Rough Country 488.20 Installation Instructions

8-Inch N3 Lift Kit for Ford F-250/F-350 Super Duty 4WD (1999-2004)

Part number: 488.20

trailfortress.com/rough-country-8-inch-lift-kit-488-20

Scan for fitment, price and install help

ROUGH COUNTRY SUSPENSION SYSTEMS®

1488BAG3

99-04 F250/F350 8" KIT

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 parts list. 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 any parts are missing or if you have any questions please contact us at 731-285-9000

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.

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. Mixing component brands, lifts, and/or combining body lift with suspension lifts voids all warranties. 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 kit with its new heavy duty track bar only fits trucks produced after 03/01/99—2000 models forward. If you have a truck produced prior to this date this kit will not fit the vehicle. A difference of bolt size on the stock track bar bracket does not allow the installation of the new track rod.

This 8" suspension system was developed for 38x13.50x17 tire on an after market wheel with 4.5" of back spacing.

Front driveshaft modification may be necessary and must be checked prior to driving the vehicle. Lengthening and balancing must be performed by a drive line specialist. Failure to perform driveshaft modifications may result in driveshaft damage.

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.

Kit Contents:

8073-Front Spring
8072-Rear Spring
1488 Kit Box Containing:
- 1-FR Track Rod
- 1-FR Track Rod Bracket
- 1-Steering Adj. Sleeve
- 2-FR Shock-650341 Hydro / 650377 Nitro
- 2-RR Shock-658049 Hydro / 658048 Nitro
- 2-Fr Brake Line
- 1-Rr Brake Line
- 1-Pitman Arm
- 1-Carrier Bearing Drop Bracket

Tools Needed:

Assorted Metric Wrenches
Assorted standard wrenches
Jack stands
Floor jack

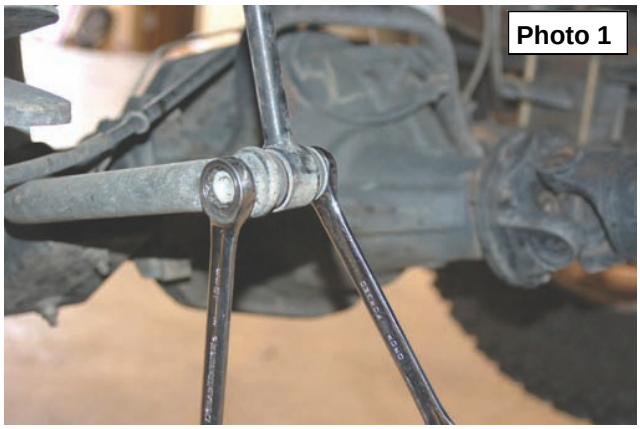
Torque Specs:

Size	Grade 5	Grade 8
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
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

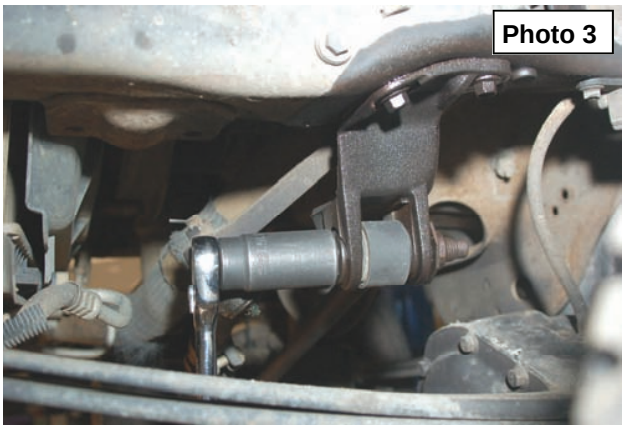
INSTALLATION INSTRUCTIONS

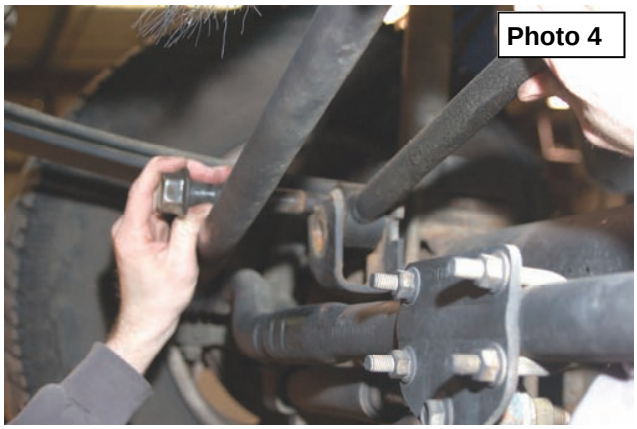
1. Park the vehicle on a level, hard surface. Block the rear wheels.
2. Remove the front anti-sway bar links from the frame mount and the sway bar using a 19 mm wrench. Retain the upper and lower mount hardware for re-use. **See Photo 1 & 2**



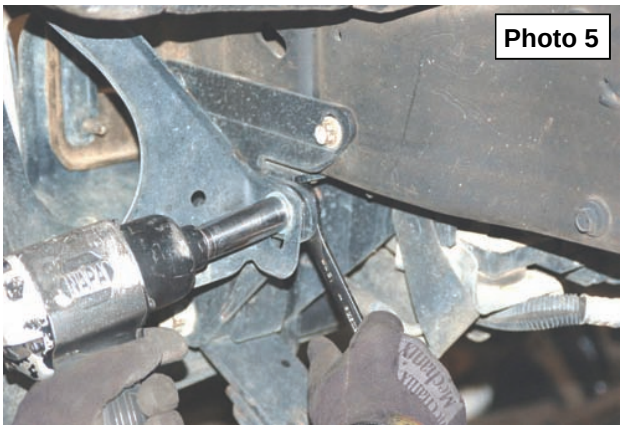


3. Disconnect the track bar on driver side from the frame bracket and axle using a 30mm wrench and remove. **See Photo 3 & 4**. Remove the stock track rod bracket using a 15mm wrench. Retain the track rod hardware for reuse.





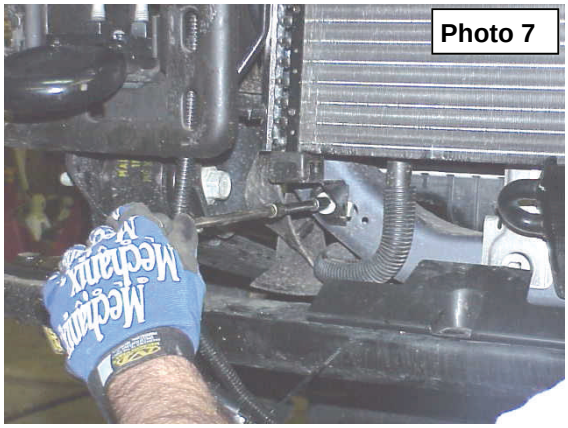
4. Remove the front shock absorbers from the upper mount and the lower mount from the axle using a 19mm wrench . Retain the hardware for re-use. Remove the shock absorber.
5. Using a 13mm socket remove the bolts that secure the bumper to the front hanger bracket. Retain hardware for reuse. **See Photo 5.** Remove the 4 bolts that secure the front bumper to the frame using a 18mm socket. **See Photo 6**. Retain the hardware for re-use. Remove the bumper from the vehicle. It may be necessary to remove the rubber lower dust shroud between the bumper and the lower cross-member.

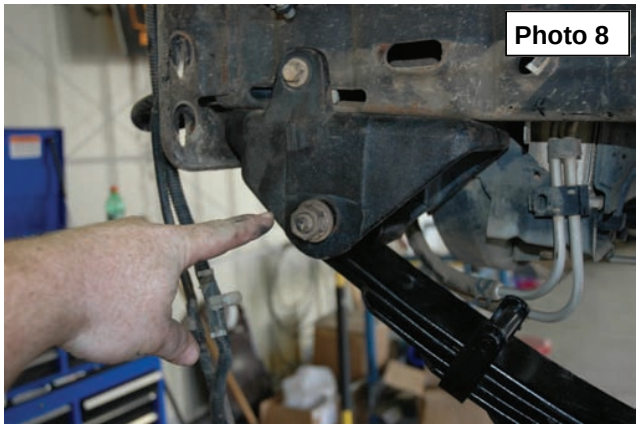




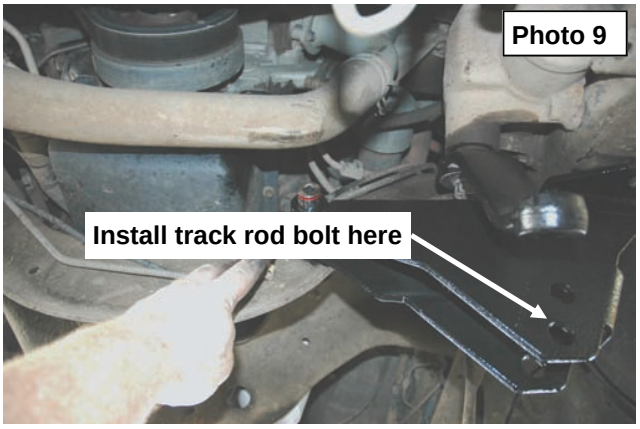
6. Position a floor jack under the front axle and jack up the vehicle. Place jack stands under the frame rails directly behind the rear stock shackles. Lower the vehicle onto the jack stands. Do not remove the jack at this time. The jack will be used to support the axle later in the step
7. Remove the wheels and tires using a 7/8 deep socket.

8. The radiator cooler lower mounts will have to be removed to allow the cooler to move outward to gain access to the front spring bolts. Remove bolts on both sides of cooler as shown in **Photo 7** (Passenger Side Shown). Retain the factory hardware for reuse.
9. Remove the leaf spring bolts from the shackle and frame mount using a 21mm and 24mm wrench and retain hardware for re-use. Reattach the transmission cooler to the factory location using the factory hardware.
10. Remove the brake line bracket from the axle using a 1/2" wrench to allow slack in the line.
11. Remove the sway bar links from the frame and sway bar using a 18mm & 15mm wrench. Retain the stock hardware for reuse.
12. Remove the axle u-bolts using a 22mm socket and lower the axle /springs & brackets down. **Do not lower beyond the limit of the brake lines**. Lower the axle down and remove the stock springs. Retain the stock leaf spring bolt / hardware.





13. Locate the new Rough Country front leaf springs part # 8073and install in the stock frame mount location and the shackle mount with the factory hardware. **See Photo 8.** Do not tighten at this time.
14. Jack up the front axle to meet the leaf springs making sure the center pin is aligned and install the supplied 9/16" x 3 1/8" x 11 1/2" u-bolts.
15. Install the new track bar bracket in the original track bar bracket location. Reuse the factory fasteners. Torque to factory specs. **See Photo 9**.
16. Using a 30mm socket, attach the upper end of the track bar to the new bracket in the lower hole using the factory hardware. **See Photo 10**. Insert the bolt from the front to the rear and hand tighten only, it will be tightened in a later step. Do not install the track rod on the axle at this time..





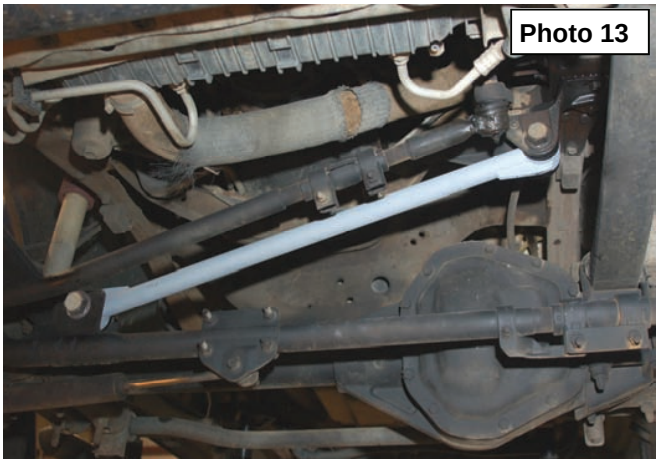
17. Using a 18mm socket and wrench, install the front shock absorbers in the factory location, part # 650328 hydraulic/ 650380 gas charged shock using hardware included in kit. Tighten the upper shock nut and lower bolt to 75 ft/lbs.

18. Remove the factory sway bar link bracket from the top of the frame using a 15mm wrench and reposition it under the frame**.** Tighten sway bar bracket hardware.
19. Assemble the bushings / sleeves in the front bent sway bar links.
20. Using a 18mm socket, and 15mm wrench, attach the upper ends of the supplied bent sway bar links to the stock brackets as shown using the supplied 12MM X 115MM bolt, large washers and nuts. **See Photo11.**
21. Swing the sway bar up to meet the sway bar link and install using the supplied 12mm x 90mm bolts/washers & nuts.
22. Remove the stock brake line from the hard line on the frame rail.
23. Remove the brake line from the brake caliper.
24. Install the new brake line on the hard line and on the caliper with factory bolts using the supplied brake line crush washers. Secure the brake line bracket that was removed in step 10 on the frame rail using a 1/2" wrench. **See Photo 12.**



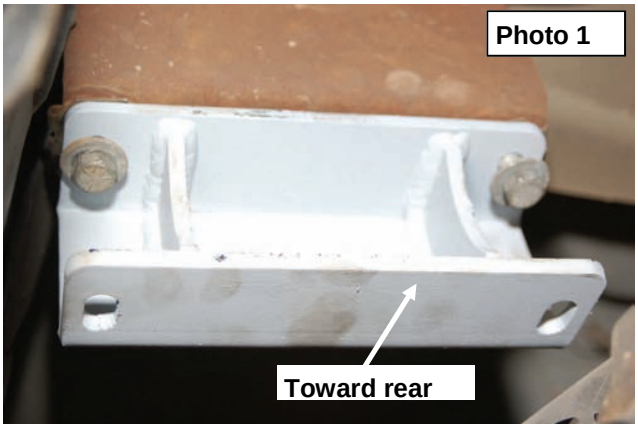


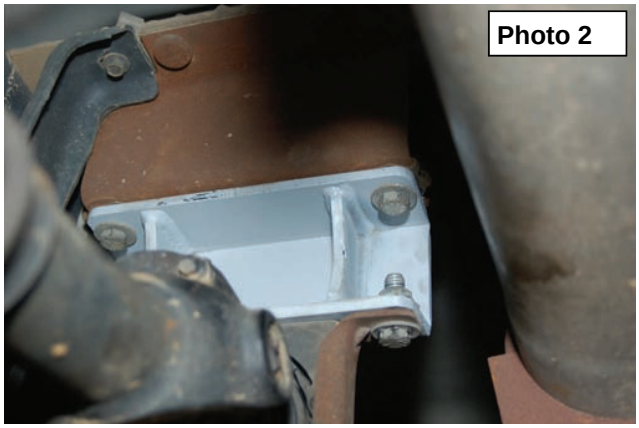
25. Install the new brake line on the caliper with factory hardware.
26. **Be sure to bleed the brake system after the front and rear lines have been replaced.**
27. Install tire/wheels and torque to factory specifications
28. Raise the vehicle and remove the jack stands. Lower the vehicle to the ground and tighten all spring hardware.
29. Install the new Rough Country shock absorbers part 658694 with supplied hardware.
30. To reattach the new track bar it will be necessary for two people to perform this task. With the vehicle running, turn the steering wheel until the track bar aligns, install factory bolt and torque to factory specification. **See Photo 13.**
31. Reinstall front bumper at this time re-using the factory hardware.
32. Proceed to the carrier bearing drop instructions and pitman arm installation instructions.



CARRIER BEARING INSTALLATION INSTRUCTIONS

1. Support the drive shaft with a floor jack.
2. Remove the stock hardware securing the driveshaft carrier bearing to the frame. Retain hardware for reuse.
3. Lower the drive shaft and install the drop bracket in the stock location. Reuse the factory hardware to secure the carrier bearing drop bracket to the frame. Tighten hardware. Please note the direction of the drop bracket. The bracket is installed with the tall part of the bracket toward the rear. Flat part of the bracket installs on the stock frame location and the drive shaft carrier bearing installs on the angled part of the bracket. **See Photo 1.**
4. Using the supplied 7/16” x 1” bolts, secure the carrier bearing to the new drop bracket as shown in **Photo 2.**





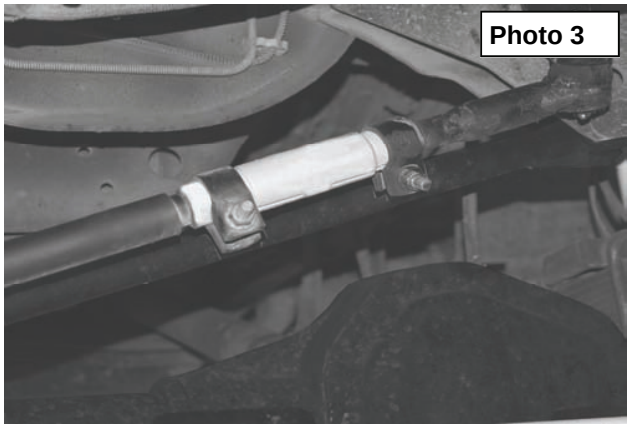


PITMAN ARM & STEERING EXTENSION SLEEVE INSTALLATION



1. Remove the cotter pin and nut using a 21mm wrench, from the drag link end where it attaches to the pitman arm. Dislodge link with a tie rod end puller, or a pickle fork. Note: replace the link if any stud looseness is detected, or if you can twist the studs in its socket with your fingers.
2. Using a 34mm socket, remove the nut from the steering sector and remove the pitman arm with a puller tool. **See Photo 1.** Inspect the splines on the shaft for excessive wear, repair if needed. Note the indexing of the pitman arm in relation to the steering sector shaft.
3. Install the new pitman arm (indexed the same as the OE) and fasten with the OE nut using 34mm socket. Tighten the pitman arm nut. **See Photo 2.**
4. Remove the sleeve from the drag link noting the amount of thread showing on the drag link. Replace with the supplied sleeve as shown in **Photo 3.** Allow the same amount of thread to show on the new link. Tighten using stock clamps.
5. Install the drag link on the pitman arm with stock hardware using a 21mm wrench. Tighten hardware.



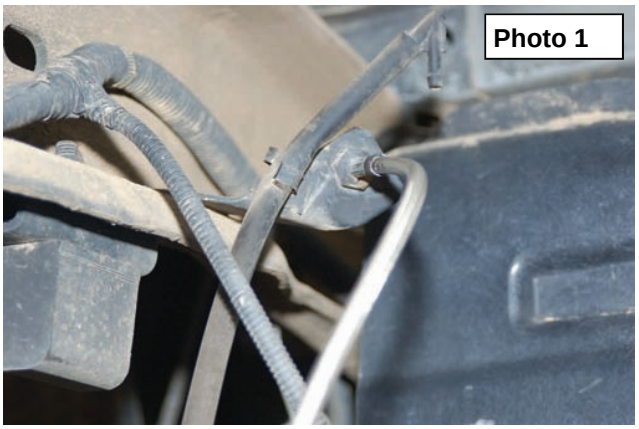


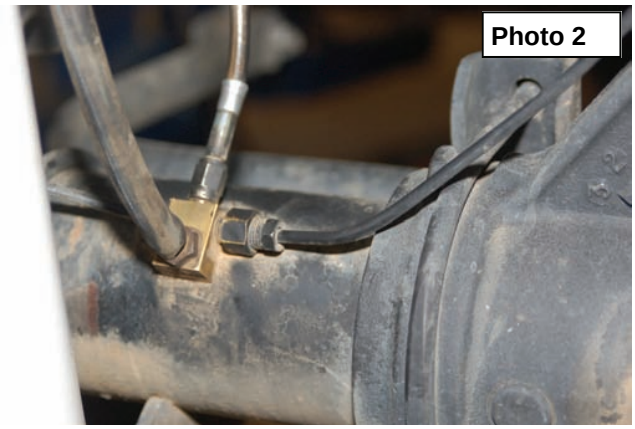
REAR INSTALLATION

1. Chock the front tires and lift the rear using a floor jack and secure with jack stands under the frame rails.
2. Remove the wheels and tires.
3. Remove the rear sway bar links if equipped. **If the vehicle is equipped with a factory rear sway bar. Part #1024 can be purchased separately from Rough Country.**
4. Remove the stock rear shocks. Retain the hardware for reuse.
5. Lower the axle down, allowing the floor jack to support the axle.
6. Remove the factory u-bolts.
7. Remove spring bolts and remove the spring from the vehicle.
8. Locate the new 8” spring and install in the stock location with factory hardware.
9. Install the supplied u-bolts and tighten.
10. Install the wheels and tires.
11. Lift the rear and remove the jack stands. Lower vehicle to the ground.
12. Assemble the rear shock absorbers part #658728 and install in the stock location using factory hardware. If a dual kit was purchased with this kit install it at this time using the instructions included with the dual shock kit.

REAR BRAKE LINE INSTALLATION INSTRUCTIONS

1. Remove the factory brake line from the metal line on the frame rail.
2. Remove the stock line from the brake line block on the axle.
3. Install the new supplied braided steel line in the stock location as shown in **Photo 1 & 2.**
4. Tighten fittings. **Please be sure to bleed the brake line system and after both front and rear lines have been installed to ensure the brake system is functioning correctly and to full capacity.**





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.

Thank you for purchasing a Rough Country Suspension Kit. Please consider the additional options offered by Rough Country and shown below for your F250/F350.













REAR DUAL SHOCK KIT
PART #1403

DUAL STABILIZER KIT
PART #87490

FRONT DUAL SHOCK KIT
PART #1402

KIT CONTENTS



Thank you for choosing Rough Country for your suspension needs.

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable , State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.