# Rough Country 652.20 Installation Instructions

2.5-Inch Lift Kit with N3 Shocks for Jeep Wrangler TJ 4WD (1997–2006)

Part number: 652.20

trailfortress.com/rough-country-2-5-inch-lift-kit-652-20

Scan for fitment, price and install help



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# 97-06 JEEP TJ 2 1/2”PROGRESSIVE COIL 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 2 1/2” suspension system was developed for 31x10.50x15 tire on a stock wheel. An after market 8” wide wheel with 3.75” of back spacing may also be used for larger tires (32” x 11.50”). The use of **stock wheels** with larger than stock tires may cause the tire to come in contact with the lower control arm at full turn. The use of aftermarket wheels is recommended to avoid this. Due to the inconsistency of vehicles when manufactured and the various options available, the amount of actual lift gained by this lift kit may vary slightly. On models outfitted with extra bolt-on equipment and accessories, Rough Country offers new coil spring isolator pads made from polyurethane to boost ride height 3/4" and these may be needed to maintain a level performance look. **Longer shocks are needed on this kit for optimum performance, suspension articulation and optimum ride quality.**

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

**Kit Contents**

4 Cylinder:
- 9239-Fr Coils
- 9237-RR Coils
- Front Shocks –660742
- Rear Shocks –660775

6 Cylinder:
- 9238-Fr Coils
- 9237-Rr Coils
- Front Shocks-660742
- Rear Shocks-660775

**Tools Needed**

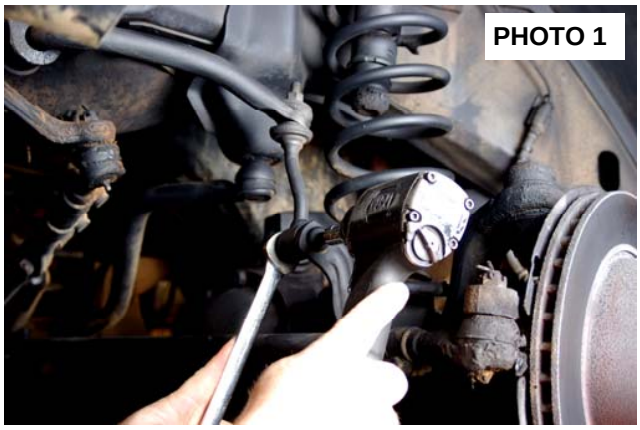
Spring Compressor
Silicone spray
Torx key socket
Floor jacks
Wheel chocks
Torque wrench
1/2 drive ratchet and sockets
Heavy duty jack stands
Safety glasses

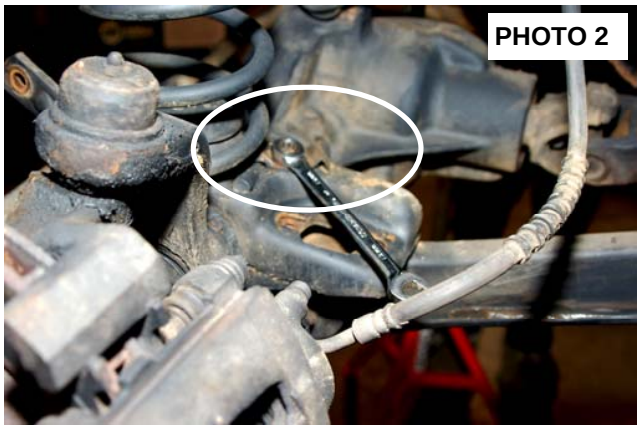
**Torque Specs**

| 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 INSTALLATION INSTRUCTIONS

1. The front-end components are installed first.
2. Place the vehicle on a level surface. Set the parking brake. Center the front wheels and chock rear wheels.
3. From inside the engine compartment, remove the upper stud nut, retainer and grommet from both of the front shocks.
4. Place jack stands on the frame rail behind the lower control arm mount on the frame and jack up the vehicle. Installation is done one side at a time.
5. Remove the front tires and wheels.
6. Remove the sway bar links from the axle using a 18mm wrench / T55 torx head bit to allow the axle to be lowered for coil spring removal**. See Photo 1.**
7. Place a floor jack underneath the axle for support and complete the removal of the front shock absorbers. Retain factory lower mounting hardware for re-use.
8. Remove the coil spring clip located on the bottom coil seat as shown in **Photo 2** using a 13mm wrench on the driver side of the vehicle. Lower the axle and remove the coil spring.




9. Install the new front progressive rate coil spring. A coil spring or strut compressor may be needed for the new coil spring installation**.** Install the new coil spring (with the coil wraps that are closer together to the top) into the upper and lower spring pockets and carefully remove the compressor. Make sure the coil is seated properly in the coil seat by rotating the spring so the pig tail end fits in the spring pocket. Install the coil spring clamp and torque the spring clip bolt to 16ft.-lbs.
10. Install the front shock absorber in the factory upper &lower mounts. **(Longer shocks are highly recommended for this lift).**
11. Repeat installation on the opposite side of the vehicle.
12. Install the tires, wheels and lug nuts and tighten to factory specifications. Lower the vehicle to the ground
13. Reinstall the sway bar links in the factory location with factory hardware using a 18mm wrench and T55 torx head bit.

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SUSPENSION SYSTEMS

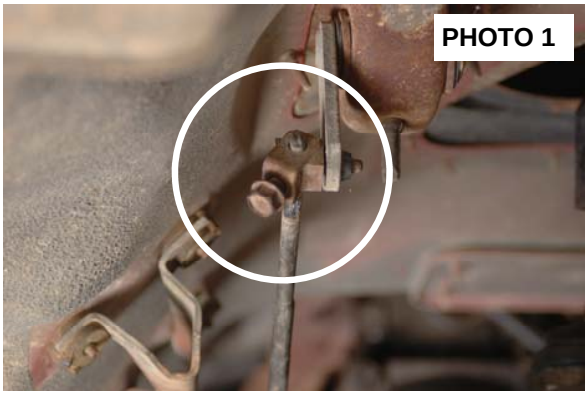
## REAR INSTALLATION INSTRUCTIONS




1. Chock the front wheels. Jack up the rear of the vehicle and remove the tires and wheels.
2. Place jack stands under the frame rail to support the vehicle. Place a floor jack under the differential to lightly support the axle.
3. Remove the stock shock absorbers. Retain the hardware for reuse.
4. Remove the lower sway bar links from the sway bar using a 15mm wrench. **See Photo 4** . Retain the factory hardware for re-installation.
3. Carefully lower the axle with the floor jack and remove the coil springs. NOTE: It may be necessary to use a coil spring or strut compressor to remove the stock coil springs. Be careful not to overextend the vent tube on the axle. **It may be necessary to disconnect the vent tube during installation and reroute the vent tube after installation to ensure the line does not get damaged.**
4. Install the new Rough Country progressive rate coil springs making sure the coil isolator is positioned in the upper mount. It may be necessary to use a coil spring or strut compressor to install the new coil springs. Jack up the axle to lightly compress the coil springs.
5. Install the rear shock absorber in the factory mounts with the factory hardware using a 15mm & 18mm wrench for the lower and a 13mm socket for the upper. Tighten hardware. **(Longer shocks are highly recommended for this lift).**
6. Install the wheels and tires and lower the vehicle to the floor.
7. Reinstall the factory sway bar links with the factory hardware using a 15mm wrench and tighten.

## POST INSTALLATION INSTRUCTIONS

1. Check the transfer case shifter to see if it will move to **4L**. If not, the linkage will need adjusting. Place the shifter in **4L**, loosen adjustment bolt and push the linkage forward until it stops. Now re-tighten adjustment bolt. **See Photo 1.** Check to be sure 4WD works properly.
2. Rotate driveshaft and check for interference at differential yoke and cardan joint. If necessary, lightly dress casting(s) and/or U-joint tabs in order to eliminate binding
3. Have a qualified alignment center realign front end to factory specifications.
4. Install Warning to Driver decal on sun visor.
5. Adjust headlights to proper settings.

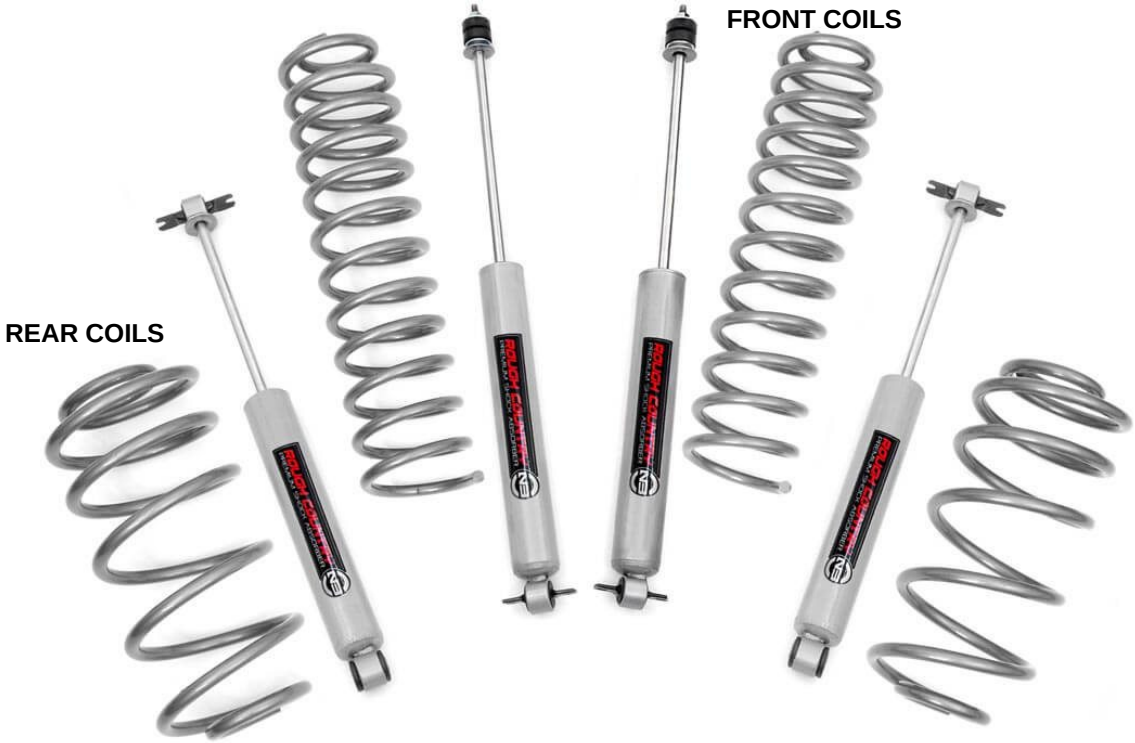



## MAINTENANCE INFORMATION

It is the ultimately the buyers responsibility to have all bolts/nuts checked for tightness after the first 500 miles and then every 1000 miles or 3 months. Wheel alignment steering system, suspension and driveline systems must be inspected by a qualified professional mechanic at least every 3000 miles.

## TROUBLESHOOTING TIPS

**Problem**: Driveline Vibrations
**Possible Solution**: Check all u-joints to insure that there is no wear on the existing hardware caps. Even a new vehicle can cause vibrations in the angle on the U-joint is changed after being run for even a short period of time.
**Possible Solution**: Driveline vibrations can be caused from the removal or addition of the hardtop which changes the rear vehicle weight, and the rear height, which affects the rear drive shaft pinion angle. **If excessive vibration occurs, Rough Country's adjustable eccentric upper cam-bolt kit will eliminate such vibrations by adjusting / rotating the rear pinion angle up or down as needed.**
**Problem: On 03-06 models equipped with the automatic transmission, the transmission skid plate may come in contact with the front driveshaft at full droop even when equipped with the 1" lowering spacers supplied.**
**Possible Solution:** Lower the transmission skid plate more to create distance in between the driveshaft & skid plate or remove the skid plate from the vehicle.




**Thank you for purchasing a Rough Country Suspension Lift Kit.**