TRAIL FORTRESS

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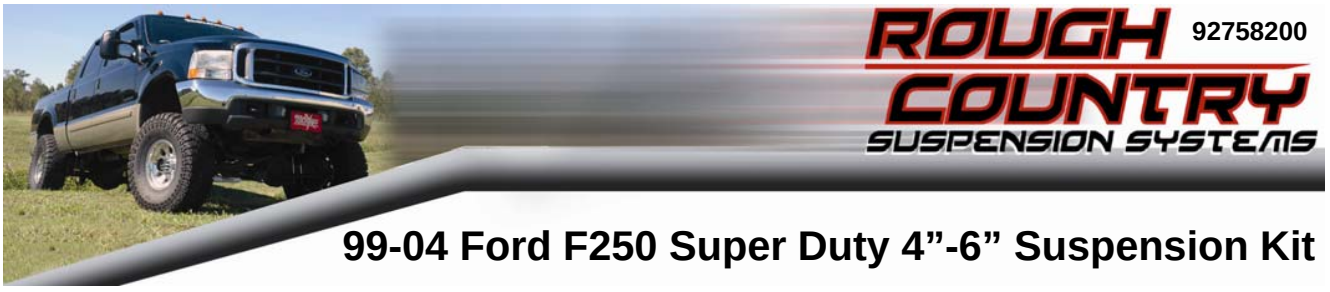
Rough Country 50170 Installation Instructions

4-Inch Lift Kit with V2 Shocks for Ford Super Duty 4WD (1999–2004)

Part number: 50170

trailfortress.com/rough-country-4-inch-lift-kit-50170

Scan for fitment, price and install help



92758200

99-04 Ford F250 Super Duty 4”-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, 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.

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 is packaged as a leveling kit—raising the front 4” and the back 2” or raising the front 6” and the back 4”. If you desire a different look or if your truck has a tool box or something else that is going to bring the rear end down, please consult with your sales repetitive about option higher block and u-bolt options or the use of an add-a-leaf.

The 4” suspension system was developed for 35x12.50x17 tire on an after market wheel with 4.5” of back spacing. The 6” suspension system was developed for 37x13.50x17 tire on an after market wheel with 4.5” of 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.

Tools Needed

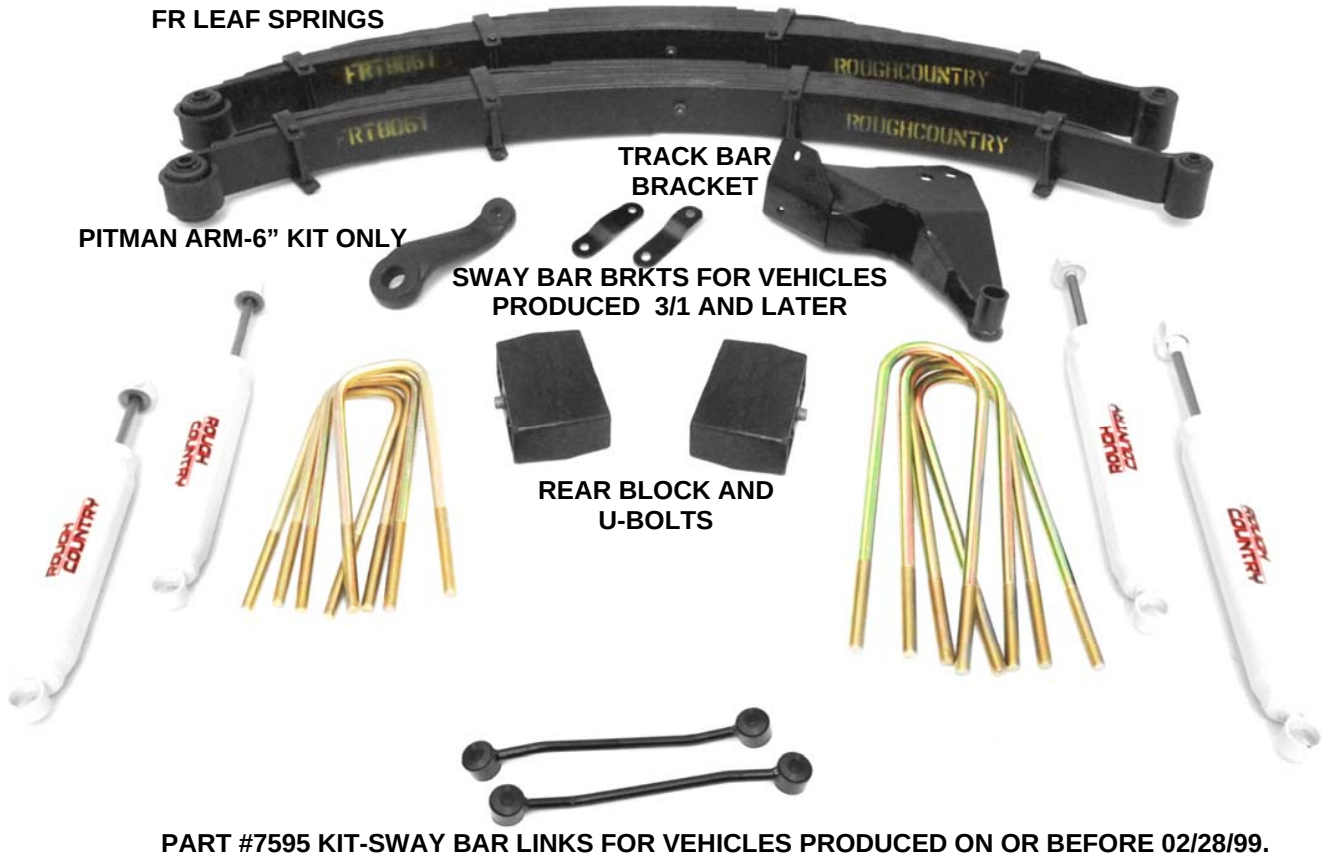
13mm Socket	22mm Socket
13mm Wrench	24mm Socket
15mm Socket	30mm Socket
15mm Wrench	32mm Wrench
16mm Wrench	34mm Socket
18mm Wrench	4 Ton Floor Jack
18mm Socket	2 Jack Stands
19mm Wrench	
19mm Socket	
21mm Wrench	
7/8 Deep Well Socket	

Torque Specs:

Size	Grade 5	Grade 8
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
12MM	55ft/lbs	75ft/lbs
14MM	85ft/lbs	120ft/lbs
16MM	130ft/lbs	165ft/lbs
18MM	170ft/lbs	240ft/lbs

KIT CONTENTS



PART #7595 KIT-SWAY BAR LINKS FOR VEHICLES PRODUCED ON OR BEFORE 02/28/99.

Kit Contents

Fits trucks made on or after 3-1-99

4" Kit
8057– Front Leaf Springs
7582- Front Kit Box
6557- 2" Block & U-Bolt Kit
8113– Front Shocks
8181– Rear Shocks

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6" KIT
8061– Front Leaf Springs
7582– Front Kit Box
7638– Rear U-Bolts
6593– 4" Block
8113– Front Shocks
8181– Rear Shocks
6111-Pitman Arm

Fits trucks made on or before 02/28/99

4" Kit
8057– Front Leaf Spring
7595– Front Kit Box
6557– 2" Block and U-Bolt Kit
8113– Front Shocks
8181– Rear Shocks

6" Kit
8061– Front Leaf Springs
1493– Kit Box
7638– U-Bolt Kit
6593– 4" Rear Blocks
8113– Front Shocks
8181– Rear Shocks
6111-Pitman Arm

ROUGH COUNTRY SUSPENSION SYSTEMS

trailfortress.com/rough-country-4-inch-lift-kit-50170

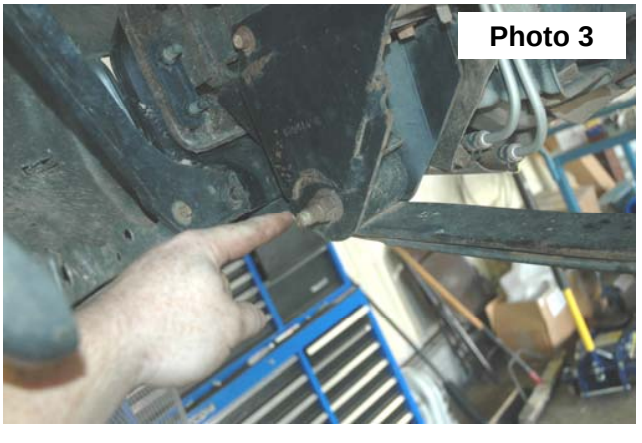
FRONT INSTALLATION INSTRUCTIONS

1. The tools needed , and parts for this installation are on the front cover. Make sure you have all of the proper tools an understanding of these directions before you proceed.
2. Place the truck on a clean level surface and set the parking brake. Chock the rear wheels and using a floor jack raise the front of the truck and support the frame rails with approved jack stands. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE,** Using a 7/8 deep well socket remove the front wheels.
3. Using a 18mm and 13mm socket, remove the front bumper. Using a clip tool or a large flat head screwdriver, disconnect the rubber valance panel from underneath the front bumper. Disconnect the block heater plug from the bumper. (if equipped).
4. Using a 21mm socket, remove front crash bar. (if equipped).
5. Using a 30mm socket, unbolt the track rod from the frame mount and let the bar hang. Using a 15mm wrench, unbolt the track rod bracket from the frame
6. Using a 18mm socket and 15mm wrench, remove the sway bar links from the sway bar, and the frame mounts on the frame rail.
7. Using a 18mm socket and wrench, remove the factory shock absorbers.
8. Leaf spring removal is done one side at a time starting with the drivers side. Position the floor jack under the driver side knuckle. Slightly load the jack so that it supports, not raises the axle. Make sure the frame rails are still secure on the frame stands.
9. Using a 22mm socket, remove the leaf spring u-bolts that secure the spring to the axle. Now remove the spring plate/ shock plate and the bottom u-bolt cradle. **See PHOTO 1**
10. Using a 21mm and a 24mm wrench, remove the spring shackle bolt and swing the shackle back away from the spring. **See PHOTO 2.**





11. Using a 15mm socket remove the front spring hanger to allow the spring bolt to come out.
12. Using a 24mm socket and wrench, unbolt the spring's front eye from the hanger, then lower the jack enough to allow the spring to be removed. **See PHOTO 3.**
13. Install the new springs, with the double wrap end towards the front of the truck. Insert the spring from the front of the vehicle and position the front spring eye in the spring hanger and install the factory bolt from the inside facing outward. Install the factory nut, do not install at this time. Using a 15mm socket re-install the spring hanger. **See PHOTO 4.**





ROUGH COUNTRY SUSPENSION SYSTEMS

14. Position the rear of the spring in the spring shackle and install the factory nut from the inside, facing outward. Install the factory nut, but do not tighten at this time. The spring eyebolts will be tightened later when the weight of the vehicle is on the springs. **See PHOTO 5**.
15. Position the u-bolt plate and bottom u-bolt cradle and install the supplied u-bolts. Snug up u-bolts, but do not tighten. **See PHOTO 6.**

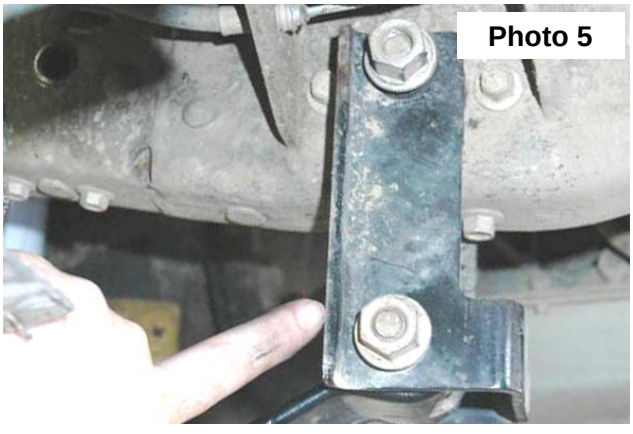


Photo 5

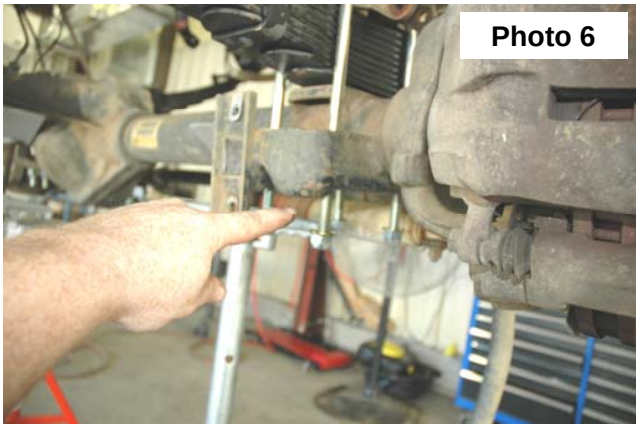


Photo 6

16. Repeat steps on passengers side of vehicle.
17. Using a 22mm socket tighten u-bolts to 99 ft/lb.
16. The next step will be performed only if the vehicle was made pre 2/28/99. For vehicles made on or after 3/1/99 proceed to step 18. The production date can be found on the upper left corner of a label located on the driver side doorpost
17. Using a 15mm socket remove the factory track bar, retain hardware for re-use. Install the new track bar bracket # 94002009 in the original track bar bracket location, using a 15mm socket. Reuse the factory fasteners. Torque to factory specs. Attach the upper end of the track bar to the bracket using the supplied 5/8" x3 1/2" bolt and nyloc nut. The track bar sleeve clearance is tight for this bolt and it might require some light taps with a hammer to seat fully, use caution not to damage the bolt threads. The bolt should be installed from the front to rear and hand tighten only. It will be fully tightened in a later step.

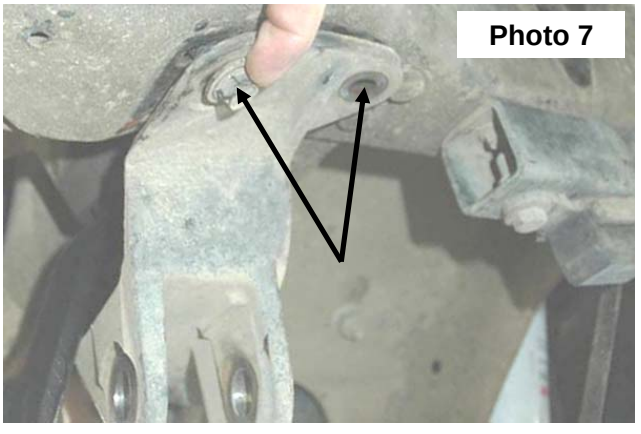


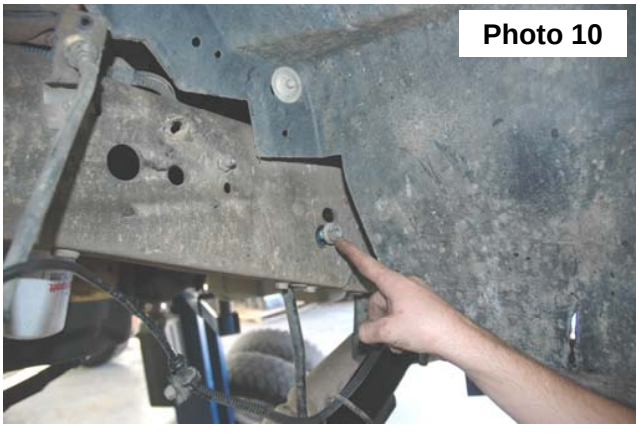
Photo 7

18. This step will be performed if the vehicle was made after 2/28/99. The production date can be found on the upper left corner of a label located on the driver side door post. Using a 15mm socket, install the new track bar bracket # 94002008 in the original track bar bracket location. Reuse the factory fasteners. Torque to factory specs. **See PHOTO 7,8 and 9**.


Photo 8

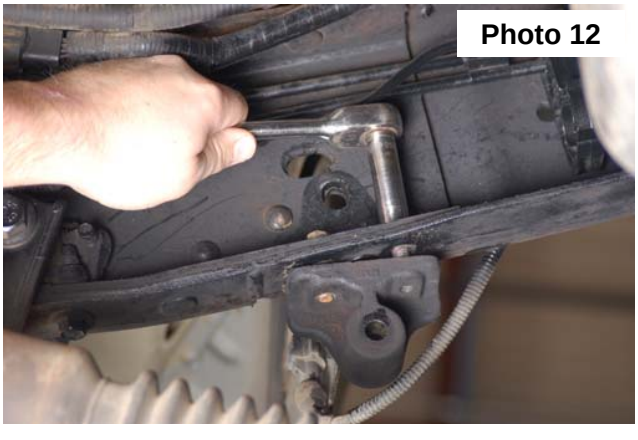

Photo 9

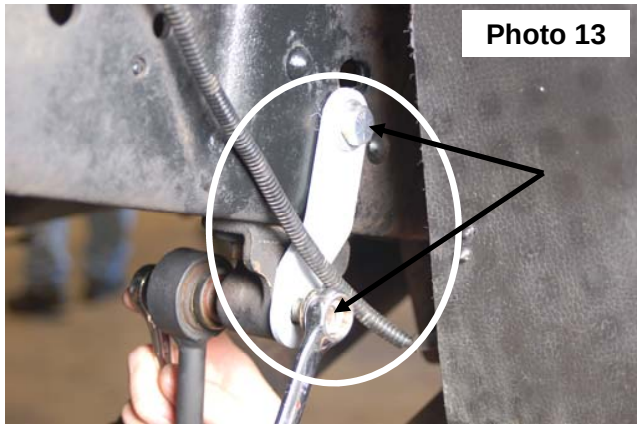
19. Using a 32mm socket, attach the upper end of the track bar to the new bracket in the upper hole for the 4” lift, lower mounting hole for the 6” lift—**see PHOTO 9**. Using the factory hardware. Insert the bolt from the front to the rear and hand tighten only, it will be tightened in a later step.
20. Using a 18mm socket and wrench, install the 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.
22. Anti sway bar links will be addressed next. Note: Inspect the factory bar end links. If the links have traditional rubber bushings and sleeves, replace the links with 94002002 LINK as described in the next step. If the links have swivel ends proceed to the next step 23.
23. Insert bushings and sleeves, 12mm sleeve, in top eye, 1/2” sleeve in the bottom eye. Install the link to frame mount using the original 12 mm bolt and nut. Torque to 60 ft lbs. Install the link to the body using the furnished 1/2” x 2 1/2” bolt and lock nut.
24. This step will be performed if the anti-sway bar links have swivel ends. Using a 13mm wrench, remove the factory anti-sway bar frame brackets (where the upper end of the sway bar link attaches to the frame). Save all the hardware for reuse. **See PHOTO 10**.
25. Using a 13mm wrench, remove the factory anti-sway bar frame brackets (where the upper end of the sway bar link attaches to the frame). Save all the hardware for reuse. **See PHOTO 11**.



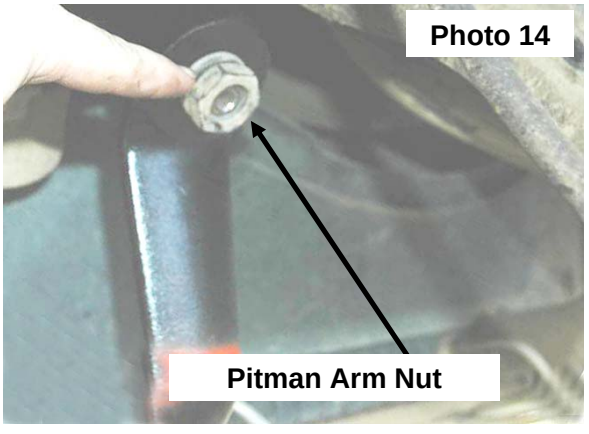


26. Reattach the stock bracket below the frame with the stock hardware as shown in **Photo 12**. Tighten using a 13mm socket.
27. Attach the new anti-sway bar drop brackets to the frame in the same location as the original brackets using the supplied 1/2” x 1 1/2” bolts, washers / nuts and tighten using a 18mm socket / wrench. **See Photo 13.**
28. Using a 18mm socket, and 15mm wrench, attach the upper ends of the factory anti sway bar links to the new brackets using the supplied 12mm x70mm bolt and 12 mm stover nut. Tighten to 37 ft/lbs. **See PHOTO 13**.





29. The following pitman arm install will be performed on 6” kits. 4” kits **DO NOT** require a pitman arm.
30. 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. 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.





31. Install new arm, lock washer, and nut. Using a 34mm socket, torque to 200 ft/lbs. **See PHOTO 14 & 15**.
32. 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.
33. Install front tires and tighten lug nuts to factory specs, using a 7/8 deep well socket.
34. Install the front bumper assembly using stock hardware. Plug in the block heater plug. (If applicable).
35. Raise the vehicle and remove the jack stands. Lower the vehicle to the ground so the suspension is supporting the full weight of the vehicle. Torque the following: axle to spring u-bolts to 99ft/lbs. Front leaf springs rear shackle eye to 185 ft/lbs. Front leaf spring front eye to 259 ft/lbs, 5/8” track bar eye bolt upper end to 112 ft/lbs, or factory track bar eye bolt upper end to 129 ft/lbs.

REAR INSTALLATION

1. If your truck is not equipped with a carrier bearing, skip to next step. Carrier bearing packaged separately. Place a jack under the carrier bearing, using a 16mm socket, remove the two bolts holding the carrier to the cross member. Lower jack until you have enough clearance to put the spacer in between the carrier and the frame. Raise the carrier back into place and bolt into place using new supplied 7/16" x 2 3/4" bolts.
2. Chock front wheels and jack up the rear of the vehicle. Secure with jack stands on the frame rail.
3. Place a floor jack under the rear differential on the rear axle. Using a 18mm socket and wrench, remove the stock shock absorbers, retain the stock hardware for reuse.
4. Using a 24mm socket, remove the stock u-bolts. Use the floor jack to lower the axle assembly to allow for lifted block installation.
5. Install the Rough Country block in between the factory block and axle. **See PHOTO 1 & 2**. 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.
6. Locate shock part number 658048 hydraulic shock/ 658049 nitrogen charged shock and assemble poly bushings and sleeve in shock. Using a 18mm socket, and wrench, Install using factory hardware on upper and lower shock mount.
7. Install the tires and wheels.
8. Jack up the rear of the vehicle and remove the jack stands. Lower the vehicle to the floor.

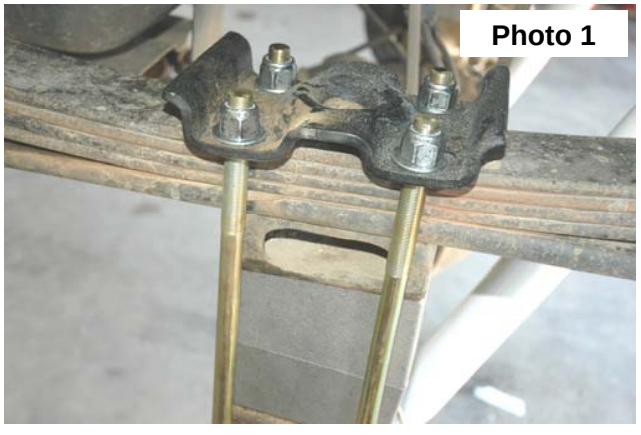


Photo 1


Photo 2

POST INSTALLTION INSTRUCTIONS

1. Have a qualified alignment center realign front end to factory specs.
2. Install Warning to Driver decal on sun visor.
3. All components must be retightened after 500 miles, and every three thousand miles after installation
4. Adjust headlights to proper settings.

ROUGH COUNTRY ALSO OFFERS DUAL SHOCK FITS FOR THE FRONT AND REAR OF THE 99-04 F250. SINGLE AND DUAL STABILIZERS ARE ALSO AVAILABLE!!

REAR DUAL SHOCK KIT PART #1403



REAR DUAL SHOCK KIT PART #1402





THANK YOU FOR CHOOSING ROUGH COUNTRY FOR YOUR SUSPENSION NEEDS