Rough Country 16530RED Installation Instructions

2-3 Inch Lift Kit with N3 Shocks for 6-Lug Trucks

Part number: 16530RED

trailfortress.com/2-3-inch-lift-kit-6-lug-trucks-rough-country-16530red

Scan for fitment, price and install help

92754500D

ROUGH COUNTRY
SUSPENSION SYSTEMS®

88-98 GM 2-3" 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

⚠WARNING As a general rule, the taller a vehicle is the easier it will roll. We strongly recommend, because of rollover possibility, that 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 no 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 2"-3" and the back 1.5". 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.

The 2.5" suspension kit was developed for 285/75x16 tire on 16" wheel. With the addition of larger tires, trimming will have to be performed for adequate tire clearance.

NOTICE TO DEALER AND VECHICLE OWNER

⚠NOTICE

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.

⚠NOTICE Note to installer : Before installation begins we recommend that a test drive be performed. While driving check for uncommon sounds and/or vibrations . What you feel and hear during the test drive will only magnify once lift kit is installed. Advise you to discuss possible issues identified from drive with customer before proceeding to install this kit.

Kit Contents

6112– Rear Add-a-Leaf
7545– Kit Box Including
- Drivers Side Upper Control Arm
- Pass Side Upper Control Arm
- Dr Upper and Lower Diff Drop Brkts
- Pass Axle Drop Bracket
- Skid Plate Spacers
- 7545Bag1 Differential Hardware
- 7545Bag2 Axle Bracket Bag

23225 Front Shocks
23307 Rear Shocks

Tools Needed

10mm Wrench
11mm Socket
13mm Wrench
Hammer
18mm socket
18mm Wrench
21mm socket
21mm Wrench
1 1/16" wrench
3/8" Allen Wrench
Drill
Jack Stands
Torsion Bar Tool
1/2" Drill Bit
Punch
15mm Socket

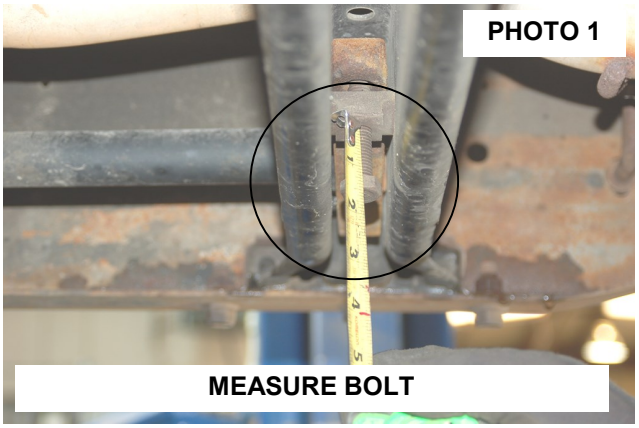
Torque Specs:

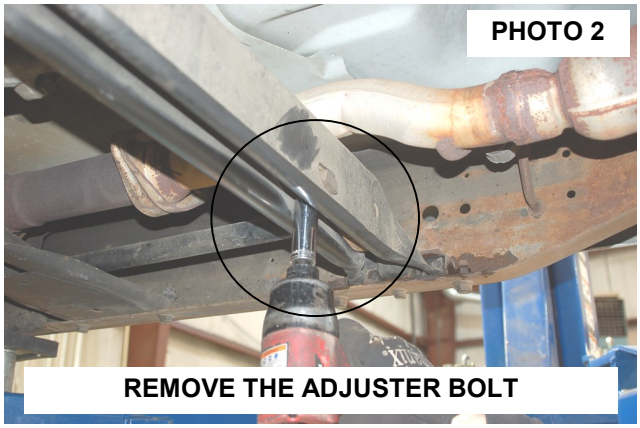
Size	Grade 5	Grade 8
3/8"	30 ft/lbs	35 ft/lbs
7/16"	45 ft/lbs	60 ft/lbs
1/2"	65 ft/lbs	90 ft/lbs
9/16"	95 ft/lbs	130 ft/lbs

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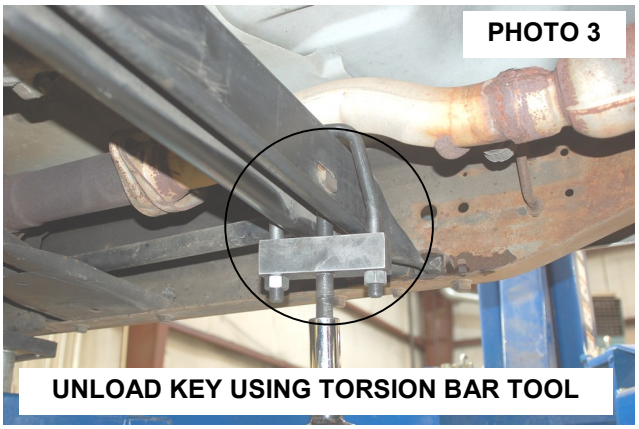
FRONT INSTALLATION INSTRUCTIONS

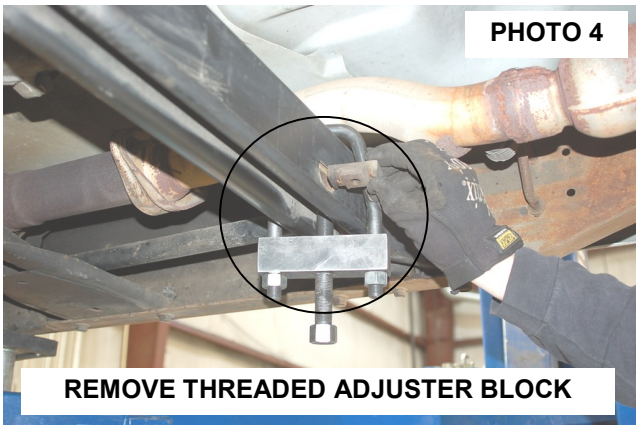
1. Chock the rear wheels to prevent movement. Place a jack under the lower control arm and jack the vehicle up. Place jack stands on the frame rails to support the vehicle. Remove tires and wheels.
2. Measure the length of adjustment bolt for later reference. **See Photo 1.**
3. Remove the torsion bar adjuster bolt. **See Photo 2.**





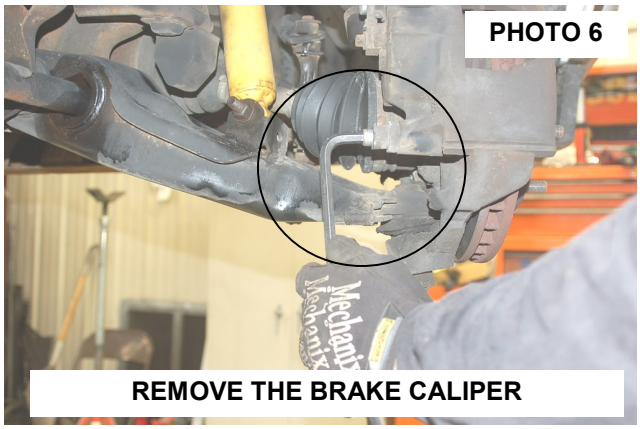
4. The next step will require a torsion bar tool to safely unload the torsion bars . Part # 1067 is available from Rough Country. **Please Note the torsion bar is under extreme load. Substituting a tool for an actual torsion bar tool may result in injury.**
5. On either side of the vehicle, position unloading tool on cross member. **See Photo 3.** Apply light lubricating grease to tool threads. Be sure to leave adequate clearance to remove the adjuster block from the cross member.
6. Tighten tool on torsion bar adjuster to relieve tension on the bolt .Loosen the adjuster bolt and remove the threaded block from cross member. **See Photo 4.**



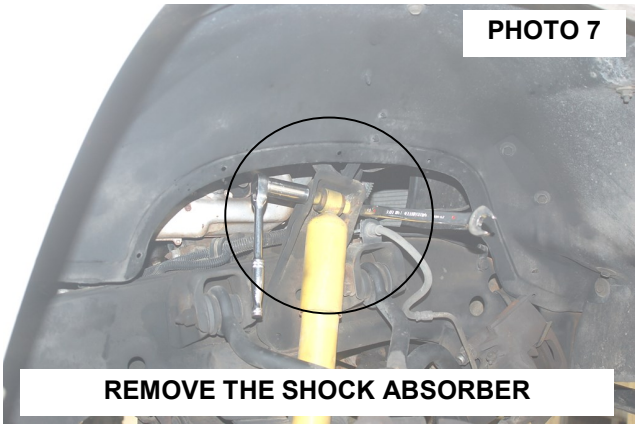


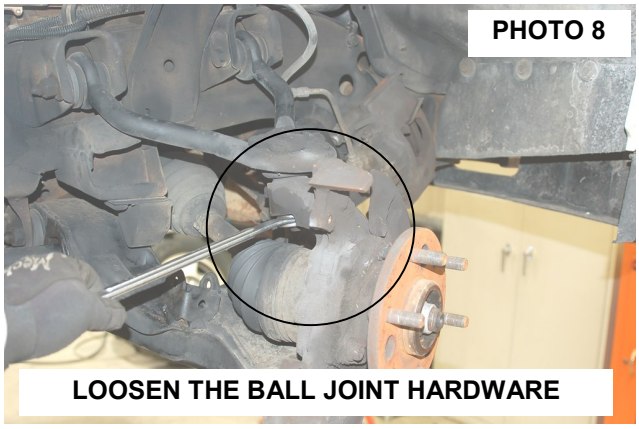
7. Slide the bar forward and the torsion bar adjuster will fall free. In the event the bar seems lodged, use a punch and hammer routed through the hole in the back of the cross member to drive it forward. **See Photo 5**. Repeat on opposite side.
8. The supplied torsion bar keys will installed in a later step.
9. Remove brake caliper as shown in **Photo 6** using a 3/8” allen wrench and secure out of harms way.
10. Remove the rotor.



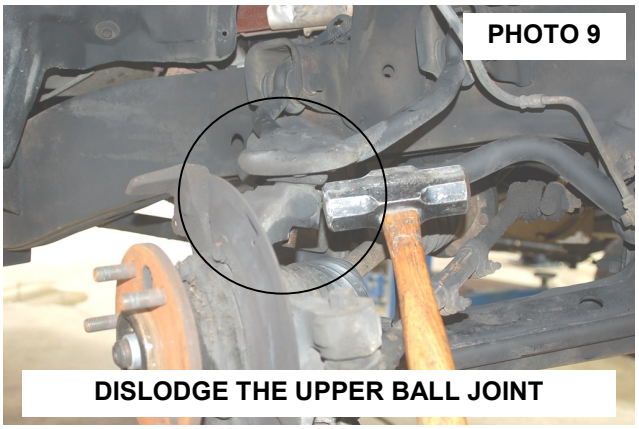


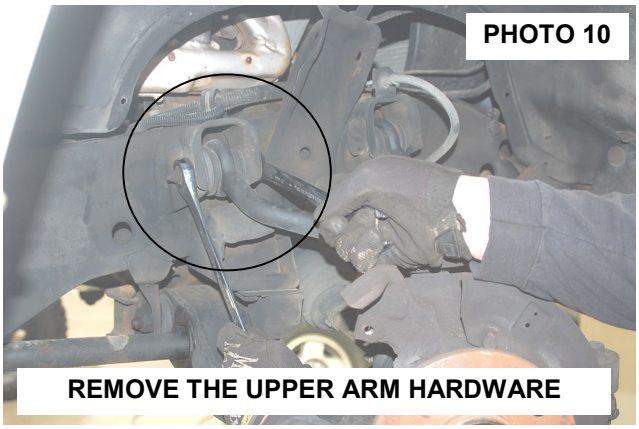
11. Remove the stock shock from the upper mount (Shown in **Photo 7**) and the lower mount using a 18mm socket / wrench. Retain the stock hardware.
12. Remove the upper ball joint cotter pin and loosen the nut using a 1 1/16" wrench. **See Photo 8.** Retain the stock hardware. Unplug the ABS sensor wire is equipped.





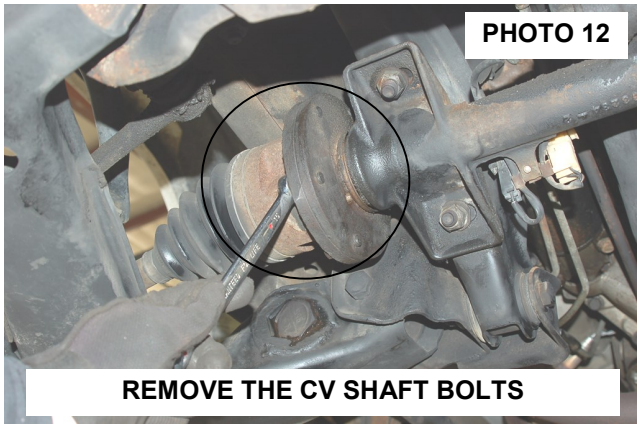
13. Support the lower control arm.
14. Strike the knuckle as shown to dislodge the upper ball joint. **See Photo 9.**
15. Remove the upper control arm hardware using a 21mm wrench / socket. **See Photo 10.**



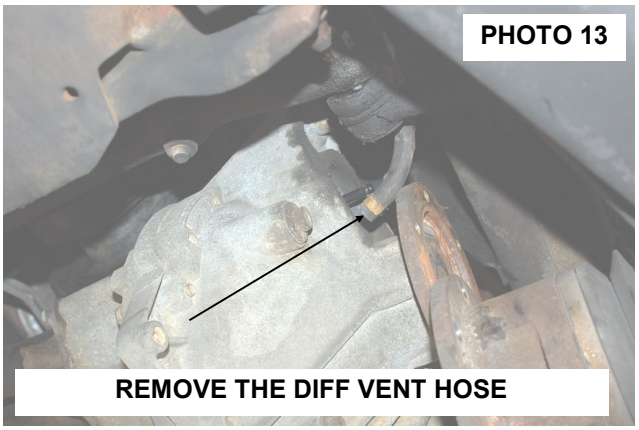


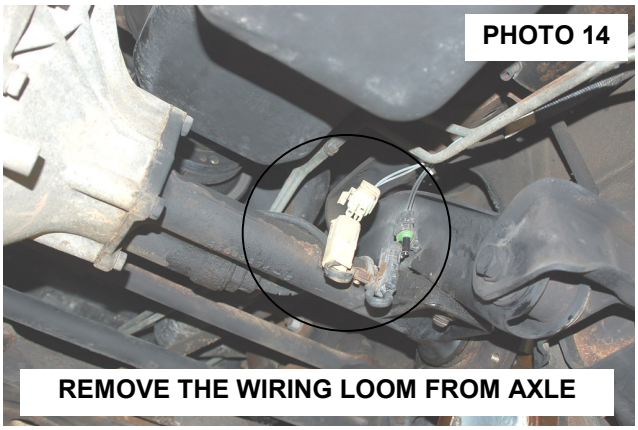
16. On Pre 94 models the upper control arm alignment tabs may need to be removed. If applicable remove the perforated area as shown. **See Photo 11.**
17. Remove the factory lower skid plate using a 15mm wrench if equipped.
18. Remove the 12 bolts-6 per side that secure the half shafts to the differential using a 15mm wrench. Retain the factory hardware. **See Photo 12.**



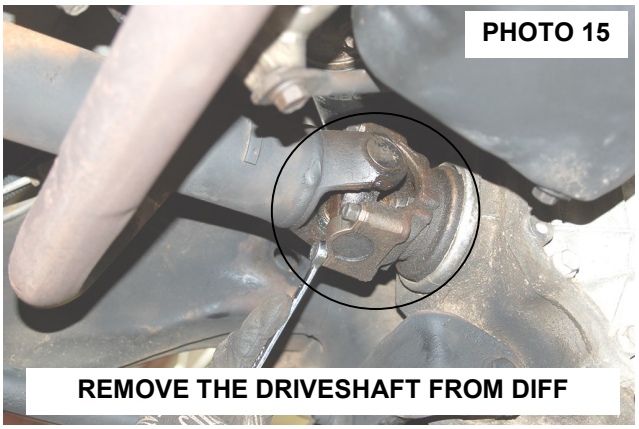


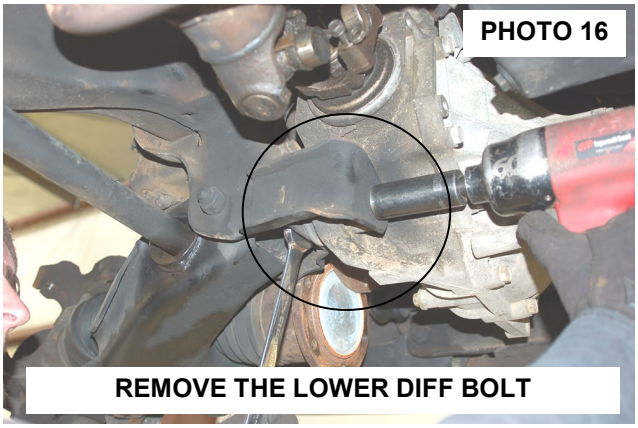
19. Remove the differential vent hose from the differential. **See Photo 13.**
20. Unplug the wiring harness from the passenger differential side as shown in **Photo 14.**



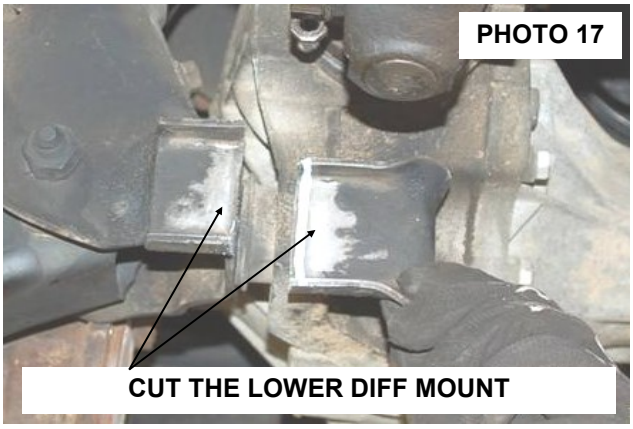


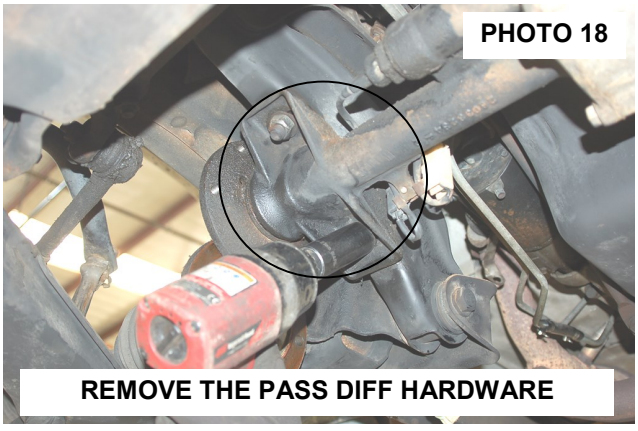
21. Remove the driveshaft from the differential as shown in **Photo 15** using a 11mm wrench. Retain the factory hardware.
22. Support the differential with a floor jack or jack stands.
23. Remove the lower driver differential hardware using a 21mm socket / wrench. **See Photo 16.**



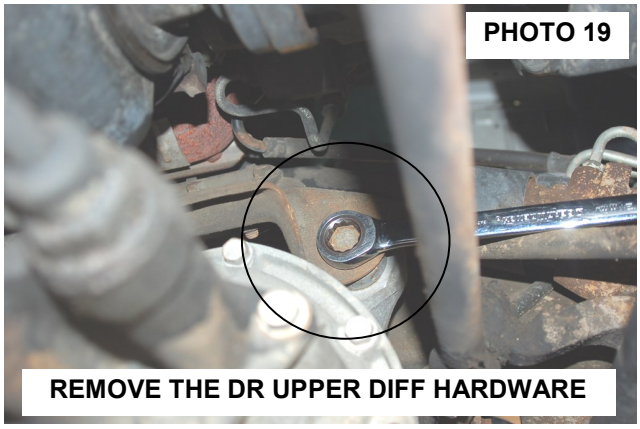


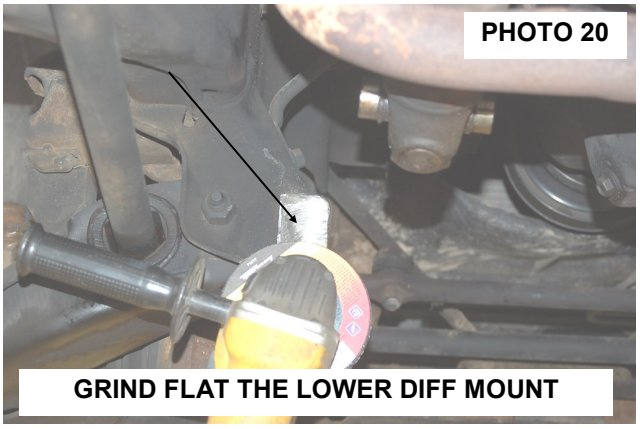
24. Mark and cut the lower driver stock differential mount from the frame as shown in **Photo 17.**
25. Remove the differential mount hardware from the passenger side mount as shown in **Photo 18** using a 21mm socket / wrench.



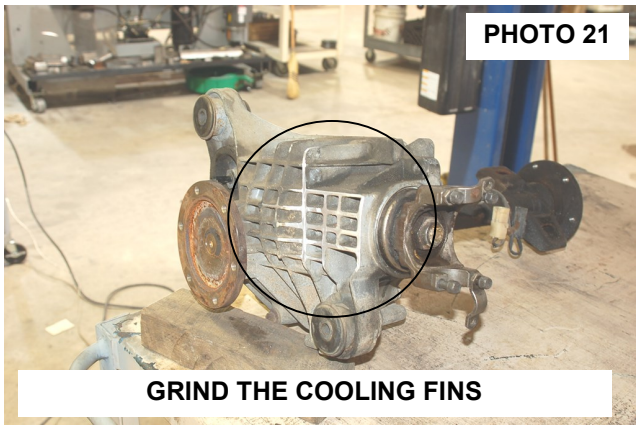


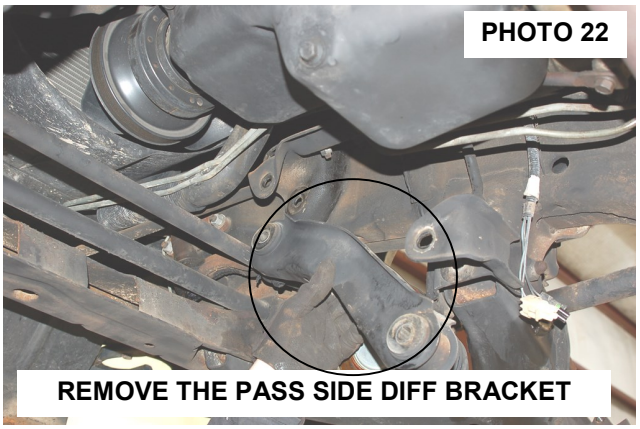
26. Remove the driver side upper differential hardware using a 21mm socket / wrench. **See Photo 19**. Retain the factory hardware.
27. Remove the differential from the truck and grind the driver side mount flat as shown in **Photo 20** and coat with paint to prevent rust.



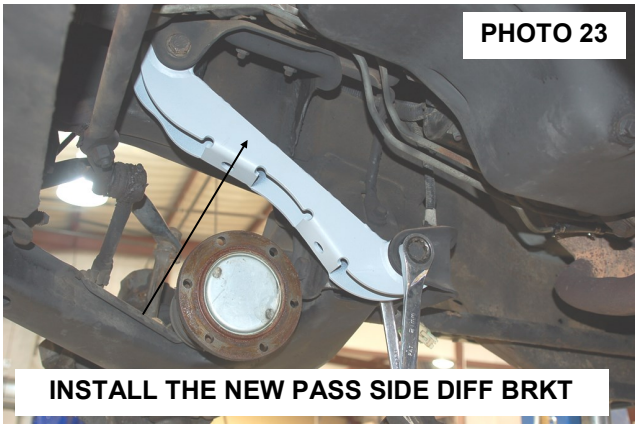


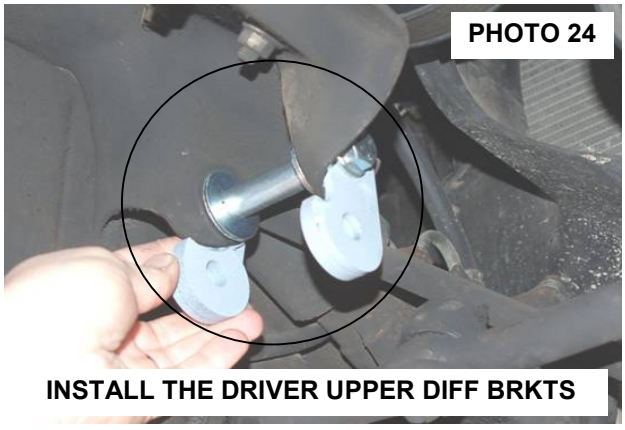
28. With a hand grinder. Grind the cooling fins to clear the frame. **See Photo 21.**
29. Remove the passenger side frame bracket using a 21mm socket / wrench. **See Photo 22.** Retain the stock hardware.



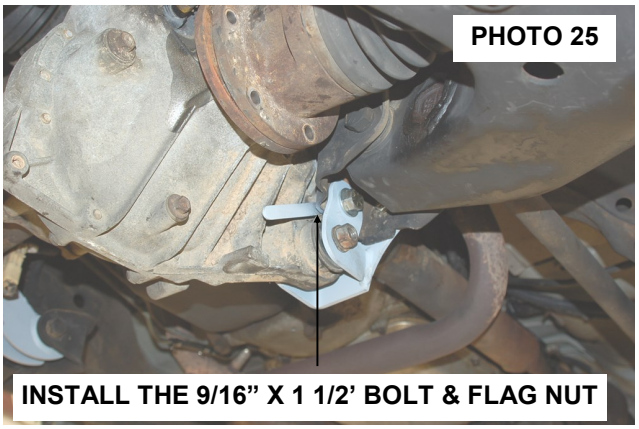


30. Install the supplied bushings and sleeves in the passenger side drop bracket and install in the factory mount as shown in **Photo 23** with the factory hardware. Short end of bracket to the rear. Tighten using a 21mm socket / wrench.
31. Install the driver side upper brackets with the crush sleeve and flat washers as shown **Photo 24** with the supplied 9/16" x 5" bolt, washers and nut. Do not tighten at this time. The thick part of the new brackets will be on the bottom.



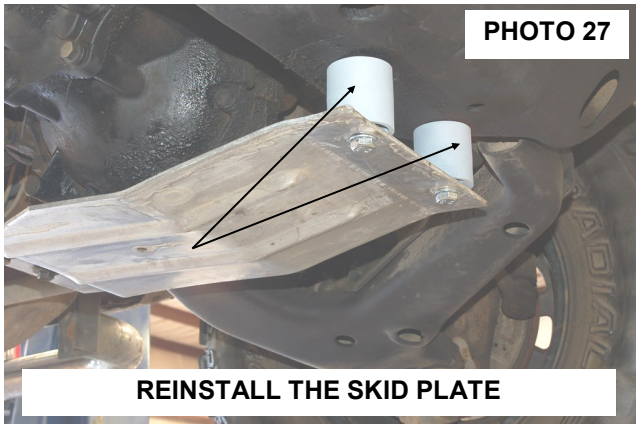


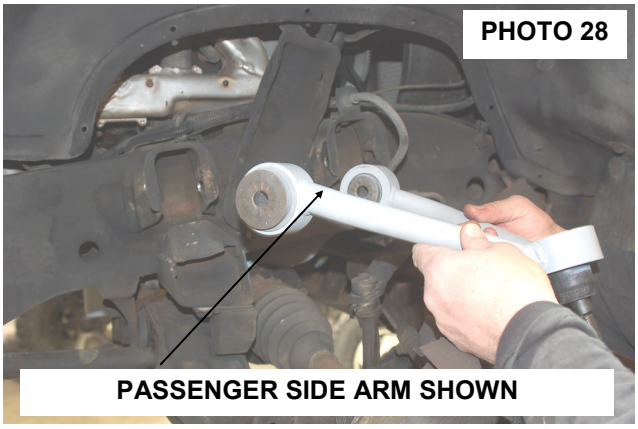
32. Raise the differential and install it in the upper driver bracket with the supplied 9/16” x 5” bolt, washers and nut. Also install the differential in the passenger side with the factory hardware. Do not fully tighten at this time.
33. Install the driver side lower differential bracket on the differential with the factory hardware on the differential and the supplied 9/16” x 1-1/2” bolt and flag nut as shown in **Photo 25. Do not tighten at this time.**
34. Make sure the bracket is flat on the frame and positioned correctly. Mark the hole as shown in **Photo 26** and drill the hole with a 1/2” drill bit. Install the 1/2” x 1 1/2” bolt, washers and nut.





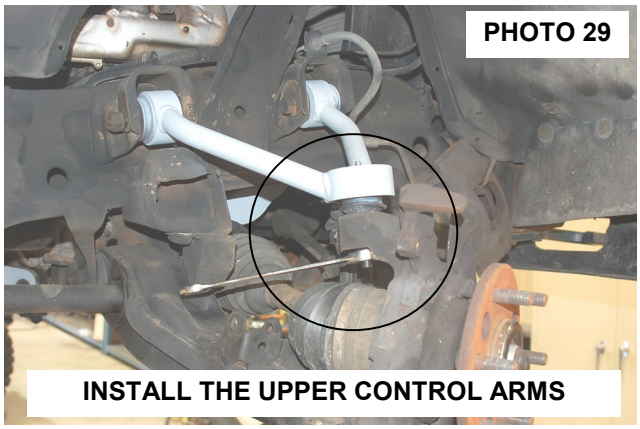
35. Tighten all diff bolts using a 21mm socket / wrench for stock bolts and 21 & 22 mm for supplied bolts.
36. Reinstall the drive shaft with the stock hardware using a 11mm wrench.
37. Reinstall the axle shafts with the stock hardware using a 15mm wrench.
38. Reconnect vent hose to the differential and reconnect the axle wiring harness
39. If equipped with skid plate, install the front skid plate spacers as shown, using the supplied 10mm x 65mm bolts and washers. Reuse your factory hardware in the rear. Tighten with a 17mm wrench. **See PHOTO 27.**
40. Install the upper control arms. **Note there is a driver and passenger side. Passenger side shown. See Photo 28.**





41. Install the control arm on the stock knuckle with the supplied lock nut. Tighten ball joint to 50 ft/lbs with a 18mm wrench. **Do not over tighten the ball joint**. Tighten the control arm to frame hardware using a 21mm wrench to 90 ft/lbs. **See Photo 29.**

⚠ NOTICE Ball joint must be greased before use. Check ball joint grease after the first 100 miles and then every 3000 miles.

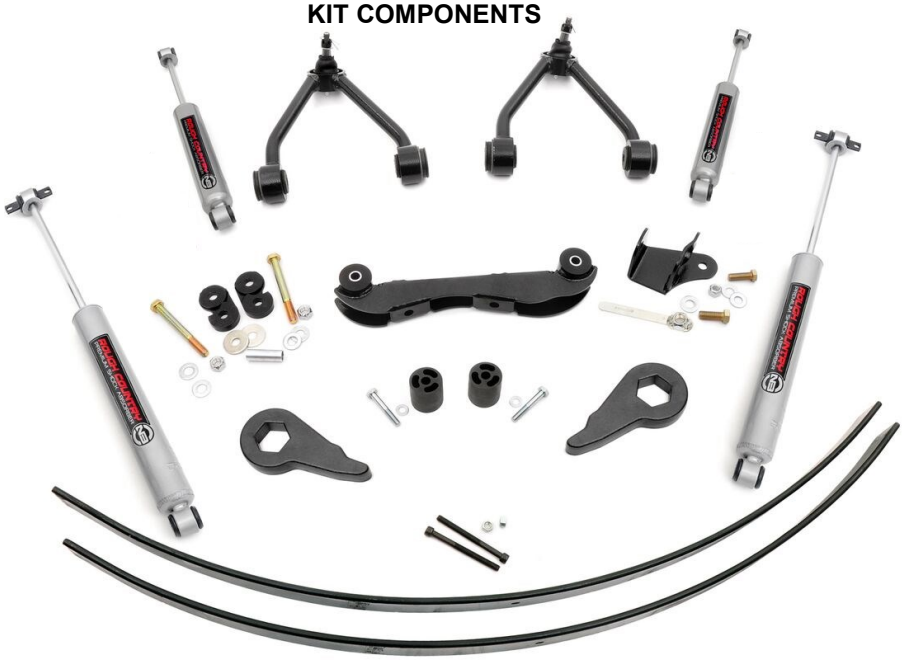


42. Install part # 23225 front shock absorber and install with the stock upper and lower bolts, using a 18mm socket and wrench.
43. Reinstall the brake rotor and brake caliper using a 3/8” Allen wrench. **Adjust brake hose for slack.**
44. Install the supplied torsion bar adjusters in the same manner as the stock was removed with the torsion bar tool. Tighten the torsion bar bolt to the recorded measurement in Step 2.
45. Reinstall Tires and wheels. Lower. Vehicle to the ground
46. **Be sure to check brake line /ABS wires for slack and clearance before driving the vehicle. If needed slightly bend brake caliper metal leader away from harm. It will be necessary to align the front end IMMEDIATELY after the installation is complete.**
47. Recommended Alignment Settings: Caster 3º + 1º, Camber -5º + 0º, Toe in 1/16” per wheel.

REAR INSTALLATION INSTRUCTIONS

1. Chock the front wheels and jack up the rear of the vehicle. Secure with jack stands on the frame rail.
2. Place a floor jack under the rear differential on the rear axle. Using a 13mm wrench for the upper, and 18mm and 21mm wrench for the lower, remove the stock shock absorbers, retain the stock hardware.
3. Using a 21mm socket, remove the stock u-bolts. Use the floor jack to lower the axle assembly.
4. **If installing block skip to Step 10.**
5. Remove the spring eye bolts and nuts and remove the rear spring.
6. Place c-clamps on bolt sides of the center pin and tighten. Unbolt the center pin and remove. Un-clamp leaf spring. CAUTION– Take care when releasing the c-clamps since the springs are under load and will spring apart when released.
7. Position the add-a-leaf under the next longest leaf of the spring pack. Replace the shorter spring leafs under the helper leaf and clamp together, being careful to align the center pin holes in the spring leafs.
8. Insert the new center pin supplied with the kit through the spring assembly with the head of the center pin in the same location as the stock pin. Re-compress the pack with the c-clamps, not the center pin, to avoid stripping of nut/bolt threads. Bolt together being sure to align leafs. Cut of excess threads of the center pin with a hack saw. If applicable, re-form straps and or install new bend straps. If heat is used on the straps, allow them to cool naturally and thoroughly before removing the c-clamps.
9. Reinstall leaf springs, using the factory hardware. Skip to step 11.
10. Install the Rough Country block in between the leaf spring and the axle. Jack up the axle and align the pins in the blocks and axle seats. Secure with new u-bolts and torque evenly to 85 ft/lbs.
11. Locate rear shock part # 23307. Using a 12mm wrench, for the upper and a 18mm wrench for the lower. Install using your factory hardware on upper and lower shock mount.
12. Install the tires and wheels.
13. Jack up the rear of the vehicle and remove the jack stands. Lower the vehicle to the floor.
14. Adjust torsion bars so that the truck sets level.

KIT COMPONENTS





2 1/2" Kit Shown with rear blocks

POST INSTALLATION INSTRUCTIONS

1. Have a qualified alignment center realign front end to factory specs.
2. Install Warning to Driver decal on sun visor.
3. Re-torque all nuts, bolts, and especially u-bolts after the first 100 miles, again after another 100 miles and then check periodically thereafter.
4. All components must be retightened after 500 miles, and every three thousand miles after installation
5. Adjust headlights to proper settings.

Thank you for choosing Rough Country for your suspension needs.

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable , 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.