TRAIL FORTRESS

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Rough Country 20601 Installation Instructions

3.5-Inch Lift Kit for 2007–2013 Chevy Avalanche 1500

Part number: 20601

trailfortress.com/rough-country-3-5-inch-lift-kit-20601

Scan for fitment, price and install help

92206000D

ROUGH COUNTRY
SUSPENSION SYSTEMS®

GM 2007-13 4WD Avalanche 3.5” Lift Kit

Thank you for choosing Rough Country for 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 parts list on the rear cover of these instructions. 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. 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. If questions exist we will be happy to answer any questions concerning the design, function, and correct use of our products.

⚠NOTICE **This kit does NOT fit vehicles equipped with electric power steering. This kit does NOT fit vehicles equipped with Auto Ride or Rear Auto Leveling suspension.**

This suspension system was developed using a 285/75/17 tire with factory wheels. **Note** if wider tires are used, offset wheels will be required and trimming may be required.

⚠NOTICE NOTICE TO DEALER AND VEHICLE OWNER

Any vehicle equipped with any Rough Country product should have a “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.

INSTALLLING DEALER - 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.

Tools Needed:

- 18MM Wrench
- 17MM Wrench
- 15MM Wrench
- 21MM Wrench
- 11MM Wrench
- 10MM Wrench
- 10MM Allen Wrench
- Floor Jack
- Jack stands
- Thread Locker

Torque Specs:

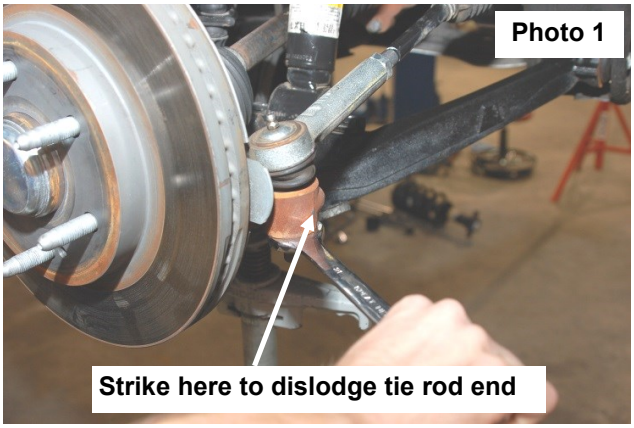
Size	Grade 5	Grade 8
3/8”	30 ft/lbs	35 ft/lbs
7/16”	45 ft/lbs	60 ft/lbs
1/2”	65 ft/lbs	90 ft/lbs
9/16”	95 ft/lbs	130 ft/lbs
5/8”	135 ft/lbs	175 ft/lbs

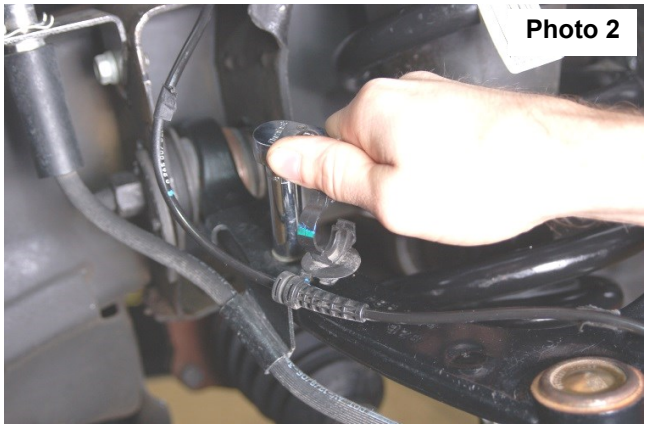
	Class 8.8	Class 10.9
8MM	18ft/lbs	23 ft/lbs
10MM	32ft/lbs	45ft/lbs
12MM	50ft/lbs	75ft/lbs
14MM	85ft/lbs	120ft/lbs
16MM	130ft/lbs	165ft/lbs
18MM	170ft/lbs	240ft/lbs

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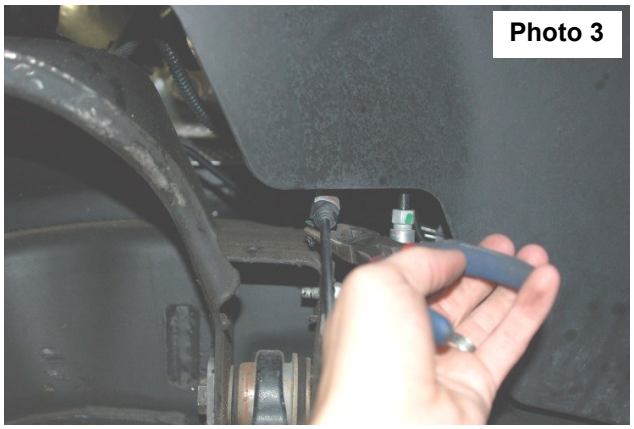
FRONT INSTALLATION

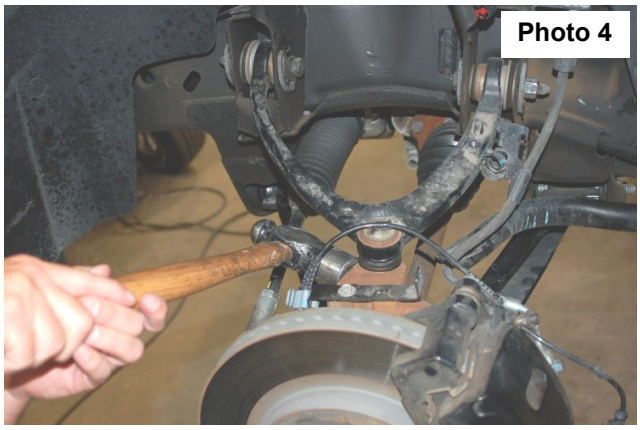
1. Park the vehicle on a level surface and chock the rear wheels.
2. Jack up the front of the vehicle. Place jack stands under the frame rails and lower onto jack stands letting the front suspension hang.
3. Remove the tires and wheels. Remove the upper and lower factory skid plates using a 15mm wrench. Retain factory hardware and front skid plate for reuse.
4. Using a 21mm wrench, remove the tie-rod nut as shown in **Photo 1**. Strike the side of the mount to dislodge the tie rod end. Remove from the knuckle.
5. Remove the sensor wire from the plastic clip. Remove the bracket from the control arm using a 10mm wrench. **See Photo 2.**



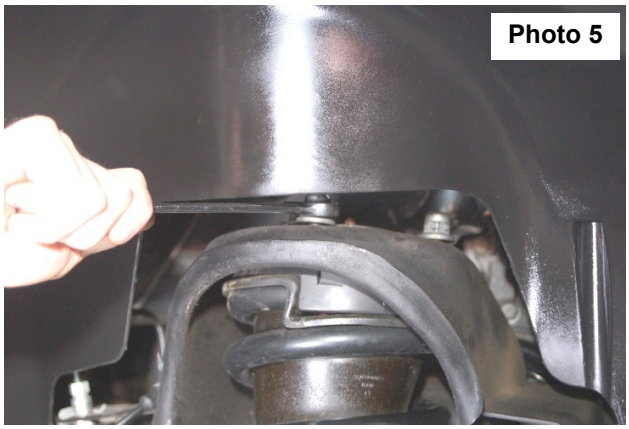


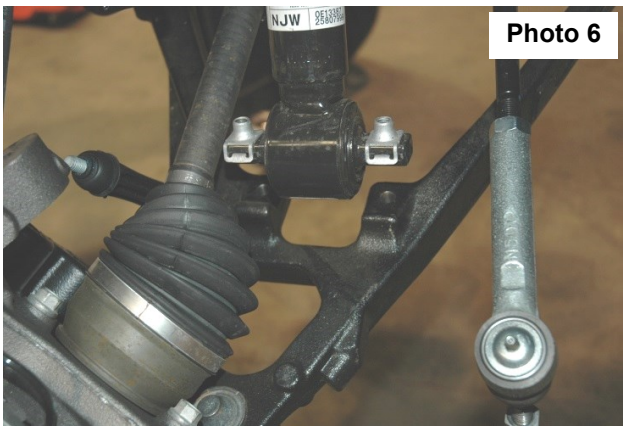
6. Remove and unplug the ABS sensor wire from the frame as shown in **Photo 3**.
7. Remove the upper ball joint nut using a 18mm wrench. **See Photo 4**. Strike the knuckle as shown to dislodge the ball joint. Separate the upper control arm from the knuckle.



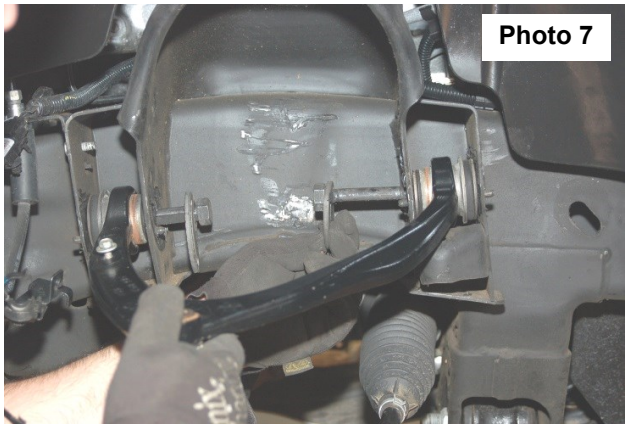


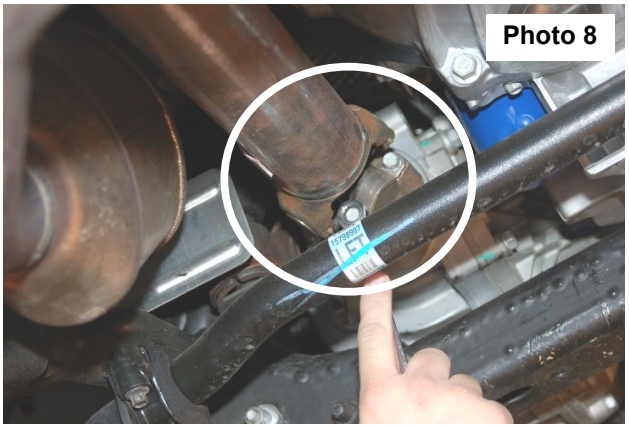
8. Using a 18mm wrench, remove the upper strut nuts as shown in **Photo 5**. Retain factory hardware for reuse.
9. Using a 15mm wrench, remove the 2 bolts securing the lower strut mount to the lower control arm and remove the strut



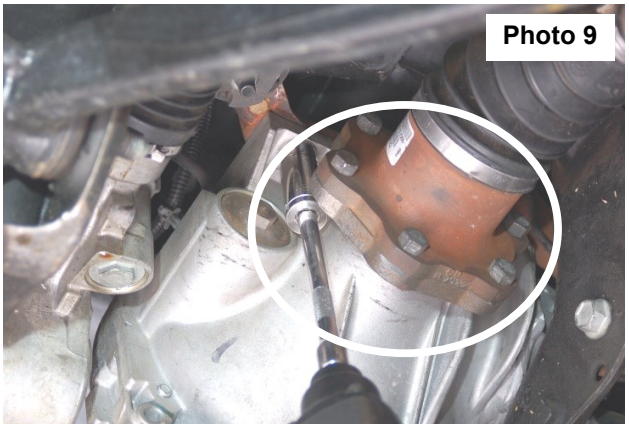


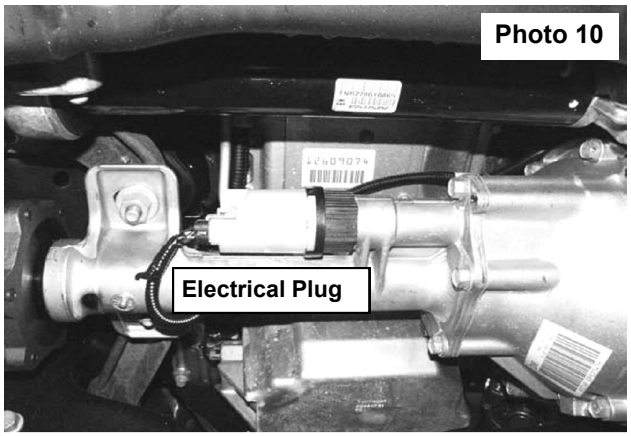
10. Mark location of alignment cams on upper control arms to allow installation of new arm to same position. Using a 21mm wrench and 21mm socket, remove the upper control arms from the vehicle. **See Photo 7**. Retain the hardware
11. Using a 11mm wrench, remove the drive shaft bolts. **See Photo 8.** Retain hardware for reuse.

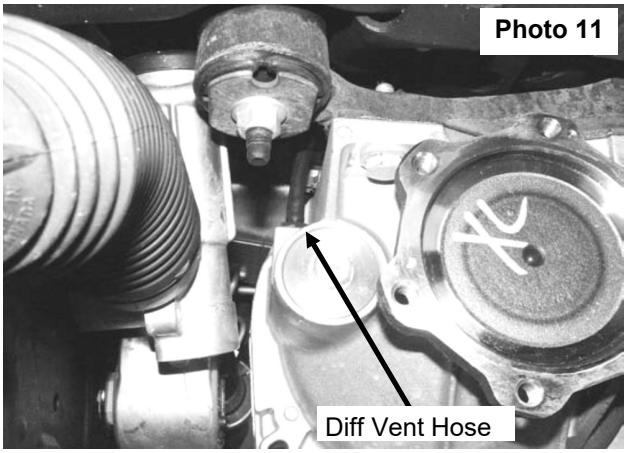


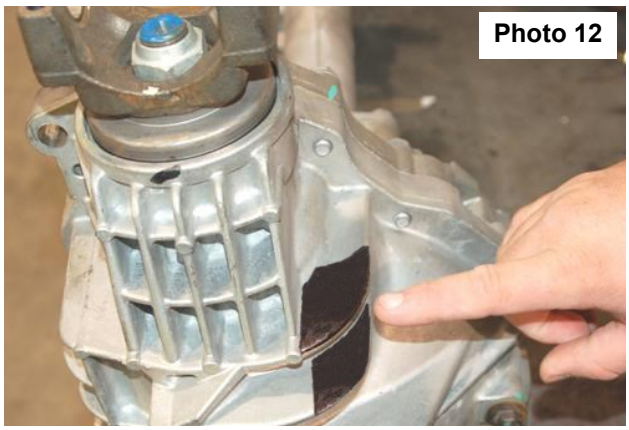


12. Using a 18mm socket and wrench remove the four bolts holding in the factory cross member. Retain factory hardware.
13. Place a floor jack under the differential assembly to provide support for following steps.
14. Using a 15mm wrench, remove the 6 axle shaft bolts and secure axle shafts out of the way. **See Photo 9** Repeat on opposite side. Retain the factory hardware for reuse. Unplug the electrical connector on differential as shown in **Photo 10** and unplug the diff vent hose**. Photo 11**
15. Using a 18mm socket remove the 4 differential bolts (2 each side) securing the differential to the frame. **See Photo 9.**
16. Slowly lower differential assembly to the ground.
17. Using a hand grinder. Grind away marked portion of the cooling fin as shown in **Photo 12** and **Photo 13**. Grind until flush with casing.



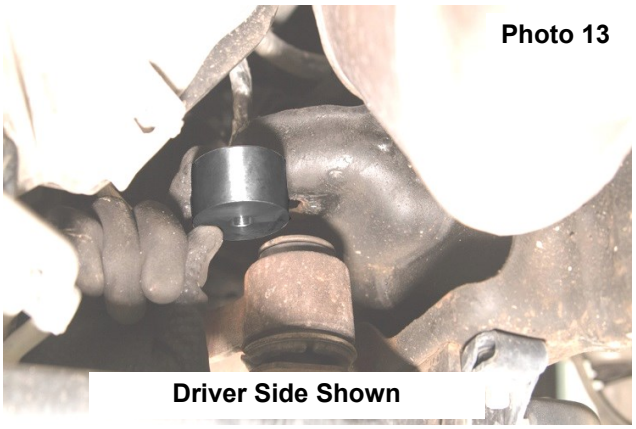


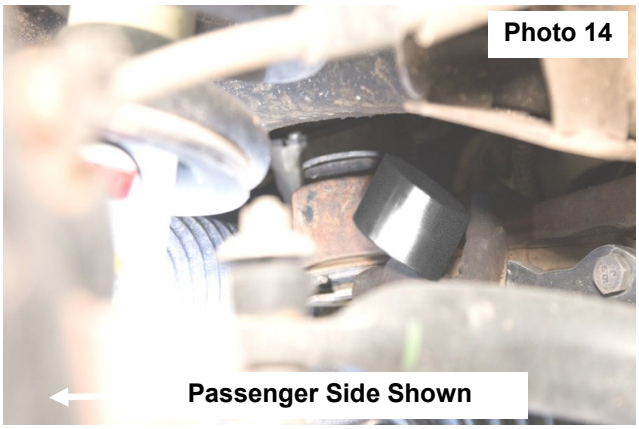




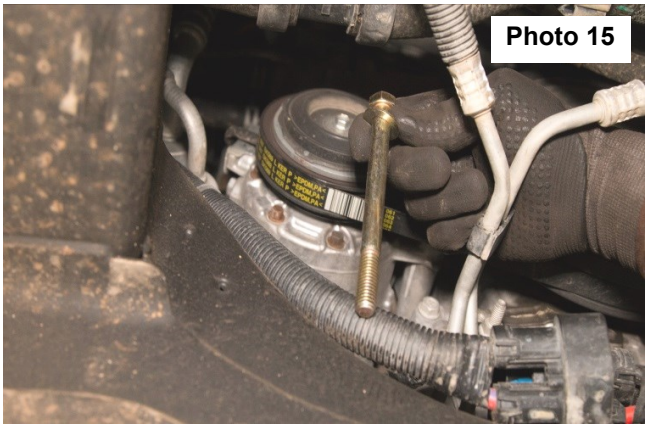


18. Using 15mm and 18mm wrench remove the bolts holding the factory differential brackets on the driver and passenger sides.
19. Place the 4 supplied aluminum differential spacers between the frame mounts and the factory differential brackets. **See Photos 13 & 14.**



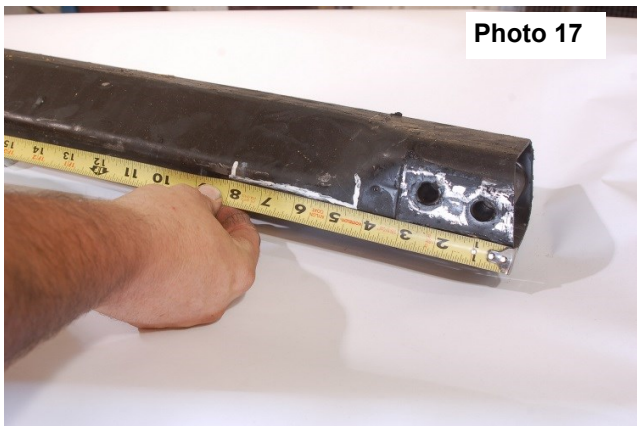


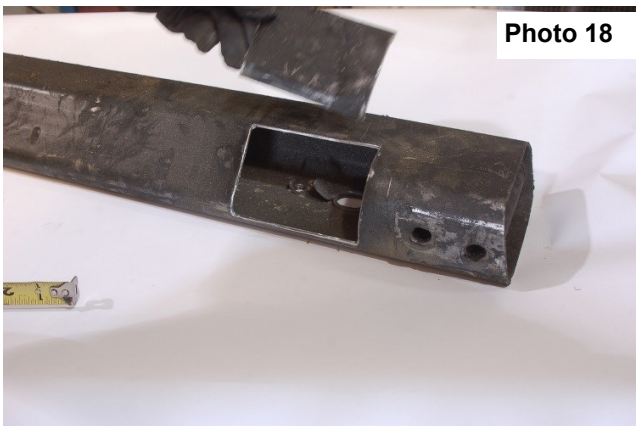
20. Using the supplied 7/16” x 4.5” bolts, nuts and washers from 275BAG6, attach the diff. mounts and drop brackets to the frame and tighten using a 5/8” wrench **See Photos 15 & 16.**





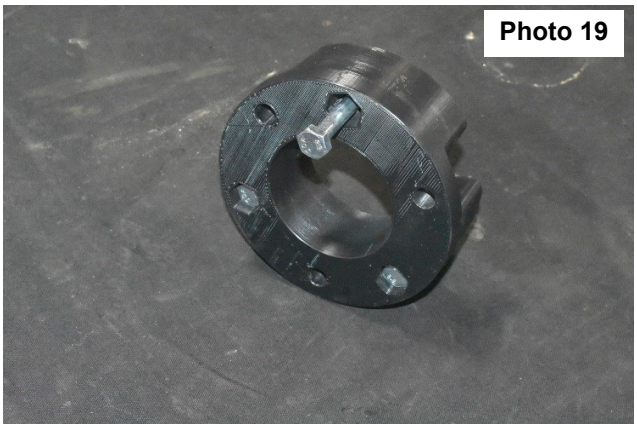
21. Reinstall the differential to the diff brackets with the factory bolts on the drive side and factory nuts on the passenger side. Tighten using a 18mm socket.
22. On the driver side of the factory cross member measure from the end of the tube and make marks at 4.5” and 8” on the front side as shown in **Photo 17**. Measure 1/4” for the bottom, and 2” from the back side and mark.
23. Using a die grinder and cut across the marks as shown in **Photo 18.** Hold the cross member into place and check clearance between the cross member and front diff.



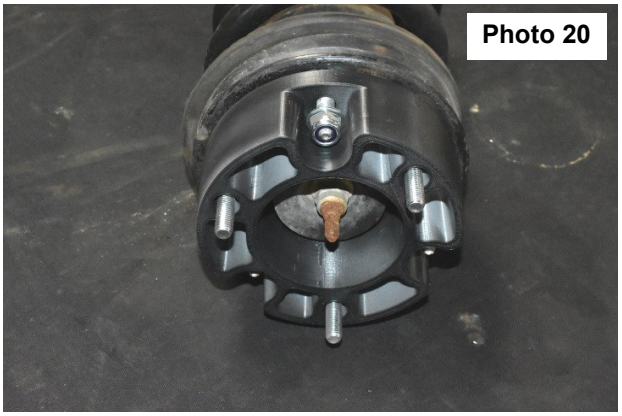


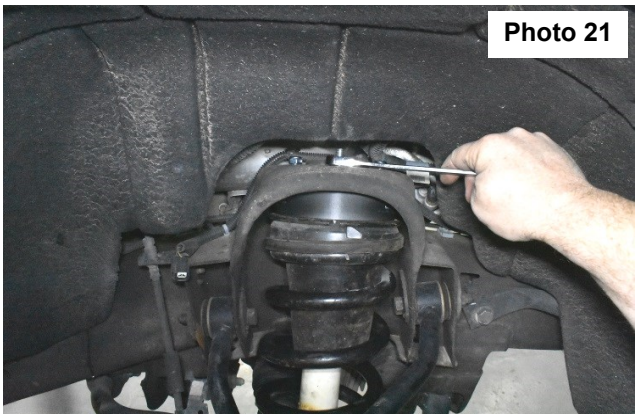
24. Reconnect the connector plug on the differential & pull the vent hose down slightly and reinstall on the differential. The differential vent hose may be tapped to the electrical loom. If so separate and slightly pull for slack.
25. Reinstall the axle shafts to the differential with the factory hardware using a 15mm socket as removed in Step 15.
26. Install the new control arm as shown in **Photo 18 i**n the factory mount making sure the 1/4" stud for mounting the brake line bracket is toward the rear with the factory hardware. Tighten using mark made as a reference in Step 10 and using a 21mm wrench & socket. **Passenger side shown.**
18. Place the supplied 10mm x 70mm bolts into the hex shaped holes in the strut spacer facing upward. **See Photo 19.**


Photo 18


Photo 19

20. Place the strut spacer on top of the strut and tighten with the supplied 10mm lock nuts and flat washers and a 17mm socket. **See Photo 20.**
21. Install the strut assembly in the factory mount with the supplied 10mm flange lock nuts. Tighten using a 17mm wrench. **See Photo 21.**


Photo 20


Photo 21

24. Install the strut in the lower control arm using the supplied 3/8" 2 1/4" bolts /washers & nuts using a 9/16" wrench. **See Photo 22.** It may be necessary to jack up the lower control arm with a floor jack to align lower strut holes.
25. Reinstall the sway bar on the lower control arm using a15mm wrench**.**
26. Reinstall the knuckle to the upper control arm with the supplied castle nuts/cotter pins. Tighten using 3/4" wrench to **50 ft/lbs. DO NOT OVER-TORQUE THE CASTLE NUT**. Reinstall the tie rod end into the knuckle with factory hardware and using a 21mm wench.
27. Reinstall the driveshaft with the factory hardware using a 11mm wrench.
28. Install the brake line bracket on the new control arm with the supplied 1/4" lock nut / washer and using a 7/16" wrench. **See Photo 23**. **Driver side shown.**

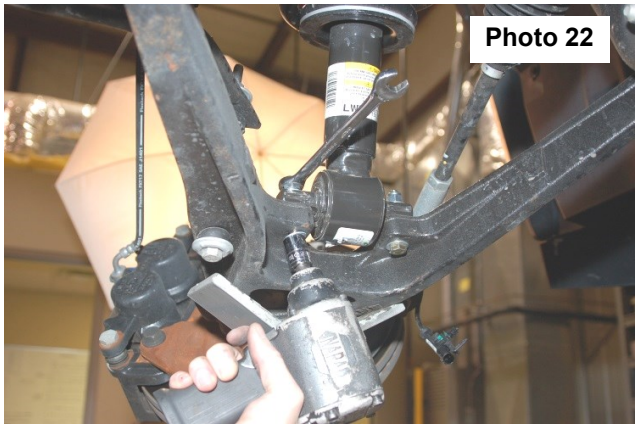
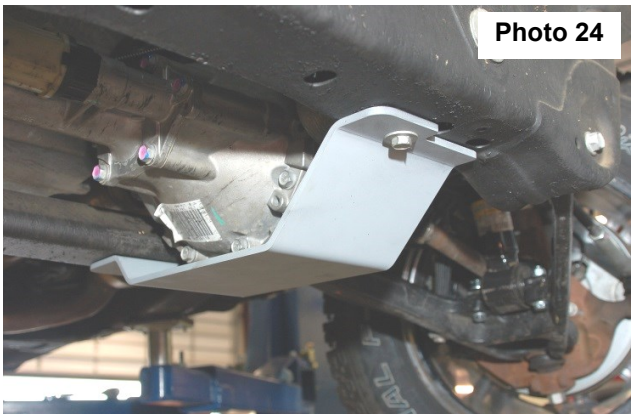

Photo 22

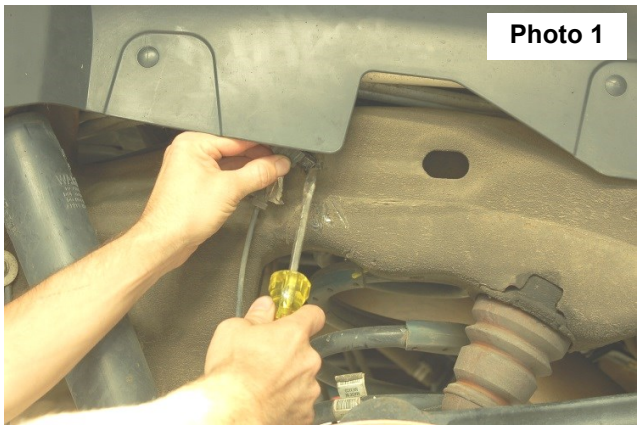

Photo 23

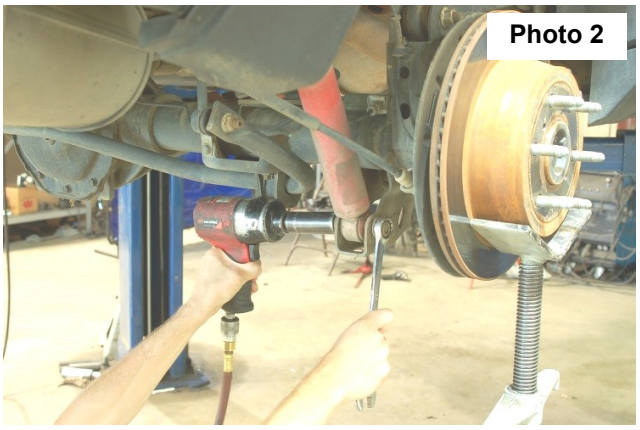
35. Reconnect the ABS wire that was disconnected in Step 6.
36. Locate and install the new lower skid plate below the differential in the factory location (if equipped) with the factor hardware and using a 15mm wrench. **See Photo 24**. If not equipped with a factory skid plate, use the supplied 3/8” self tapping bolts to install the skid plate in the holes in cross-member.
37. Reinstall the wheels/tires.
38. Jack up the vehicle and remove the jack stands.
39. Lower the vehicle to the ground.



REAR INSTALLATION

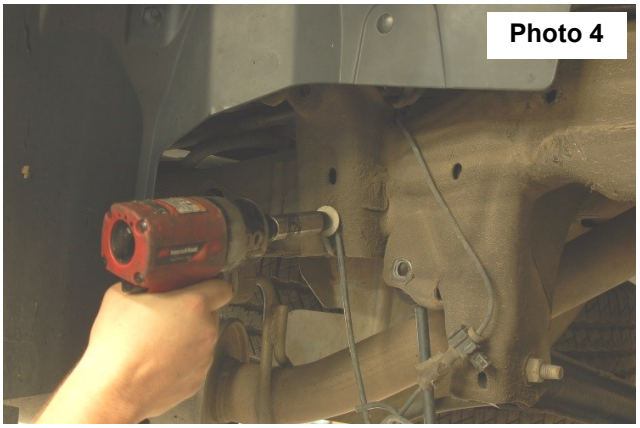
1. Chock the front wheels.
2. Place a floor jack under the differential and jack up the rear of the vehicle.
3. Place jack stands under the frame rails and lower onto the jack stands.
4. Remove the tires/wheels.
5. Locate and remove the ABS wire from the frame. **See Photo 1.**
6. Remove the upper and lower shock from the axle using a 21mm socket/ wrench. **See Photo 2.**





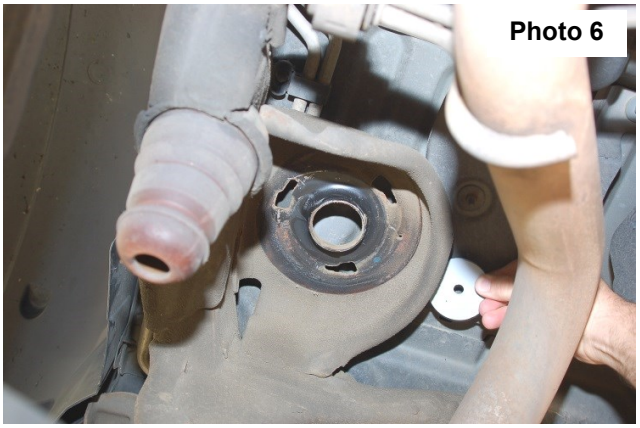
7. Remove the upper sway bar link using a 18mm socket/ wrench. **See Photo 3.**
8. Remove the e-brake mount mount using a13mm socket / wrench. **See Photo 4.**





9. Remove the brake line with a 13mm wrench. **See Photo 5.**
10. Remove the coil.
11. Install the spring spacer washer on top of the mount as shown in **Photo 6**.





12. Secure the spacer in the mount and washer using the supplied 3/8” x 3 3/4” bolts and lock nuts. **See Photo 7.**
13. Reinstall the coil spring.
14. Install the brake line spacer as shown in **Photo 8** with the supplied 8mm x 65mm bolt and locking nut. Tighten with a 13mm socket/ wrench.

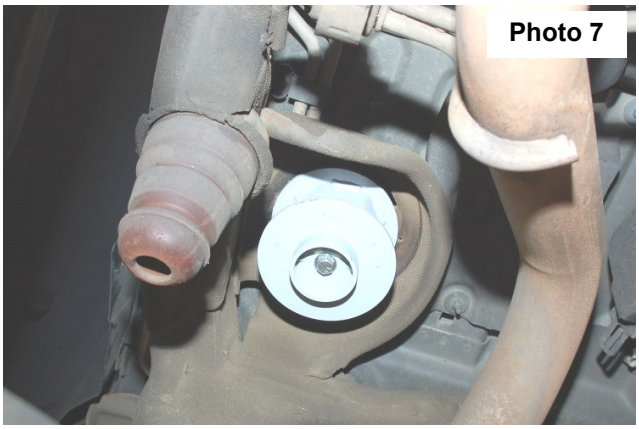
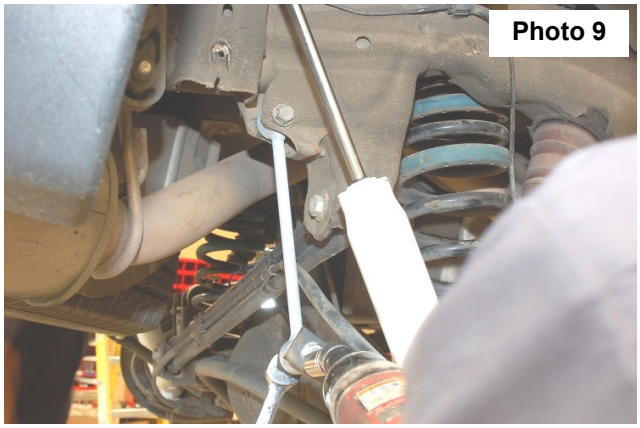
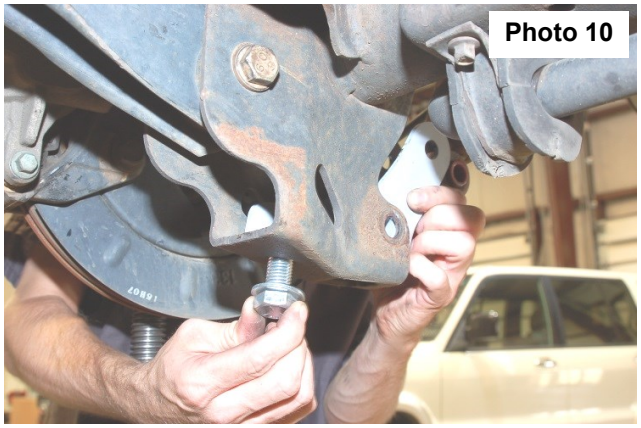
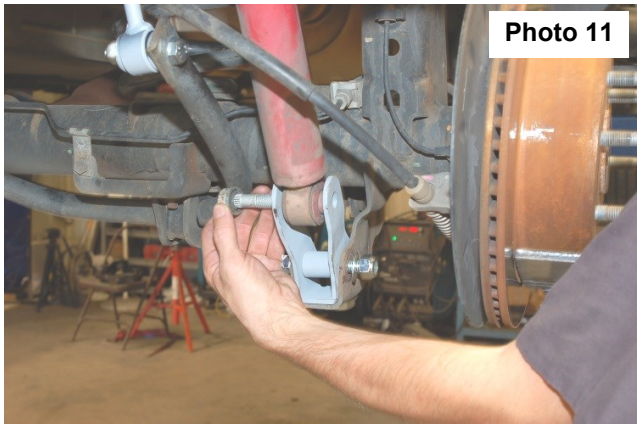

Photo 7


Photo 8

15. Install the supplied sleeves in the sway bar link and install on the frame using the stock hardware.
16. Place the supplied washer on the head of the supplied 12mm x 65mm bolt and install on the sway bar with the nut on the sway bar as shown in **Photo 9** using. Tighten using a 18mm & 19mm wrench.
17. Install the shock relocation bracket as shown in the factory shock location with the supplied 5/8” x 1 1/2” bolt, washers and lock nut on the bottom of the shock mount. **See Photo 10.**
18. Install the supplied 14mm x 75mm bolt, washers and lock nuts in the stock shock mount. **See Photo 11.**
19. Install the tires/wheels.
20. Jack up the vehicle to remove the jack stands. Remove the jack stands and lower the vehicle to the ground.


Photo 9


Photo 10


Photo 11

POST INSTALLATION INSTRUCITONS

1. Lightly grease the ball joints. Do not over grease the ball joint as this could cause ball joint boot failure.
2. Have a qualified alignment center align the vehicle immediately.
3. Have headlights adjusted to proper settings.
4. Wheels must be retightened at 50 miles.
5. All kit components must be retightened at 500 miles and then every three thousand miles after installation. Periodically check hardware for tightness.
6. Install “Warning to Driver” decal on sun visor.
7. 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.

KIT CONTENT



20600 Box Kit

- 1-Driver Side Control Arm
- 1-Pass Side Control Arm
- 1-Driver Side Diff Bracket
- 1-Pass Side Diff Bracket
- 1-Diff Lower Skid Plate
- 2-Strut Spacers
- 4-9/16" x 10 1/2" U-bolts
- 2-1 1/2" spacer blocks
- 2-Rear Shock Absorbers
- 4-Diff Spacer

1-Front Kit Bag:

For Lower Strut:
- 4-3/8" x 2 1/4 bolts
- 8-3/8" washers
- 4-3/8" lock nuts

For Front Strut Spacers:
- 6-10mm x 70mm Bolts
- 6-10mm Flange Lock Nuts
- 6-10mm Flat Washers
- 6-10mm Hex Lock Nuts

For Skid Plate:
- 2-3/8 self tapping bolts

1– Differential Drop Bag:

For Differential:
- 4-7/16" X 4.5" bolts
- 4-7/16" Hardened Washers
- 4-7/16" Lock Washers
- 4-7/16" Nuts

For Upper Control Arms:
- 2-1/4" nut

1-Rear Kit Bag:

For Rear Coil Spacer:
- 2-3/8" x 3 3/4" Bolts
- 2-3/8" Flange Locknut

For Rear Brake Line:
- 1-Sleeve
- 1-8mm x 60mm Bolt

For Rear Sway Bar Link:
- 2-12mm x 65mm Bolt
- 2-12mm Flange Lock Nuts
- 2-Flat Washers
- 4-12mm ID Sleeves

For Rear Shock Relocation Brckts
- 2-14mm x 75mm Bolts
- 2-14mm Lock Nuts
- 2-Flat Washers
- 2-5/8" x 1 1/2' Bolts
- 4-5/8" Flat Washers
- 2-5/8" Lock Nuts

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.