

ROUGH COUNTRY

SUSPENSION SYSTEMS®

2004-2008 Ford F150 2WD 2" FRONT DROP SPINDLES

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

Rough Country recommends a certified technician install 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 instructions before beginning installation. Check the kit hardware against the kit contents list on the back page. Be sure you have all needed parts and know where they go. Also please review tools needed list and make sure you have the tools needed to install the kit.

▲ NOTICE

PRODUCT USE INFORMATION

Generally, braking performance and capability are decreased when 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 decrease vehicle height over the intended height of the Rough Country product purchased. Mixing component brands is not recommended.

Rough Country makes no claims regarding lowering devices and excludes any and all implied claims. We will not be responsible for any product that is altered.

Always inspect (replace if necessary), bearings, ball joints, tie rods and ends as well as steering components before installation is completed.

We will be happy to answer any questions concerning the design, function, and use of our products.

NOTICE TO DEALER AND VEHICLE OWNER

INSTALLING DEALER / OWNER - It is your responsibility to install the warning decal and forward these installation instructions on to the vehicle owner for review. These instructions should be kept in the vehicle for its service life.

▲ NOTICE

20+ or larger wheels must be used with Rough Country drop spindles. If 20+ wheels are used, you will use the supplied nuts and lock washers on the lower ball joints. Also, lower ball joint will need to be trimmed after ball joint nut is torqued to **95 ft-lbs**. See Photos 34-36. Factory ball joint hardware will be used with wheels larger than 20+.

Tools Needed:

21mm Wrench
36mm Socket
18mm Socket
24mm Socket
10mm Socket/Wrench
Needle Nose Pliers
Impact
Torque Wrench
Cut Off Tool
Floor Jack
Jack Stands

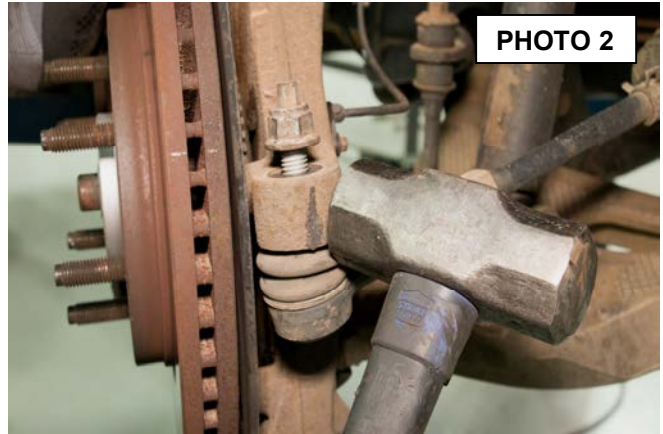
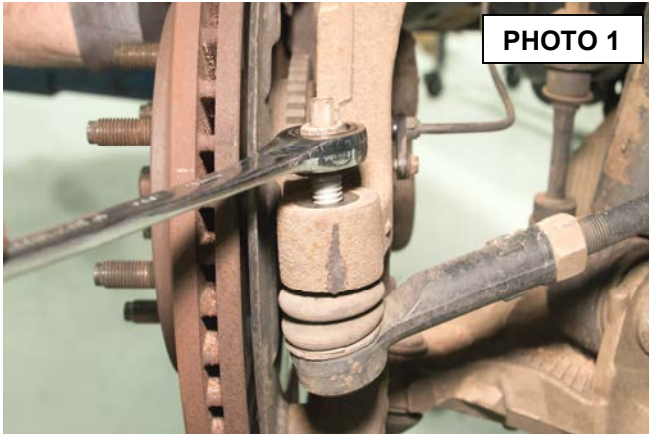


Kit Includes:

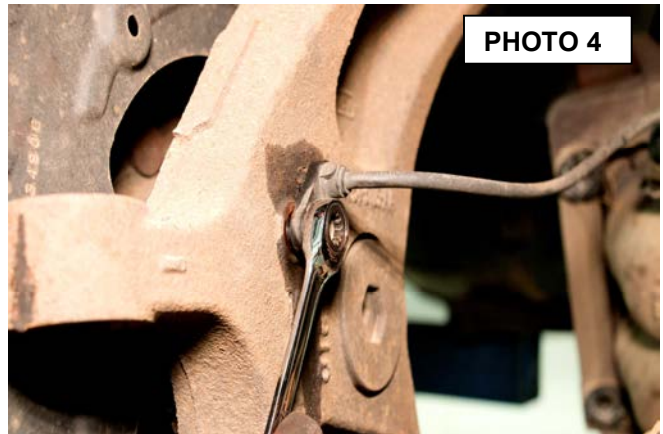
1726BOX1
(2) Lowering Spindles

FRONT INSTALLATION INSTRUCTIONS

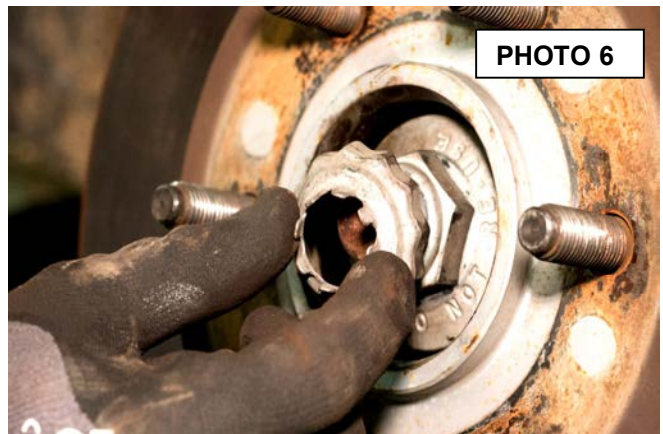
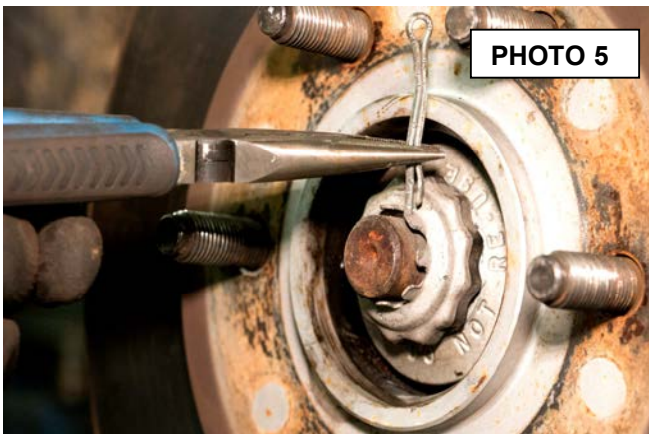
1. Lift the front of the vehicle using a jack and support the vehicle with jack stands, so that the front wheels are off the ground
2. Remove the front tires/wheels.



3. Using 21mm wrench, loosen Tie Rod End nut. **Do not remove. See Photo 1.**
4. Using a hammer, strike the side of the knuckle to loosen the Tie Rod End. Remove nut and Tie Rod End from spindle. **See Photo 2..**



5. Using a 18mm socket remove the upper and lower caliper bolts. Remove caliper from spindle. **Do not hang from brake line. See Photo 3.**
6. Using 10mm wrench, remove ABS wire from spindle. **See Photo 4.**

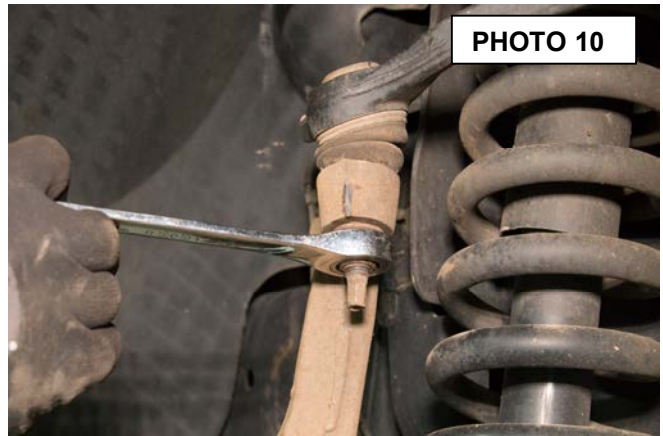


7. Remove cotter pin from axle shaft. **See Photo 5.**
8. Remove locking nut. **See Photo 6.**

9. Using a 36mm socket remove stub shaft nut. **See Photo 7.**
10. Remove rotor from spindle. **See Photo 8.**



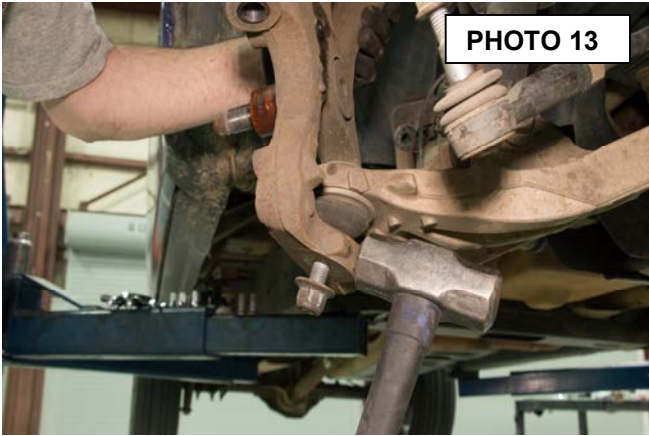
11. Using 10mm socket, remove dust shield bolts and dust shield. **See Photo 9.**
12. Using 21mm wrench, loosen upper ball joint nut. **Do Not Completely Remove Nut.** **See Photo 10.**



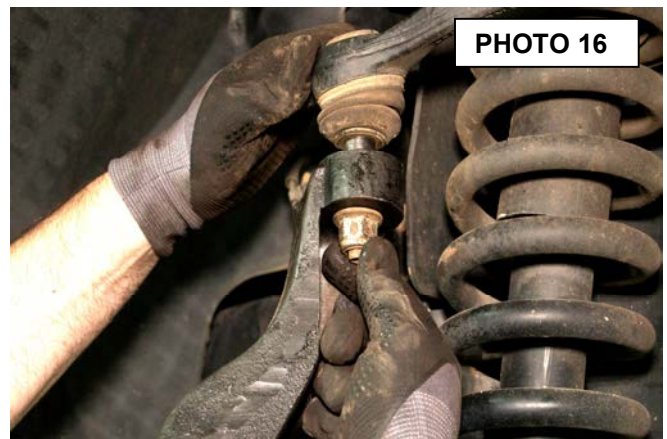
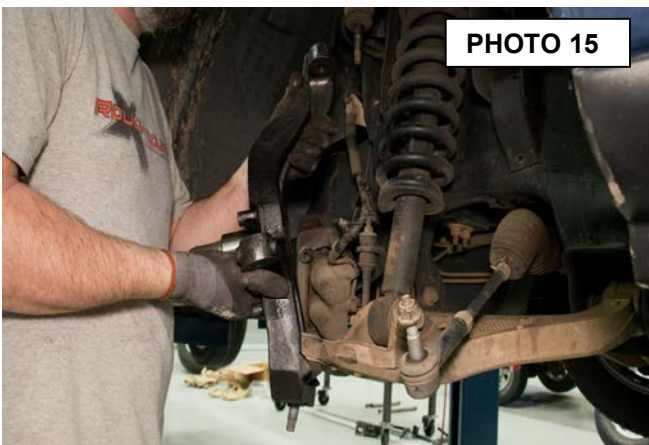
13. Strike rear of spindle at upper ball joint to loosen. Once the upper control arm pops up, remove nut from ball joint. **See Photo 11.**
14. Using 24mm socket, loosen lower ball joint nut. **Do Not Completely Remove Nut.** **See Photo 12.**



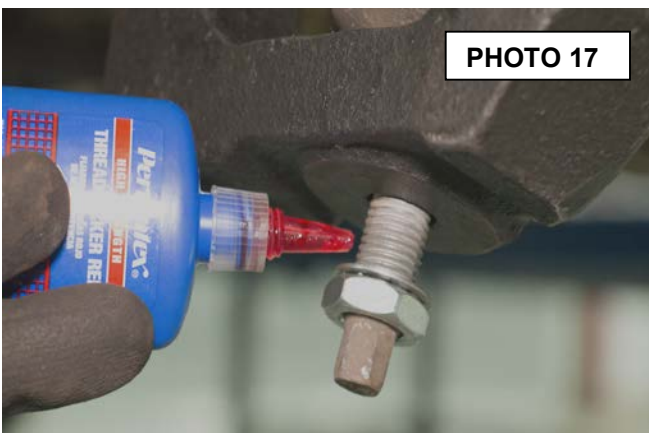
16. Strike rear of lower ball joint with hammer to release taper lock. **See Photo 13.**
17. Remove spindle from upper and lower ball joints. **See Photo 14.**

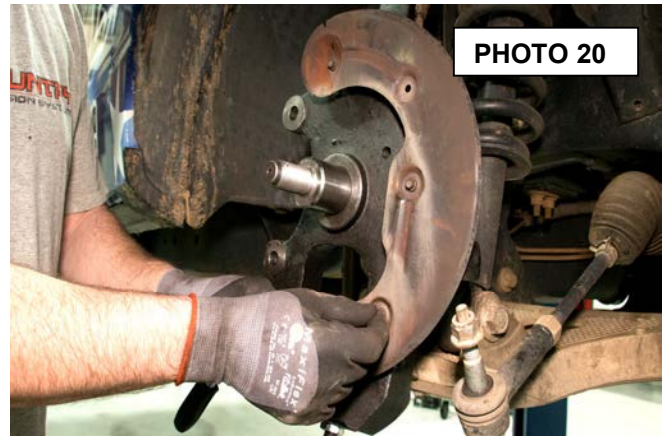
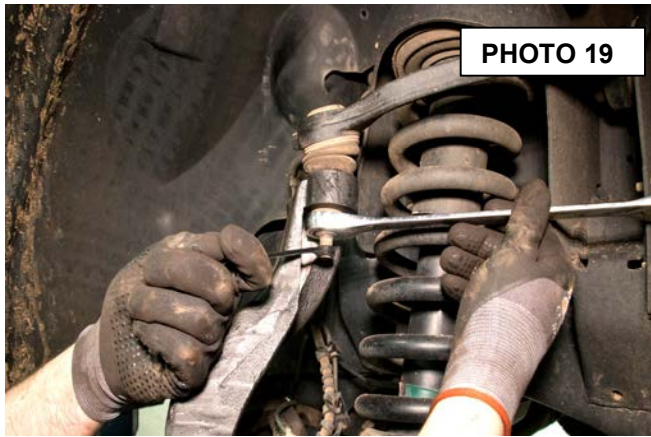


18. Place new lowered spindle on ball joints. **See Photo 15.**
19. Place factory nut on upper ball joint and hand tighten. **See Photo 16.**

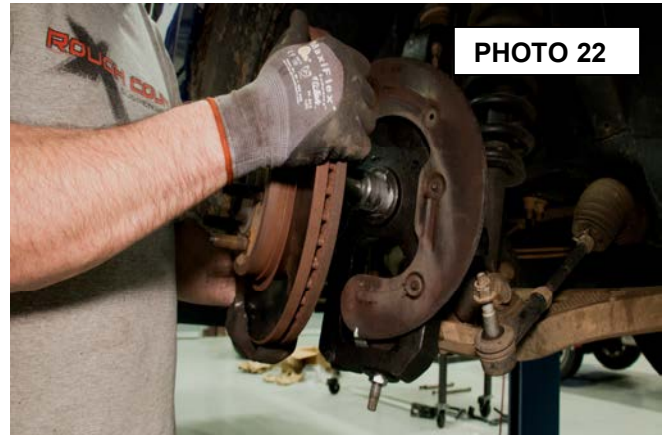
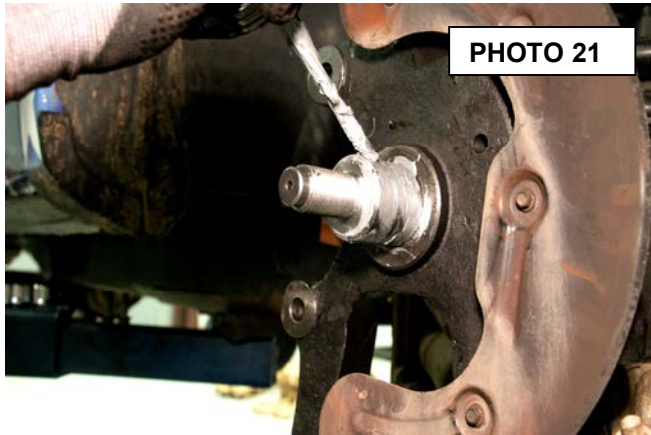


20. Apply a quality thread locker to lower ball joint. **See Photo 17.**
21. Using supplied nut and lock washer, tighten lower ball joint with a 24mm socket. Torque to **95 ft-lbs.** **See Photo 18.**





21. Using a 21mm wrench, tighten upper ball joint. Torque to factory spec. **See Photo 19.**
22. Replace dust shield using factory bolts. Tighten using 10mm socket. **See Photo 20.**



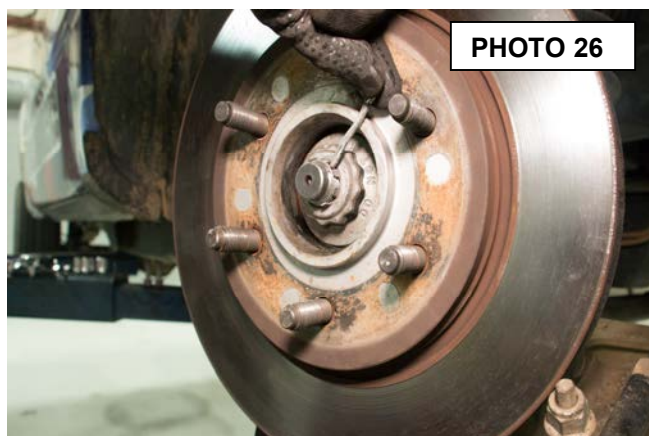
23. Apply anti-seize to end of stub shaft. **See Photo 21.**
24. Install rotor back onto spindle stub shaft. **See Photo 22.**



25. Using 36mm socket, install nut on stub shaft. **See Photo 23.**
26. Torque nut to factory spec. **See Photo 24.**

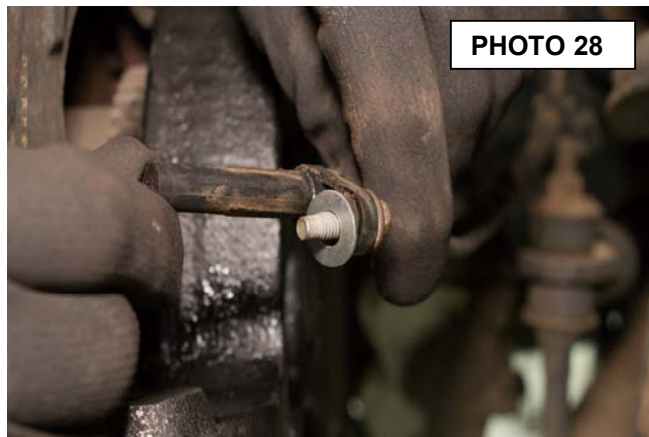
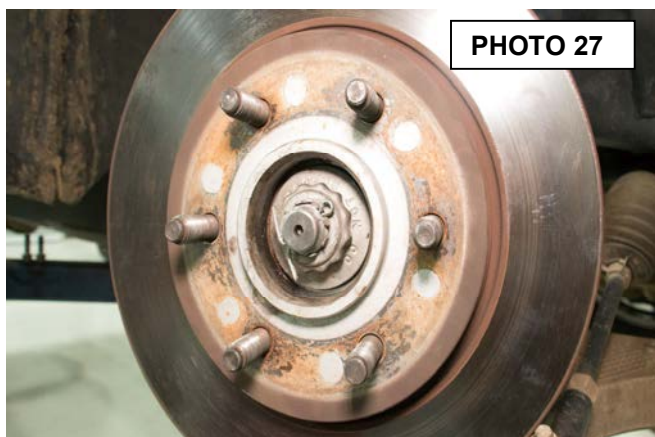
27. Install locking nut over stub shaft nut. **See Photo 25.**

28. Install cotter pin in stub shaft. **See Photo 26.**

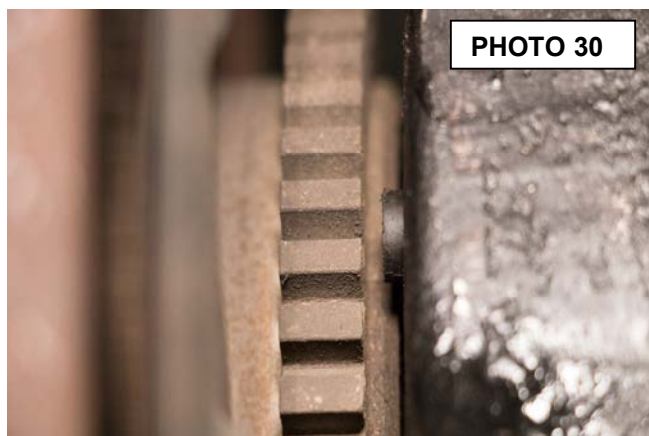


29. Bend ends of cotter pin around stub shaft. **See Photo 27.**

30. Using 10mm wrench, install ABS sensor into hole in spindle. **See Photo 28.**



31. Make sure there is a small gap between sensor and gear on rotor. **See Photos 29 & 30.**



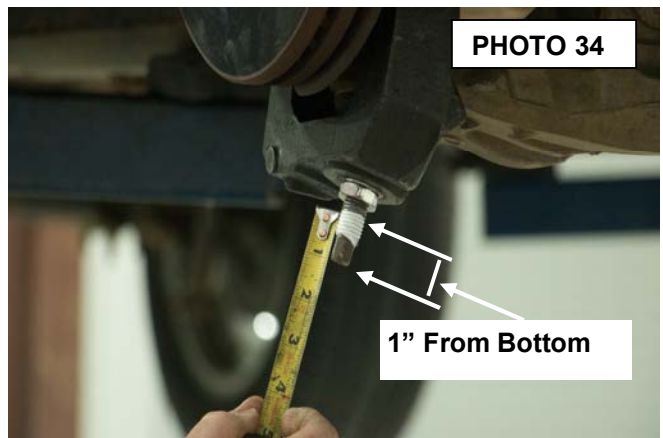
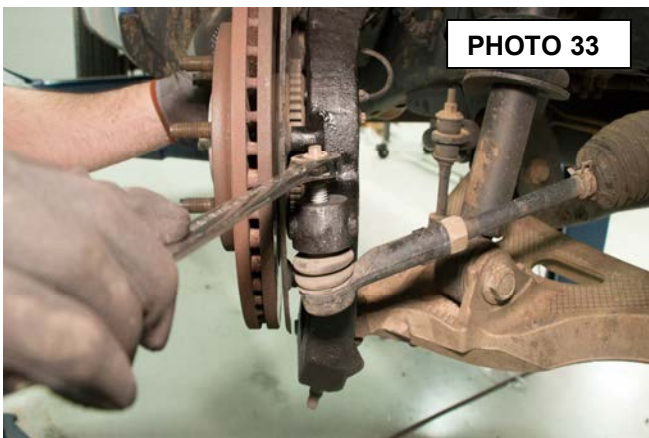
27. Install brake caliper onto lowered spindle. **See Photo 31.**

28. Using 18mm socket, torque factory caliper bolts to factory spec. **See Photo 32.**



29. Using 21mm wrench tighten tie rod end factory nut. Torque to factory specs. **See Photo 33.**

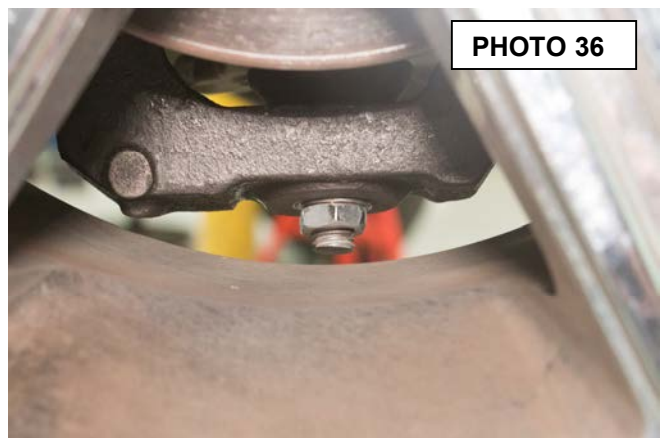
30. Measure 1+ from bottom and mark lower ball joint threads. **See Photo 34.**



31. Using a cutoff wheel or reciprocating saw, cut lower ball joint at mark on threads. **See Photo 35.**

32. Install wheel and check clearance on lower ball joint. **See Photo 36.**

33. Repeat process for opposite side of vehicle.



Post Installation Instructions

1. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering for interference and proper working order. Test brake system.
2. Perform steering sweep. The distance between the tire sidewall and the brake hose must be checked closely. Cycle the steering from full turn to full turn to check for clearance.
3. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.
4. Readjust headlights to proper settings and take truck in for a front-end alignment to a qualified alignment shop.

Alignment Specifications

2004-2005 F150 2wd

Front	←	→ □ ←	→
Total Toe	-0.20°	+0.00°	+0.20°
Front Camber	-0.95°	-0.20°	+0.55°
Caster	+3.60°	+4.60°	+5.60°
Rear			
Total Toe	. . .	. . .	. . .
Rear Camber	. . .	. . .	. . .
Thrust Angle	-0.25°	+0.00°	+0.25°

2006-2007 F150 2wd

Front	←	→ □ ←	→
Total Toe	-0.20°	+0.00°	+0.20°
Front Camber	-0.65°	-0.05°	+0.55°
Caster	+3.30°	+4.30°	+5.30°
Rear			
Total Toe	. . .	. . .	. . .
Rear Camber	. . .	. . .	. . .
Thrust Angle	-0.25°	+0.00°	+0.25°

2008 F150 2wd

Front	←	→ □ ←	→
Total Toe	-0.20°	+0.00°	+0.20°
Front Camber	-0.95°	-0.20°	+0.55°
Caster	+3.40°	+4.40°	+5.40°
Rear			
Total Toe	-0.10°	+0.00°	+0.10°
Rear Camber	. . .	. . .	. . .
Thrust Angle	-0.25°	+0.00°	+0.25°

Shock Mounting** If installing kit with rear shocks, follow these steps below.

N2.0 shocks. Part number **658695**. Install sleeves into shock bushings. Shocks will mount with the body **down**.

Perf2.2 Shocks. Part number **660576**. Install sleeves into shock bushings. Shocks will mount with the body **up**.



04-10 F150 2 / 4WD 1"-2" LOWERING SHACKLES

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

Rough Country recommends a certified technician install 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. If anything is missing, do not proceed with the installation, call Rough Country to obtain needed items.

Product Use Information

Do not add, alter, or fabricate any factory or after-market parts. We will not be responsible for any product that is altered.

Notice to Dealer and Vehicle 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.

The shackle has two holes to achieve either 1" or 2" of drop. Placing the spring in the upper hole will lower the rear of the vehicle approx 2", while the lower hole will lower the rear of the vehicle 1".

Kit Contents:

- 2-Rear Shackles
- 4-Bushing
- 2-Sleeves

Tools Needed:

- Floor Jack
- Jack Stands
- 18mm Socket / Wrench
- 21mm Socket/wrench

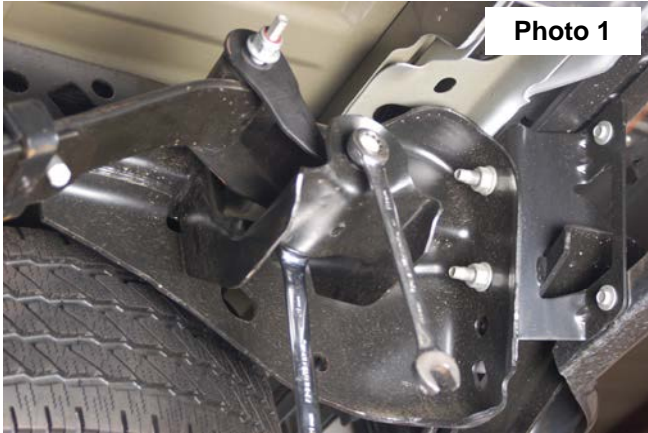
Torque Specs

Size	Grade 5	Grade 8
9/16"	95 ft/lbs	130 ft/lbs
14MM	Class 8.8 85ft/lbs	Class 10.9 120ft/lbs

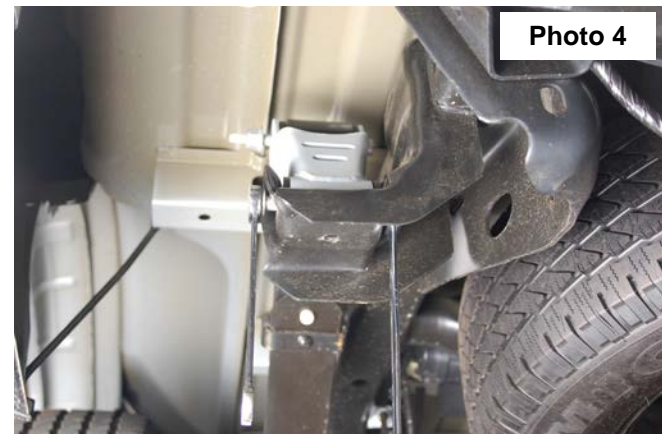


Installation Instructions

1. Jack up the rear of the vehicle using a floor jack. Both sides will be installed simultaneously to avoid binding the spring bolts.
2. Place jack stands under the frame rails to support the vehicle. With floor jack lower the vehicle onto jack stands and let the suspension hang. Leave floor jack under axle for support.
3. Lightly support the rear axle with the floor jack under the differential.
4. Remove the lower shackle bolts as shown in **Photo 1** using a 18mm & 21mm socket / wrench.
5. Jack up the rear end enough to remove the upper shackle bolt. **See Photo 2.**



6. Lightly grease the supplied bushings/sleeves and install in the shackle.
7. Install the new shackle at the desired amount of drop (either top or bottom hole) with the stock hardware using 18mm & 21mm socket / wrench. **See Photo 3.**
8. Lower the jack and install the new shackle in the stock shackle mount with stock hardware using a 18mm & 21mm wrench. **See Photo 4.**



9. Install the wheels /tires.
10. Jack up the vehicle and remove the jack stands.
11. Lower the vehicle to the ground.

Post Installation

1. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Test brake system.
2. Re torque all fasteners after 500 miles. Visually inspect components and re-torque fasteners during routine vehicle service.
3. Readjust headlights to proper settings.

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

**ROUGH
COUNTRY**
SUSPENSION SYSTEMS