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# Rough Country 75231 Installation Instructions

6-Inch Lift Kit with N3 Shocks for 2016–2021 Toyota Tundra 4WD

Part number: 75231

trailfortress.com/rough-country-6-inch-lift-kit-75231

Scan for fitment, price and install help

921751200B

ROUGH COUNTRY SUSPENSION SYSTEMS®

1751BAG3

# TUNDRA 07–UP 2WD/4WD 6” LIFT KIT

**Thank you for choosing Rough Country for all your suspension needs.**

**NOTICE** **This kit will fit both 4WD and 2WD models, all brackets will be used for 4WD models. On 2WD models the differential brackets will not be used. In this instruction sheet, the 4WD model is shown.**

## PRODUCT USE INFORMATION

**WARNING** As a general rule, the taller a vehicle is, the easier it will roll. Too offset, as much as possible, what is lost in rollover resistance by increasing tire track width. In other words, go "wide" as you go "tall". Many sportsmen remove their mud tires after hunting season and install ones more appropriate for street driving; always use as wide a tire and wheel combination as possible to enhance vehicle stability.

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 significantly 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 1-800-222-7023.

**This 6” kit was developed to accommodate a Maximum tire size of 35x 12.5x 18” tire on a 18x 8.5 with a maximum backspacing of 6 3/16”on a wheel. 18” or larger stock wheels can be used but no wider than a 11.5” tire can be used. Larger tires or different wheel offsets will need to be verified to work with this kit prior to usage.**

**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. INSTALLING DEALER - it is your responsibility to install the warning decal and forward these installation in-

**Tools Needed:**

Floor Jack / Jack Stands
5mm Allen wrench
10mm socket / wrench
12mm socket / wrench
13mm socket / wrench
14mm socket / wrench
17mm socket / wrench
19mm socket / wrench
21mm socket / wrench
22mm socket / wrench
24mm socket / wrench
39mm socket / wrench
9/16 socket / wrench
5/8 socket / wrench
1 1/16 socket / wrench
1 3/16 socket / wrench
Pipe wrench
Needle nose pliers
Tin shears / cutters
Shop hammer
Reciprocating-Saw

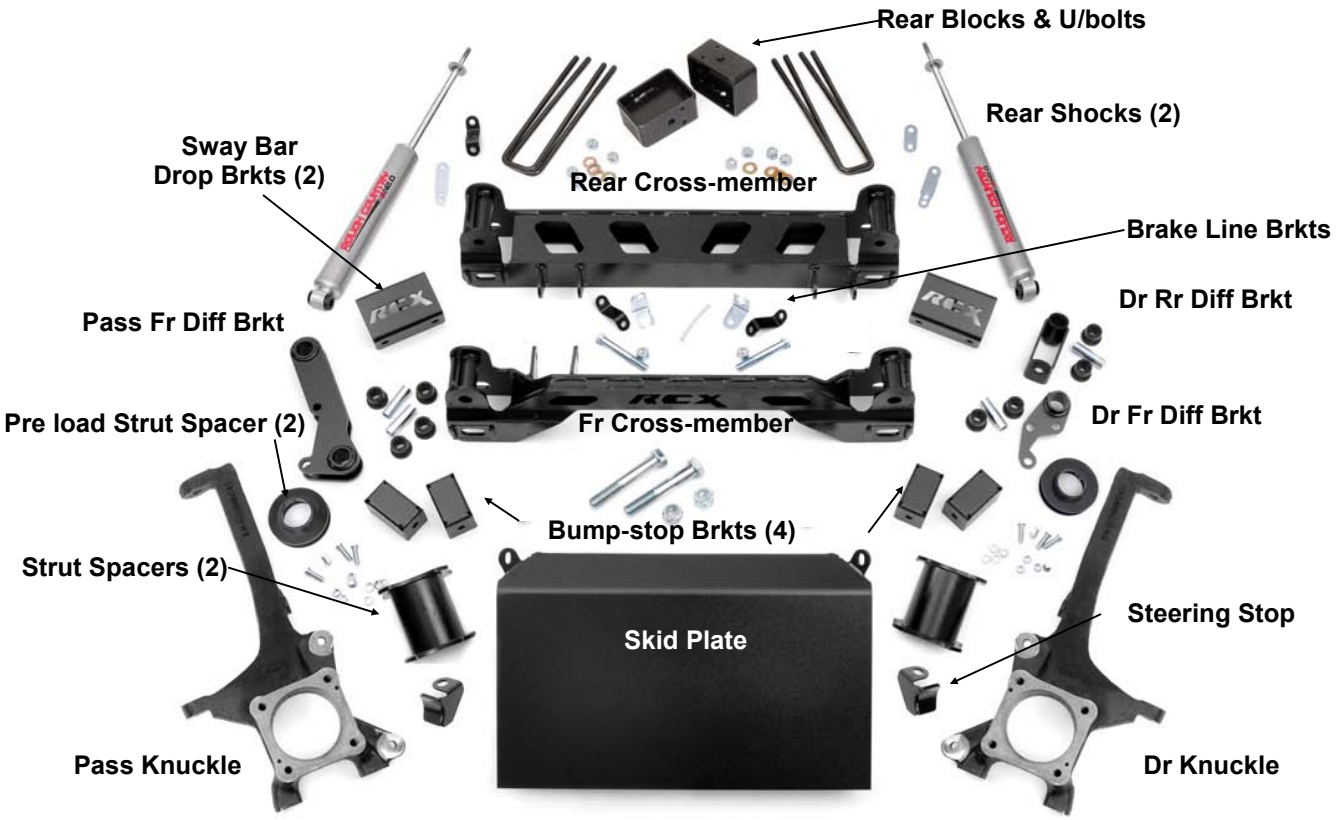
**TORQUE SPECS:**

| 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 |

| | Class 8.8 | Class 10.9 |
|---|---|---|
| 8MM | 18ft/lbs | 23 ft/lbs |
| 10MM | 32ft/lbs | 45ft/lbs |
| 12MM | 55ft/lbs | 75ft/lbs |
| 14MM | 85ft/lbs | 120ft/lbs |
| 16MM | 130ft/lbs | 165ft/lbs |
| 18MM | 170ft/lbs | 240ft/lbs |

trailfortress.com/rough-country-6-inch-lift-kit-75231

## KIT CONTENTS




*Kit Contents:*

***1775Box1***
- Front Cross-member
- Rear Cross-member
- Sway Bar Drop Bracket (2)
- Dr Side Steering Stop
- Pass Side Steering Stop

***1775Box2 or 1773BOX1(2016):***
- Driver Side Knuckle
- Pass Side Knuckle

***1775Box3:***
- Strut Spacer (2)
- Rear Shocks-660797 (2)
- Rear Shock Hardware 143200 (2)
- Rear 4” block (2)
- Rear U-bolts (4)
- 10mm Stud Bag

***1775Box4:***
- Driver Front Diff Bracket
- Driver Rear Diff Bracket
- Pass Diff Bracket
- Skid Plate
- Fr Crssmber Square Washer (4)
- Rr Crssmber Square Washer(4)
- Rear E-Brake Bracket (2)
- Rear ABS Bracket
- Front Brake Bracket (2)
- Front Bump-stop Bracket (4)

*Kit Bag:*

*For Rear Cross-member*
- 18mm X 150mm Bolt (2)
- 18mm Lock Nut (2)
- Square Washers (4)

*For Front Cross-member*
- 7/8” x 5” Bolt (2)
- 7/8” Lock Nut (2)
- Square Washer (4)

*For Front Driver Diff Bracket (4WD)*
- Bushing (2)
- Sleeve
- 9/16” x 4” Bolt
- 9/16” Lock Nut
- 14mm x 60mm Bolt (3)

*For Driver Rear Diff Bracket (4WD)*
- Bushing (2)
- Sleeve
- 9/16” x 4” Bolt
- 9/16” Lock Nut (1)
- 14mm x 25mm Bolt

*For Pass Side Diff Bracket (4WD)*
- Bushing (4)
- Sleeve (2)
- 9/16” x 4” Bolt (2)
- 9/16” Washer (1)
- 9/16” Lock nut (2)

*For Front Bump-Stops*
- 10mm x 35mm Bolt (4)
- 10mm Washer (4)
- 10mm Lock Nut (4)

*For Front Sway Bar Bracket*
- 7/16” x 1 1/4” (4)
- 7/16” Washer (8)
- 7/16” Lock Nut (4)

*For Strut Spacers*
- 10mm Studs (8)
- 10mm Nut (8)
- 10mm Lock Washer (8)
- 10mm Washer (8)

*For Front Brake Line Brackets*
- 5/16” x 3/4” Bolt (2)
- 5/16” Washer (4)
- 5/16” Lock Nut (2)

*For Front Skid Plate*
- 3/8” x 1” Bolt (5)
- 3/8” x Washer (5)
- 3/8” Lock Nut (2)

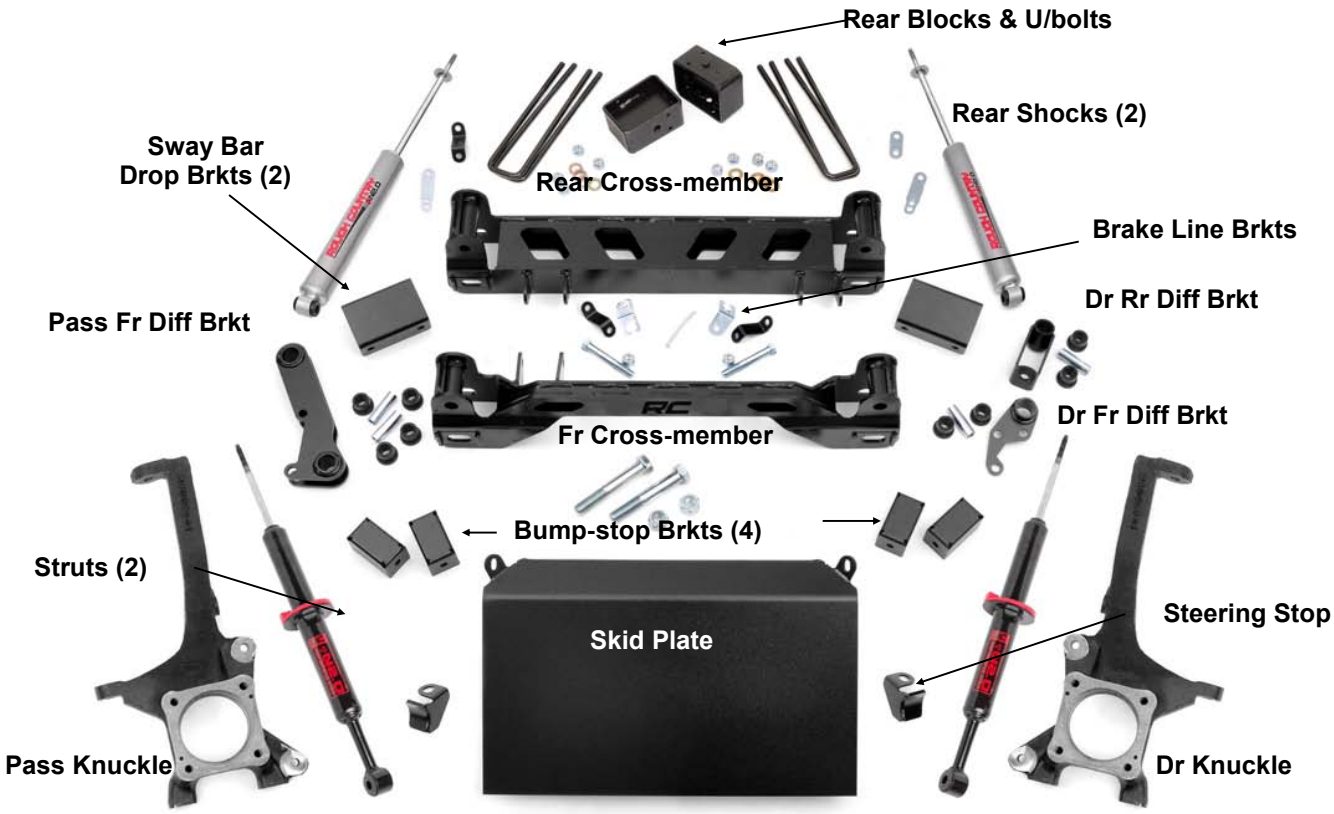
*For Rear Shock Mount*
- *Retainer Washers (4)*
- *Stem Bushings (4)*
- *3/8” Nut (2)*
- *Shock Sleeve (2)*

*For Rear E-Brake Bracket*
- 5/16” x 3/4” Bolt (2)
- 5/16” Washer (4)
- 5/16” Lock Nut (2)

*For Rear Brake Line Bracket*
- 5/16” x 3/4” Bolt
- 5/16” Washer (2)
- 5/16” Lock Nut

For Rear ABS Wire Bracket
- 5/16” x 3/4” Bolt
- 5/16” Washer (2)
- 5/16” Lock Nut

## STRUT KIT CONTENTS




*Kit Contents:*

***1775Box1***
- Front Cross-member
- Rear Cross-member
- Sway Bar Drop Bracket (2)
- Dr Side Steering Stop
- Pass Side Steering Stop

***1775Box2 or 1773BOX1(2016):***
- Driver Side Knuckle
- Pass Side Knuckle

***1775Box5:***
- Rear Shock-660797 (2)
- Rear Shock Hardware 143200 (2)
- Rear 4” block (2)
- Rear U-bolts (4)

***1775Box4:***
- Driver Front Diff Bracket
- Driver Rear Diff Bracket
- Pass Diff Bracket
- Skid Plate
- Fr Crssmber Square Washer (4)
- Rr Crssmber Square Washer(4)
- Rear E-Brake Bracket (2)
- Rear ABS Bracket
- Front Brake Bracket (2)
- Front Bump-stop Bracket (4)

***23029***
- Lifted Struts (2)

*Kit Bag:*

*For Rear Cross-member*
- 18mm X 150mm Bolt (2)
- 18mm Lock Nut (2)
- Square Washers (4)

*For Front Cross-member*
- 7/8” x 5” Bolt (2)
- 7/8” Lock Nut (2)
- Square Washer (4)

*For Front Driver Diff Bracket (4WD)*
- Bushing (2)
- Sleeve
- 9/16” x 4” Bolt
- 9/16” Lock Nut
- 14mm x 60mm Bolt (3)

*For Driver Rear Diff Bracket (4WD)*
- Bushing (2)
- Sleeve
- 9/16” x 4” Bolt
- 9/16” Nut on Skid Plate
- 14mm x 25mm Bolt

*For Pass Side Diff Bracket (4WD)*
- Bushing (4)
- Sleeve (2)
- 9/16” x 4” Bolt (2)
- 9/16” Washer (1)
- 9/16” Nut on Skid Plate
- 9/16” Lock nut (1)

*For Front Bump-Stops*
- 10mm x 35mm Bolt (4)
- 10mm Washer (4)
- 10mm Lock Nut (4)

*For Front Sway Bar Bracket*
- 7/16” x 1 1/4” (4)
- 7/16” Washer (8)
- 7/16” Lock Nut (4)

*For Front Brake Line Brackets*
- 5/16” x 3/4” Bolt (2)
- 5/16” Washer (4)
- 5/16” Lock Nut (2)

*For Front Skid Plate*
- 3/8” x 1” Bolt (5)
- 3/8” x Washer (5)
- 3/8” Lock Nut (2)

*For Rear Shock Mount*
- *Retainer Washers (4)*
- *Stem Bushings (4)*
- *3/8” Nut (2)*
- *Shock Sleeve (2)*

*For Rear E-Brake Bracket*
- 5/16” x 3/4” Bolt (2)
- 5/16” Washer (4)
- 5/16” Lock Nut (2)

*For Rear Brake Line Bracket*
- 5/16” x 3/4” Bolt
- 5/16” Washer (2)
- 5/16” Lock Nut

For Rear ABS Wire Bracket
- 5/16” x 3/4” Bolt
- 5/16” Washer (2)
- 5/16” Lock Nut

## INSTALLATION INSTRUCTIONS

1. Park the vehicle on a level surface and chock the rear wheels.
2. Jack up the front of the vehicle and place jack stands under the frame rails. Lower the vehicle onto the jack stands letting the front suspension hang at full droop. Remove tires and wheels with a 21mm socket.
3. Take ABS wire loose from upper control arm using a 10mm wrench & ABS/ brake line on the knuckle using a 12mm wrench. Retain the stock hardware. **Photo 1 & 2.**

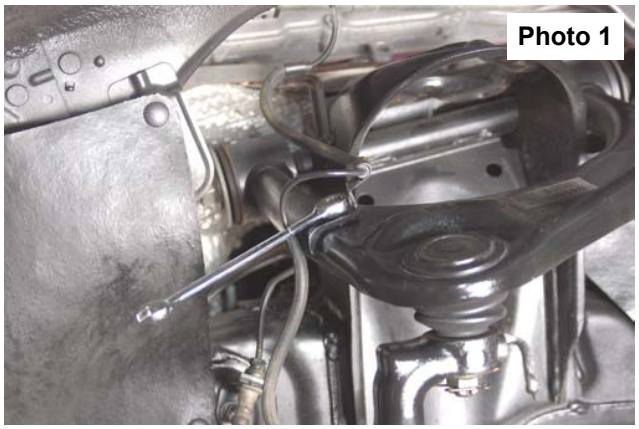

Photo 1


Photo 2

4. Remove the sensor as shown in **Photo 3** using a 5mm allen wrench.
5. Remove the ABS bracket from the knuckle and remove the wire from the bracket. Cut the bracket as shown to install on the new knuckle. Retain the stock hardware for reuse. **See Photo 4.**

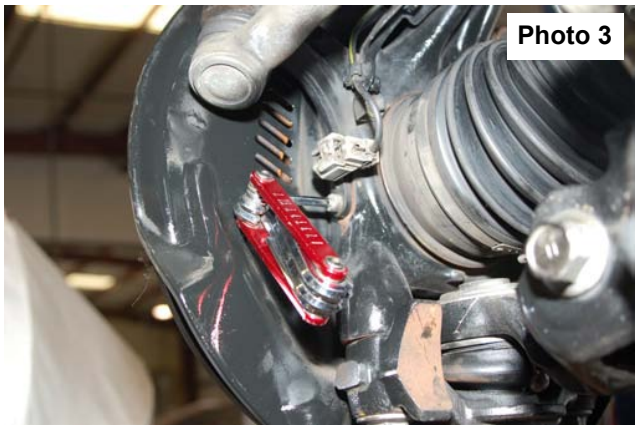

Photo 3


Photo 4

6. Using a 1 1/16 and a 1 3/16 wrench loosen the tie-rod end from inner tie-rod as shown in **Photo 5**. Remove cotter key from tie-rod end. Using a 24mm wrench remove nut as shown in **Photo 6**. Use a hammer to break loose tie-rod from knuckle.
7. Remove brake caliper using a 17mm wrench. Tie caliper out of way, but do not let the caliper hang by the brake line. Next remove the rotor and check for wear on brake pads and rotor. Any worn parts should be replaced before re-installed.

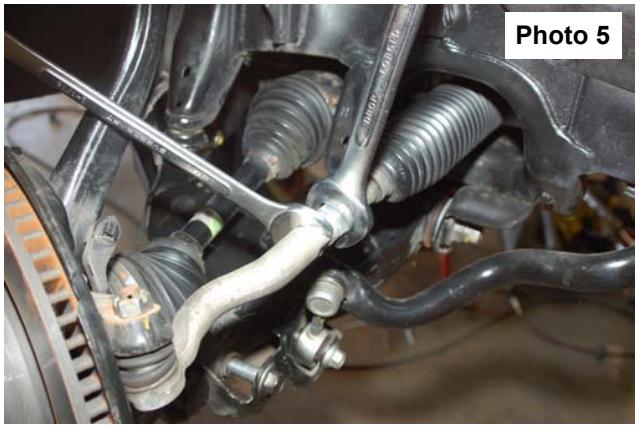

Photo 5


Photo 6

8. Remove the dust shield and remove cotter key from axle and remove axle nut using a 39mm socket (4WD Model) as shown in **Photo 7**.
9. Remove cotter key from upper ball joint. Using a 19mm wrench remove nut. Using a hammer as shown in **Photo 8,** loosen ball joint from knuckle. Support the lower arm with jack stand.


**Photo 7**


**Photo 8**

10. With a dead blow hammer loosen the axle from hub bearing. (4WD Model) Using a 22mm wrench remove the 2 lower ball joint bolts as shown in **Photo 9**. Remove knuckle from vehicle. Do not let axle hang down and tie up out of the way. (4WD Model)
11. Remove sway-bar bolt from lower control arm using a 19mm wrench as shown in **Photo 10**.

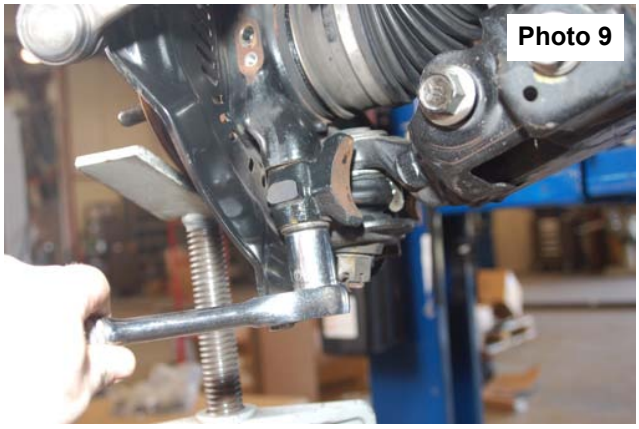

**Photo 9**

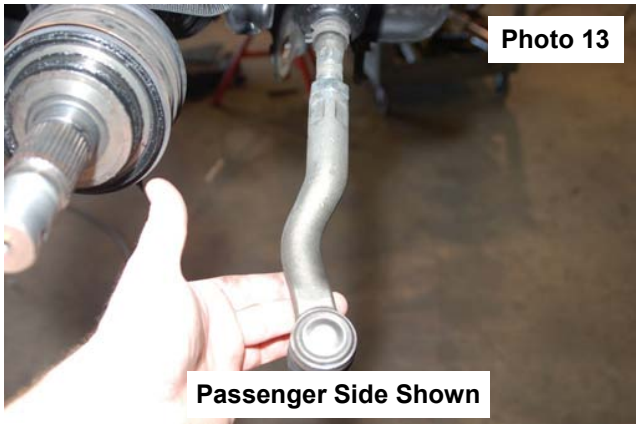

**Photo 10**

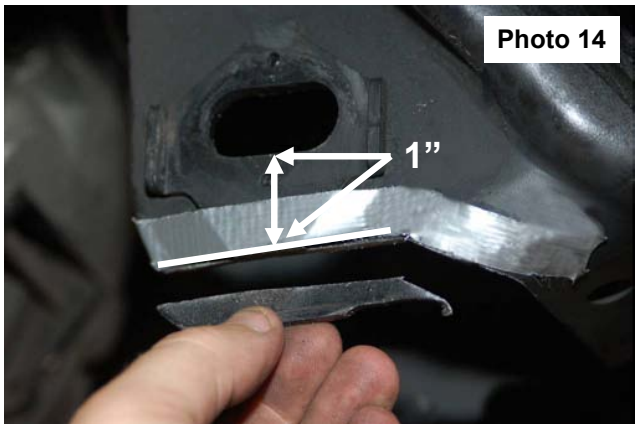
12. Remove lower strut bolt using 22mm wrench for both ends of bolt as shown in **Photo 11**. Use a 14mm wrench for nuts on top of strut. Remove strut from vehicle.
13. With a 24mm wrench loosen lower control arm bolts and remove control arm from vehicle.
14. Repeat steps 3-12 on opposite side of vehicle.
15. With a pipe wrench remove all 4 bump-stops. **See Photo 12**


**Photo 11**

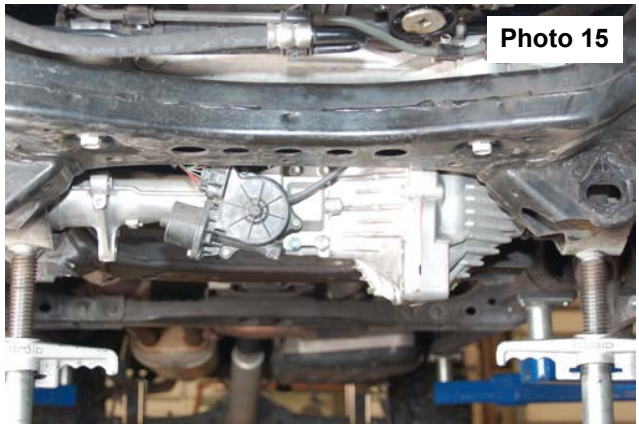

**Photo 12**

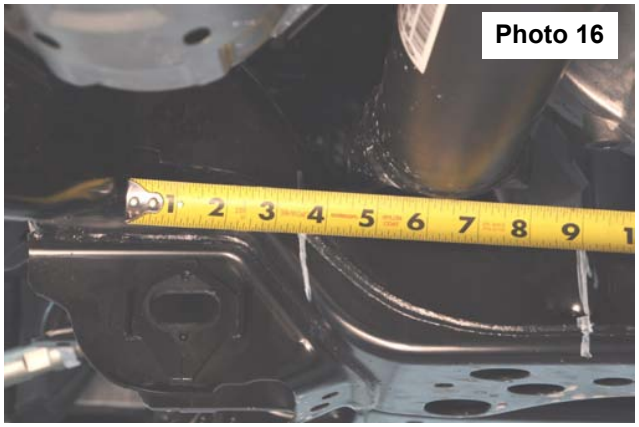
16. Remove sway-bar using a 17mm wrench.
17. Swap left and right outer tie-rod ends as shown in **Photo 13**. This is done for wheel clearance.
18. Trim the front and rear lower control arm pocket front side only **1 inch** from hole as shown in **Photo 14**.



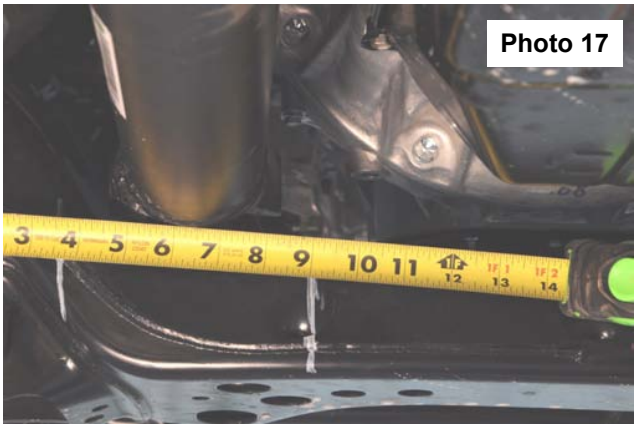



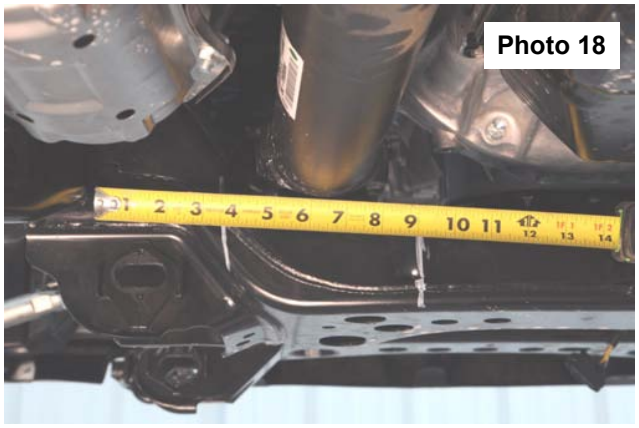

19. Support differential with jack stand and remove the 3 differential mounts using a 19mm wrench. There should be 10 bolts to remove. Remember too remove the nuts on top of frame from front diff mounts.(4WD Model)
20. Lower differential down being careful with vent hose and wiring. Let the diff rotate down slightly. (4WD Model) **See Photo 15**.
21. Measuring from the inside of the frame, measure 3.5” inches and mark the rear crossmember. **See Photo 16.**




22. Measure over 9” and mark the rear crossmember. **See Photos 17 & 18.**



23. On the front of the rear crossmember, measure from the outside of the cam tab 3.75” and mark the crossmember. **See Photo 19.**
24. Cut the rear crossmember and remove the cut portion from the vehicle? **See Photo 20.**

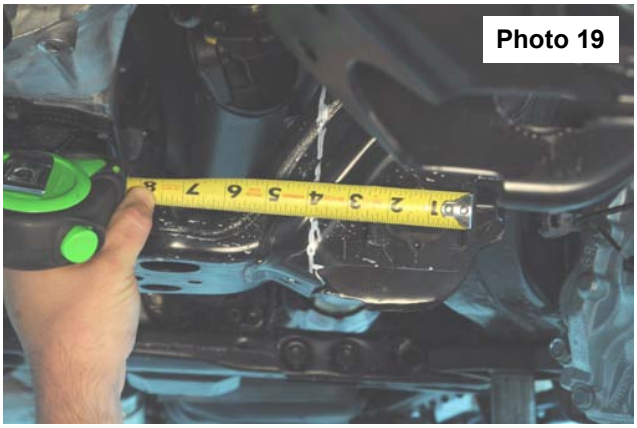

Photo 19


Photo 20

25. Grind or file the cut edges and paint to prevent rust. **See Photo 21.**
26. Install rear cross-member using supplied 18mm x 150mm bolts square washers (4) and nuts as shown in **Photo 16**. Do not tighten at this time. Please note, there is a front and rear cross-member square washer.
27. Install supplied bushings & sleeve into rear diff mount and using 22mm and 21mm wrench install on vehicle with 9/16 x 4” bolt Install the 14mm x 25mm bolt in the differential as shown in **Photo 22**. (4WD Model) **Do not install nuts on the 9/16” bolts, the nuts for this bolt are located on the skid plate.**


Photo 21


Photo 22

28. Install front cross-member using 7/8 x 5” bolts and square washers (4) in **Photo 23**. Please note, there is a front and rear cross-member square washer. Do not tighten at this time.
29. Install supplied bushings & sleeve into driver side diff mount and install on vehicle using 9/16 x 4” bolts & nut on the cross-member and three 14mm x 60mm long bolts on the differential drop bracket as shown in **Photo 24**. Tighten using a 19mm, 21mm and 22mm wrench. (4WD Model)

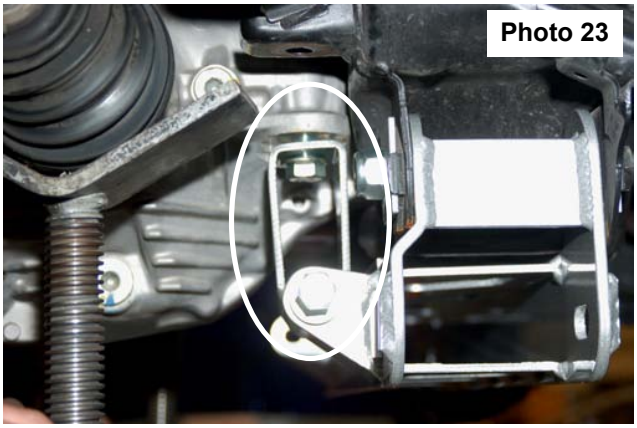
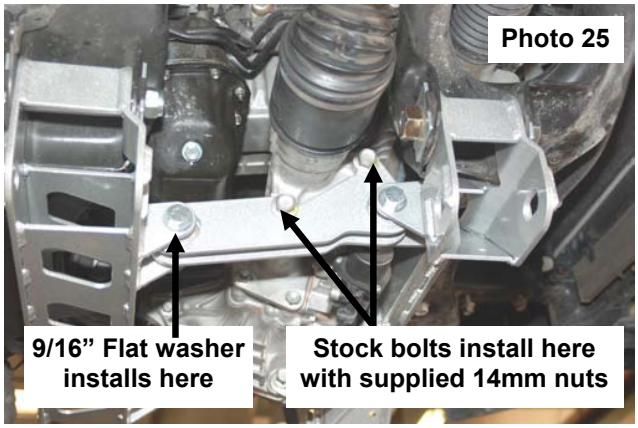
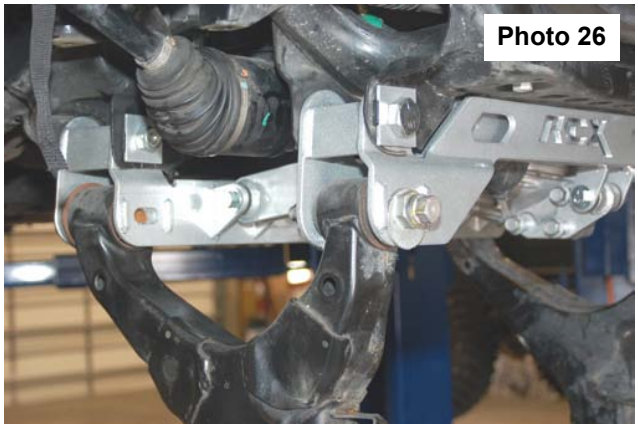

Photo 23



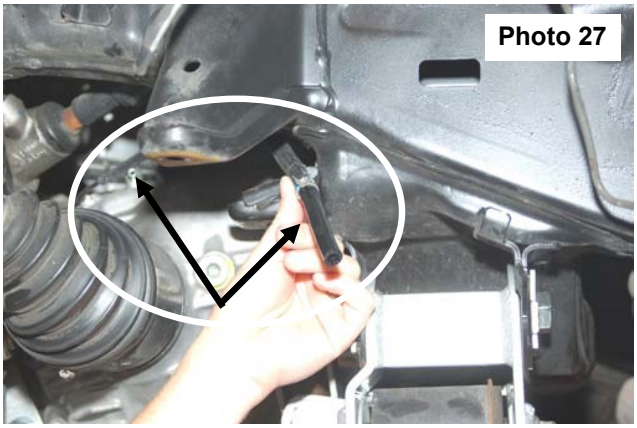
Photo 24

30. Install bushing into passenger side diff bracket. Using 2- 9/16 x 4” long bolts and nuts and 21 and 22mm wrench on vehicle. Use stock bolts for bracket to diff with supplied 14mm nuts. **See Photo 25.** Tighten using a 19mm wrench. (4WD Model)
31. Install lower control arms with stock hardware as shown in **Photo 26**.Do not tighten.
32. At this time tighten all cross-member bolts using 1- 5/16” wrench on front cross-member and 1 -1/16” on rear. Tighten all differential mounting bolts. (4WD Model) Rear diff bracket bolt are not tighten because the nuts are welded to the skid plate. Do not tighten lower control arm bolts at this time.



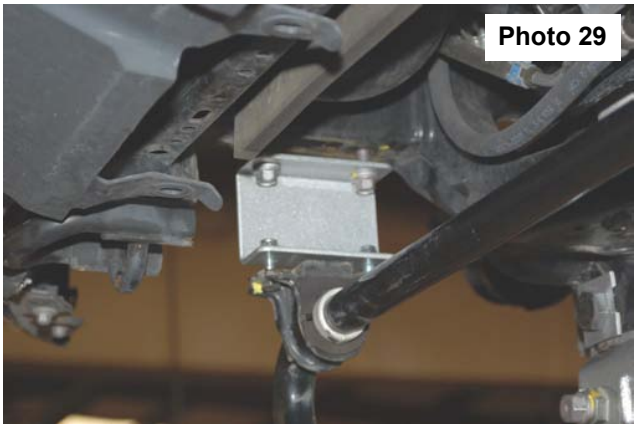

33. Assemble supplied 1/4” coupler and hose and install new vent tube ext to differential as shown in **Photo 27**. (4WD Model)
34. Install bump-stop to bump-stop ext. using 10mm x 1.25 nuts & washers and thread into factory location with 10mm x1.25 bolts & washers. **See Photo 28**. Tighten hardware using a 17mm wrench.3







35. Install sway-bar drop brackets using factory hardware at top with a 17 mm wrench. Install sway bar to drop brackets using supplied 7/16 X 1.25 bolts nuts and washers using a 5/8 wrench as shown in **Photo 29**. Attach sway bar links to lower control arms with factory hardware using a 19mm wrench as shown in **Photo 30**.







**⚠NOTICE** If you purchased a kit with replacement lifted struts, refer to 922300000 instructions included in 23029 box and skip to step 42. **You will use factory hardware on the top of strut when installing in the vehicle.**

36. Disassemble the factory strut assembly with a strut compressor using a 17mm wrench and remove the strut cylinder as shown in **Photo 31**.
37. Install the strut preload spacer on the strut as shown with the stock hat on top, spacer and stock isolator as shown in **Photo 32**.



**Photo 31**


**Photo 32**

38. Re-assmble the strut with the factory hardware. Tighten hardware using a 17mm wrench.
39. Install the strut spacer on the strut with the factory hardware. Tighten using a 14mm wrench. **See Photo 33.**
40. Install the 10mm studs into strut ext. using a 10mm nut and a 17mm socket torque the stud to 35-45 ft/lbs as shown in **Photo 33**.
41. Install strut onto vehicle using factory hardware for bottom and supplied 10mm lock washers, flat washers & 10mm nuts for top. Tighten using a 22mm wrench & 17 mm wrench to tighten. **Photo 34** shows the top of the strut.

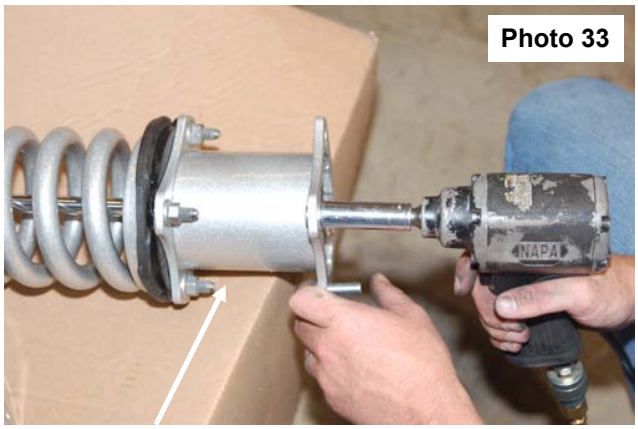
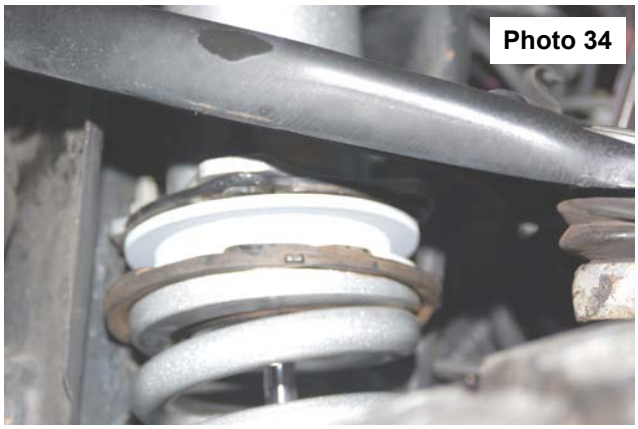


**Photo 33**


**Photo 34**

42. Remove hub bearing from stock knuckle using a 17mm wrench as shown in **Photo 35**. Remove seal and install seal into knuckle.
43. Install bearing assemble into new knuckle  Take care not to damage seals. **See Photo 36. Tighten using a 17mm wrench.**

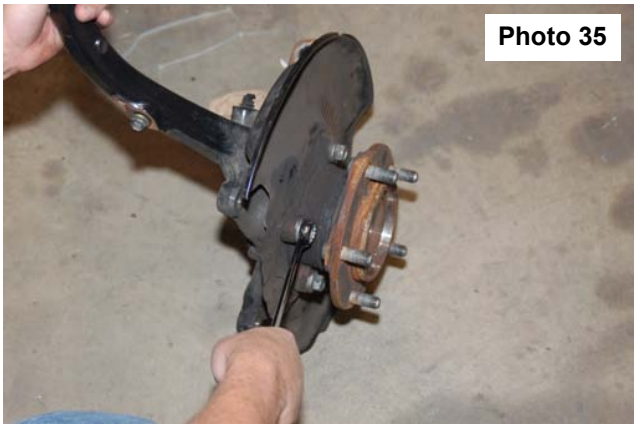
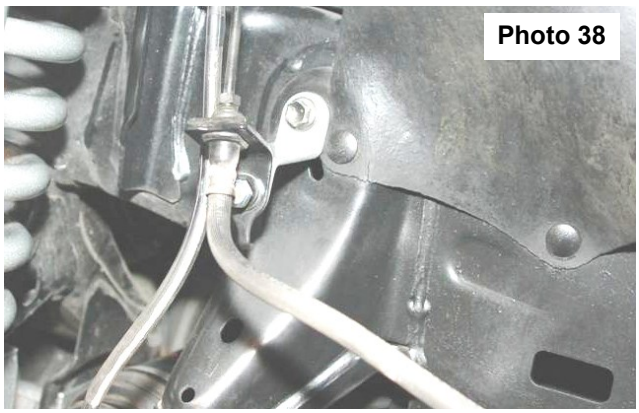

**Photo 35**


**Photo 36**

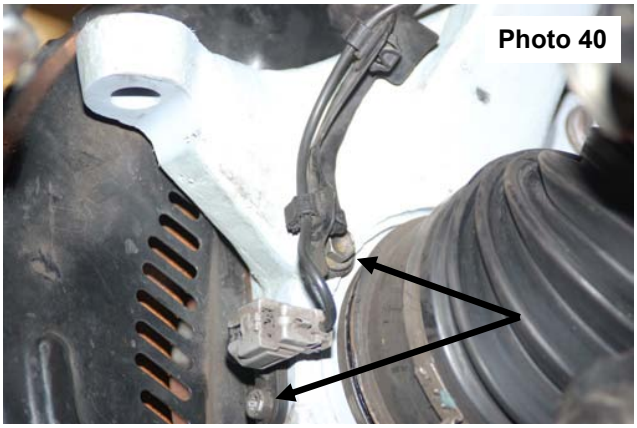
44. Install knuckle onto vehicle with factory hardware. Tighten upper ball joint using 19mm
45. Install the supplied steering stop on the lower ball joint front bolt hole and tighten with a 22mm wrench. **See Photo 37.** Tighten the axle nut with 39mm socket or equilavent. Make sure the cotter key is installed on the axle nut.
46. Install new brake line drop brackets on the frame as shown in **Photo 38** using stock bolts. Secure the brake line to the new bracket using the supplied 5/16 x 3/4" bolts, washers & nuts. Tighten using a 12mm and a 13mm wrench.



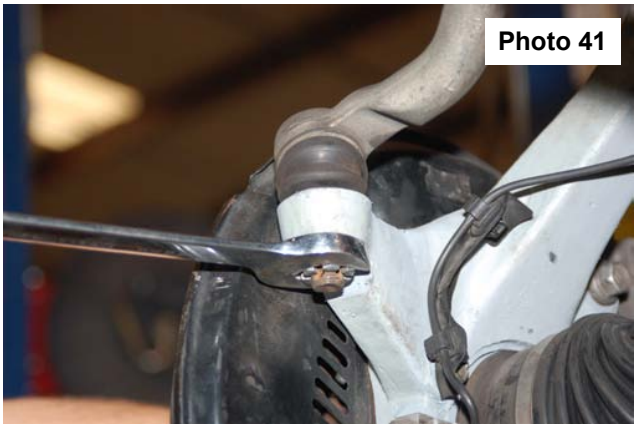




47. Install rotor and brake caliper using a 17mm wrench.
48. Install the stock brake line bracket onto the knuckle as shown in **Photo 39** using the stock hardware. Tighten using 12mm wrench.
49. Install the ABS sensor into the knuckle using a 5mm allen wrench and install the factory bracket back onto the upper a-arm using a 10mm wrench and stock bolt . **It may be necessary to slightly pull the ABS wire to create slack . WD-40 can be used to lub the line to allowit to slide in the upper control arm mount**. Reinstall the ABS bracket on the knuckle as shown using the stock hardware. Tighten using a 12mm wrench. **See Photo 40.**



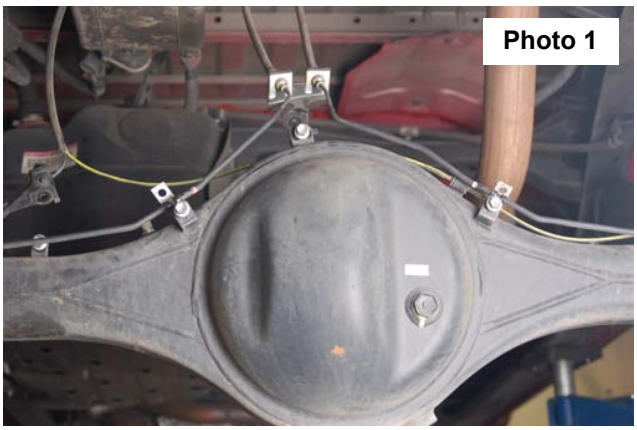

50. Install the tie-rod end into the knuckle using a 24mm wrench to tighten in **Photo 41**. Make sure the cotter key is installed. Tighten the jam nut on the tie-rod end using a 1 1/16" and a 1 3/16" wrench.
51. Install skid plate as shown in **Photo 42** using the supplied 3/8" x 1" bolts and hardware. Using a 9/16" wrench for the bolts that secure the skid plate.
52. Install the wheels and tires. Jack up the front of the vehicle and remove the jack stands. Lower the vehicle to the ground and tighten lower control arm bolts using a 21mm wrench.






## REAR INSTALLATION INSTRUCTIONS

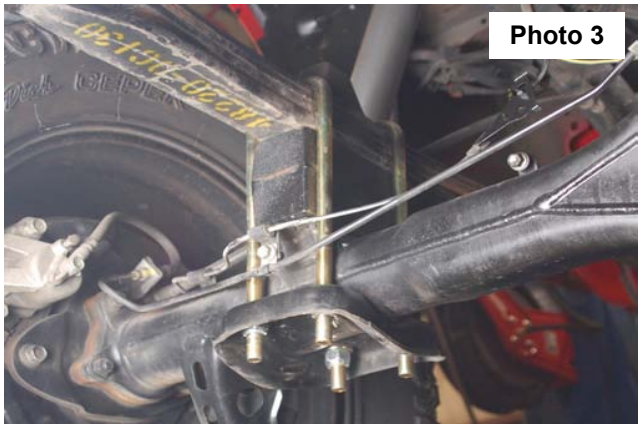
1. Chock the front tires. Jack up the rear of the vehicle and place jack stands under the frame rails, remember to raise the rear high enough so the axle can be lowered to install the blocks. Lower the jack and let the vehicle rest on the jack stand, keep the jack under the axle this will be used to move the axle up and down during installation.
2. Remove the bolts from the 4 factory brake line and ABS wire brackets. Also remove the emergency brake cable bolts from brackets. Use 12mm wrench to remove bolts. **See Photo 1.**
3. Remove shocks using a 17mm for both top and bottom bolts. **See Photo 2.**

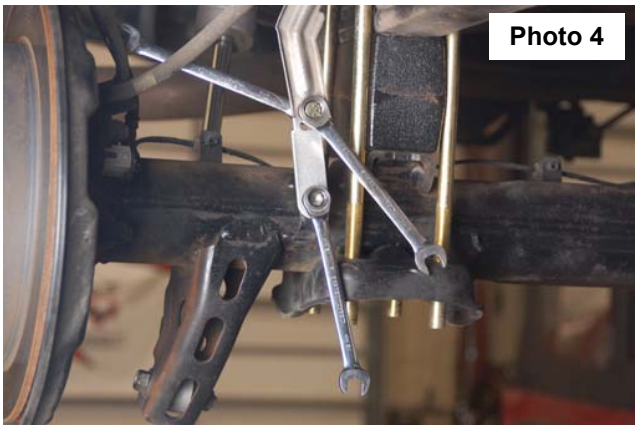




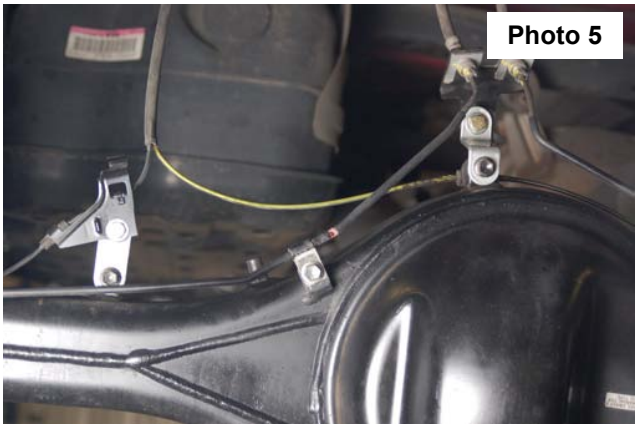


4. Using a 19mm socket remove the factory U-bolts and lower the axle with the jack. Be careful not to over extend the brake lines or ABS wires. Install lift blocks and new U-bolts. **See Photo 3**. Tighten with a 22mm socket.
5. Install rear shock **Part # 660797 with supplied 143200 hardware** in the stock location. Tighten stem end with a 17mm socket and the body end with a 17mm socket and wrench.
6. Install new brake line brackets in **Photo 4** using stock and supplied 5/16 x 3/4” bolts. Tighten using 12mm wrench and 13mm wrench to tighten.




7. Install new emergency brake cable brackets on the driver and passenger side as shown in **Photo 5** using stock hardware to secure the new bracket to the stock location. Secure the new bracket to the stock brake bracket using 5/16 x 1” bolts . Tighten using a 12mm wrench and 13mm wench to tighten.
8. Install tires and wheels.
9. Jack up the rear of the vehicle and remove the jack stand.
10. Lower the vehicle to the ground and check to make sure that all ABS and brake lines are clear from any moving parts.



## POST INSTALLATION INSTRUCTIONS

1. Check and recheck all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check clearance between upper control arm and sidewall of tire for proper clearance. Check steering for interference and proper working order. Test brake system.
2. Perform steering sweep. Cycle the steering from full turn to full turn to check for clearance. Failure to perform inspections may result in component failure.
3. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.
4. Adjust headlights to proper settings given increased vehicle height.
5. An alignment will need to be performed on this vehicle to set proper alignment.

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