuckle. Retain the stock hardware for reuse. **See Photo 4.**



Photo 3



Photo 4

6. Using a 1 1/16 and a 1 3/16 wrench loosen the tie-rod end from inner tie-rod as shown in **Photo 5**. Remove cotter key from tie-rod end. Using a 24mm wrench remove nut as shown in **Photo 6**. Use a hammer to break loose tie-rod from knuckle.
7. Remove brake caliper using a 17mm wrench. Tie caliper out of way, but do not let the caliper hang by the brake line. Next remove the rotor and check for wear on brake pads and rotor. Any worn parts should be replaced before re-installed.

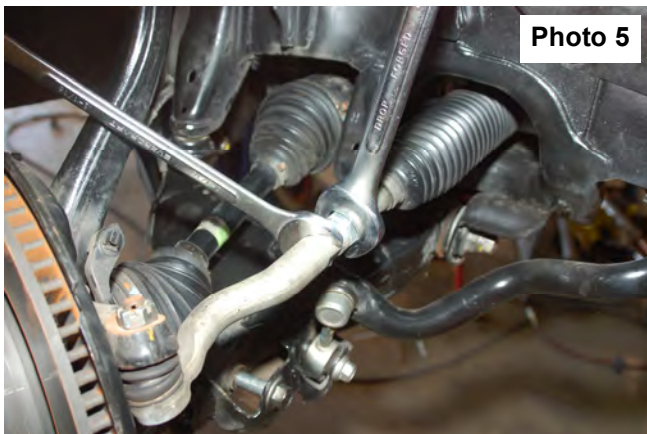


Photo 5

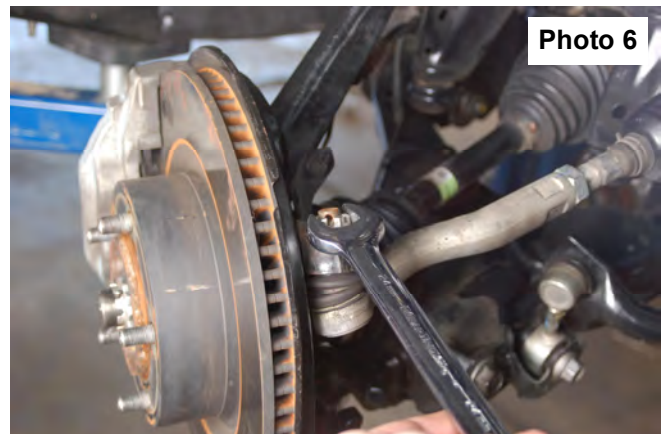


Photo 6

8. Remove the dust shield and remove cotter key from axle and remove axle nut (4WD Model) using a 39mm socket as shown in **Photo 7**.
9. Remove cotter key from upper ball joint. Using a 19mm wrench remove nut. Using a hammer as shown in **Photo 8**, loosen ball joint from knuckle. Support the lower arm with jack stand.



Photo 7



Photo 8

10. With a dead blow hammer loosen the axle from hub bearing. (4WD Model) Using a 22mm wrench remove the 2 lower ball joint bolts as shown in **Photo 9**. Remove knuckle from vehicle. Do not let axle hang down and tie up out of the way. (4WD Model)

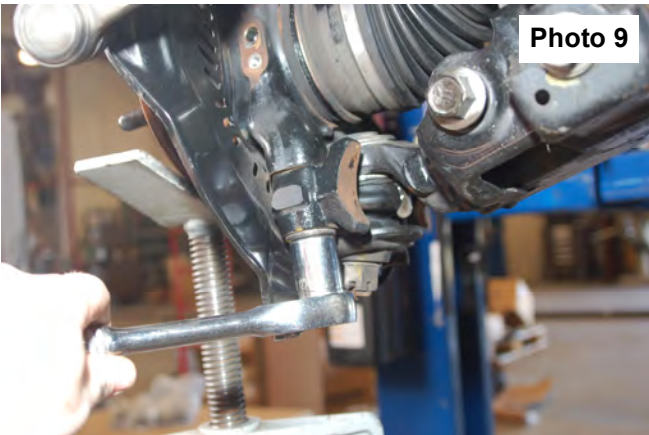


Photo 9

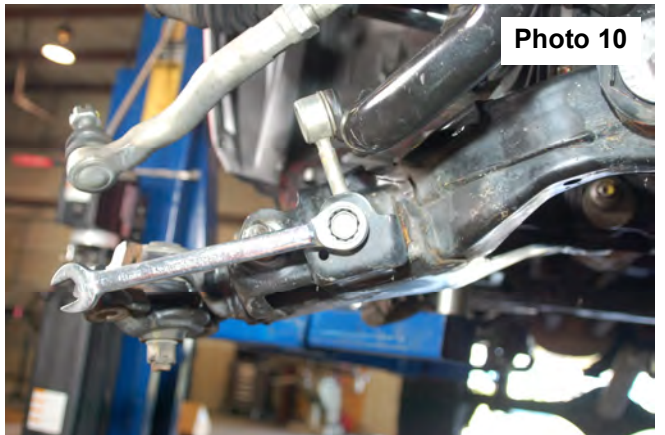


Photo 10

11. Remove sway-bar bolt from lower control arm using a 19mm wrench as shown in **Photo 10**.
12. Remove lower strut bolt using 22mm wrench for both ends of bolt as shown in **Photo 11**. Use a 14mm wrench for nuts on top of strut. Remove strut from vehicle.
13. With a 24mm wrench loosen lower control arm bolts and remove control arm from vehicle.
14. Repeat steps 3-12 on opposite side of vehicle.
15. With a pipe wrench remove all 4 bump-stops. **See Photo 12**
16. Remove sway-bar using a 17mm wrench.



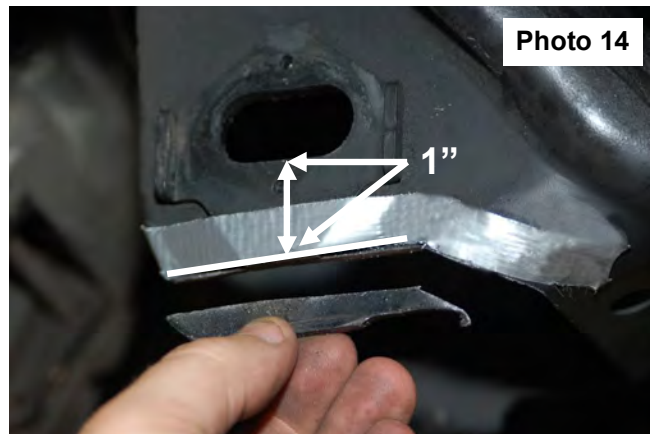
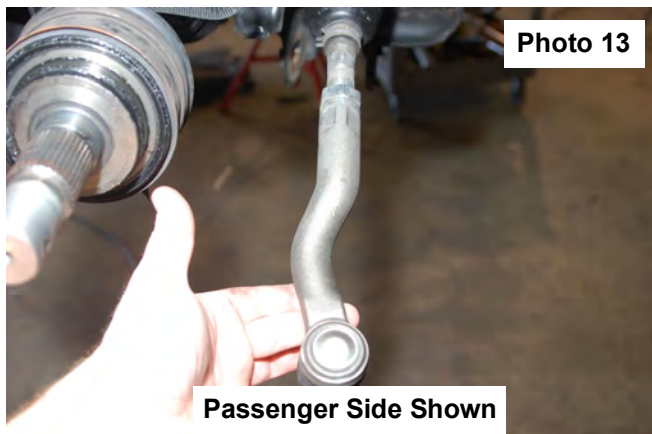
Photo 11



Photo 12

17. Swap left and right outer tie-rod ends as shown in **Photo 13**. This is done for wheel clearance.

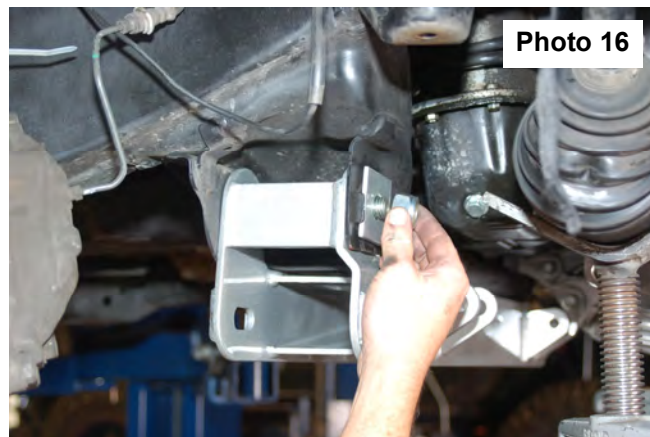
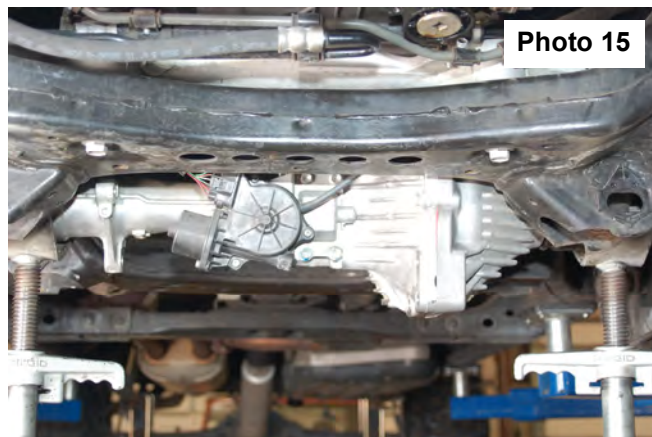
18. Trim rear lower control arm pocket front side only **1 inch** from hole as shown in **Photo 14**.



19. Support differential with jack stand and remove the 3 differential mounts using a 19mm wrench. There should be 10 bolts to remove. Remember too remove the nuts on top of frame from front diff mounts. (4WD Model)

20. Lower differential down being careful with vent hose and wiring. Let the diff rotate down slightly. (4WD Model) **See Photo 15**.

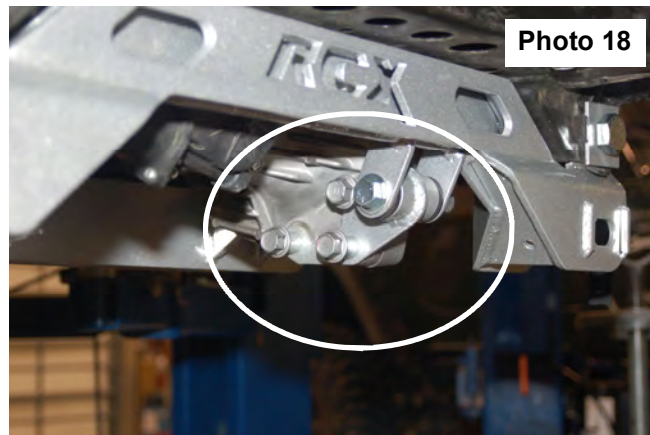
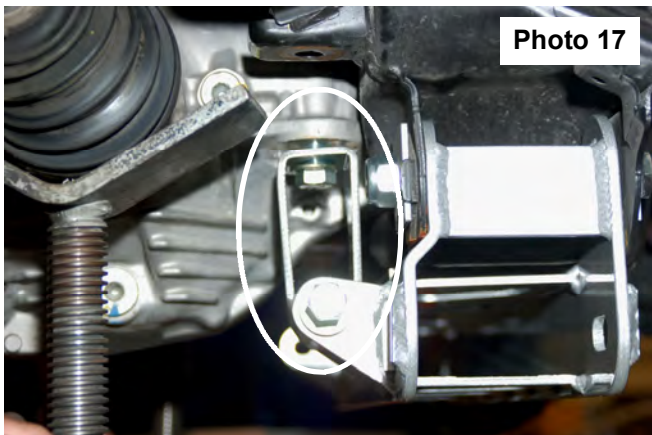
21. Install rear cross-member using supplied 18mm x 150mm bolts square washers (4) and nuts as shown in **Photo 16**. Do not tighten at this time. Please note, there is a front and rear cross-member square washer.



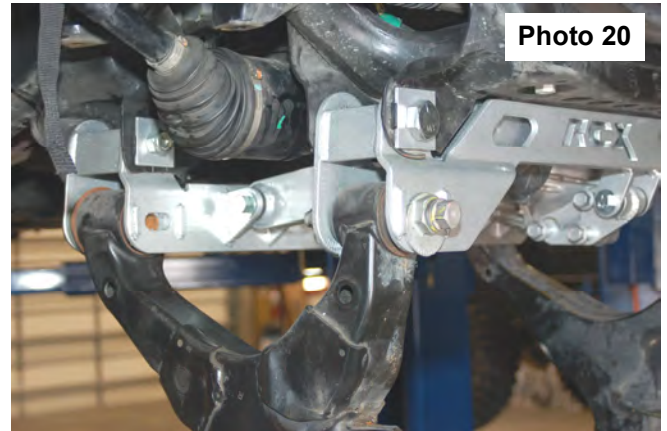
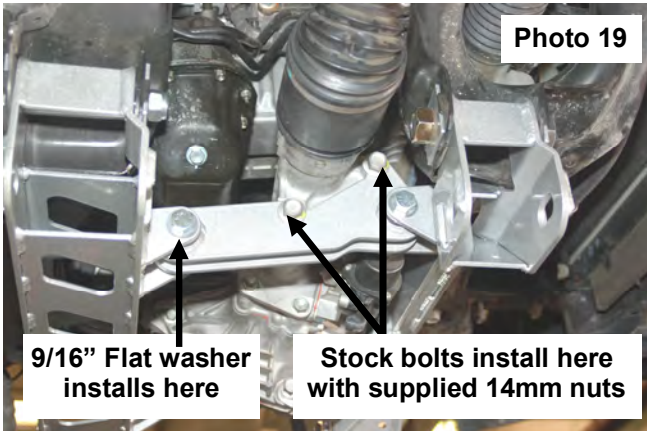
22. Install supplied bushings & sleeve into rear diff mount and using 22mm and 21mm wrench install on vehicle with 9/16 x 4+bolt Install the 14mm x 25mm bolt in the differential as shown in **Photo 17**.(4WD Model) **Do not install nuts on the 9/16\"**

23. Install front cross-member using 7/8 x 5+bolts and square washers (4) in **Photo 18**. Please note, there is a front and rear cross-member square washer. Do not tighten at this time.

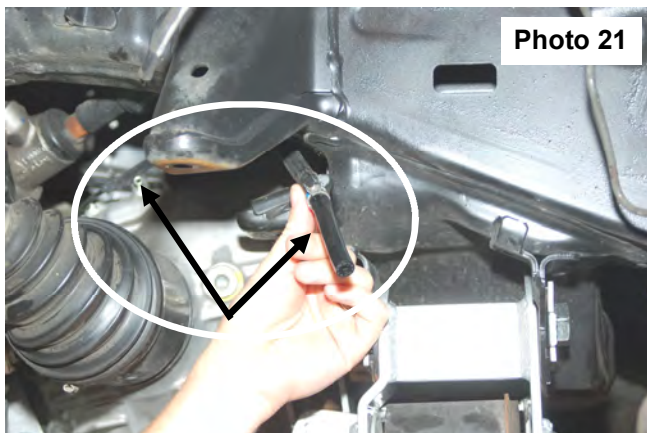
24. Install supplied bushings & sleeve into driver side diff mount and install on vehicle using 9/16 x 4+bolts & nut on the cross-member and three 14mm x 60mm long bolts on the differential drop bracket as shown in **Photo 18**. Tighten using a 19mm, 21mm and 22mm wrench. (4WD Model)



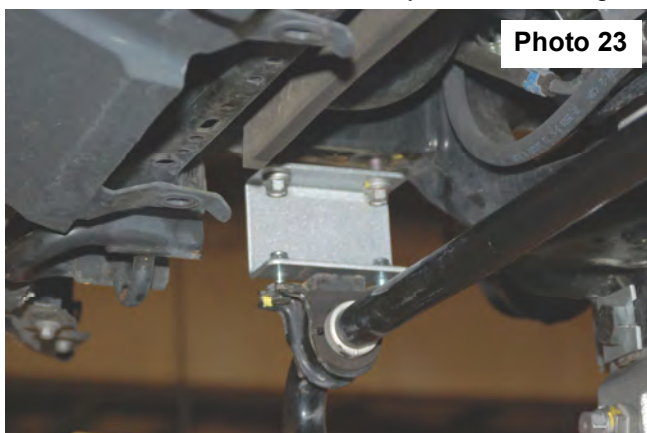
25. Install bushing into passenger side diff bracket. Using 2- 9/16 x 4+long bolts and 21 and 22mm wrench on vehicle. Use stock bolts for bracket to diff with supplied 14mm nuts. (4WD Model) **See Photo 19.** Tighten using a 19mm wrench. **Do not install nuts on the 9/16" bolts on the rear cross member ,the nuts for this bolt are located on the skid plate.**
26. Install lower control arms with stock hardware as shown in **Photo 20.** Do not tighten.



27. At this time tighten all cross-member bolts using 1- 5/16+wrench on front cross-member and 1 -1/16+on rear. Tighten all differential mounting bolts. Rear diff bracket bolt are not tighten because the nuts are welded to the skid plate. (4WD Model) Do not tighten lower control arm bolts at this time.
28. Assemble supplied 1/4+coupler and hose and install new vent tube ext to differential as shown n **Photo 21.** (4WD Model)
29. Install bump-stop to bump-stop ext. using 10mm x 1.25 nuts & washers and thread into factory location with 10mm x1.25 bolts & washers. **See Photo 22.** Tighten hardware using a 17mm wrench.



30. Install sway-bar drop brackets using factory hardware at top with a 17 mm wrench. Install sway bar to drop brackets using supplied 7/16 X 1.25 bolts nuts and washers using a 5/8 wrench as shown in **Photo 23.** Attach sway bar links to lower control arms with factory hardware using a 19mm wrench as shown in **Photo 24.**



31. Install the strut spacer on the strut with the factory hardware. Tighten using a 14mm wrench. **See Photo 25.**
32. Install the 3/8 studs into strut ext. using a 3/8 nut and a 9/16 socket torque the stud to 35-45 ft/lbs as shown in **Photo 25**, this will cause the stud to clinch.
33. Install strut onto vehicle using factory hardware for bottom and supplied 3/8+lock washers, flat washers & 3/8+nuts for top. Tighten using a 22mm wrench & 14 mm wrench to tighten.
34. Remove hub bearing from stock knuckle using a 17mm wrench as shown in **Photo 26**. Remove seal and install seal into knuckle.

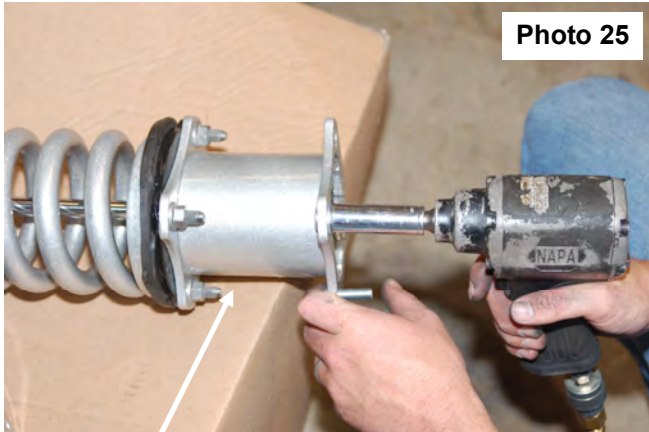


Photo 25

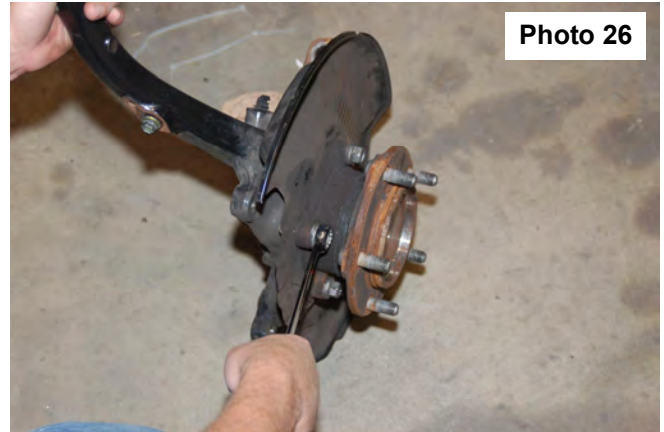


Photo 26

35. Install bearing assemble into new knuckle Take care not to damage seals. **See Photo 27. Tighten using a 17mm wrench.**
36. Install knuckle onto vehicle and install axle shaft in hub assembly. Tighten upper ball joint using 19mm.
37. Locate and install the steering stop bracket as shown in **Photo 28** on lower ball joint with stock hardware using a 22mm socket.



Photo 27



Photo 28

38. Tighten the and axle nut with 39mm socket or equivalent. Make sure the cotter key is installed on the axle nut.(4WD Model)
39. Install new brake line drop brackets on the frame as shown in **Photo 29** using stock bolts. Secure the brake line to the new bracket using the supplied 5/16 x 3/4+bolts, washers & nuts. Tighten using a 12mm and a 13mm wrench.
40. Install rotor and brake caliper using a 17mm wrench as shown in **Photo 30**.



Photo 29



Photo 30

41. Install the stock brake line bracket onto the knuckle as shown in **Photo 31** using the stock hardware. Tighten using 12mm wrench.
42. Install the ABS sensor into the knuckle using a 5mm allen wrench and install the factory bracket back onto the upper a-arm using a 10mm wrench and stock bolt . **It may be necessary to slightly pull the ABS wire to create slack . WD-40 can be used to lube the line to allow it to slide in the upper control arm mount.** Reinstall the ABS bracket on the knuckle as shown using the stock hardware. Tighten using a 12mm wrench. **See Photo 32.**



Photo 31

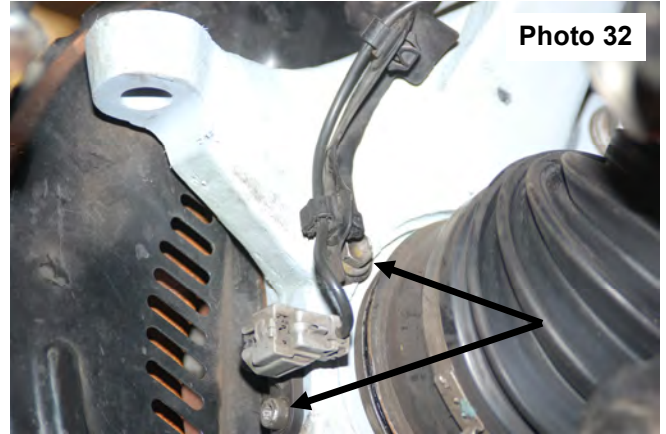


Photo 32

43. Install the tie-rod end into the knuckle using a 24mm wrench to tighten in **Photo 33**. Make sure the cotter key is installed. Tighten the jam nut on the tie-rod end using a 1 1/16+ and a 1 3/16+ wrench.
44. Install skid plate as shown in **Photo 34** using the previously installed 9/16+ rear diff. bracket bolts and supplied 3/8-x 1+bolts and nuts and 2 washers. (4WD Model) Use a 9/16+ wrench for the front bolts and a 21mm for the rear diff bolts that secure the skid plate.

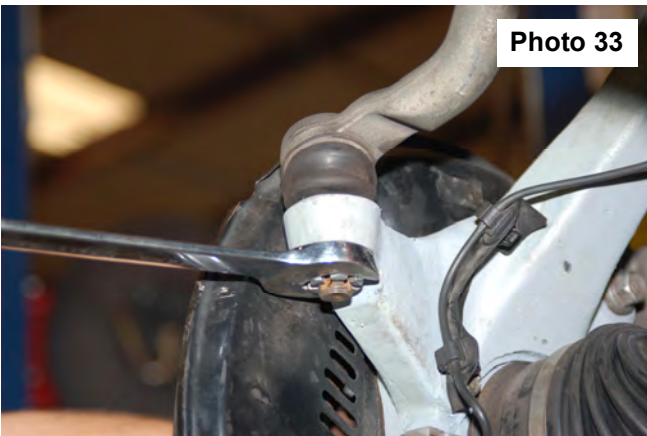


Photo 33

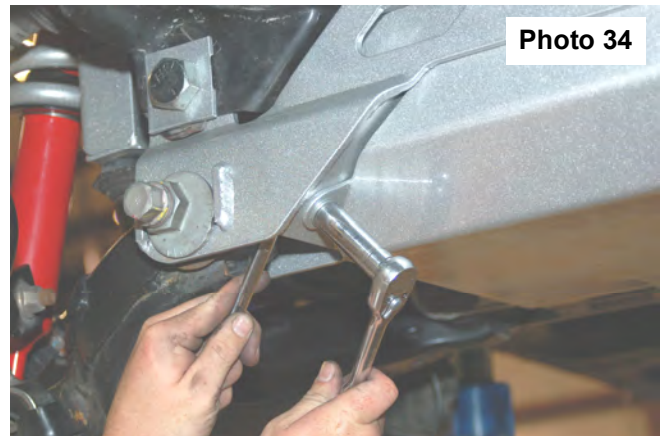
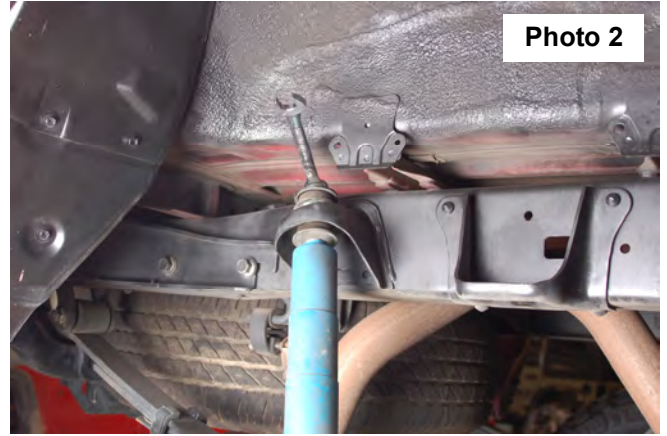
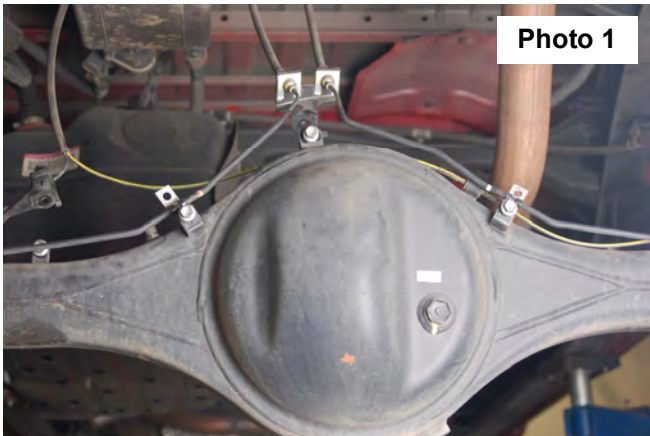


Photo 34

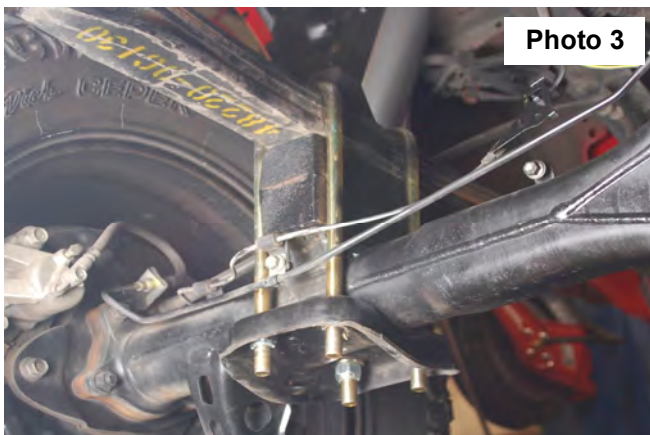
45. Install the wheels and tires. Jack up the front of the vehicle and remove the jack stands. Lower the vehicle to the ground and tighten lower control arm bolts using a 21mm wrench.

REAR INSTALLATION INSTRUCTIONS

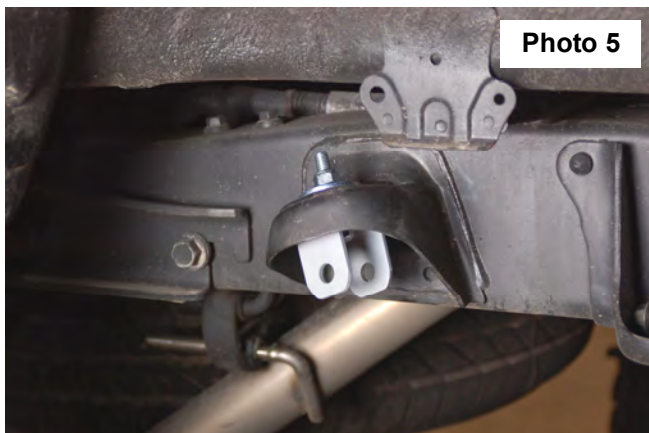
1. Chock the front tires. Jack up the rear of the vehicle and place jack stands under the frame rails, remember to raise the rear high enough so the axle can be lowered to install the blocks. Lower the jack and let the vehicle rest on the jack stand, keep the jack under the axle this will be used to move the axle up and down during installation.
2. Remove the bolts from the 4 factory brake line and ABS wire brackets. Also remove the emergency brake cable bolts from brackets. Use 12mm wrench to remove bolts. **See Photo 1.**
3. Remove shocks using a 17mm for both top and bottom bolts. **See Photo 2.**



4. Using a 19mm socket remove the factory U-bolts and lower the axle with the jack. Be careful not to over extend the brake lines or ABS wires. Install lift blocks and new U-bolts. **See Photo 3.** Tighten with a 22mm socket.
5. Insert the new rear shock relocation bracket in **Photo 4** through the frame with a 10mm x 55 bolt and a male stem shock bushing.



6. Using a 17mm wrench tighten the 10mm nut and cup washer to hold the shock relocation bracket in **Photo 5.**
7. Install the supplied Rough Country 2.2 series shock **Part # 660564** to the shock relocation bracket with supplied 12mm x 65mm bolt and flange lock nut. **See Photo 6.** Tighten using a 18mm socket and 19mm wrench.



8. Install the shock on the lower shock mount with factory hardware and tighten using a 17mm wrench. **Note: The RCX 2.2 Series Shock Absorber is designed to run the piston down as shown. See Photo 7.**
9. Install new brake line brackets in **Photo 8** using stock and supplied 5/16 x 3/4+bolts. Tighten using 12mm wrench and 13mm wrench to tighten.
10. Install new emergency brake cable brackets on the driver and passenger side as shown in **Photo 9** using stock hardware to secure the new bracket to the stock location. Secure the new bracket to the stock brake bracket using 5/16 x 1+bolts . Tighten using a 12mm wrench and 13mm wrench to tighten.
11. Install tires and wheels.
12. Jack up the rear of the vehicle and remove the jack stand.
13. Lower the vehicle to the ground and check to make sure that all ABS and brake lines are clear from any moving parts.



Photo 7

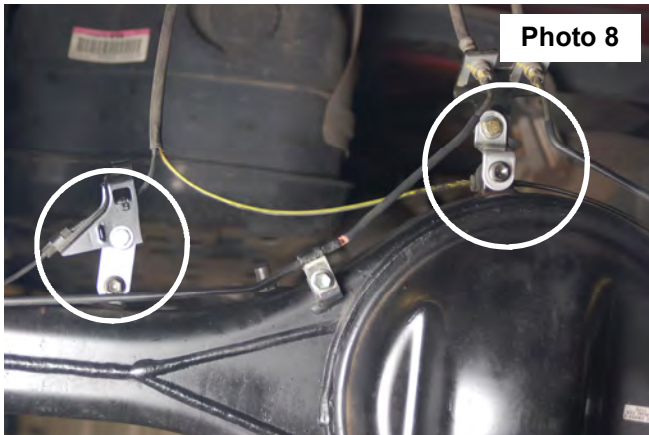


Photo 8

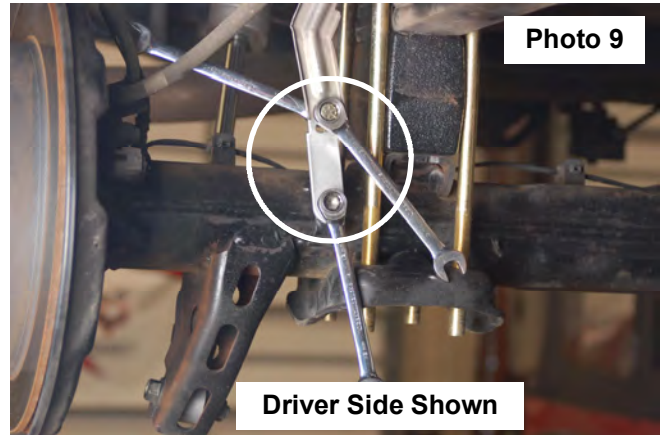


Photo 9

Driver Side Shown

POST INSTALLATION INSTRUCTIONS

1. Check and recheck all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check clearance between upper control arm and sidewall of tire for proper clearance. Check steering for interference and proper working order. Test brake system.
2. Perform steering sweep. Cycle the steering from full turn to full turn to check for clearance. Failure to perform inspections may result in component failure.
3. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.
4. Adjust headlights to proper settings given increased vehicle height.
5. An alignment will need to be performed on this vehicle to set proper alignment.

Thank you for choosing Rough Country for all your suspension needs and don't forget to visit us on the web @ www.roughcountry.com for your off road needs.

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SUSPENSION SYSTEMS