

88-98 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.

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.



This kit was designed for **88-98 GM 1500 Extended Cab** trucks. It will fit **92-98 GM 1500 Standard Cab** models with no modification.

Installation on 88-91 GM 1500 Standard Cab models will require the use of rotors and bearings from the 88-98 GM 1500 Extended Cab model.

Tools Needed:

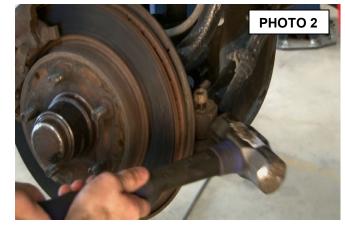
24mm Wrench
21mm Wrench
18mm Wrench
13mm Socket
10mm Allen Wrench
Hammer
Pry Bar
Screwdriver
Needle Nose Pliers
Floor Jack
Jack Stands



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.



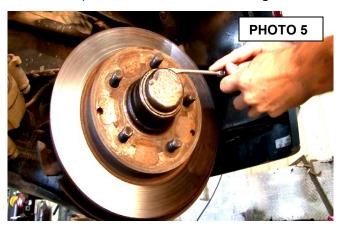


- 3. Using 18mm wrench, loosen Tie Rod End nut. Do not remove. See Photo 1.
- **4.** Using a hammer, strike the side of the knuckle to loosen the Tie Rod End. Remove nut and Tie Rod End from knuckle. **See Photo 2..**





- **5.** Using a 10mm Allen remove the upper and lower caliper bolts. **See Photo 3.**
- 6. Remove caliper from knuckle. Do not hang from brake line. See Photo 4.





- 7. Using a flat screwdriver, pry dust cap from hub. See Photo 5.
- 8. Remove cotter pin from spindle. See Photo 6.

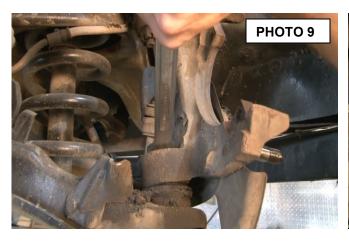


- 9. Remove spindle nut. See Photo 7.
- **10.** By holding pressure on the nut, you can remove the hub assembly. **NOTICE** Hub contains tapered bearings and races, inspect and replace if necessary. **See Photo 8.**





- 11. Using 24mm wrench, loosen lower ball joint nut. Do Not Completely Remove Nut. See Photo 9.
- 12. Using 21mm wrench, loosen upper ball joint nut. Do Not Completely Remove Nut. See Photo 10.





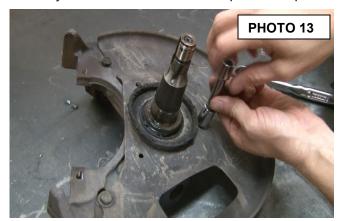
- **13.** Strike front side of knuckle at upper ball joint to loosen. Once the upper control arm pops up, remove nut from ball joint. **See Photo 11.**
- **14.** Place a pry bar under the upper control arm and on top of the spindle. Pry the upper control arm up until the ball joint clears the spindle. **See Photo 12.**
- 15. Remove lower ball joint nut. Pull spindle up and off of the lower ball joint.







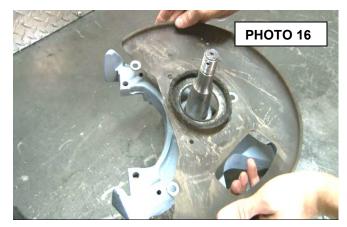
- **16.** Using a 13mm socket remove the 3 bolts holding the dust shield to the spindle. **See Photo 13.**
- 17. Carefully remove dust seal from old spindle and place on new lowered spindle. See Photos 14 & 15.



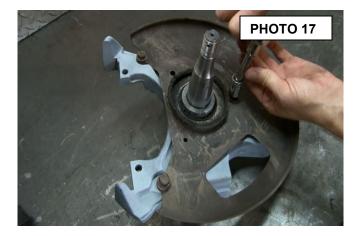


18. Place dust shield on new spindle using stock hardware. Tighten with 13mm socket. See Photos 16 & 17.





- 19. Place new drop spindle on lower ball joint. Place factory nut on lower ball joint and hand tighten.
- 20. Place pry bar under upper control and on top of spindle. Pry upper control arm up until ball joint will go into spindle. Place factory nut on ball joint and hand tighten. See Photo 18.











- 21. Using a 21mm wrench, tighten upper ball joint. See Photo19.22. Using a 24mm wrench, tighten lower ball joint. See Photo 20.
 - PHOTO 21



- 23. Place supplied cotter pins in upper and lower ball joints and bend ends over. See Photo 21.
- 24. Grease clean spindle shaft with quality automotive bearing grease. See Photo 22.





- 25. Place hub assembly on greased spindle, using factory nut preload bearings where hub will spin and hole on shaft lines up with slots in the castle nut. **See Photo 23.**
- 26. Using supplied cotter pin, secure nut and bend ends over. See Photo 24.



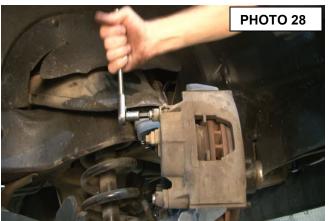
- 27. Replace factory dust cover, bump into place using rubber mallet. See Photo 25.
- 28. Install brake caliper on lowered spindle. See Photo 26.





- 29. Place a small amount of grease on caliper bolts and reinstall into caliper. See Photo 27.
- 30. Using 10mm Allen, tighten caliper bolts. See Photo 28.





- 31. Reinstall Tie Rod into spindle, using factory nut, tighten with 18mm wrench. See Photo 29.
- 32. Place supplied cotter pin in Tie Rod End and bend ends over.
- **33.** Repeat process for opposite side of vehicle.







97-03 F150 2/4WD, 73-87 GM 1/2TON 2WD, 88-98 GM 1/2T 2WD REAR 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 different increments of drop. On the 97-03 Ford F150, 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". For the 73-87 1/2T 2WD GM the upper hole will lower the rear 2 1/2" and the lower hole 2". On 88-98 1/2T 2WD GM, placing the spring in the upper hole will lower the vehicle 2" and the lower hole 1 1/2".

Kit Contents: 2-Rear Shackles Tools Needed: Floor Jack Jack Stands Assorted Wrenches **Torque Specs**

Size Grade 5 Grade 8 9/16" 95 ft/lbs 130 ft/lbs

Class 8.8 Class 10.9
14MM 85ft/lbs 120ft/lbs

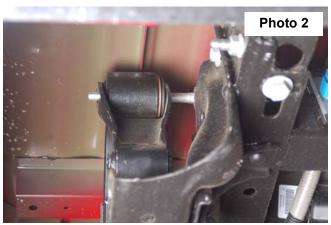


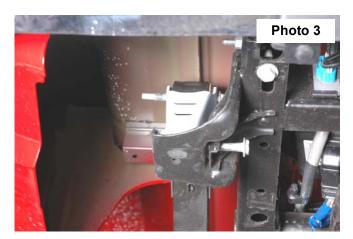
<u>Installation Instructions-(97-03 Ford F150 Shown)</u>

- 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**. Retain hardware for reuse.
- 5. Jack up the rear end enough to remove the upper shackle bolt from the shackle. See Photo 2.
- 6. Install the new shackle at the desired amount of drop (either top or bottom hole) with the stock hardware. **See Photo** 3.



- Lower the jack and install the new shackle in the stock shackle mount with stock hardware.
- 8. Install the wheels /tires.
- 9. Jack up the vehicle and remove the jack stands.
- 10. 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.

