Rough Country 588.20 Installation Instructions

6-Inch Lift Kit with N3 Shocks for 2008–2010 Ford Super Duty 4WD

Part number: 588.20

trailfortress.com/rough-country-6-inch-lift-kit-588-20

Scan for fitment, price and install help



92158400

08-10 F250 6” SUSPENSION 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.

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 no 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 is packaged as a leveling kit—raising the front 6” and the back 5”. If you desire a different look or if the vehicle has a tool box or added weight in the rear, please consult with your sales representative about block / u-bolt options.

This 6” suspension system was developed for **37x12.50x17** tire on an after market wheel w/ 4.5” back spacing.

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 too the vehicle owner for review and to be kept in the vehicle for its service life.

Kit Contents:

9295	Diesel Coil Springs
OR	
9296	Gas Coil Springs
1580Box1	Upper Control Arms
1580Box2	Adj Lower Control Arms
1584Box1	Stabilizer Drop Brackets
	Track Bar Bracket
	Control Arm Bracket
	Sway Bar Link
	Hardware Bags
	Pitman Arm
	Stainless Front Lines
1580Box4	Shock Box
6111	Add-a-leaf
6578	3” Block and U-Bolt Kit
OR	
6539	Rear Block / u-bolt kit for use with vehicles w/o factory rear overloads

Tools Needed:

8mm Wrench	1 1/8” Wrench
10mm Wrench	1 13/16” Wrench
12mm Wrench	Jack Stands
15mm Wrench	Jack
17mm Wrench	Drill
17mm Socket	Drill Bits-13/16-7/8
18mm Wrench	
18mm Socket	
19mm Wrench	
21mm Wrench	
24mm Socket	
30mm Socket	

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

FRONT INSTALLTION INSTRUCTIONS

1. Block the rear wheels of the vehicle. Raise the front of the vehicle and support the frame with jack stands. Remove the front wheels and tires and set aside. Position a hydraulic jack under the front axle and raise the jack until the front suspension begins to compress
2. Disconnect the track bar from the driver side frame bracket, using a 30mm wrench.
3. Disconnect the sway bar end links from the axle and the sway bar, using a 18mm wrench. Remove end links and retain the hardware for reuse. **See Photo 1**.
4. Remove the bump stop from the cup shaped bracket. Remove the bracket from the frame rail using 10mm wrench. **See Photo 2**.

Photo 1



Photo 2



5. Disconnect the ABS sensor wire from the lower spring seat and the radius arm, using a 8mm wrench.
6. Unbolt the brake line brackets from the axle, using a 10mm wrench. Remove the vacuum line from the clamp on the axle.(If equipped with automatic hubs). Remove the stock brake line from the stock steel line and install the supplied braided brake lines in the factory location with the factory hardware. **Please note there is a driver and passenger side brake hose** . **Photo 3** shows the passenger side new line being installed. Bleed brake system.
7. Using a 19mm wrench remove the nut, retaining washer and rubber bushing from the upper shock mounts. Using a 18mm wrench remove the lower shock bolts. Retain hardware for re-use.
8. Carefully lower the jack until the coil springs are free. Remove the coil springs from the vehicle. Note: use of a coil spring compressor may be required for spring removal.
9. Support both driver and passenger radius arms with jack stands. Using a 24mm wrench, and socket remove the bolt holding the radius arm to the frame. Using a 24mm wrench, and socket remove the bolts holding the radius arm to the axle. Retain stock hardware for reuse.
10. Insert bushings, and sleeves from kit bag into the upper control arm. **See Photo 4**.

Photo 3



Photo 4



11. Insert the radius arm drop bracket into the stock location. Bolt into place using the supplied 3/4” x4.75” bolt, crush sleeve, nut and washer in the bracket. Do not tighten at this time. **See Photo 5**.
12. Attach the upper control arm to the radius arm bracket in the top hole. Bolt into place using a 3/4” x4.75” bolt, nut and washer provided in the kit bag. Do not tighten at this time
13. Attach the control arms to the axle using the stock hardware. **See Photo 6. It may be necessary to use the rear nut from the frame mount due to some models having the radius arm nut welded to the radius arm.**

Photo 5

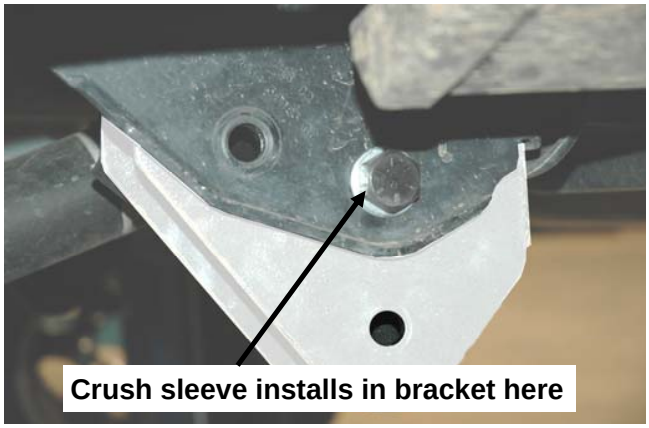

Photo 6



14. Attach the lower control arm to the axle using the stock hardware. Do not tighten at this time.
15. Insert the joint end of the lower control arm into the radius arm drop bracket. Bolt into place using a 3/4” x4.75” bolt, nut and washer provided in the kit bag. Using a 1 7/8” wrench tighten the jam nut against the body of the arm. Center of end to center hole of opposite end should be 36 1/8” **See Photo 7.**
16. Reattach the ABS wire to the upper control arm. **See Photo 8**.
17. Repeat step 12-17 on the opposite side.

Photo 7

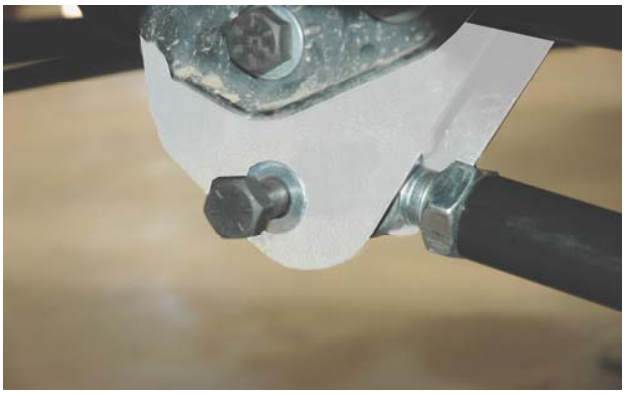

Photo 8



18. Using a 21mm wrench and 18mm wrench socket remove the factory track bar bracket. Retain stock hardware for re-use.
19. Remove the cotter pin and nut using a 24mm 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. Using a 34mm socket, remove the nut from the steering sector and remove the pitman arm with a puller tool. Inspect the splines on the shaft for excessive wear, repair if needed.
20. Install new arm, lock washer, and nut. Using a 34mm or 1 13/16" socket, tighten bolt.
21. Attach the drag link stud to the pitman arm. Torque nut to factory specs, and install cotter pin. Check for adequate linkage clearances while turning steering wheel full lock in both positions
22. Position the Rough Country track bar bracket on the frame as shown and secure using the factory hardware. Tighten hardware using a 21mm & 18mm wrench. **See Photo 9.**
23. Using the nylon bump stop extension provided, place the extension between the frame and the bump stop cup. Bolt back into the original location using the 8mmx95mm bolt supplied using a 13mm wrench. Torque to 15 ft. lbs.
24. Lower the front axle enough to install the new coil springs. Position the coil springs in the lower coil buckets on the axle and rotate as necessary to be sure that the pigtail of the coil in indexed properly in the bucket. Position the factory rubber isolator on top of each coil, then raise the axle enough to seat the coil springs in the upper spring buckets.
25. Install the bushings and sleeves on the front gas shock absorbers part # 658459
26. Compress the front springs enough to install the front shocks. Bolt the lower end of the shock to the axle using the stock hardware , using a 18mm wrench. Attach the upper end of the shock using the stock hardware, and a 18mm wrench, tighten only enough to bulge the bushing.
27. Remove the factory steering stabilizer from the passenger factory frame mount using a 18mm wrench.
28. On the passenger side, install the new stabilizer bracket in between the frame and the factory sway bar mount with the factory hardware**. See Photo 10**.

Photo 9



Photo 10



29. On the driver side, remove the sway bar bracket from the frame using a 15mm wrench and install the supplied spacer plate as shown in **Photo 11** with factory hardware.
30. Reinstall the factory unit install in the new stabilizer bracket using the factory bolt that was removed from the factory steering stabilizer.

Photo 11



31. Install tires and wheels and lower the vehicle to the ground.
32. Line up the track bar with the hole in the new track bar bracket. You may have to start the truck and turn the wheels in the direction the track bar needs to go to help align the track bar with the hole. Install using the stock track bar bolt. Tighten bolt.
33. Install the new sway bar links in the factory location with the factory hardware and using a 18mm wrench. **See Photo 12.**
34. Tighten the radius arm hardware.
35. For vehicles with 2 piece drive shafts, support the driveshaft, using a 15mm socket remove the bolts from the carrier bearing bracket. Insert the carrier bearing spacer between the bearing bracket and body mount. Reattach the carrier bearing using the supplied 7/16"x 3 1/4" bolts and washers. Torque to 60 ft/lbs. **See Photo 13. Install bracket with flat part on the stock mount and the taper towards the front.**

Photo 12



Photo 13



REAR INSTALLTION

1. Chock front wheels and jack up the rear of the vehicle. Secure with jack stands on the frame rail.
2. Place a floor jack under the rear differential on the rear axle. Using a 18mm wrench for the upper, and 18mm and 15mm wrench for the lower, remove the stock shock absorbers, retain the stock hardware for reuse.
3. Using a 24mm socket, remove the stock u-bolts. Use the floor jack to lower the axle assembly to allow for lifted block installation..
4. Remove the spring eye bolts and nuts and remove the spring**.** If equipped: the top mounted block and top mounted overload spring must be removed. The top spring plate may need to be drilled out to accept the nut for the new spring center pin. Make sure before starting that you have access to a drill and a 13/16" to 7/8" drill bit. Have c-clamps in place on either side of each strap before center bolt is removed
5. Unbolt center pin and remove. Un-clamp leaf spring. **CAUTION** -Take care when releasing the c-clamps since the springs are under load and will "spring" apart when released.
6. Position add-a-leaf under the next longest leaf of the spring pack. Replace the shorter spring leafs under the helper leaf and clamp together, being careful to align the center pin holes in the spring leafs. If less lift is desired the leaf under the new add-a-leaf can be removed
7. Insert the new center pin supplied with the kit through the spring assembly with the head of the center pin in the same location as the stock pin. Re-compress the pack with the c-clamps, not center pin, to avoid stripping of nut/ bolt threads. Bolt together, being sure to align leafs. Cut off excess threads on the center pin with a hack saw. If applicable, re-form straps or install new bend straps. If heat is used on the straps, allow them to cool naturally and thoroughly before removing the c-clamps.
8. Replace spring on vehicle. Torque to 86-110 ft./lbs.
9. Install the Rough Country block in between the leaf spring and the axle. Jack up the axle and align the pins in the blocks and axle seat. Secure with new u-bolts and torque evenly to 85 ft/lbs.
10. Locate shock part number 658601 gas shock and assemble poly bushings and sleeve in shock. Using a 18mm wrench, for the upper, and a 19mm and 15mm wrench for the lower. Install using factory hardware on upper and lower shock mount
11. Install the tires and wheels
12. Jack up the rear of the vehicle and remove the jack stands. Lower the vehicle to the floor.

POST INSTALLTION INSTRUCTIONS

1. Have a qualified alignment center realign front end to Caster min– 4.0 degree
   Camber –0.6—.09 degree
   Toe –.10– .15 degree
2. Install Warning to Driver decal on sun visor.
3. Re-torque all nuts, bolts, and especially u-bolts after the first 100 miles, again after another 100 miles and then check periodically thereafter.
4. All components must be retightened after 500 miles, and every three thousand miles after installation
5. Adjust headlights to proper settings.
6. Test brake system to make sure the lines has been properly bled.



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