Rough Country 420.20 Installation Instructions

2.5-Inch Lift Kit with N3 Shocks for 1980–1996 Ford F-150 4WD

Part number: 420.20

trailfortress.com/rough-country-2-5-inch-lift-kit-420-20

Scan for fitment, price and install help

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ROUGH COUNTRY SUSPENSION SYSTEMS®

80-96 F150 2 1/2” Lift Kit Instructions

Rough Country recommends this system be installed by a certified technician. 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 and kit content on the back page of these instructions. Be sure you have all needed parts and know where they go.

With the installation of all lift kits and larger tires it is important to check the condition of your steering stabilizer. If the stabilizer is worn or leaking it should be replaced. Steering stabilizers are designed to restrain “bump steering” and front end vibration, giving added life to tires, ball joints, and other steering components. A multiple stabilizer kit is recommended for vehicles equipped with a snow plow, winch, or larger tires

PRODUCT USE INFORMATION

As a general rule, the taller a vehicle is, the easier it will roll. 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.

We strongly recommend, because of rollover possibility, that the vehicle be equipped with a functional roll-bar and cage system. 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.

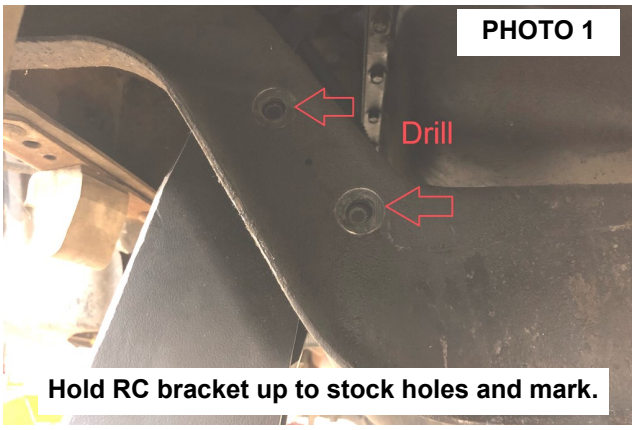
Rough Country makes no claims regarding lifting devices and excludes any and all implied claims. We will not be responsible for any product that is altered. Most states have some type of law limiting vehicle height. The amount of lift allowed, and how the lift may be achieved, varies greatly. It is the owner’s responsibility to check state and local laws to ensure that their vehicle will be in compliance. The installation time for this system is approximately 8 hours.

This suspension system was developed using a 32x 11.50x 15” tire, on an 8” wheel with a 3 5/8” backspacing. Before installing other combinations, please consult your local tire and wheel specialist.

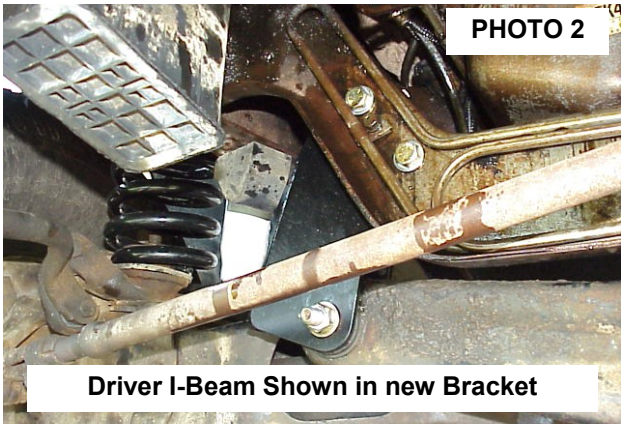
By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable Federal, State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State 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.

INSTALLATION INSTRUCTIONS

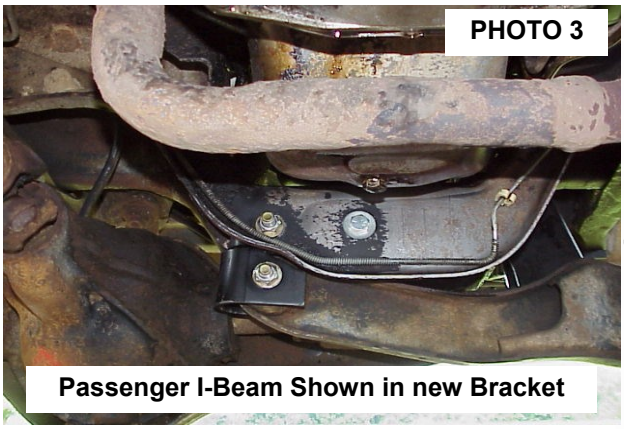
1. If equipped with anti-say bar, disconnect front sway bar bolts on coil mounting seat. (You will reattach after installation without a need for modification).
2. Remove the brake caliper form the brake rotor and secure out of the way. If the stock rubber units are retained, they must be in good condition; check for chafed spots, cracks and dry rot.
3. Put transmission in neutral. Place a floor jack under the outer ends of both axle halves and evenly raise vehicle approximately 12".
4. Place jack stands under frame rails approximately 4" behind radius arm brackets. Ease vehicle down onto stands. Continue down with jacks until there is only a slight load on the coil springs. Put vehicle in park or gear, set emergency brake and chock rear wheels to prevent any possibility of movement.
5. Remove tires and shock absorbers.
6. If longer brake hoses are being used, disconnect the stock rubber hoses where they connect to the metal lines at the frame rails. A piece of rubber tubing routed from the metal lines to a catch pan will eliminate a fluid mess. New hoses are installed in a later step.
7. Remove upper spring retaining clip. Support axle with floor jack at this time. Avoid dropping the axle too far or the axle shaft will disengage its splines.
8. Remove lower retaining nut and washer. Lower axle to loosen spring. Remove spring by pulling the top outward.
9. Install original shock behind the coil seat. This will hold the beam up while working on the pivot end. Remove crossmember bolt on driver side beam. Unbolt and remove stock pivot point bracket.
10. Hold the RC bracket up to the stock holes and mark the holes for drilling. Remove and drill to 1/2". **See Photo 1**.
11. Replace with Rough Country pivot bracket. This will be the larger of the two brackets in the kit. Using the two upper bolt holes and temporarily using stock Ford bolts, attach bracket to cross member. Mark new Rough Country bracket using existing holes in cross member as a guide. Remove and drill to 1/2" diameter. Refer to illustration #2. **DO NOT OVERLOOK THIS STEP!**
12. Replace bracket using only the 4-1/2" x 1-1/2" bolts, washers, and locknuts provided in the kit. Do not use any of the Ford stock bolts on this bracket. The stock bolts were used just to hold the bracket in place temporarily. tighten the 4 -1/2" bolts at this time. (torque to 115 ft. lbs.) **See Photo 2.**
13. Raise the pivot end of driver side beam into Rough Country bracket. Install re-using stock bolt, washers, and nut. Tighten at this time (toque to 120-150 ft. lbs)
14. Move on to passenger side, repeat steps 4 through 8.
15. Remove pivot bolt for passenger side beam. Mount passenger side bracket into cross member using 9/16" x 3-1/2" bolt and 1-5/32" spacer. *Refer* to **Photo 3 and Diagram 1**. Measure over from stock pivot hole center 3-1/8" on back side of cross member making sure to keep hole parallel to stock hole and keep the new pivot hole directly below the stock pivot hole in the cross member. Drill a 9/16" hole and install the 9/16" x 1-1/2" bolt washer and locknut provided. Raise beam and install the 9/16" x 3-1/2" bolt, washers, and locknut through pivot. Tighten the three 9/16" bolts at this time. (torque to 115 ft. lbs.)



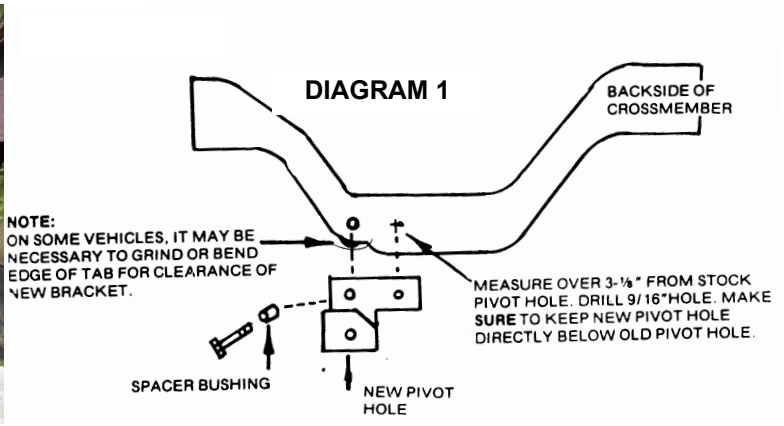
Hold RC bracket up to stock holes and mark.



Driver I-Beam Shown in new Bracket



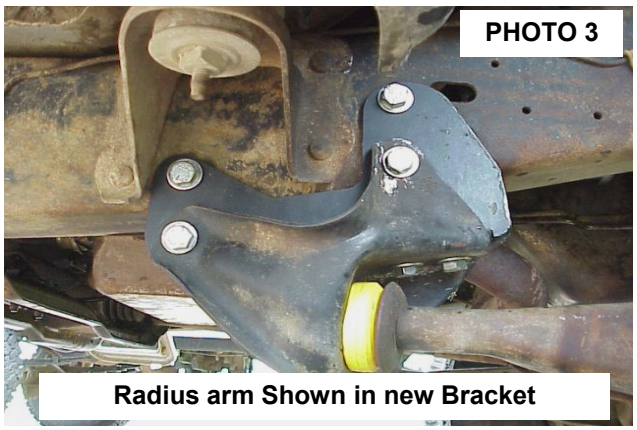
Passenger I-Beam Shown in new Bracket



15. Remove shock used to support beams earlier
16. With the jack positioned under the driver's side axle should he loaded slightly. Remove the coil springs upper retaining clip then lower the lower retaining nut and washer. Install new coil spring. When lowering the axles for spring installation, take care not to overextend the factory rubber brake hoses. Torque upper clip(13-18), lower nut(30-70). On some vehicles factory equipped with dual front shocks, keep the bottom of the coil pulled as far rearward as possible to gain clearance between coil and front shock
17. Repeat procedure on the passenger side.
18. Install front shock on both Dr and Pass sides. The shock # **660772**. Install the sleeves and bushings. This kit is packaged assuming a single shock set up. If the vehicle comes with a factory dual front shock setup, install the supplied shock in the rear mount. The front factory mount will not be used.

RADIUS ARM DROP BRACKET INSTALLATION

1. Make sure to support the frame rail and have a floor jack under the axle lightly supporting the axle weight.
2. Drill or chisel off frame rivets holding on stock radius arm brackets. (3 on each bracket) and remove stock bolts. Loosen (1 1/8") radius arm nut. Save original brackets as they will be used later.
3. Check your radius arm bushings for wear and replace if needed.
4. Install new radius arm drop brackets between frame and original radius arm bracket. Drill all holes out to ½" and use new ½" x 1 ½" bolts washers and nuts. **See PHOTO 3.**
5. Tighten all fasteners.



Radius arm Shown in new Bracket

REAR BLOCK INSTALLATION

1. Raise the rear of the vehicle with a floor jack. Support the frame with jack-stands.
2. Disconnect the axle vent tube (if so equipped).
3. Remove the lower shock hardware and retain for later use. Remove the u-bolt hardware and u-bolts. Raise or lower the axle as necessary to clear it from the rear springs. Do not allow the drive shaft to slip out.
4. Install the new lift blocks between the axle and the stock blocks. Thick end of the block should be placed to the rear of the vehicle. Jack the axle up to meet the blocks. Be sure to properly realign the center-pin when reassembling the rear axle assembly.
5. Reconnect the vent hose and install the Rough Country u-bolts, nuts and washers. Torque the u-bolts to 75 to 90 ft./lbs.. **NOTE:** It may be necessary to enlarge the holes in the spring plate for u-bolt installation.
6. Lower vehicle to the ground and install shocks. The rear shock number is #**660745.** Install bushings and sleeves

REAR SPRING INSTALLATION

1. Chock the front wheels.
2. Place the vehicle on jack stands and remove the tires and wheels. Remove the shock absorbers.
3. Remove the u-bolts.
4. Remove the spring eye bolts and remove the leaf springs.
5. Install the new rear lifted springs, install the eye bolts.
6. Install the new u-bolts and torque nuts to 100 ft/lbs.
7. Install the new shock absorbers and torque bolts to factory specifications and install the tires and wheels.
8. Remove the jack stands and lower vehicle to the ground.

POST INSTALLATION INSTRUCTIONS

Note—It is not unusual to have a camber issue (the top of the tires lean outward) and a toe issue (tires pointed in) when this kit is first installed and has not been driven or aligned. When aligned a new caster/camber bushing may be needed to achieve proper caster and camber angles.

1. Have a qualified alignment center realign front end. Toe-in must be reset. Caster angle was kept intact by the radius arm lowering brackets, and is non-adjustable. Set camber angle at ¾º to 1º degree positive with preferably the driver side 1/8º to ¼º more positive than the passenger side. The extra driver side caster improves drivability, especially on high-crowned driving surfaces. When the springs settle (after 100miles or so) caster will read the preferred ¼º to ½º positive.
2. Wheels must be retightened at 50 miles.
3. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering gear for interference and proper working order. Test brake system.
4. Perform steering sweep. Check to ensure brake hoses have sufficient slack and will not contact rotating, mobile, or fixed members, adjust lines/brackets to eliminate interference and maintain proper working order. Failure to perform inspections may result in component failure.
5. Bump stops and extensions must be in place on all vehicles! Note: Allowing suspension to over extend by neglecting to install or maintain stops and extensions may cause serious damage to factory components.
6. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.

MAINTENANCE INFORMATION

It is the ultimate buyer's responsibility to have the bolts/nuts checked for tightness after the first 100 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.

Kit Content:
4-9/16 X 3 1/4 X 12 UB
2-2" Block with 5/8" Hole
1-Driver I-Beam Bracket
1-Pass I-Beam Bracket
1-Driver Side Radius Arm Brckt
1-Passenger Side Radius Arm Bracket
2-Front Shock Absorbers
2-Rear Shock Absorbers



1-Kit Bag Containing:
2 - 5/8" Block Pin
4 -1/2" Lock Nut
12 -9/16" Flat Washer
8 -1/2" Flat Washer
2 -9/16" Lock Nut
4 -1/2" x 1 1/2" Bolt
2 -9/16" x 3 1/2" Bolt
1-9/16" x 1 1/2"
1-Spacer
8-.9/16" Lock Nut

1-Shock Poly Bag Containing:
4-Stud Bushings
4-Cup Washers
2-3/8" Stud Nuts
6-Shock Eyering Bushings
4-Shock Sleeves

Radius Arm Bracket hardware:
16-1/2" x 1 1/2" Bolt
16-1/2" Lock Nut
32-1/2" Flat Washer

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