Rough Country 875.23 Installation Instructions

6-Inch Lift Kit with N3 Struts for 2004-2015 Nissan Titan 4WD

Part number: 875.23

trailfortress.com/rough-country-6-inch-lift-kit-875-23

Scan for fitment, price and install help

ROUGH COUNTRY SUSPENSION SYSTEMS®

1875BAG8

Nissan Titan 6” Front & 4” Rear Suspension Kit

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 on the next page. Be sure you have all needed parts and know where they go. Also please review 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.

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 increase vehicle height over the intended height of the Rough Country product purchased. Mixing component brands is not recommended.

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. We will be happy to answer any questions concerning the design, function, and correct use of our products by calling our toll free number @ 1-800-222-7023.

⚠WARNING Prior to installation, carefully inspect the vehicle's steering and driveline systems paying close attention to the tie rod ends, ball joints, and wheel bearing preload. Additionally check the steering to frame and suspension to frame attaching points for stress cracks. The overall vehicle must be in excellent working condition. Repair or replace all warn or damaged parts.

This kit is packaged as a leveling kit—raising the front 6” and the rear 4”.

<u>On 2011—Current Models</u>, the vehicle was equipped from the factory with a 4 1/2” diameter driveshaft at the u-joint. As a stock un-lifted vehicle, this oversize shaft coupled with the lack of adequate clearance with the floor pan from the factory, may cause the shaft to contact with the floor pan. This kit does not minimize the clearance in this area but is usually recognized with the addition of larger tires and aggressive power-train torque both in on road and off road situations. If contact does occur, modification of the floor pan may be needed to gain clearance on the oversize driveshaft. This is accomplished by creating more space between the driveshaft and the floor pan by manipulation of the body pan directly above and to the side of the u-joint on the driveshaft.

Due to differences in manufacturing, dimension and inflated measurements, tire and wheel combinations should be test fit prior to installation. For this application we recommend a 17” or larger wheel not to exceed 8” in width with a minimum backspacing of 4.5” to a maximum of 5”, a 9” wide wheel with 5” of backspacing is acceptable. Additionally a quality tire of radial design is recommended, not exceeding 35” tall and 12.5” wide is recommended. Please note that use of a 35” x 12.5” tire may require modification to the front valance. . On some 2004-2007 models, not all 17” wheels will accommodate the larger brake calipers. Please check with the dealer for more information on fitment. On 2008 Models the use of a 18” wheel or larger is mandatory due to the brake caliper size.

NOTICE TO DEALER AND VEHICLE OWNER

Install the supplied “Warning to Driver” decal installed on the inside of the windshield or on the vehicle’s dash. The decal should act as a constant reminder for whoever is operating the vehicle of its unique handling characteristics.

We hope installing your Rough Country lift kit is a positive experience. Please note that variations in construction and assembly in the vehicle manufacturing process will virtually ensure that some parts may seem difficult to install. Additionally, the current trend in manufacturing of vehicles results in a frame that is highly flexible and may shift slightly on disassembly prior to installation. The use of pry bars and tapered punches for alignment is considered normal and usually does not indicate a faulty product. However, if you are uncertain about some aspect of the installation process, please feel free to call our tech support department at 800-222-7023. We do not recommend that you modify the Rough Country parts in any way as this will void any warranty expressed or implied.

KIT CONTENTS

Please confirm that you have all the needed parts and know where they go prior to beginning installation.

1875 Box1
- Front Cross Member
- Rear Cross Member
- Front Sway Bar Links (2)

1875 Box2
- Dr Knuckle
- Pass Knuckle

187530
- Sway Bar Spacer (2)
- Fr Brake Line Bracket (2)
- Front Skid Plate
- Front Strut Spacer (2)
- Driver Side Bump Stop Spacer
- Pass Side Bump Stop Spacer
- Rear Brake Line Bracket
- Rear E Brake Line Bracket
- Rear Shock Absorber (2)
- Rear Block (2)
- Front Sway Bar Links (2)
- 9/16" x 2.5" x 12" U-Bolt (4)

1875 BOX 5
- Skid Plate

Hardware Bags

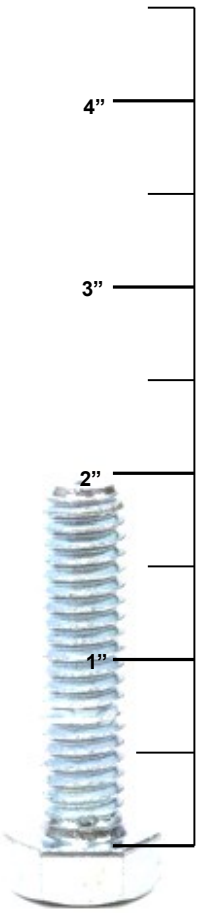
1875 Bag1
- *For Front Cross Member*
  - 9/16" x 4.5" Bolt (2)
  - 9/16" Nylon Lock Nuts (2)
  - 9/16" Washers (4)
- *For Front Cross Member—Ctrl Arm Mt*
  - Cam Bolt (2)
  - Cam Nut (2)
- *For Front Skid Plate*
  - 3/8" x 1" Bolt (4)
- *For Differential Vent Hose*
  - Differential Vent Hose Ext
  - Hose Coupler
- *For Front Brake Line Brkts*
  - Front Brake Line Brkt (2)
  - 3/8" x 1" Bolt (2)
  - 3/8" Nylon Lock Nut (2)
  - 3/8" Washer (4)
- *For Upr Ball Joint and Tie Rod Ends*
  - Cotter Pin (4)
- *For Bump Stop Exts.*
  - 5/16" x 1" Bolt (2)
  - 5/16" Nylon Lock Nut (2)
  - 5/16" Washer (4)

1875 Bag4
- *For Rear Cross Member*
  - 9/16" x 4.5" Bolt (2)
  - 9/16" Nylon Lock Nuts (3)
  - 9/16" Washers (6)
- *For Rear Cross Member—Ctrl Arm Mt*
  - Cam Bolt (2)
  - Cam Nut (2)

9/16 U-Bolt Bag
- 9/16" Lock Nut (8)
- 9/16" Washer (8)

Strut Spacer Hardware Bag
- 10mm Studs (6)
- 10mm Nuts (6)
- 10mm Lock Washers (6)

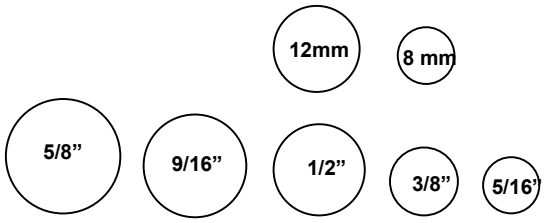
1875 Bag5
- *For Fr Sway Bar Links*
  - 4-12mm x 65mm Bolts
  - 4-12mm Flange Locknuts
  - 4-12mm Flat Washers
  - 4-12mm Sleeves

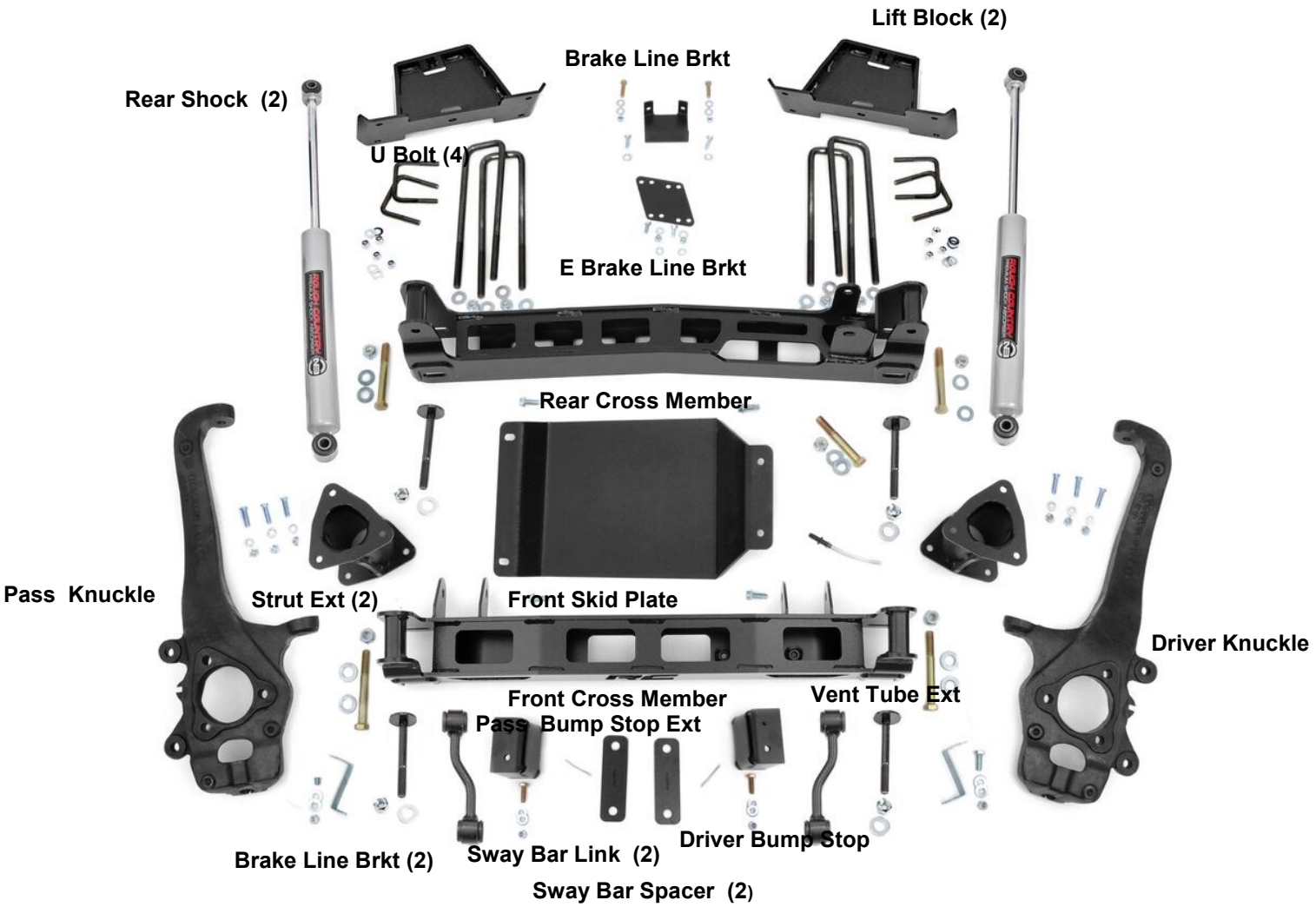


1875 Bag2
- *For Rear Brake Line Brkt*
  - 5/16" x 1.25" Bolt (2)
  - 5/16" Nylon Lock Nut (2)
  - 5/16" Washer (4)
  - 8mm x 25mm Bolt (2)
  - 8mm Washer (2)
- *For Rear E Brake Brkt*
  - *5/16*" x .75" Bolt (2)
  - 5/16" Nylon Lock Nut (2)
  - 5/16" Washer (4)

1875 Bag 8—Inst. Sheet Bag
- Instruction Sheet
- Warning to Driver Decal
- Shock Decal (2)

HARDWARE KEY





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

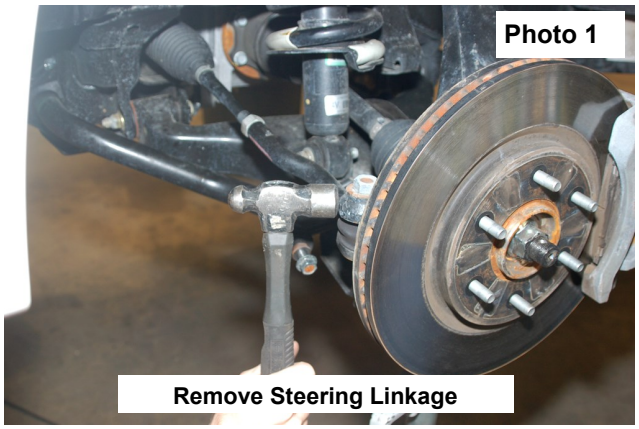
	Class 8.8	Class 10.9
8MM	18ft/lbs	23 ft/lbs
12MM	55ft/lbs	75ft/lbs

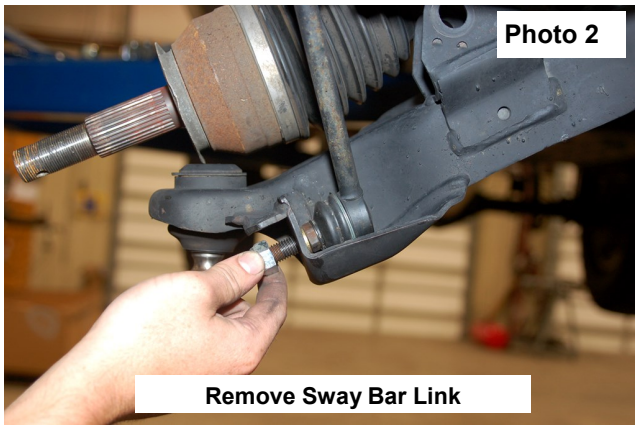
Tools Needed:

Floor jack	
Jack stands	17mm Socket
Ratchet	19mm Socket
13/16” socket	21mm Socket
5mm Socket	22mm Socket
10mm Socket	30mm Socket
12mm Socket	32mm Socket
14mm Socket	Pliers
15mm Socket	Hammer

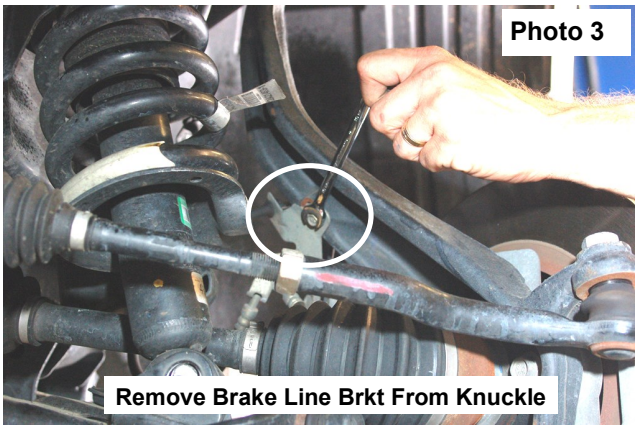
FRONT INSTALLATION INSTRUCTIONS

1. Jack up the front of the vehicle and support the vehicle with jack stands, so that the front wheels are off the ground
2. Using 13/16” socket remove the front tires/wheels.
3. Using 22mm socket remove the nut from the steering linkage. Using a hammer hit on the side of the knuckle as shown, and remove the linkage from the knuckle. Push linkage forward to make room for installation. Retain factory hardware **See Photo 1.**
4. Using a 17mm wrench, remove the stock sway bar link from the sway bar and the lower control arm, allowing the sway bar to drop. **See Photo 2.**





5. Using a 10mm wrench remove the brake line bracket from the back side of the knuckle. **See Photo 3.**
6. Remove the axle nut using a 30mm socket as shown in **Photo 4**. (4WD ONLY)



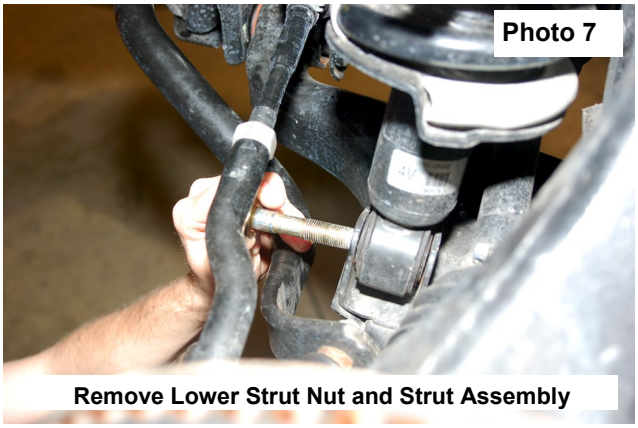


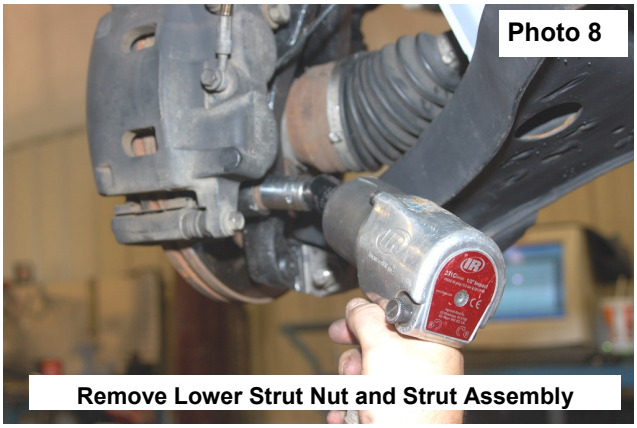
7. Remove cotter pin from the upper control arm ball joint nut. Place jack stand under the knuckle for support. Using 22 mm socket remove nut. Using a hammer hit the knuckle as shown to allow the ball joint to separate from the upper control arm **See Photo 5**. Do not allow the knuckle to pull out far enough that it pulls the shaft out of the differential.
8. Using a 14mm socket, remove the strut nuts on the upper strut tower that holds the assembly in place. **See Photo 6**. One nut can be left on the upper bolts to hold the strut in place.



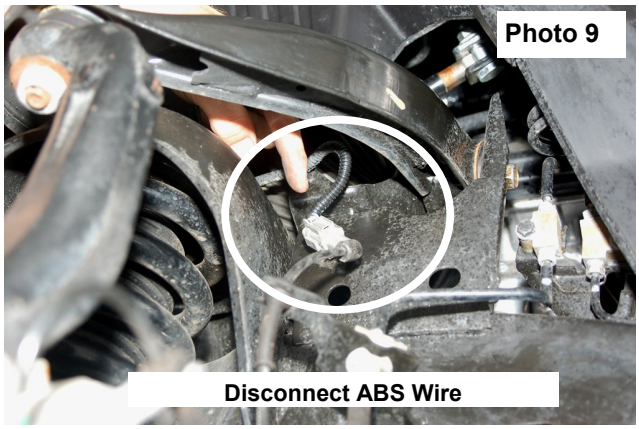


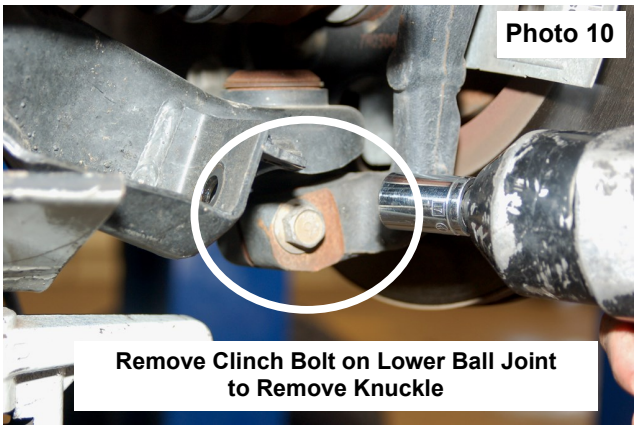
9. Using a 19mm socket and wrench, remove the strut bolt from the lower control arm and remove the strut assembly from the vehicle. Retain the factory lower bolt for reassembly. Note the direction of the bolt for reassembly. **See Photo 7.**
10. Using a 21mm socket remove the brake caliper assembly from the knuckle/rotor. **See Photo 8**. Secure the caliper. Place an alignment mark on CV and Dif Flange for reinstallation. Do not let the caliper hang. Retain the hardware for reuse.



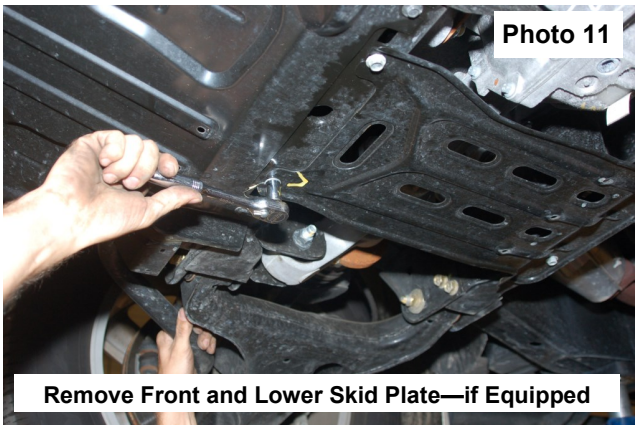


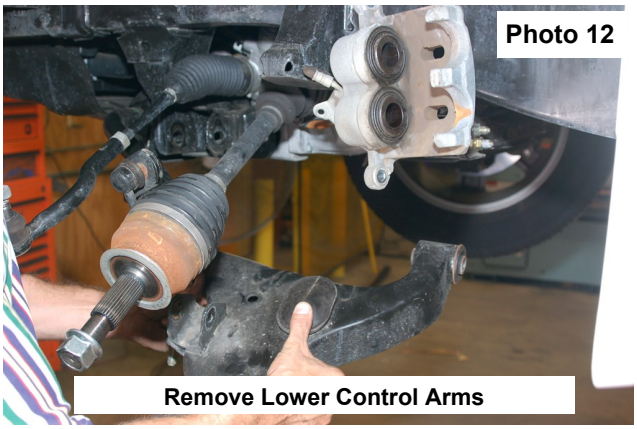
11. Unplug the ABS wire as shown in **Photo 9.**
12. Using a 17mm socket, remove the bolt securing the knuckle to the lower ball joint as shown in **Photo 10** and remove the knuckle from the vehicle.



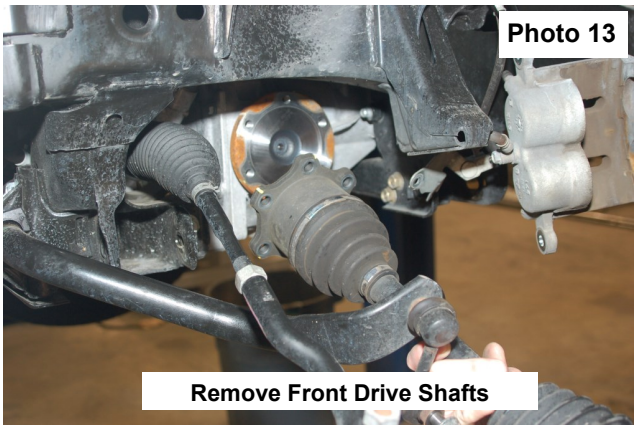


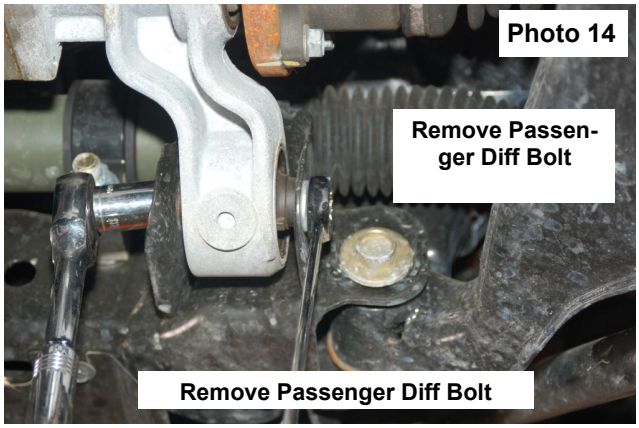
13. Remove the factory front skid plate and the lower skid plate from the frame as shown in **Photo 11** using a 12mm wrench. The skid plates will **not** be reused. The front skid plate must be removed for access to the oil filter or altered to allow access to oil filter.
14. Remove the lower control arm as shown in **Photo 12** using a 19mm socket/wrench.

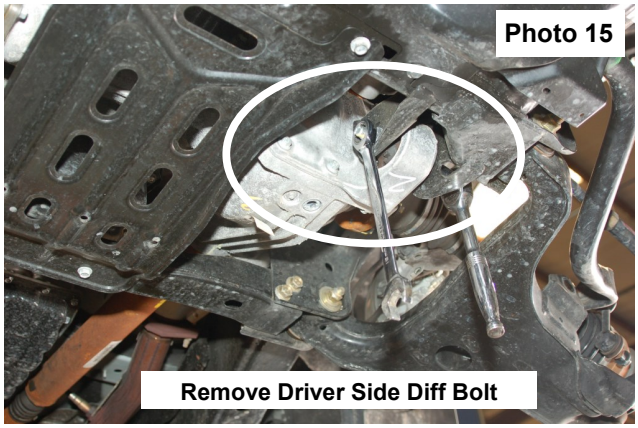




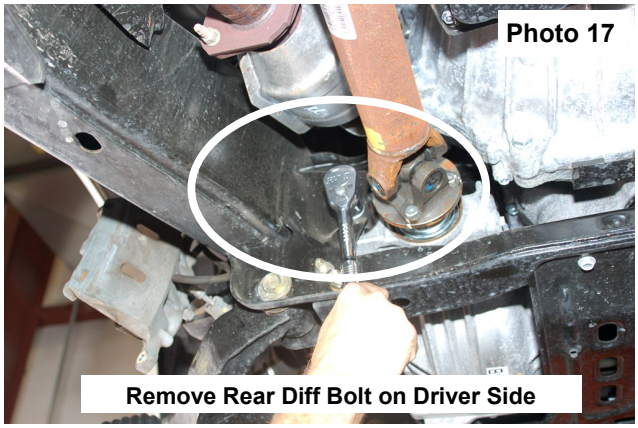
15. Mark the front drive shaft orientation, remove front drive shaft, retaining factory hardware. (4WD ONLY)
16. Using a 15mm remove the front shafts from the differential as shown in **Photo 13.** (4WD ONLY). Retain stock hardware.
17. **Support the differential** with a floor jack or jack stand and remove the 2 lower differential bolt on the driver and passenger side using a 22mm socket and 19mm wrench. Passenger side differential bolt shown in **Photo 14**. Driver shown in **Photo 15.** Retain the stock hardware for reuse.(4WD ONLY)
18. With the skid plate removed, remove the cross member as shown in **Photo 16** using a 14mm wrench /socket.
19. Remove rear differential bolt on the driver side using a 19mm wrench. **See Photo 17.** (4WD ONLY)



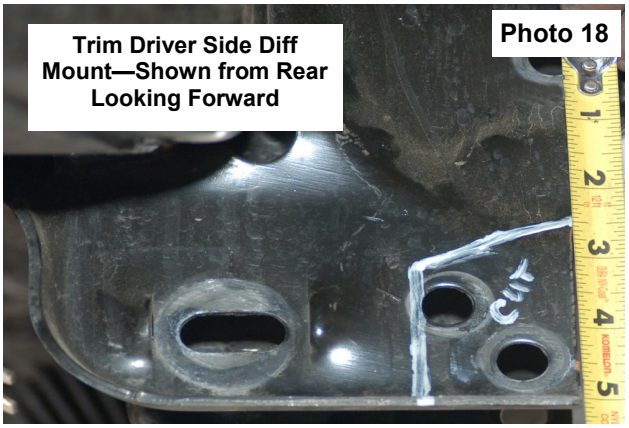


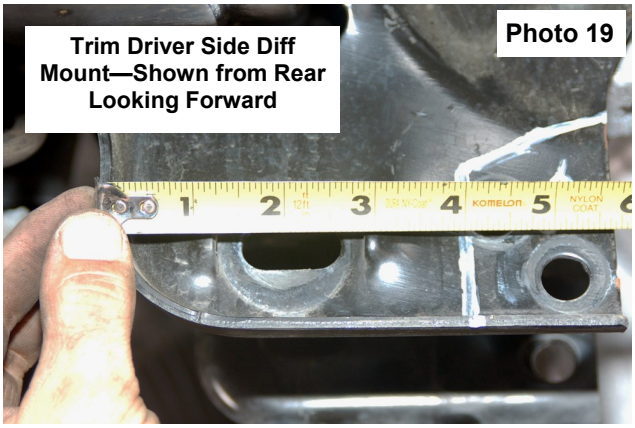




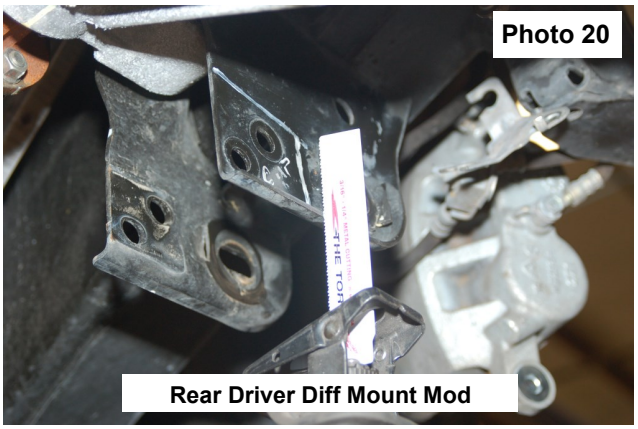


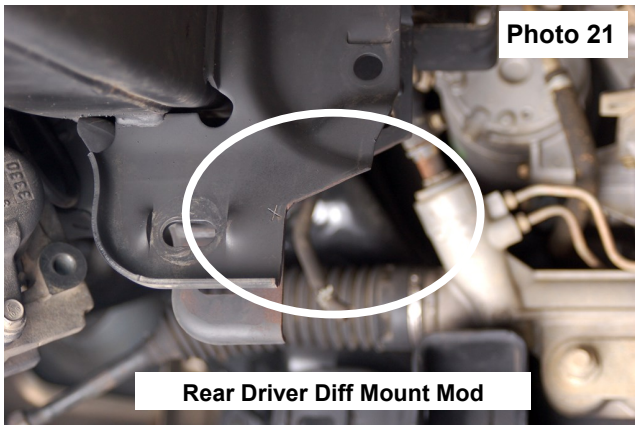
20. Remove the differential vent hose from the top of the differential and lower the differential from the vehicle. (4WD ONLY)
21. Mark 2 1/2” from the center of the upper drivers old differential mounting hole as shown in **Photo 18** and 4” from the side of the frame through the center of the control arm hole as shown in **Photo 19**. (4WD ONLY)



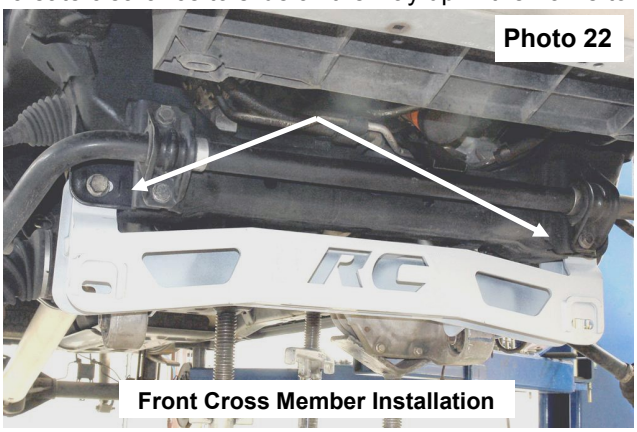


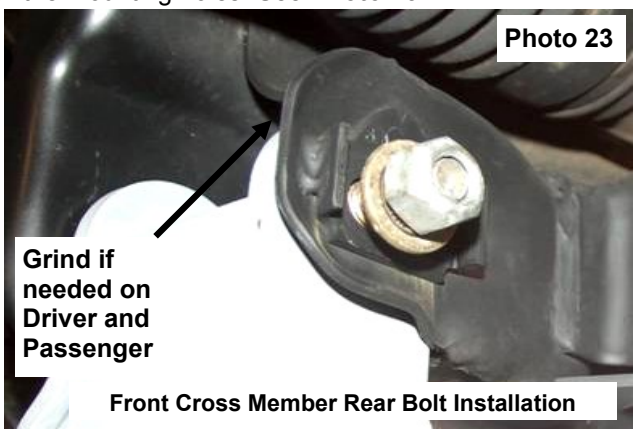
22. Cut the control arm pocket as shown in **Photo 20 & Photo 21.** Paint and smooth cut area with grinder if needed.



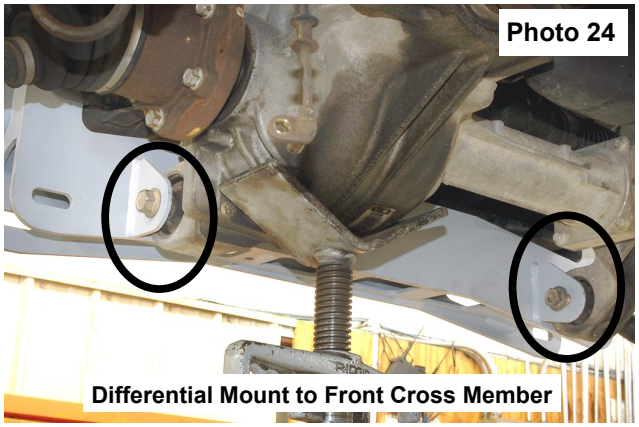


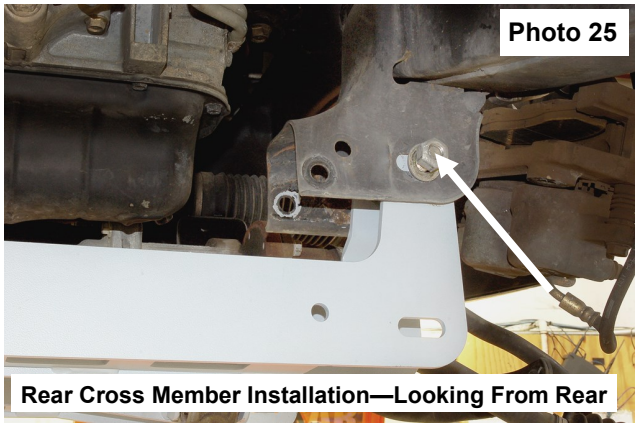
23. Install new front cross-member using 9/16x 4 1/2"bolts.**See Photo 22**. Do not tighten at this time. **NOTE**: Due to factory differences in the frame mounting points, it may be necessary to grind the top of the new cross members to create clearance to slide all the way up in the frame to align the mounting holes. **See Photo 23.**





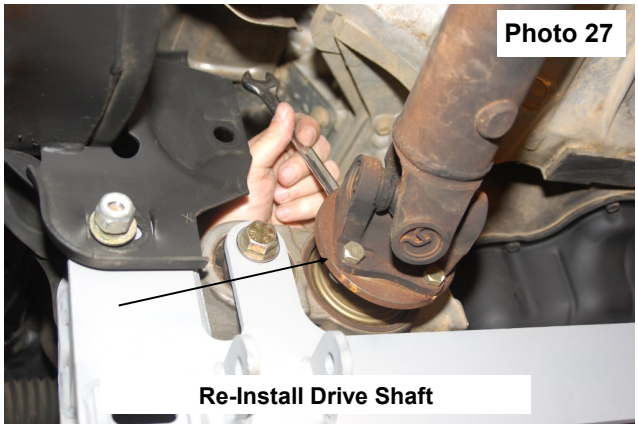
24. Install differential using a floor jack or jack stands using stock diff hardware in the new cross member. Do not tighten at this time. **See Photo 24.** (4WD ONLY)
25. Install rear cross-member with two supplied 9/16 x 4 1/2" bolts/washers. Passenger side is shown in **Photo 25**. **NOTE:** Due to factory differences in the frame mounting points, it may be necessary to grind the top of the new cross members to create clearance to slide all the way up in the frame to align the mounting holes and it may be necessary to grinds down the raised steps on the inside portion of the mounting pockets.





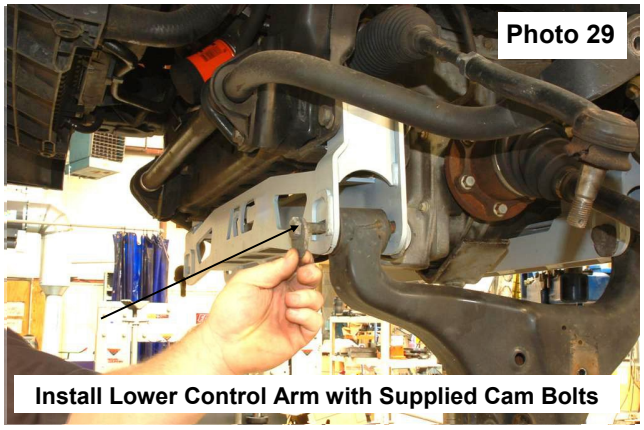
26. Install supplied 9/16 x 4 “bolts/washers/nuts for rear differential as shown in **Photo 26**. (4WD ONLY)
27. Aligning to marks made during disassembly reinstall driveshaft using a 14mm wrench to tighten**. See Photo 27.** (4WD ONLY)



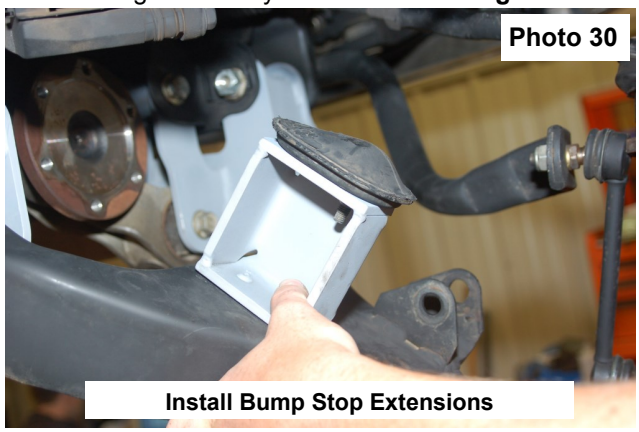


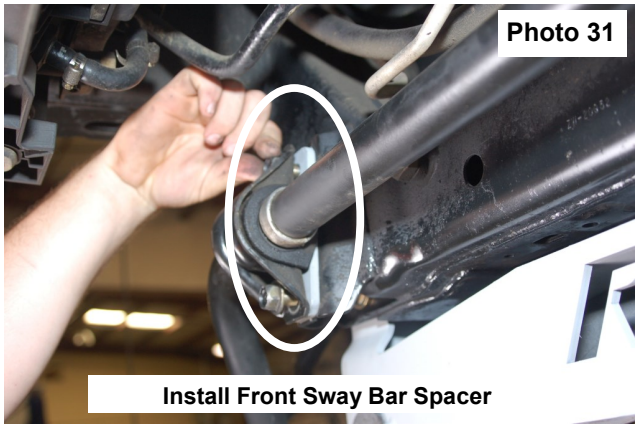
28. Install supplied hose and coupler on the stock diff hose and install on the differential. **See Photo 28**. (4WD ONLY)
29. Install control arm on truck using supplied cam bolts. Make sure all cam blocks off plates are installed with the notch in same direction. **See Photo 29**.



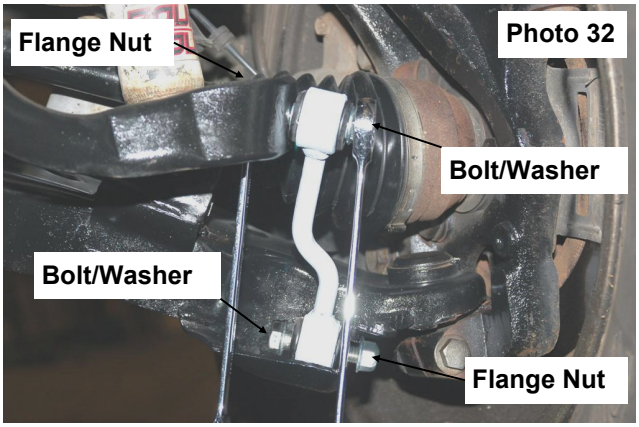


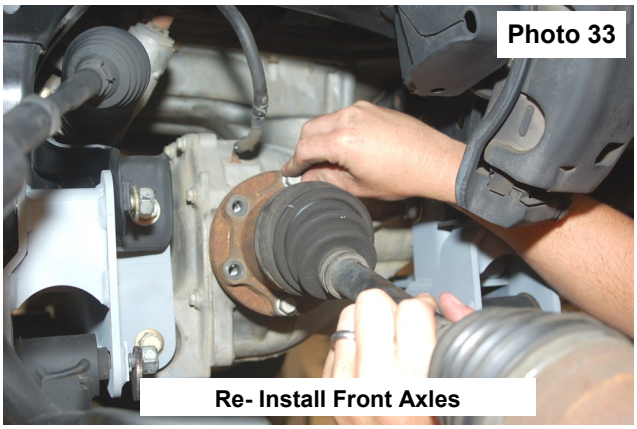
30. Remove bump-stop off of control arm using 12mm wrench. Install bump-stop to the new bump-stop ext. (note there is a left and right bump-stop). Then install to control arm using supplied 5/16 x1” bolts/washers & nuts. Tighten using13mm wrench. **Passenger side shown in Photo 30.**
31. At this time tighten all cross-member bolts and differential bolt (4WD ONLY) using 21mm, 22mm and 19mm wrench per torque specs for bolt size.
32. Remove the stock bolts from the sway bar mount on the frame on the driver and passenger side. Retain the stock hardware for reuse. Install the supplied sway bar spacers as shown in **Photo 31** between the sway bar and the frame using the factory hardware. **Passenger side shown.**





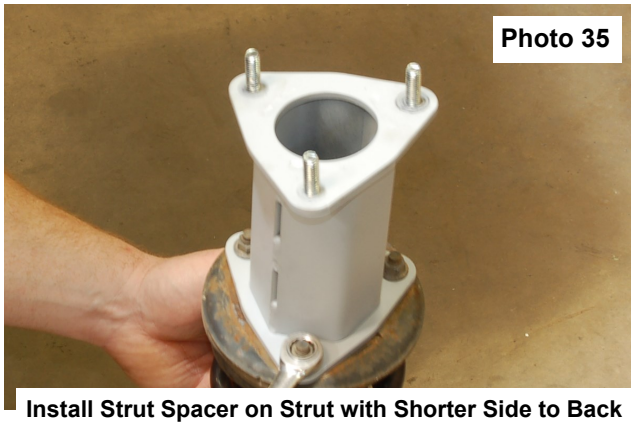
33. Install the supplied sleeves in the sway bar links and install on the sway bar and control arm using 19mm wrench and the supplied 12mm x 65mm bolts, washers and flange lock nuts. ****Note bolt direction in Photo 32. Secure bolt and tighten nut only.**
34. Reinstall axle shafts per disassembly markings using 14mm socket. **See Photo 33.** (4WD ONLY)





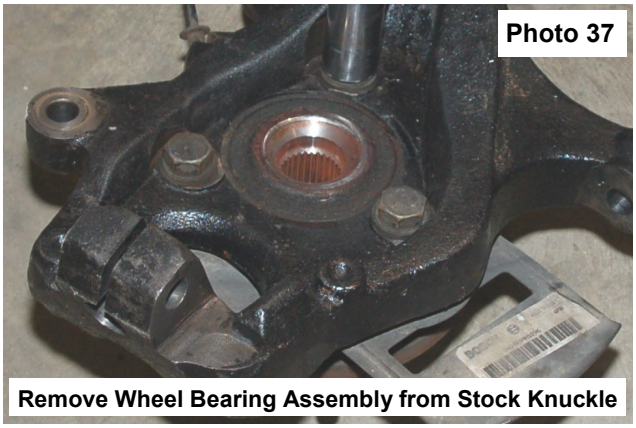
35. Install the supplied 10mm studs on the strut spacer as shown in **Photo 34** using a 10mm nut to pull in the stud.
36. Install strut spacers on the stock strut **with shorter side to the back closest to the frame rail**. **See Photo 35.** Tighten using stock hardware with a 14mm wrench.





37. Install the strut assembly on truck using the supplied 10mm nuts & lock washers on the upper strut spacer and stock hardware in lower control arm strut mount as shown in **Photo 36**. It may be necessary to use jack stand to install the lower bolt. Tighten using a 17mm wrench and 19mm wrench
38. Remove the wheel bearing assembly from the stock knuckle as shown in **Photo 37** using a 21mm socket. Note it may be necessary to heat slightly to break factory lock tight. Retain the factory hardware.





39. Install wheel bearing assembly into new knuckle as removed from the stock knuckle using factory hardware. **See Photo 38.**
40. Install knuckle onto truck using stock hardware on the lower ball joint and upper ball joint **See Photo 39. Note:** The upper control arm will pull down at full droop until it makes contact with strut tower—this is as designed and not a problem. Be sure to line up the splines on the axle shaft with the splines on the knuckle/bearing assembly.
41. Torque the lower ball joint to **130ft/lbs** with a 19mm and a17mm wrench.

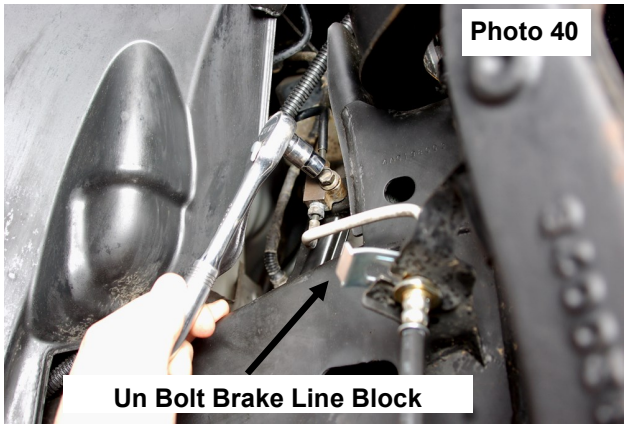


Install Bearing Assembly on New Lifted Knuckle

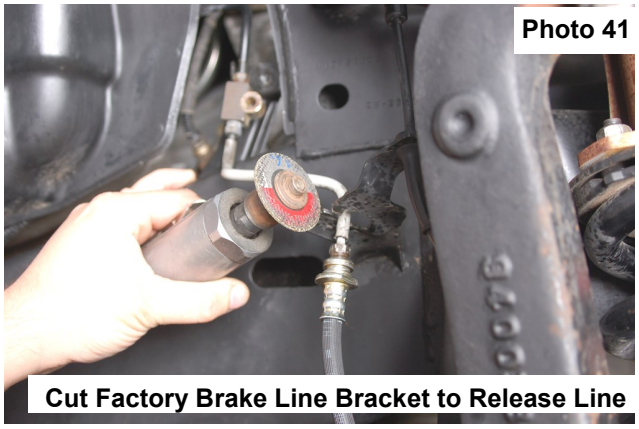


Install Lifted Knuckle Using Stock Hardware

42. Tighten upper ball joint with 22mm wrench.
43. The driver side and passenger side tie rod ends need to be exchanged to provide adequate tire clearance. The stud will be facing down. Install them on the new knuckle using a 22mm wrench with stock hardware.
44. Tighten axle nut with stock hardware using a 32mm socket.

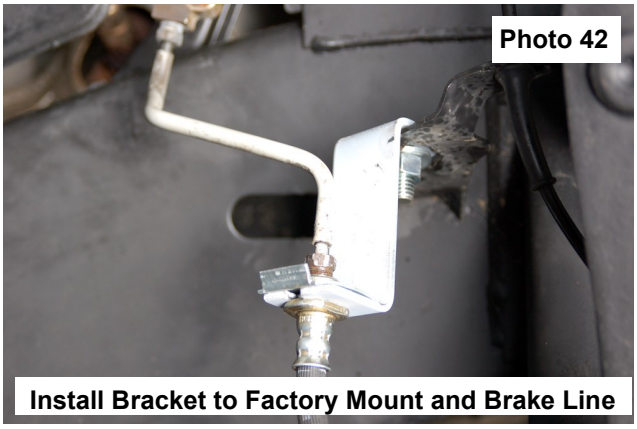


Un Bolt Brake Line Block

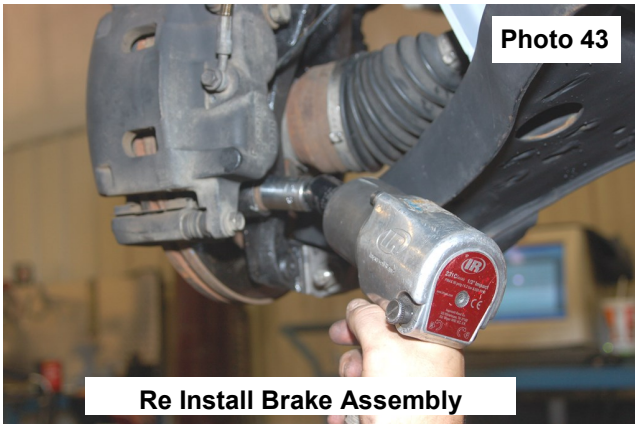


Cut Factory Brake Line Bracket to Release Line

45. Remove the brake line block as shown using a 10mm socket and remove the brake line clip securing the brake line to the frame mount. **See Photo 40.**
46. Using a cutting tool, cut the factory bracket as shown to release the brake line. **See Photo 41.**
47. Install the supplied brake line bracket using the supplied 3/8" x 1" bolts, washers and nuts and install the brake line in the new bracket as shown in **Photo 42.**
48. Install ABS wire back into bearing using a 5mm allen socket. Install brake rotor / brake caliper assembly using stock hardware. Tighten using a 21mm wrench. **See Photo 43.**

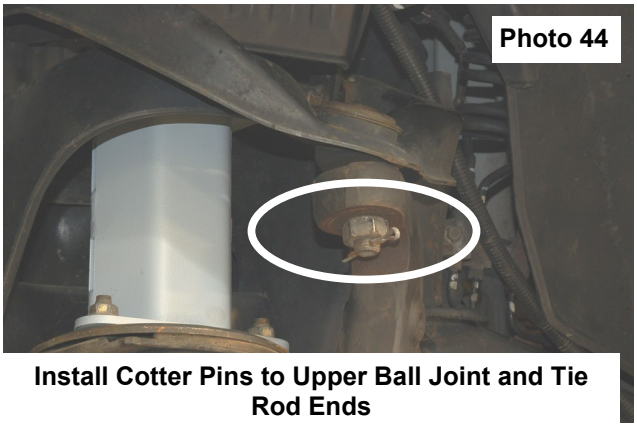


Install Bracket to Factory Mount and Brake Line

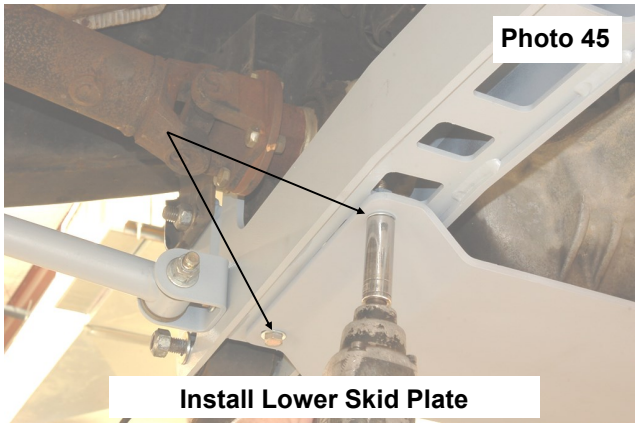


Re Install Brake Assembly

49. Install supplied cotter keys on the upper ball joint and tie rod ends. **See Photo 44.**
50. Install skid plate using supplied 3/8 x1” bolts on the front and rear cross member. Tighten with a 14mm socket. **Rear cross member shown in Photo 45.**
51. Tighten lower control arm bolts using 22mm wrench.



Install Cotter Pins to Upper Ball Joint and Tie Rod Ends



Install Lower Skid Plate

OPTIONAL EQUIPMENT

Rough Country offers a set of kicker braces that add stability to the frame for off road performance. Please contact your Rough Country distributor to order.

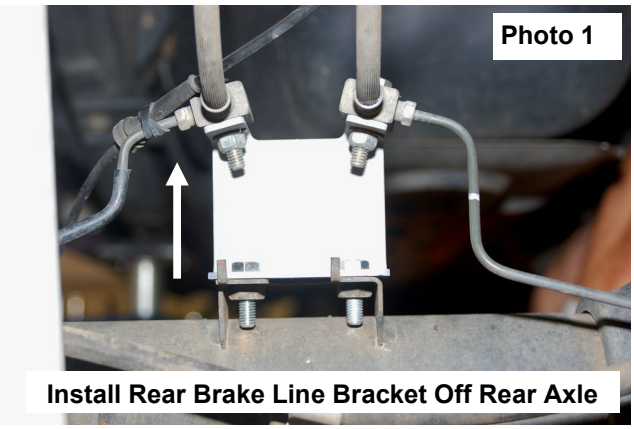
Optional Equipment: Part # 1875Box4-Kicker Braces



REAR INSTALLATION INSTRUCTIONS

If the vehicle is equipped with an electric locker, it will be necessary to free the line from the differential and reroute to allow slack in the line. The lines can be secure with a zip tie to keep them out of harms way.

1. The next 2 steps will be performed with the vehicle on the ground. This is done to ensure adequate brake line length when installing the rear blocks.
2. Remove brake lines from the brake line bracket on the axle using 12mm wrench and install new bracket in the stock location using supplied 8mm x 25mm bolts /washers with 12mm wrench to secure the bracket to the axle**.** Relocate the stock brake lines to the top of the new bracket and secure with the supplied 5/16" x 1 1/4" bolts, washers & nuts. **See Photo 1**. Tighten with 13mm wrench.
3. Remove the 2 emergency brake cables from the frame using a 12mm wrench and install the new bracket to the stock location using factory hardware. Relocate the e-brake cables to the bottom part of the bracket as shown in **Photo 2** and secure using the supplied 5/16" x 3/4" bolts, washers /nuts. Secure with a 13mm wrench.

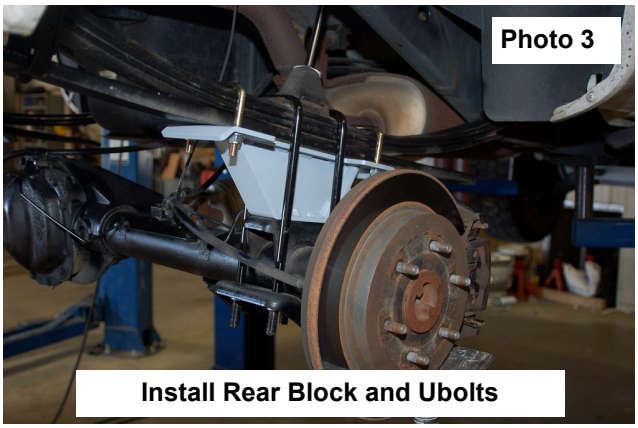


Install Rear Brake Line Bracket Off Rear Axle



Install Rear E Brake Line Bracket To Rear Frame

4. Chock the front tires and lift the rear of the vehicle, position jack stands under the rear frame rails of the vehicle and lower the vehicle on to the jack stands.
5. Place a floor jack in position under the rear differential for support.
6. Remove shocks using 19mm wrench for upper and lower bolts. Retain stock hardware.
7. With slight pressure on the rear axle, remove U-bolts using a 22mm socket.
8. Lower the axle down to install the supplied blocks. Align the blocks on the factory center pins on the leaf spring and align the pin on the block with the axle. **NOTE: The hole and the pin in the new blocks are slightly offset. The offset will go toward the front of the truck moving the axle slightly forward.** Install the 7/16" square u-bolts, over the spring and attach to block using supplied nuts and washers. Tighten using a 9/16 wrench.
9. Install the supplied shock absorbers with the stock hardware using a 19mm wrench.
10. Install supplied u-bolts and tighten with 13/16 socket. **See Photo 3.**
11. Install the wheels/tires. Jack up the vehicle and remove the jack stands and lower the vehicle to the floor.



Install Rear Block and Ubolts

POST INSTALLATION INSTRUCTIONS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure.
3. On some vehicles the front lower skirting will need to be trimmed if using certain wheel /tire combinations and with heavy offset wheels. Trim only as needed.
4. Have a qualified alignment center align the vehicle immediately. Realign to factory specifications. Perform head light check and adjustment to proper settings.
5. Check and retighten wheels at 50 miles and again at 500 miles.
6. All kit components must be retightened at 500 miles and then every three thousand miles after installation. Periodically check all hardware for tightness.
7. Install “Warning to Driver” decal on sun visor
8. Note: Installation of larger tires will require speedometer recalibration.

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.