TRAIL FORTRESS

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Rough Country 30830 Installation Instructions

6-Inch Lift Kit with N3 Shocks for Ram 1500 2WD (2009-2024)

Part number: 30830

trailfortress.com/rough-country-6-inch-lift-kit-30830

Scan for fitment, price and install help

ROUGH COUNTRY
SUSPENSION SYSTEMS®

RAM 2009-18 2wd 1500 6” Lift 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 list. Be sure you have all needed parts and know where they go. Also please review tools needed list and make sure you have the tools needed to install the kit.

⚠WARNING 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. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

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 use of our products.

This 6” suspension system was developed using a 37 X 12.5 tire with aftermarket wheels. 20” wheels with 5 1/2” backspace. **This kit will not work with a wheel smaller than 20”.** As with any tire and wheel combination it is recommended to trial fit the tire / wheel to assure there are no clearance problems.

⚠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 instructions on to the vehicle owner for review. These instructions should be kept in the vehicle for its service life.

Tools Needed:

- WD-40
- Loc-Tite
- Reciprocating Saw
- Hammer
- Dead Blow Hammer
- T30 Torx head bit
- 5mm Allen Wrench
- 8mm Socket / Wrench
- 10mm Socket / Wrench
- 13mm Socket / Wrench
- 14mm Socket / Wrench
- 15mm Socket / Wrench
- 16mm Socket / Wrench
- 17mm Socket / Wrench
- 18mm Socket / Wrench
- 19mm Socket / Wrench
- 21mm Socket / Wrench
- 22mm Socket / Wrench
- 24mm Socket / Wrench
- Long Pry Bar
- Jack

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
6MM	5 ft/lbs	9 ft/lbs
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

KIT CONTENTS

30830993 ***Containing:***
- *1-Dr Fr Brake Brkt*
- *1-Pass Fr Brake Brkt*
- *2-Rr Brake Brkt*
- *2-Rr Bumpstop Brkt*
- *2-Rr Shock Flagnut*
- *2-Rr Coil Spacers*
- *2-Rr Coil Retainers*
- *1-30830993BAG1*
- *1-308INSTBAG1*
- *2-143201 (Frt Shock Bags)*
- *2-Front Shocks*
- *2-Rr Shocks*
- *2-Rr Sway Bar Links*
- *1-Rr Track Bar Bracket*
- *1-1329Bag7*
- *2-Rr UCA Brackets*
- *1-33430BAG6*

1322Box1 ***Containing:***
- *1-Dr Knuckle*
- *1-Pass Knuckle*

9232 ***Containing:***
- *2-Coil Springs*

1329Bag7 *Containing*

For Rear Coil Spacers:
- *2-3/8" x 5" Bolts*

30830993BAG1 *Containing:*

For Front Brake Lines Brackets:
- *2-5/16" x 3/4" Bolts*
- *2-5/16" Flange Lock Nuts*
- *2-5/16" Flat Washers*
- *2-3/8" x 1" Bolt*
- *2-3/8" Flange Lock Nuts*
- *2-3/8" Flat Washers*

For Rear Bump Stops:
- *2-3/8" x 1.25" Bolts*
- *2-3/8" Flange Lock Nuts*
- *2-3/8" Flat Washers*

For Rear Sway Bar Links:
- *4-12mm x 65mm Bolts*
- *4-12mm Lock Nuts*
- *8-Flat Washers*

For Rear Brake Line Bracket:
- *2-5/16" x 3/4" Bolt*
- *2-5/16" Flange Lock Nuts*
- *2-5/16" Flat Washers*

For Rear Vent Hose:
- *1-Cable Tie*

For Rear Shock Absorbers:
- *2-Washers*

For Rear Track Rod Bracket:
- *1-Rear Track Bar Sleeve*
- *1-14mm x 80mm Bolt*
- *1-14mm Lock Nut*
- *2-Flat Washers*
- *3-3/8" X 1 1/4" Bolts*
- *3-3/8" Flange Lock Nuts*
- *3-3/8" Flat Washers*

33430BAG6
- *2-Fr Brake Line Brackets*
- *2-UCA Bracket Sleeves*
- *1-Track Bar Bracket Flag Nut*
- *1-Dr Rr Brake Line Bracket*
- *1-Pass Rr Brake Line Bracket*

For Rear Control Arm Brackets:
- *2-5/8" x 4.5" Bolts*
- *2-5/8" Lock Nuts*
- *4-5/8" Flat Washers*
- *8-3/8" x 1.25" Bolts*
- *16-3/8" Flat Washers*
- *8-3/8" Lock Nuts*

For Rear Brake Line Brackets:
- *2-5/16" x 3/4" Bolts*
- *2-5/16" Flange Lock Nuts*

For Rear Sway Links:
- *2-12mm x 65mm Bolts*
- *2-12mm Flange Lock Nuts*
- *2-Flat Washers*

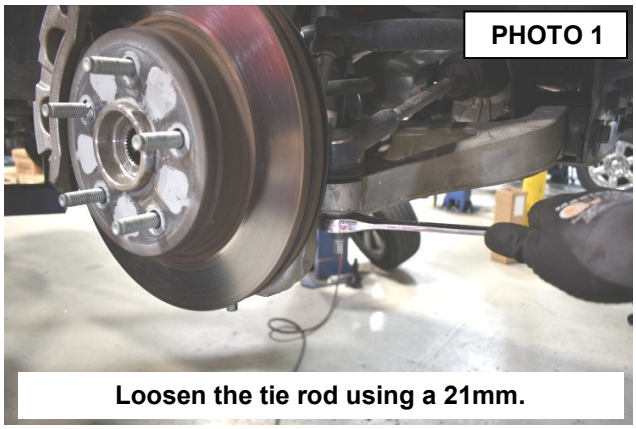
KIT CONTENTS



Thank You for choosing Rough Country for your off road needs!!!

INSTALLATION INSTRUCTIONS

1. Chock rear wheels of the vehicle and raise the front of the vehicle using a floor jack.
2. Support the vehicle with jack stands.
3. Remove wheel using 22mm socket.
4. Remove tie-rod end nut using 21mm as shown in **Photo 1**.
5. Strike with hammer to remove the tie rod from the knuckle. **See Photo 2.**

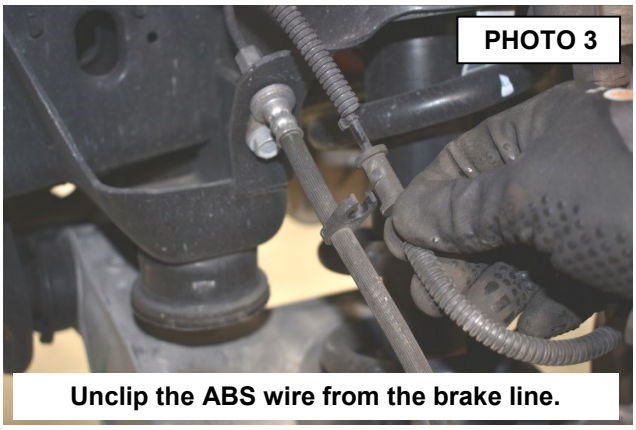


Loosen the tie rod using a 21mm.

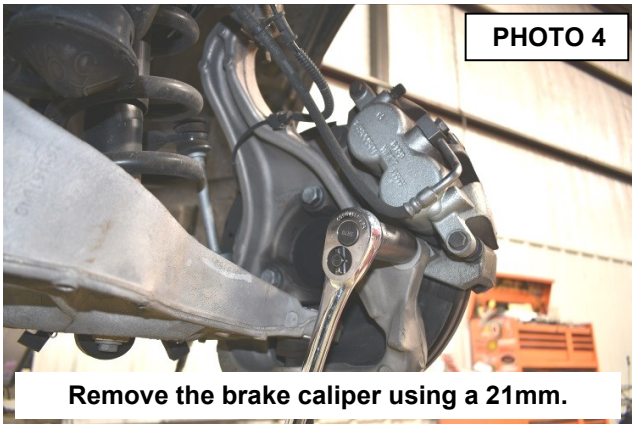


Remove tie rod from knuckle.

6. Unclip the ABS wire from the brake line. **See Photo 3.**
7. Using a 21mm socket, remove the brake caliper. Retain factory hardware. Hang the caliper out of the way. **Do not hang by the brake line. See Photo 4.**

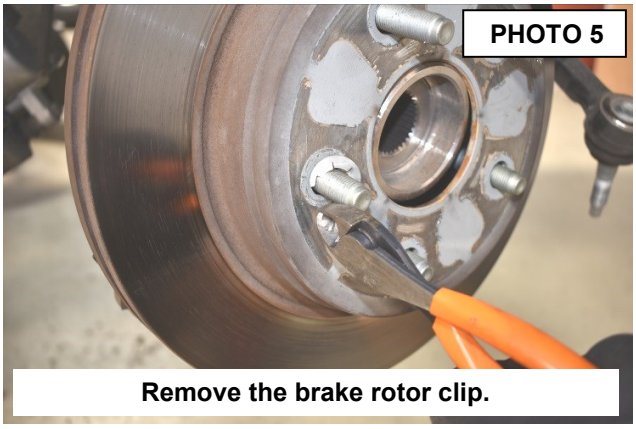


Unclip the ABS wire from the brake line.

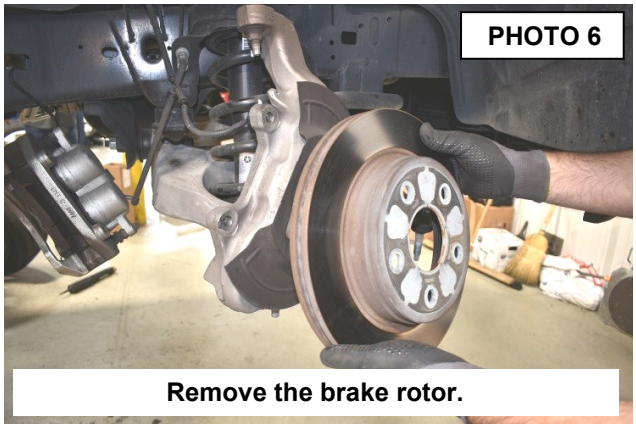


Remove the brake caliper using a 21mm.

8. Remove the brake rotor clip and discard. **See Photo 5.**
9. Remove the brake rotor. **See Photo 6.**

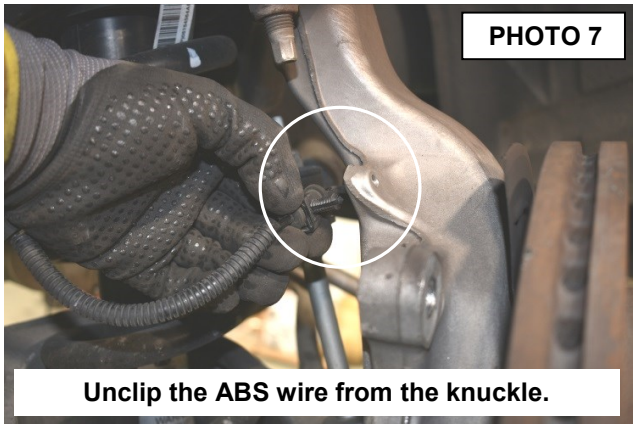


Remove the brake rotor clip.

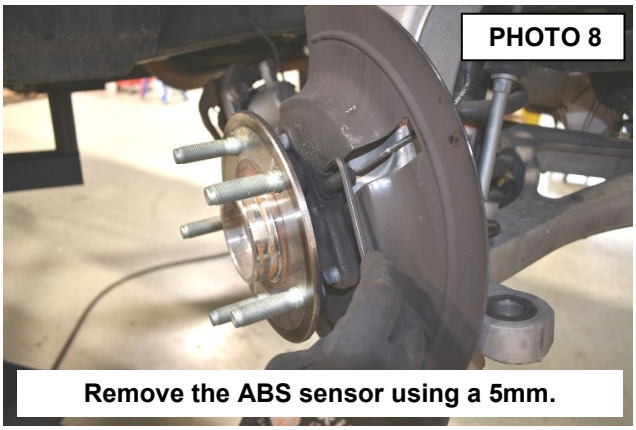


Remove the brake rotor.

10. Unclip the ABS wire from the backside of the knuckle. **See Photo 7.**
11. Using a 5mm Allen, remove the ABS wire and place out of the way. **See Photo 8.**

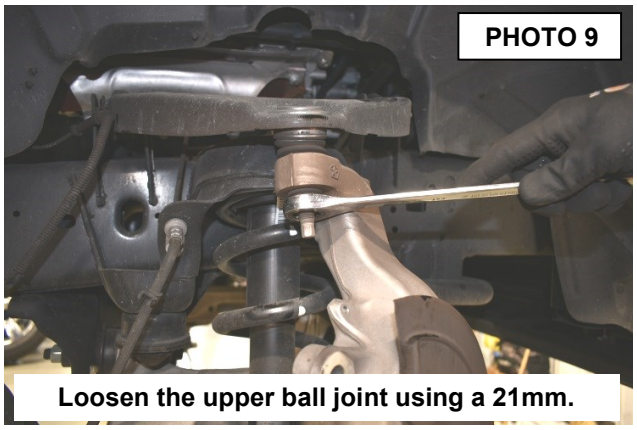


Unclip the ABS wire from the knuckle.

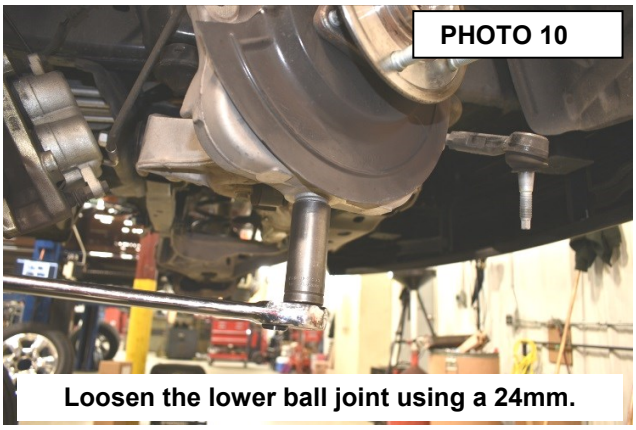


Remove the ABS sensor using a 5mm.

12. Using a 21mm wrench, loosen the upper ball joint nut. Do not fully remove the nut from the ball joint. **See Photo 9.**
13. Using a 24mm socket, loosen the lower ball joint nut. Do not fully remove the nut from the ball joint. **See Photo 10.**



Loosen the upper ball joint using a 21mm.



Loosen the lower ball joint using a 24mm.

14. Strike the knuckle with a hammer to release the taper of the ball joint. **See Photo 11.**
15. Strike the knuckle with a hammer to release the taper of the ball joint. **See Photo 12.**



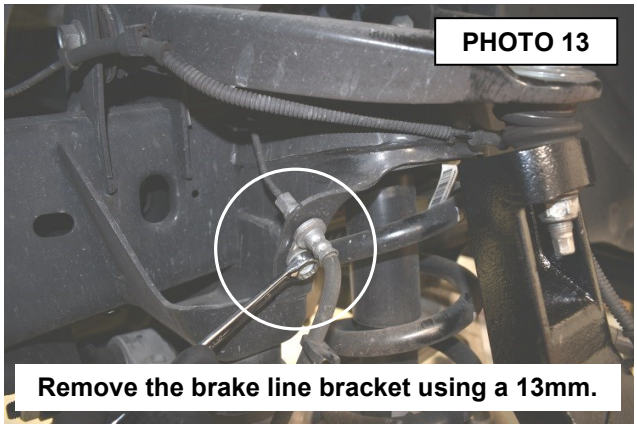
Strike the knuckle to release the taper.



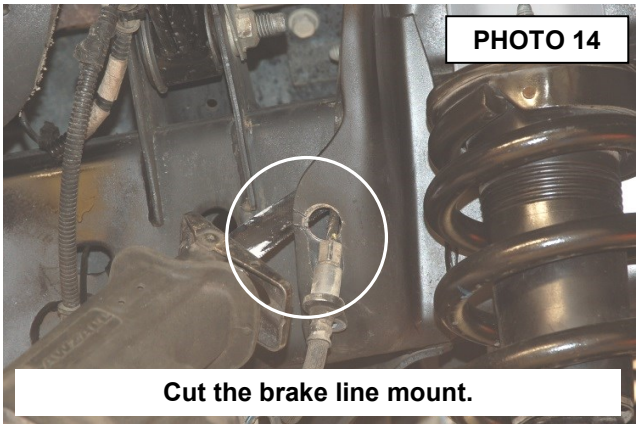
Strike the knuckle to release the taper.

16. Remove the knuckle and retain the stock hardware.

17. Using a 13mm socket, remove the brake line bracket from the frame. **See Photo 13.**
18. Using a reciprocating saw, carefully cut the brake line mount. **See Photo 14.**



Remove the brake line bracket using a 13mm.

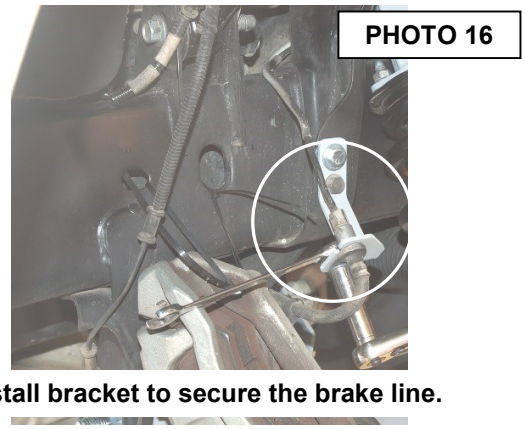


Cut the brake line mount.

19. Remove the hard line from the frame and straighten the bends taking care to not kink the line. **See Photo 15.**
20. Attach the brake line to the supplied relocation bracket using the supplied 5/16” x 3/4” bolts, washers, and nuts Attach the bracket to the frame using the stock bolt in the lower hole and the supplied 3/8” x 1” bolt, washer and nut in the lower hole. Tighten using a 13mm on the stock bolt, 1/2” wrenches on the 5/16” bolt and 9/16” wrenches on the 3/8” bolt. **See Photo 16.**

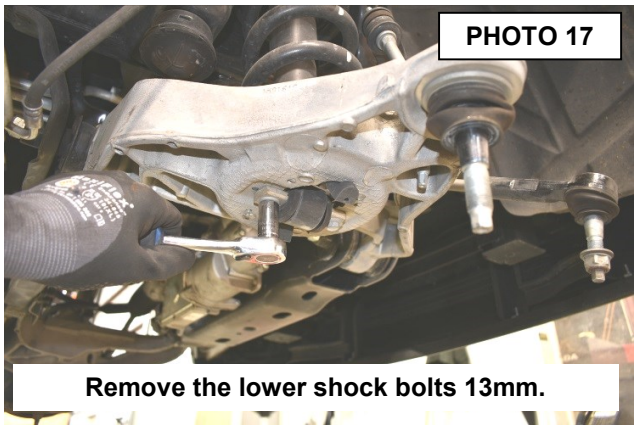


Install the line on the new bracket.

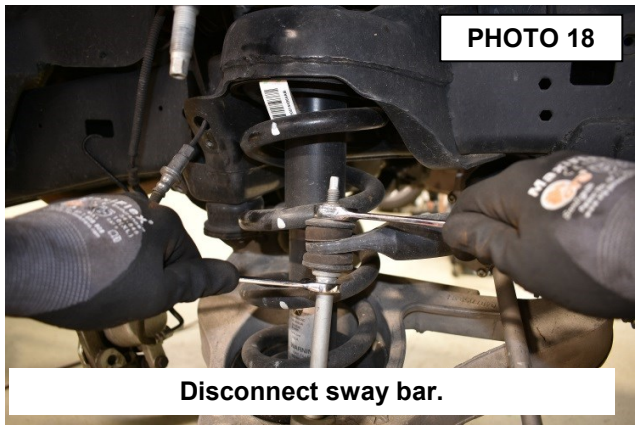


Install bracket to secure the brake line.

21. Using a 13mm socket, remove the lower shock bolts and retain for reuse. **See Photo 17.**
22. Using a 16mm wrench on the nut and 15mm wrench on the link to remove the upper sway bar nut. **See Photo 18.**

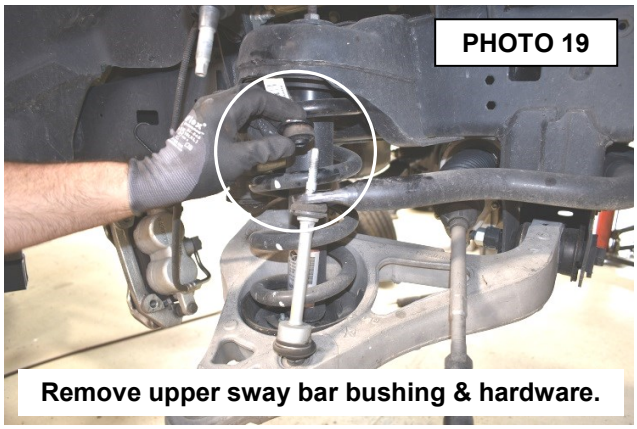


Remove the lower shock bolts 13mm.

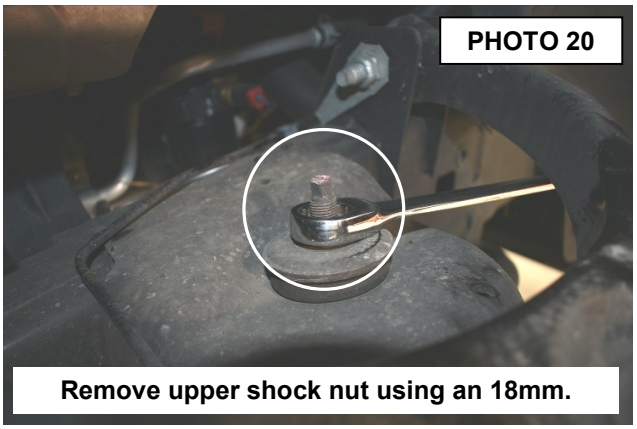


Disconnect sway bar.

23. Remove the upper sway bar bushing and washer, retain for reuse. **See Photo 19.**
24. **⚠WARNING Support the lower control arm with a jack, it will be under pressure from the coil spring.**
25. Using an 18mm wrench, remover the upper shock nut, washer, and bushing. **See Photo 20.**

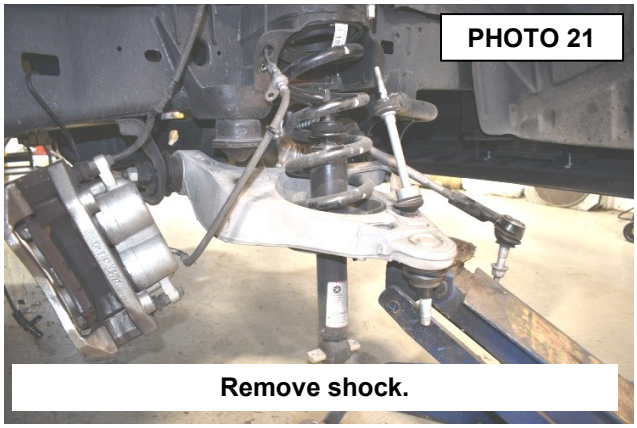


Remove upper sway bar bushing & hardware.

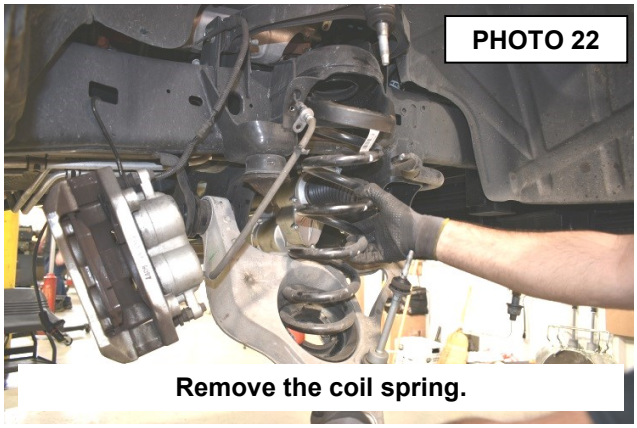


Remove upper shock nut using an 18mm.

26. Remove the shock by pulling it out of the lower control arm. **See Photo 21.**
27. Carefully, lower the jack and remove the coil spring and spring isolator. **See Photo 22.**

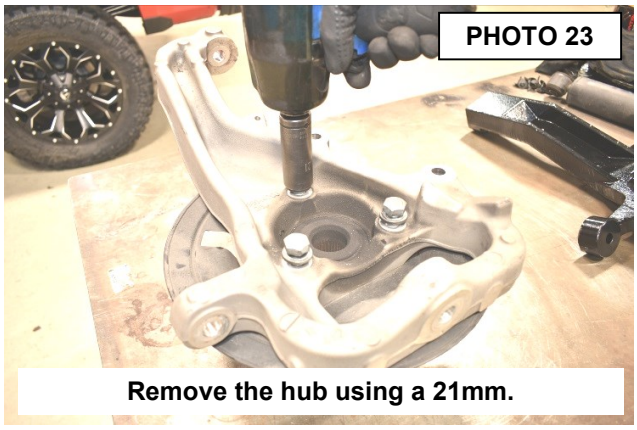


Remove shock.

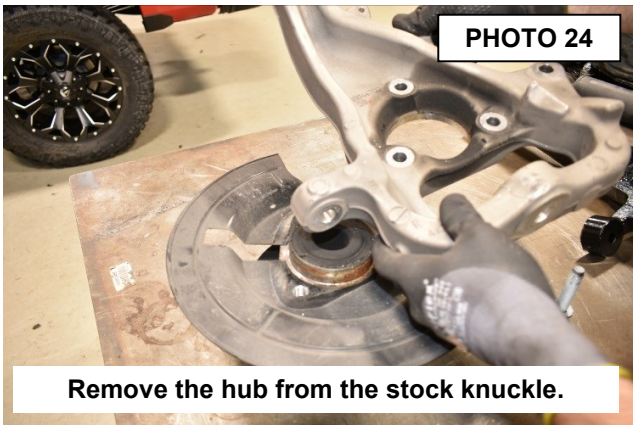


Remove the coil spring.

28. Using a 21mm socket, remove the hub bolts from the back of the knuckle. Retain the stock hardware . **See Photo 23.**
29. Remove the knuckle from the hub. **See Photo 24.**

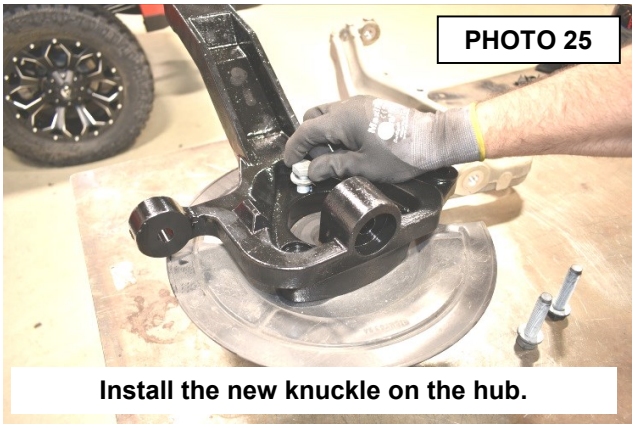


Remove the hub using a 21mm.

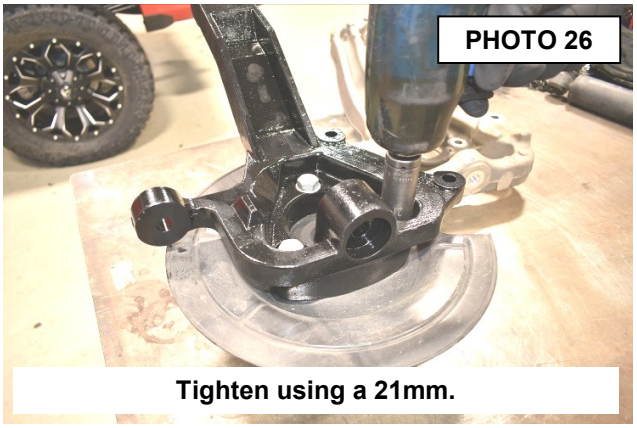


Remove the hub from the stock knuckle.

30 Place the new lifted knuckle on the hub and install the factory hardware. **See Photo 25.**
31 Using a 21mm socket, torque the bolts to the factory spec. **See Photo 26.**



Install the new knuckle on the hub.



Tighten using a 21mm.

32 Remove the coil spring isolator from the factory coil. **See Photo 27**.
33 Place the coil spring isolator on the top of the supplied lifted coil. **See Photo 28**.

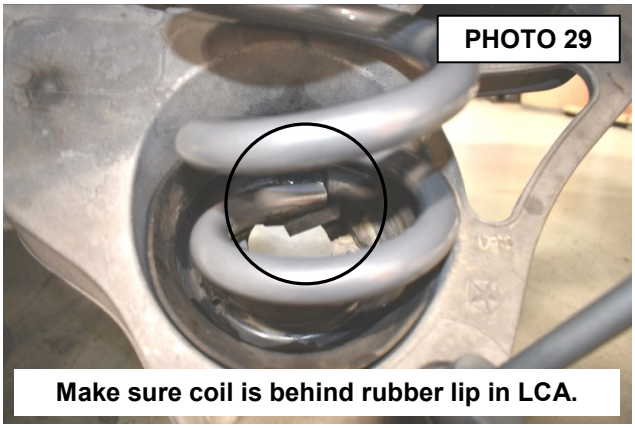


Remove the coil isolator.

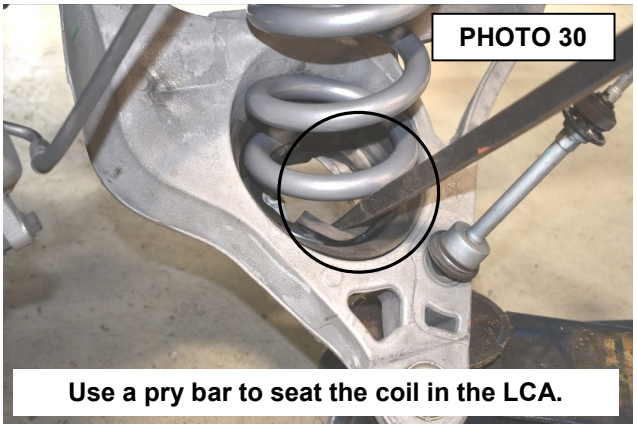


Place coil isolator on top of new coil spring.

34 Install the coil into the upper coil bucket and into the lower control arm, making sure the end of the coil is behind the rubber lip on the lower control arm. It may be necessary to mark and loosen the lower cam bolts to seat the coil. **See Photo 29.**
35 Using a long pry bar, keep the coil seated in the lower control arm while lifting the lower control arm with a jack. **See Photo 30.**

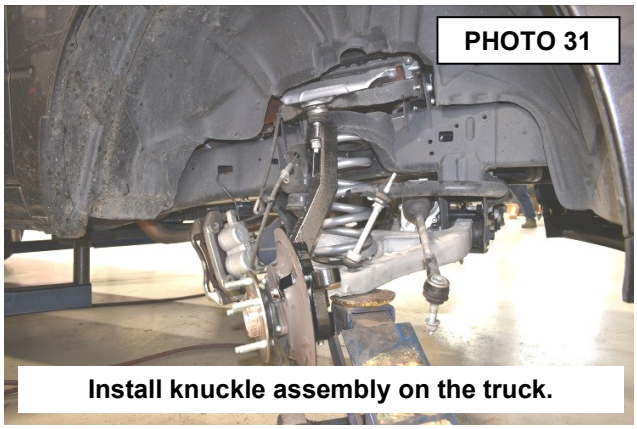


Make sure coil is behind rubber lip in LCA.

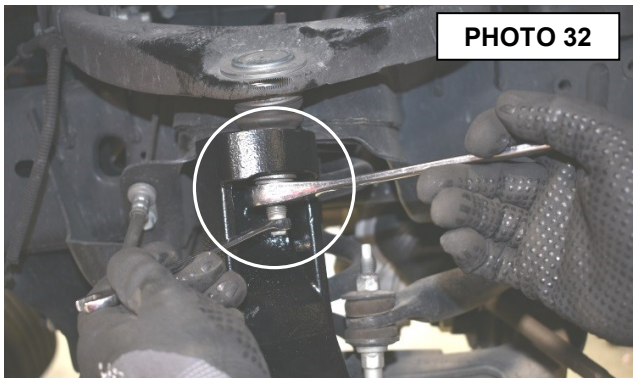


Use a pry bar to seat the coil in the LCA.

36. Install the knuckle assembly on the upper and lower ball joints. **See Photo 31.**
37. Tighten the upper ball joint using a 21mm wrench on the nut and a 10mm wrench to keep the ball joint from spinning. **See Photo 32.**

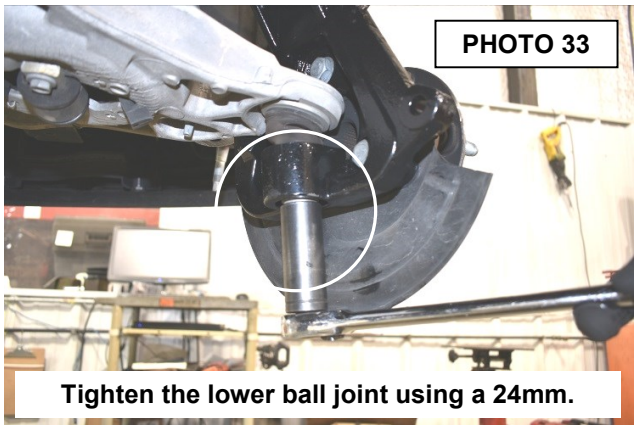


Install knuckle assembly on the truck.

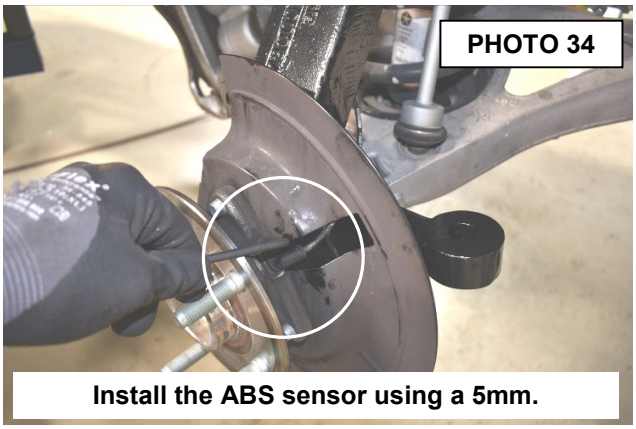


Tighten the upper ball joint using a 21mm & 10mm.

38. Tighten the lower ball joint using a 24mm socket. **See Photo 33**.
39. Place a supplied cup washer (cup upward) then bushing onto the supplied 660810 shock upper stud. Use supplied 143201 bag.
40. Install the supplied 660810 shock up through the bottom of the lower control arm while aligning the upper stud in the upper mounting hole.
41. Place a supplied bushing then cup washer (cup down) on the upper stud. Install supplied nut and tighten using an 18mm wrench until the bushings start to bulge under the washers.
42. Attach the lower shock mount to the lower control arm using the supplied 8mm bolts and nuts in the 1043201 bag. Torque to 18ft-lbs using a 13mm wrench and socket.
43. Install the ABS wire using the factory hardware and tighten using a 5mm Allen. **See Photo 34.**

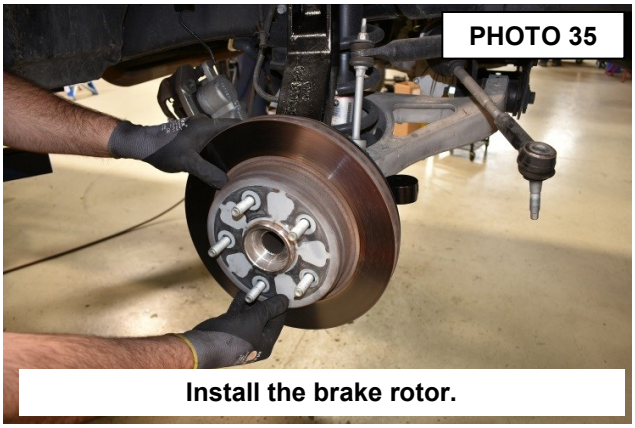


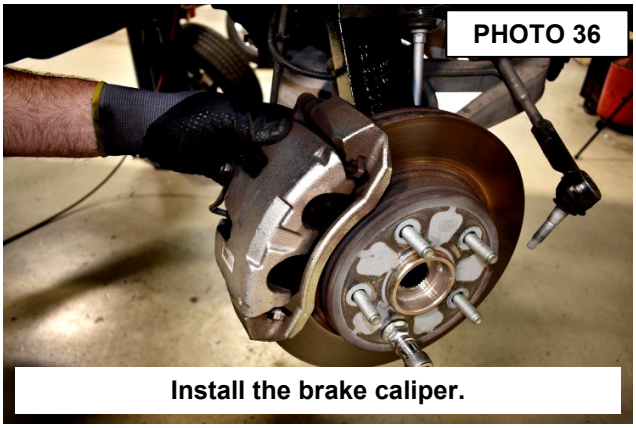
Tighten the lower ball joint using a 24mm.



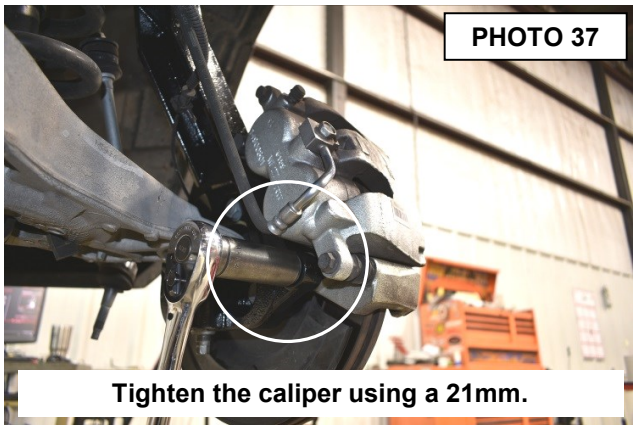
Install the ABS sensor using a 5mm.

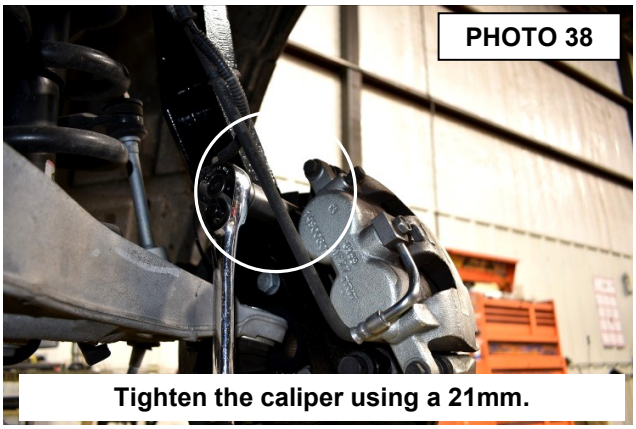
44. Install the brake rotor. **See Photo 35.**
45. Install the brake caliper. **See Photo 36.**



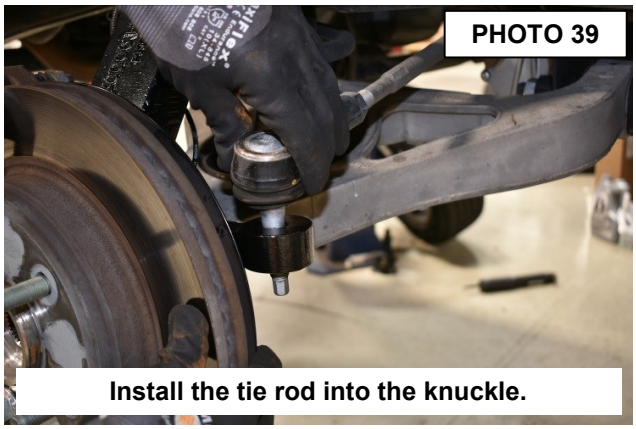


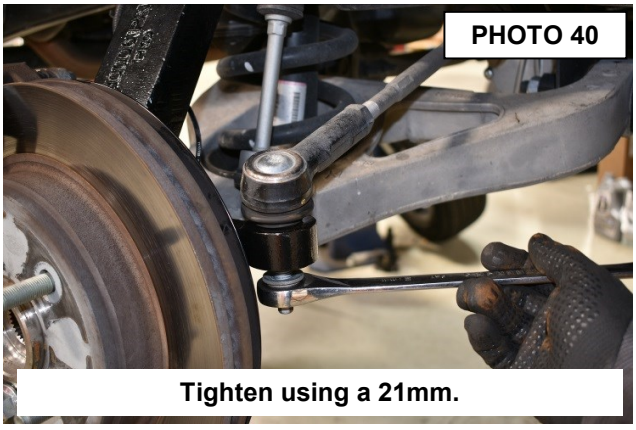
46. Torque the brake caliper bolts to factory specs using a 21mm socket. **See Photos 37 & 38**.





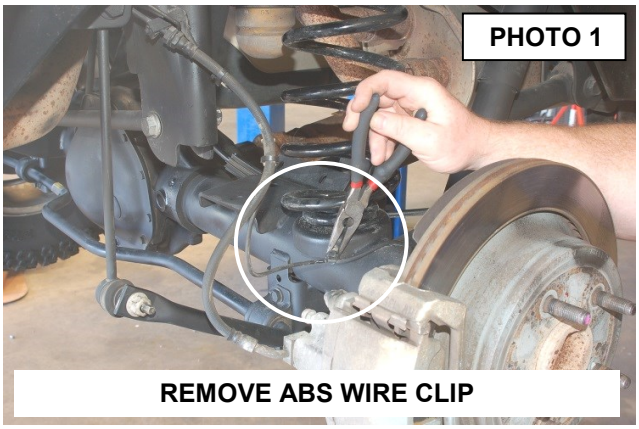
47. Install the tie rod end into the knuckle. **See Photo 39.**
48. Torque to factory specs using a 21mm. **See Photo 40.**

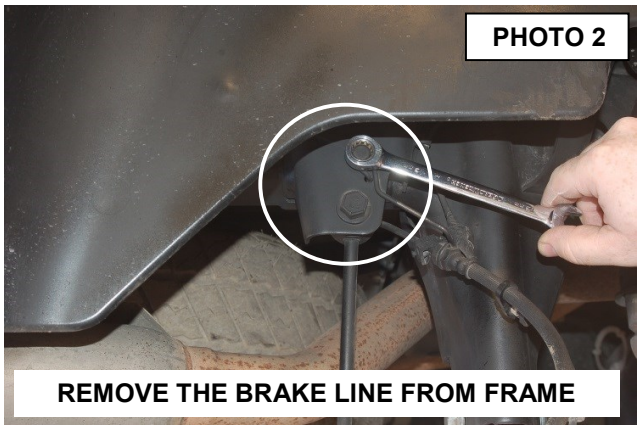




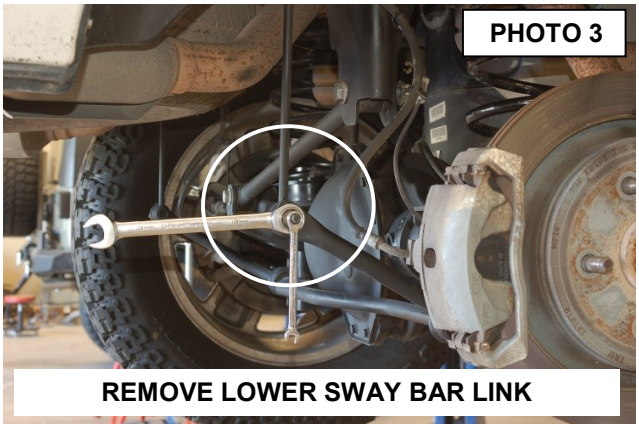
REAR INSTALLATION INSTRUCTIONS

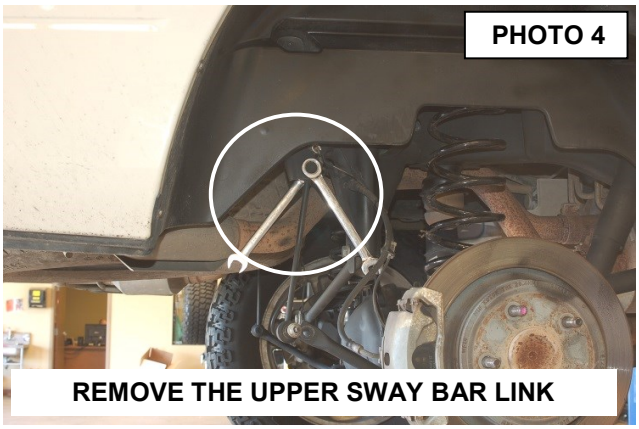
1. Chock the front tires. Raise rear of the vehicle with floor jack.
2. Support the rear with jack stands
3. Remove wheels using a 22mm socket.
4. Remove ABS clip from axle. **See Photo 1**.
5. Remove the brake line as shown in **Photo 2** using 13mm.





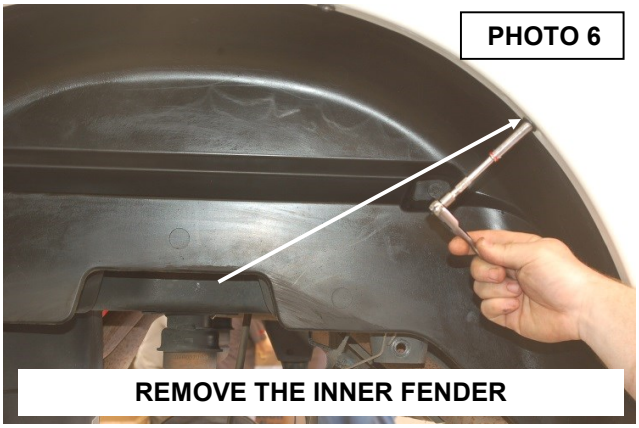
6. Remove sway-bar link using 8mm and 18mm wrench for lower end and 18mm for top end. **See Photo 3 & 4.**



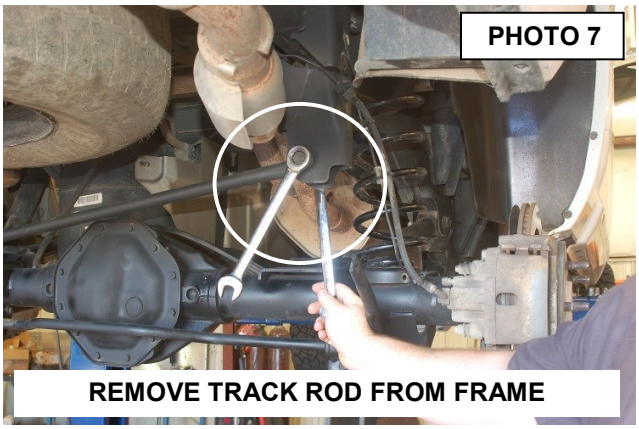


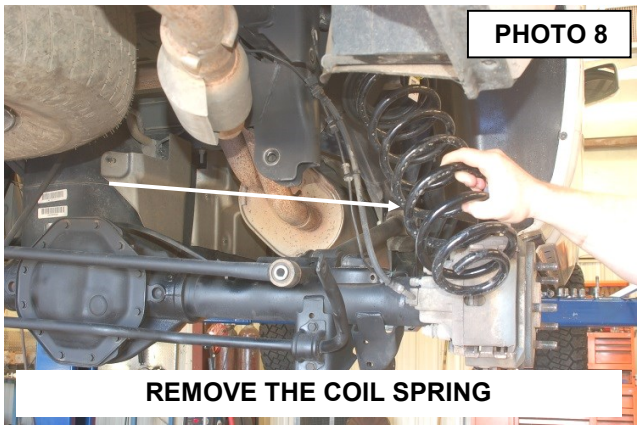
7. Remove the shocks from the axle using 21mm wrench. **See Photo 5.**
8. To remove the upper shocks from the frame mount, remove the inner fender well using 8mm socket. **See Photo 6**. There are **10** bolts on driver side and **10** on passenger side. This is done to gain access to nut on back of shock. Use a socket on back side to remove bolt.



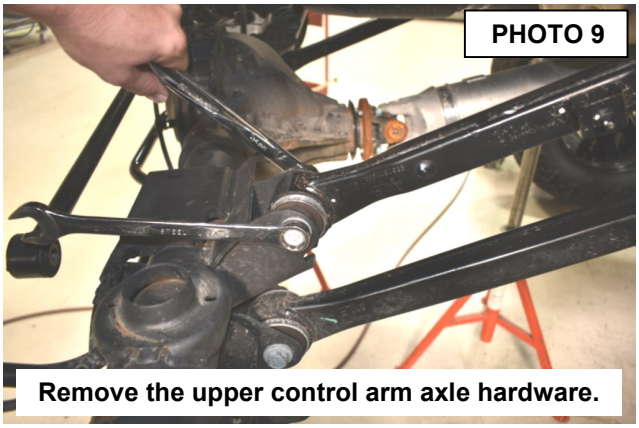


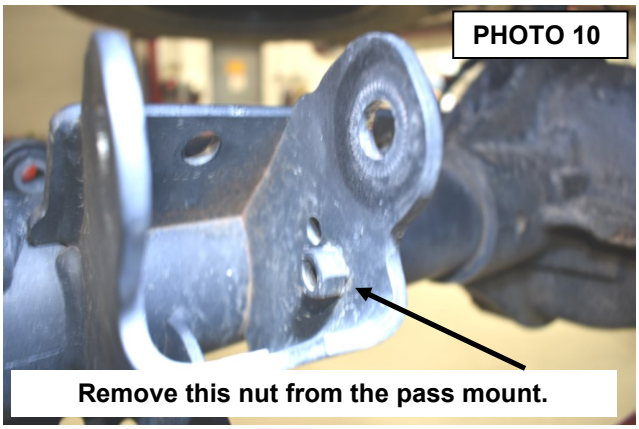
9. Remove upper track bar bolt using 21mm wrench. **See Photo 7.**
10. Remove the vent hose from the frame.
11. Remove coil springs. **See Photo 8.**





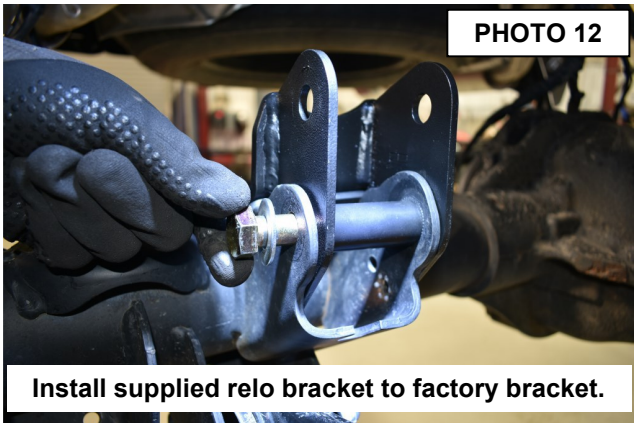
12. **4" kits skip to step 19.** Using a 21mm wrench and a 24mm wrench, remove the hardware from the axle end of the upper control arm. Retain hardware. **See Photo 9.**
13. Using a punch and hammer, remove the welded nut from the inside of the pass upper control arm mount. **See Photos 10 & 11.**





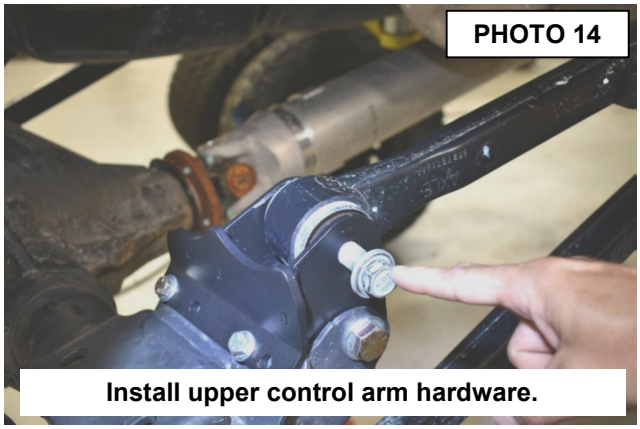
14. Install the supplied upper control arm relocation bracket in the factory bracket using the supplied sleeve and 5/8" x 4.5" bolt, washers, and nylock nut (33430BAG6). Do not tighten. **See Photo 12.**





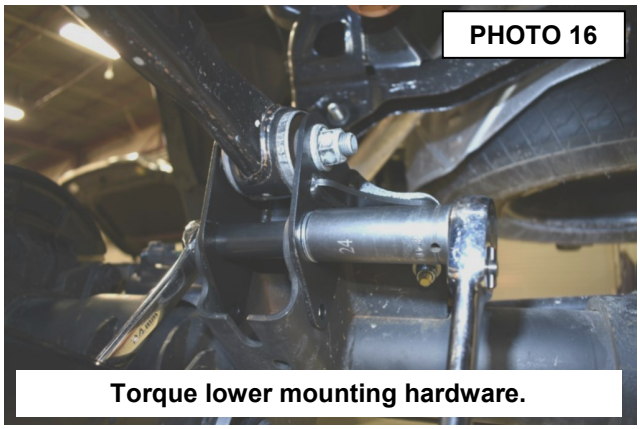
15. Install the supplied 3/8” x 1.25” bolts, washer, and nylock nuts into the rear of the mount. Torque to 30ft/lbs using a 9/16” socket and wrench. Do not tighten. **See Photo 13.**
16. Install the upper control arm in the relocation bracket using the factory hardware. Do not tighten. **See Photo 14.**



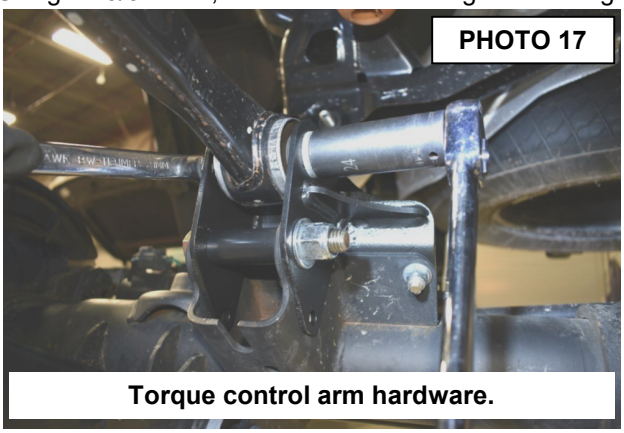


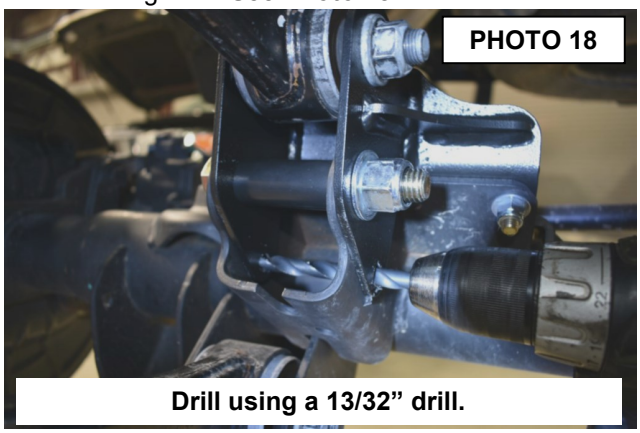
17. Torque the 3/8” hardware to 30ft/lbs using a 9/16” socket and wrench. **See Photo 15.**
18. Torque the 5/8” hardware to 135ft/lbs using a 15/16” wrench and socket. **See Photo 16.**



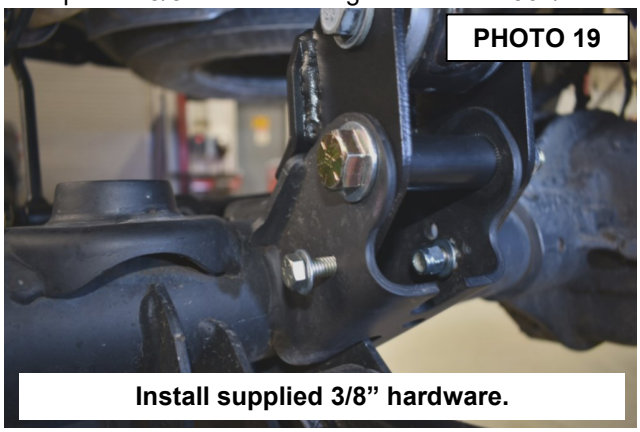


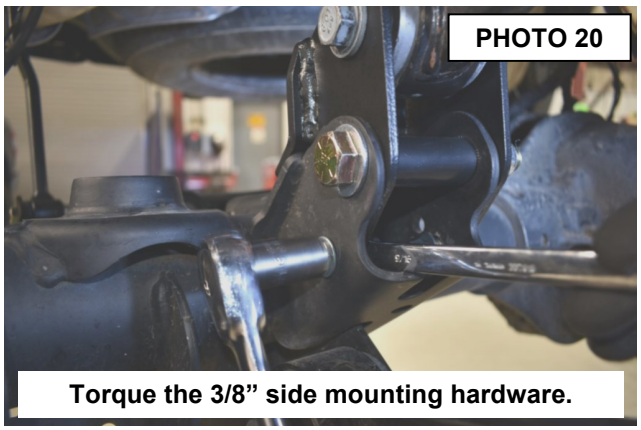
19. Torque the factory hardware to 145 ft-lbs. using a 24mm socket and 21mm wrench. **See Photo 17.**
20. Using a 13/32” drill, drill the side mounting holes using the bracket as a guide. **See Photo 18.**



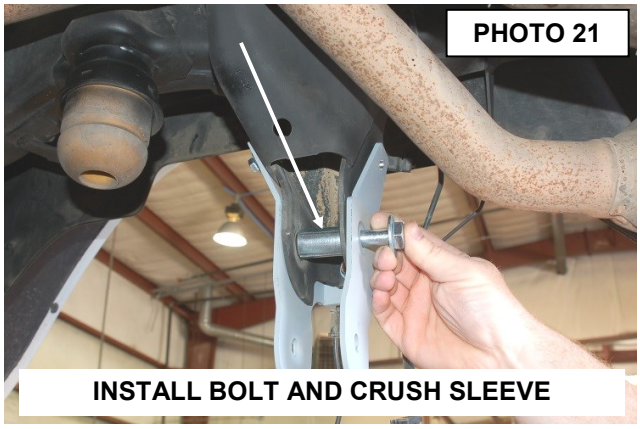


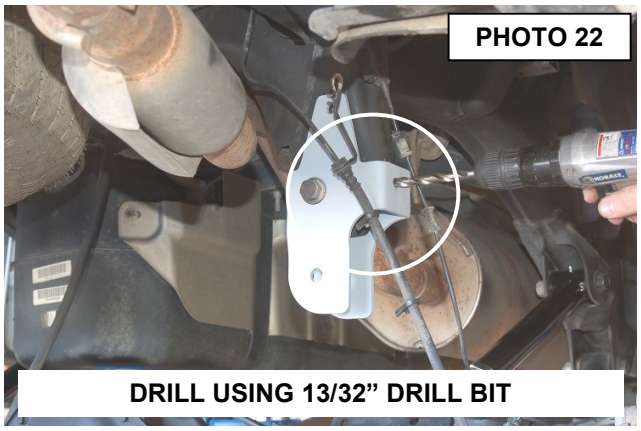
21. Install the supplied 3/8” x 1.25” bolts, washers, and nylock nuts (33430BAG6). **See Photo 19.**
22. Torque the 3/8” side mounting hardware to 30ft/lbs using a 9/16” socket and wrench. **See Photo 20.**



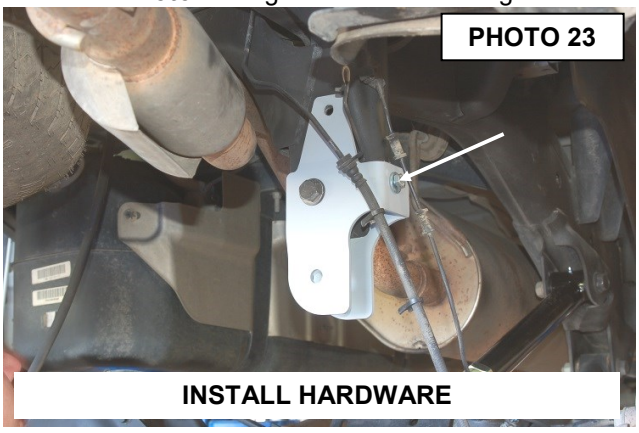


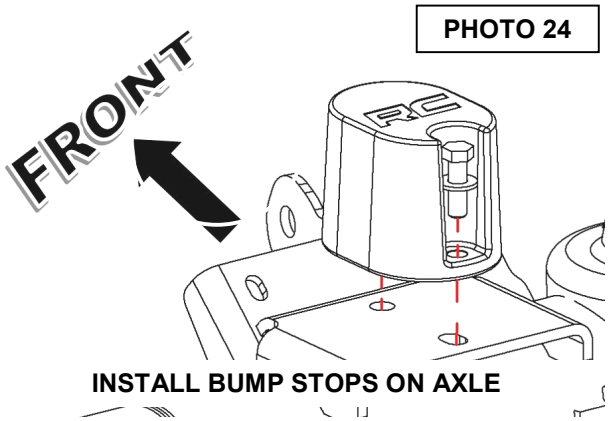
23. Install track bar bracket using supplied crush sleeve,14mm x 80mm bolt, washers and nut **See Photo 21.** Do not tighten at this time. **Make sure the bracket is installed correctly placing the lower hole in the new bracket directly below the stock hole. Failure to install this bracket correctly will push the axle out of center.**
24. Use bracket to mark the side hole to be drilled. Drill the hole on the side of the bracket using a 13/32 drill bit. **See Photo 22.**



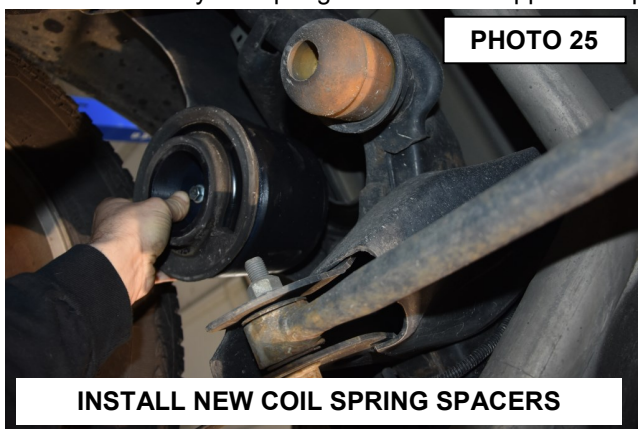


25. Install the 3/8” x 1 1/4” Bolt, washers & nut on the side hole. Tighten using a 14mm socket / wrench. **See Photo 23.**
26. Double check to make sure the bracket is still in position.
27. Drill the other two upper holes using a 13/32” drill bit and install supplied 3/8” x 1 1/4” bolts, washers and nuts. Tighten using a 14mm wrench / socket.
28. Install bump stops using supplied 3/8” x 1.25” bolts, washers and nuts. The pin in the block goes in front hole as shown in **Photo 24.** Tighten hardware using a 14 mm wrench.



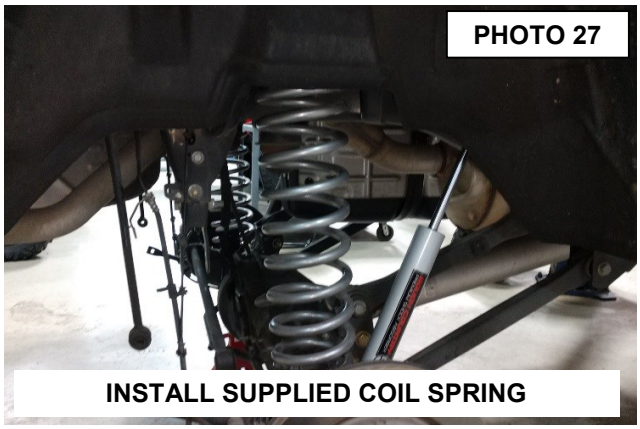


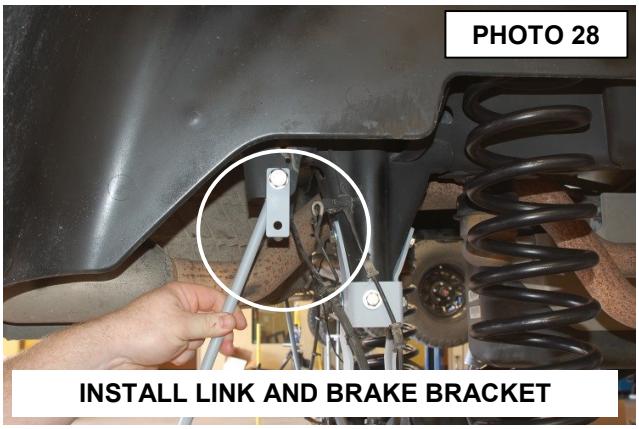
29. If **installing 9424 coil springs, skip to next step.** Install the round retainer washer from the top side of the upper coil pocket. Using the supplied 3/8" x 5.0 bolt, insert the bolt through the center hole of the rear coil spacer and tighten with a 9/16" socket. **See Photo 25.** Next install the factory coil spring and isolator.
30. Install the factory coil spring isolator in the upper coil spring bucket. **See Photo 26.**



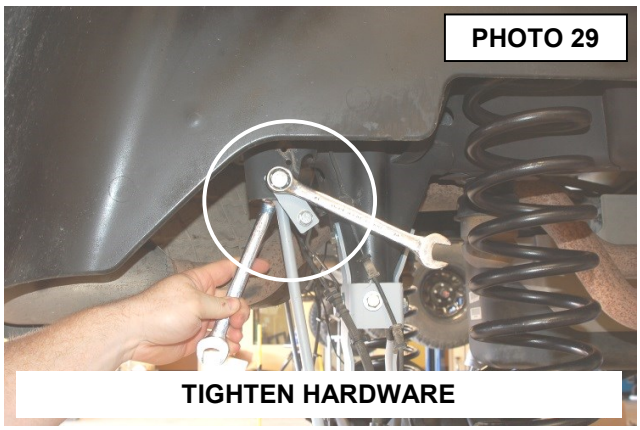


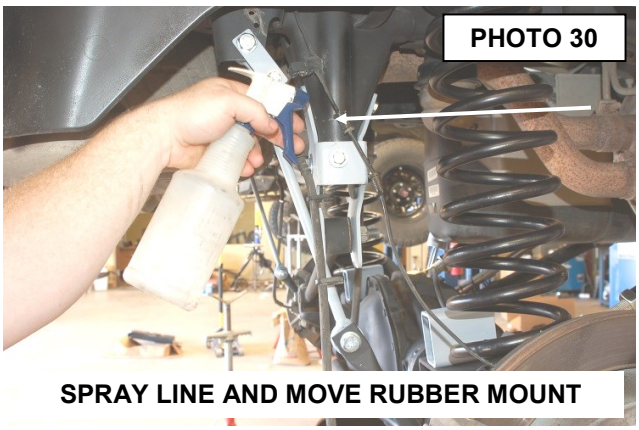
31. Install supplied coil spring in upper coil bucket and on axle mount. Make sure coil is seated in upper isolator. **See Photo 27.**
32. Install shock onto truck, **body of shock will go to bottom mount**, using stock hardware with supplied flag nut for top bolt. **If installing V2 rear shocks, refer to installation instructions included with those shocks.**
33. Also install washer on bottom of shock to the outside of truck. Use 21mm to tighten.
34. Pull down and straighten brake line. Take care not to kink the brake line.
35. Install sway bar links & brake line brackets on the frame with the supplied 12Mm x 65mm bolts, washers and nut. **See Photo 28.**



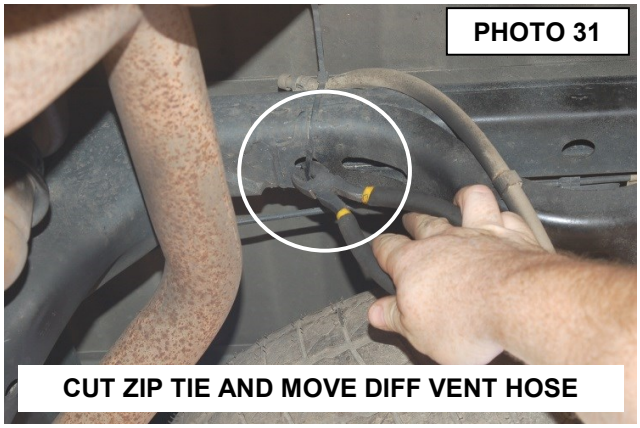


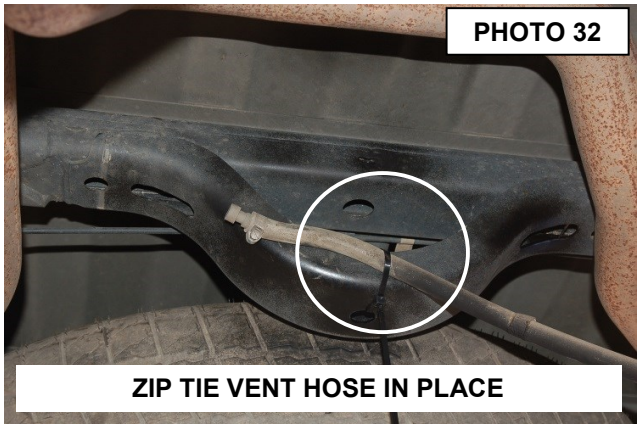
36. Install stock brake line mount on the bracket using the supplied 5/16" x 3/4" bolt, washers and nut. **See Photo 29.** Use a 18mm and 19 mm to tighten sway bar link bolts and 13 mm for brake line bolts.
37. Install track bar into bracket with stock hardware. You may have to do this with truck on the ground. Tighten upper bolt using 22mm wrench and lower with 21mm wrench.
38. With WD-40 or alcohol adjust the rubber insulator on ABS wire so that it will fit back into clip on brake line. **See Photo 30.**





39. If not removed previously, Cut zip tie for axle vent tube and install new zip tie and vent tube on lower part of frame. **See Photo 31 & 32.**





40. Reinstall the fender wells using 8mm socket.
41. Install the wheels and tires.
42. Raise the vehicle up and remove the jack stands, lower the vehicle onto the ground.
43. Tighten the upper control arms installed in step 13 using a 24mm wrench.
44. Check to make sure all fasteners are tight and install the wheels and tires and lower onto the ground.

POST INSTALLATION

1. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering for interference and proper working order. Test brake system.
2. Perform steering sweep. The distance between the tire sidewall and the brake hose must be checked closely. Cycle the steering from full turn to full turn to check for clearance.
3. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.
4. Readjust headlights to proper settings and take truck in for a front-end alignment to a qualified alignment professional.

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