TRAIL FORTRESS

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Rough Country 73831 Installation Instructions

6-Inch Lift Kit with N3 Shocks for 2015-2020 Toyota 4Runner, Part 73831

Part number: 73831

trailfortress.com/rough-country-6-inch-lift-kit-73831

Scan for fitment, price and install help



TOYOTA 2015-20 4RUNNER 2WD/4WD 6” 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 disassembly/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.

⚠WARNING Please read instructions before beginning installation. Check the kit hardware against the parts list on the next page and the product layout on the last 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. 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.

This suspension system was developed using a Maximum tire size of 33” X 12.5” with a 17” x 9” aftermarket wheel with 4 1/2” - 5” backspacing.

NOTICE 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

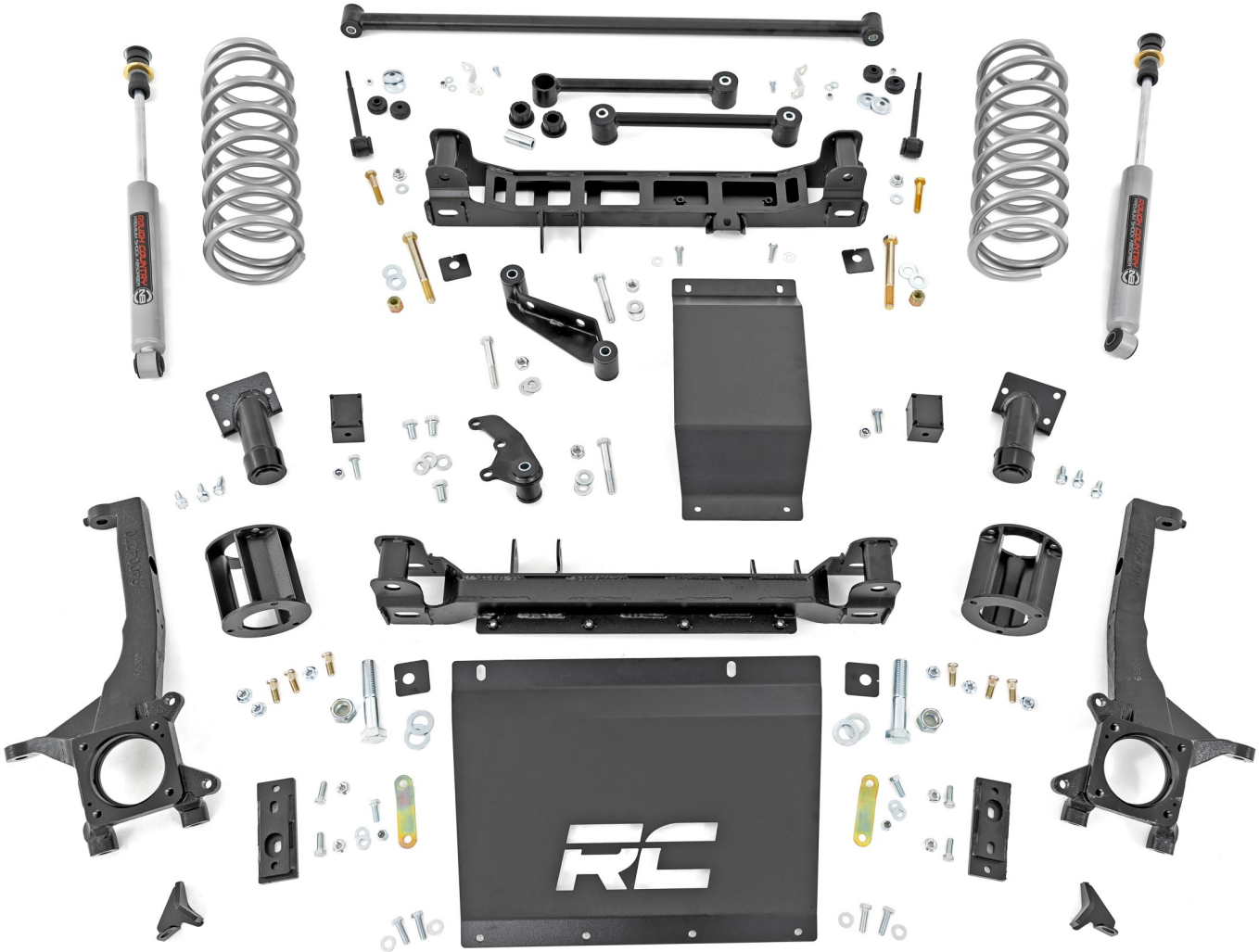
⚠NOTICE Note to installer : Before installation begins we recommend that a test drive be performed. While driving check for uncommon sounds and/or vibrations . What you feel and hear during the test drive will only magnify once lift kit is installed. Advise you to discuss possible issues identified from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

Tools Needed:

10mm Wrench	5mm Allen Wrench
12 mm Socket/Wrench	9/16” socket/wrench
14 mm Socket/Wrench	1 1/4” Wrench
17 mm Socket/Wrench	11/32” Drill Bit
19 mm Socket/Wrench	Hammer
21mm Socket/Wrench	Jack Stands
22mm Socket/Wrench	Floor Jack
35mm Socket	Flat Screwdriver
	Torque Wrench

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73830 6” Kit



Parts List

7380991 - Knuckle Box
1 - Dr. Side Knuckle
1 - Pass. Side Knuckle

73830992 - Crossmember Box
2 - Bump Stop
1 - Dr. Side Bump Stop Bracket
1 - Pass. Side Bump Stop Bracket
1 - Front Cross Member
1 - Rear Cross Member
1 - 1748BAG1
1 - 1748BAG5
1 - 1770BAG9

73830993 - Skid Plate Box
1 - Lower Skid Plate
1 - Front Skid Plate

73830994 - 6” N3 Box
2 - 660820 Rear Shock
2 - Mounting Kit
1 - Pass. Differential Bracket
1 - Dr. Differential Bracket
1 - Pass. Steering Stop
1 - Dr. Steering Stop
2 - Bump Stop
2 - Sway Bar Relocation Bracket
2 - 6” Strut Spacer
2 - Front Brake Bracket
2 - Rear Brake Bracket
2 - Rear Control Arm
2 - Bushing/Sleeve
1 - 10MMSTUDBAG-2
1 - 1746BAG2
1 - 1770BAG10
1 - 1770BAG11
1 - 1748BAG2
1 - 1770BAG4

1770BOX5
1 - Rear Track Bar
1 - 1770BAG7

9294 - 6” Rear Coil
2-Rear Coil Spring

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 Bags

1748Bag1
- 2-5/8” x 5.5” bolts
- 2-5/8” nylocks
- 4-5/8” washers
- 2-22mm x 110mm bolts
- 2-22mm nylocks
- 4-22mm washers

1748Bag5
- 4-Rear Crossmember Alignment Washers

1770Bag9
- 6-3/8” self tapping bolt

10MMSTUDBAG-2
- 6-10mm Studs
- 6-10mm Lock Washers
- 6-10mm Flat Washers
- 7-10mm Nuts
- 1-.500” Jam Nut

1746Bag2
- 6-3/8” x 1 1/4” Bolt
- 2-10mm x 35mm Bolt
- 2-10mm Lock Nut
- 6-3/8” Flat Washer
- 3-14mm x 25mm Bolt
- 3-9/16” x 3 1/2” Bolt
- 9-9/16” Flat Washer
- 3-9/16” Nut
- 6-Bushing
- 3-9/16” x 3/4” x 2.41” Sleeve

1770Bag10
- 8-Upper Suspension Arm Bushing
- 4-Upper Arm Sleeve

1770Bag11
- 4-Stem Cushion
- 2-Sleeve
- 4-3/8” ID Retainer
- 2-8mm Lock Nut
- 2-12mm x 65mm Bolt
- 2-12mm Flange Lock Nut
- 2-5/16” Flat Washer

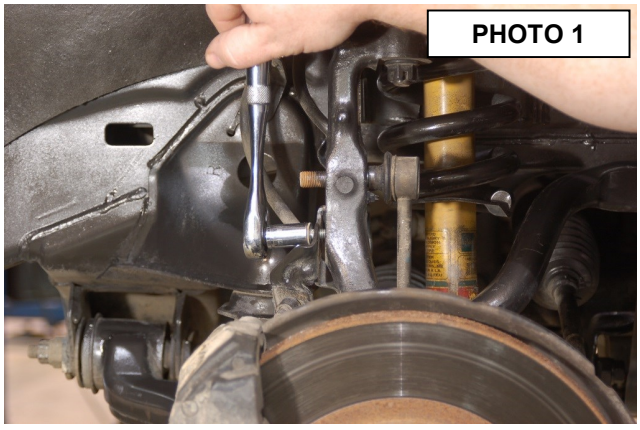
1748Bag2
- 7-1/4” x 3/4” bolt
- 14-1/4” washer
- 7-1/4” nuts
- 2-5/16” nylocks
- 2-5/16” x 3/4” bolt
- 2-3/8” nylock
- 4-3/8” washer
- 2-3/8” x 1” bolt
- 4-5/16” washer

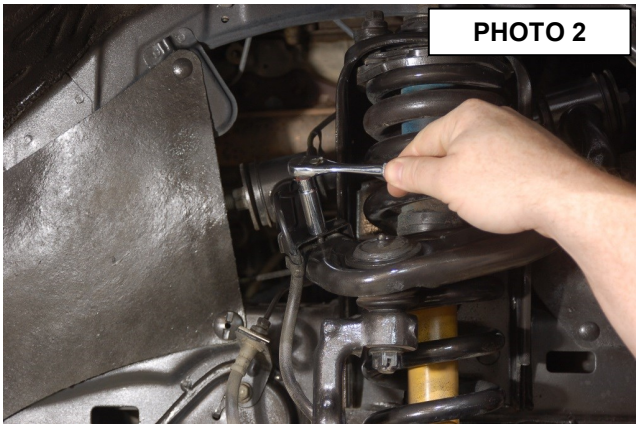
1770Bag4
- 4-5/16” washers
- 4-3/8” nuts
- 4-3/8” lock washers
- 4-3/8” x 1” bolt

1770Bag7
- 2-Track Bar Sleeve
- 4-Bushing

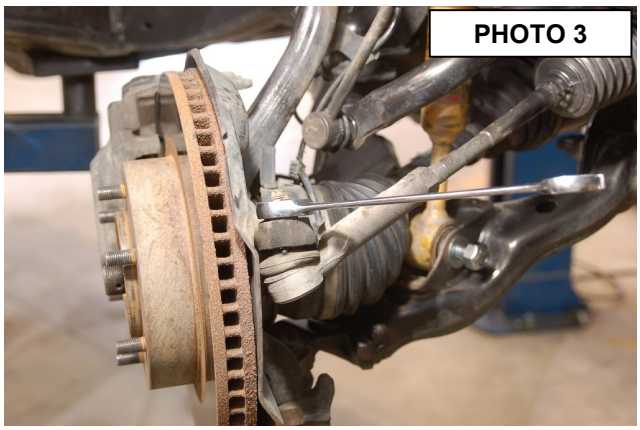
FRONT INSTALLATION

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. Remove the front tires/wheels. Using a 21mm deep well socket.
3. Remove the factory bolts holding on the skid plate with a 12mm socket and the six bolts holding the two bracket for the radiator support and stock cross-member with a 17mm socket.
4. Remove the brake line bracket from the frame on the passenger side using a 12 mm socket.
5. Next remove the ABS bracket from the knuckle using a 12mm socket. **See Photo 1.**
6. Using a 10mm socket to remove the ABS bracket from the upper control arm. **See Photo 2.**



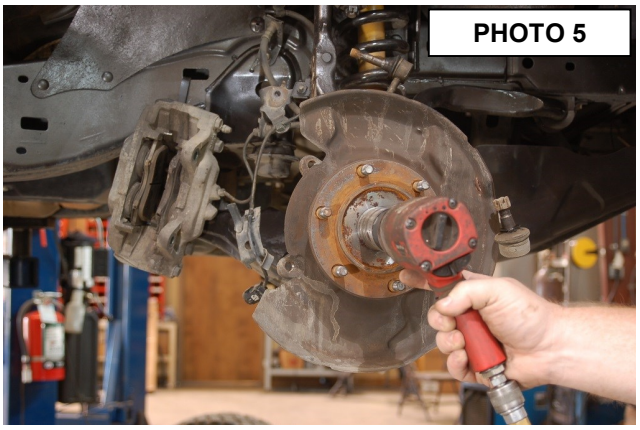


7. Next remove the ABS sensor from the knuckle using a 10mm socket.
8. Remove cotter pin from the outer tie rod end on the steering linkage. Using 19mm socket remove the nut. Using a hammer hit on the side of the cast knuckle to allow the tie rod end to separate from the knuckle. Remove the linkage from the knuckle. Retain factory nut & cotter pin. **See PHOTO 3.**
9. Using a 17mm wrench, remove the sway bar bolts, allowing the sway bar to drop. Retain factory hardware.
10. Next using a 17mm wrench remove the brake caliper bolts and secure the caliper up out of the way. **See PHOTO 4.**

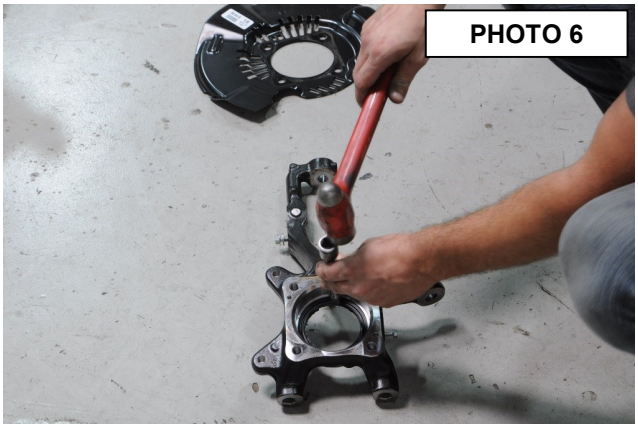


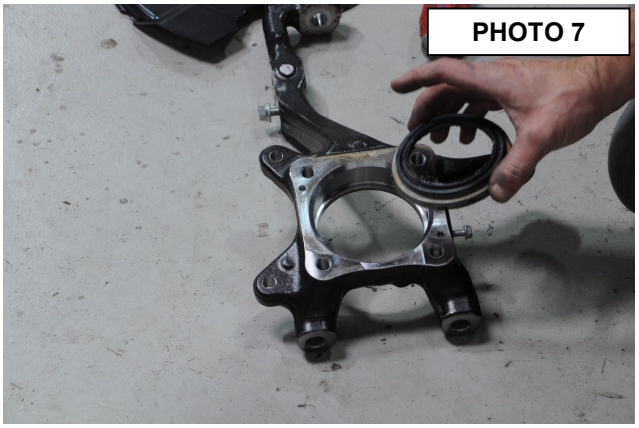


11. **(4WD MODELS ONLY)** Remove the outer dust cap with a small flathead screwdriver and remove the axle nut with a 35mm socket. Retain factory hardware. **See Photo 5.**
12. Using a 17mm wrench loosen the 4 bolts holding the hub to the knuckle.
13. Remove the upper ball joint and the two lower ball joint bolts using a 19mm socket or wrench. Strike the knuckle on the side with a hammer to dislodge the taper lock of the upper ball joint.
14. Remove the knuckle assembly from the truck and lay on a work bench. Finish removing the 4 bolts holding the hub to the knuckle.



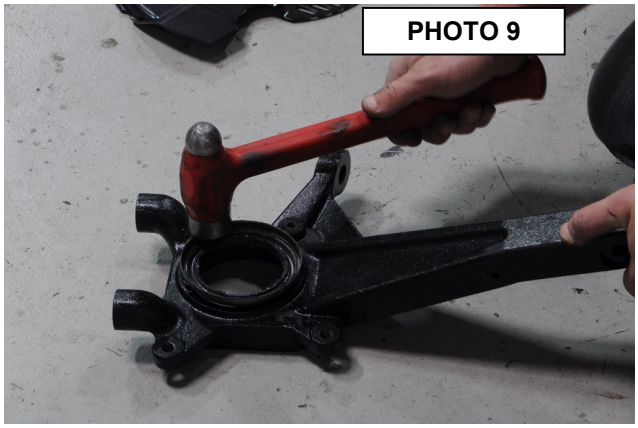
15. **On 4WD Models,** Use a hammer and punch, carefully remove the CV seal from the factory knuckle. **See Photos 6 & 7.**



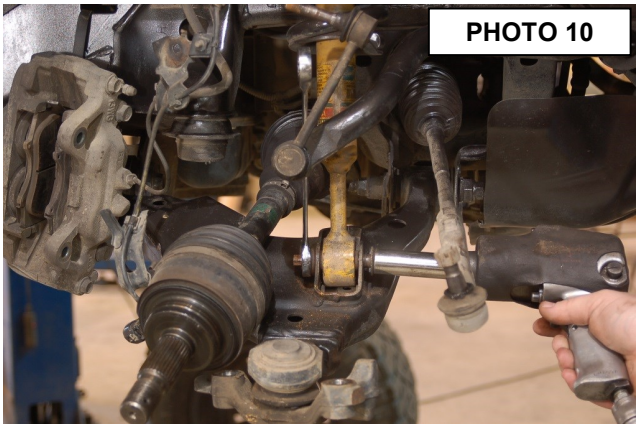


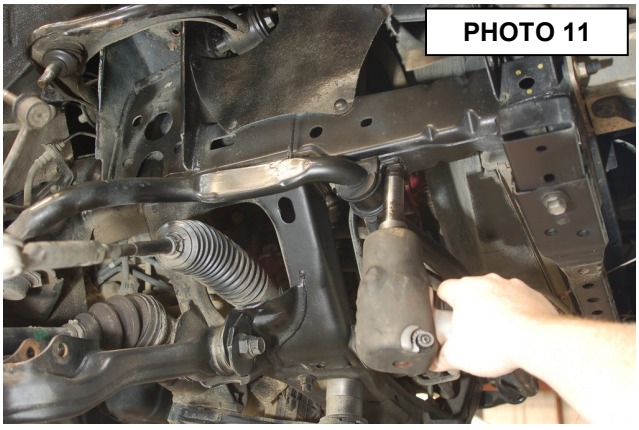
16. Place the lifted knuckle face down on the work bench. **See Photo 8.**
17. Carefully tap the seal into the lifted knuckle. **See Photo 9.**





18. Insert the factory hub and dust shield into the Rough Country lifted knuckle and tighten with a 17mm wrench.
19. Place a jack or jack stand below the lower control arm and remove the top three strut nuts with a 14mm wrench.
20. Using a 19mm socket and wrench remove the bolt on the lower strut mount. **See Photo 10.** Remove the strut from the truck and set aside.
21. Next remove the sway bar from the frame using a 14mm socket. **See Photo 11.**





22. Remove the lower control arm with a 21mm socket and wrench. **See Photo 12.**
23. Repeat steps 4-19 on the driver side.
24. **(2WD Models skip to step 29)** Remove the front driveshaft from the diff using a 14mm socket. Retain factory hardware. **See Photo 13.**

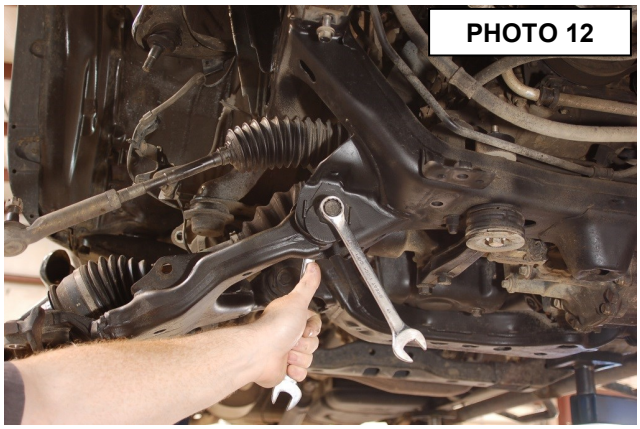
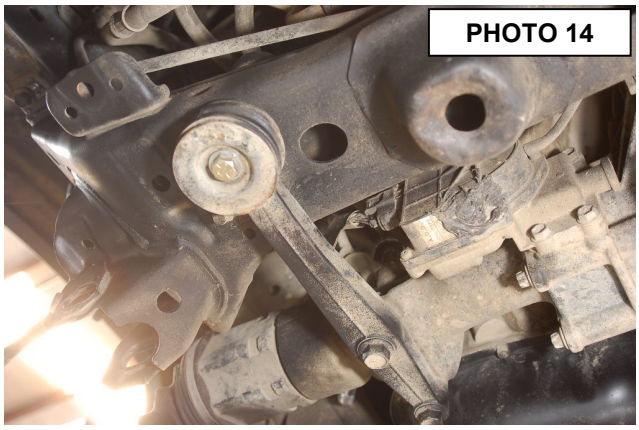
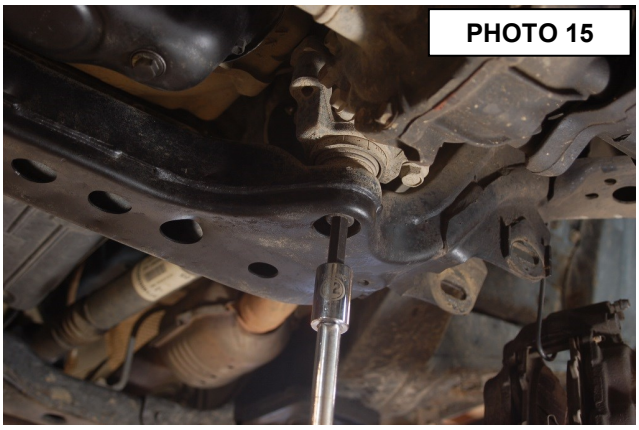

PHOTO 12

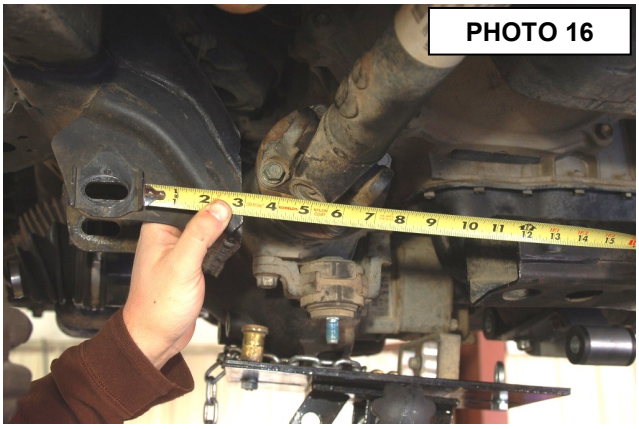

PHOTO 13

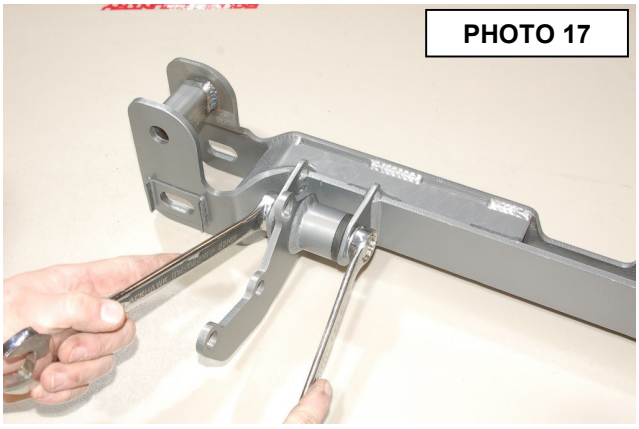
25. Unplug the vent tube and remove the diff actuator using a 12mm socket. Remove the actuator wires from the diff on the passenger side. Unplug and remove the vent tube from the top of the diff using a 12mm socket.
26. Support the diff with a jack, remove the driver and passenger diff bracket using a 22mm socket on the frame side and a 19mm socket on the diff side of the bracket. **See Photo 14.**
27. Using a 12mm Allen socket remove the rear diff mount. **See Photo 15.**
28. Lower the diff on the jack and remove from the truck.


PHOTO 14


PHOTO 15

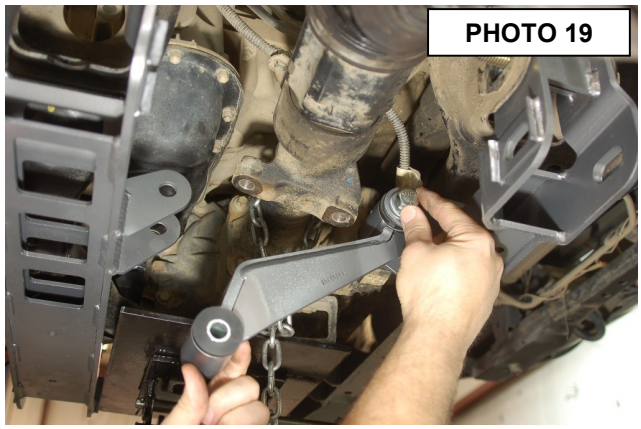
29. Starting from the edge of the cam bolt plate on the back side of the rear cross-member make a mark at 3” and another mark at 12”. This is where the rear cross-member needs to be cut to allow the diff to drop down. **See Photo 16.**
30. Take a reciprocating saw and cut straight through the marks at 3” and 12”.
31. **(2WD Models skip to step 33)** Insert two of the supplied bushings and one sleeve into the front diff mount from 1746Bag2. Use the 9/16 x 3.5” bolt, washers, and locking nut to secure the mount to the front cross-member. Hand tighten using a 21mm and 22mm socket and wrench. **See Photo 17.**


PHOTO 16

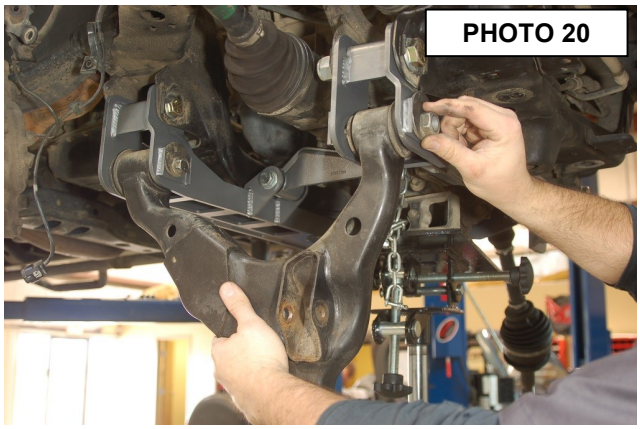

PHOTO 17

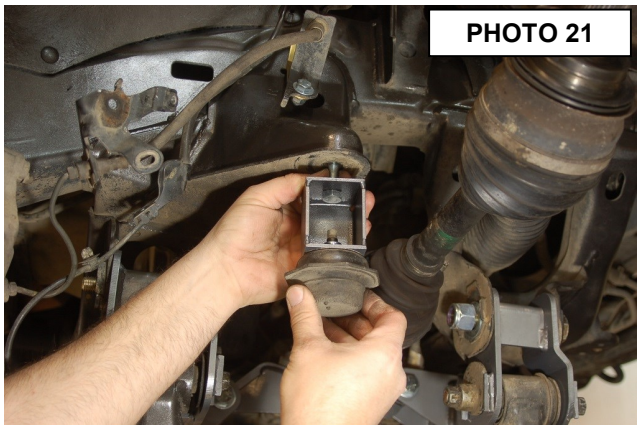
32. Raise the diff back into the correct locate while sitting on the jack.
33. Insert the rear cross-member into the frame using the supplied 5/8” x 5.5” bolts, washers, and locking nut from 1748Bag1 on each side. Hand tighten.
    If needed, refer to the washer instructions from the cross-member washer bag.
34. Insert the front cross-member into the frame using the supplied 22mm x 110mm” bolts, washers, and locking nut from 1748Bag1 on each side. Hand tighten with a 1 1/4” wrench. **See Photo 18.**
35. **(2WD Models skip to step 40)** Lower the diff into place and use the stock hardware to secure the rear of the diff to the rear cross-member. Hand tighten with a 12mm Allen socket.
36. Using the supplied 14mm x 25mm bolts and washers out of 1746Bag2 secure the front driver diff mount to the diff. Tighten using a 21mm socket.
37. Insert the supplied bushings and sleeves into the passenger side diff mount from 1746Bag2. Using the supplied 9/16 x 3.5” bolts, washers, and locking nuts from 1746Bag2 mount the diff bracket into the front and rear cross-member. Hand tighten using a 21mm and 22mm socket and wrench. **See Photo 19.**



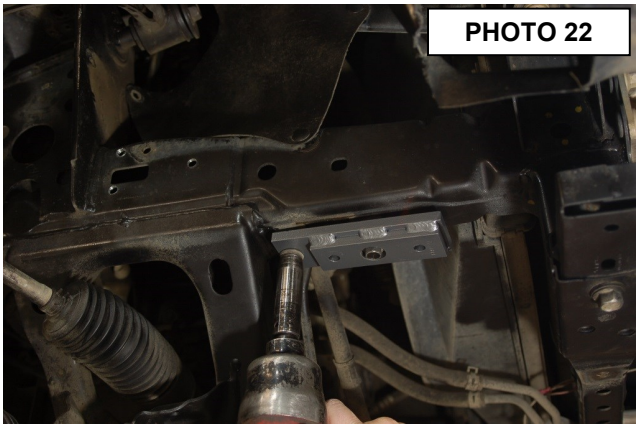


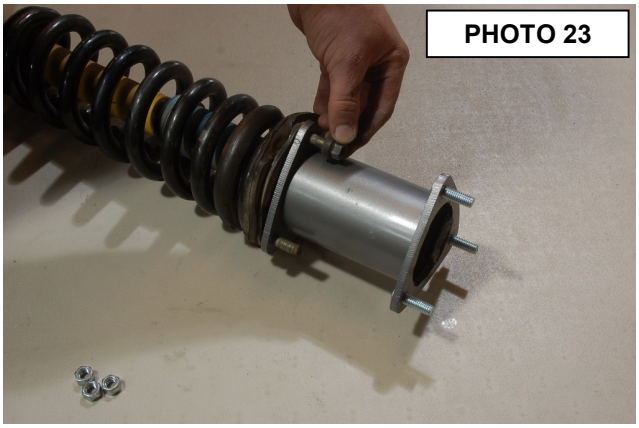
38. Use the factory hardware and a 19mm socket to bolt the passenger side diff to the mounting bracket. Plug the vent tube and the diff actuator back into the diff. Make sure the vent hose and wiring are not rubbing on any moving parts and they have slack in them. Use a 12mm socket to tighten the actuator and top vent tube.
39. Attach the front driveshaft to the diff using factory hardware and a 14mm socket.
40. Insert the driver and passenger side lower control arm into the cross-member pockets and secure with the factory cam bolts. Hand tighten. **See Photo 20.**
41. **(4WD Models)** Now you can go back and torque all the diff bolts, **2WD/4WD** tighten cross-member bolts to the correct specs.
42. Using a 3” adjustable wrench, unscrew the bump stops from the truck. Using the supplied 10mm x 35mm bolts in 1746Bag2 attach the bump stop extension to the frame. Next using the 10mm locking nuts from 1746Bag2 attach the factory bump stop to the extension. **See Photo 21**. Tighten both bolts using a 17mm wrench.



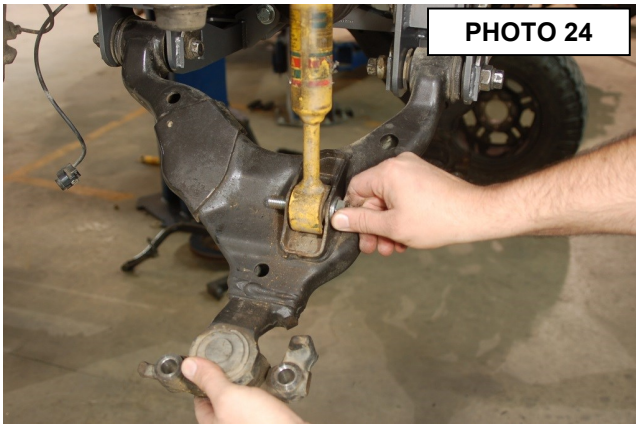


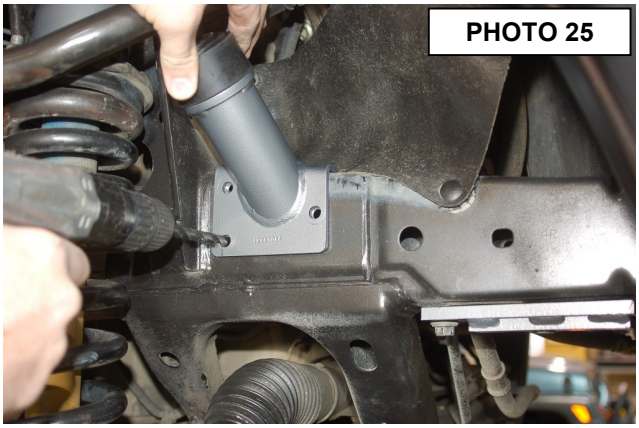
43. Locate the sway bar relocation brackets and insert two of the 3/8” x 1” bolts from 1770Bag4 on the back side of the bracket. Mount to the frame using factory hardware with offset forward. **See Photo 22.** Tighten with a 14mm socket.
44. Using the supplied 10mm studs from 10MMSTUDBAG-2, place each stud in the smaller hole end of the strut spacer facing up. Use a washer and nut and a 17mm socket to pull each stud into place. Slide the strut spacer over the factory strut bolts and tighten using a 14mm wrench and factory hardware. **See Photo 23.**



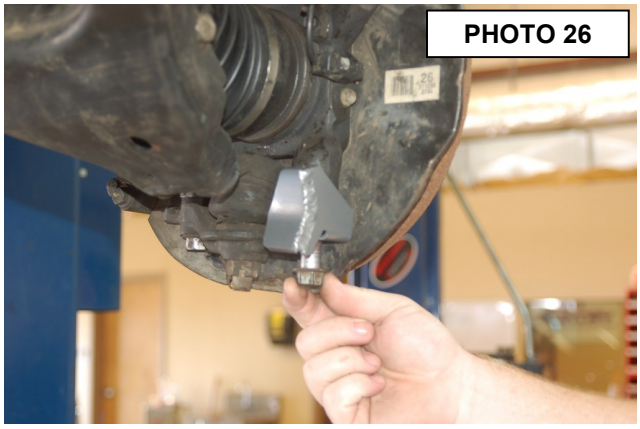


45. Place the strut assembly into the strut tower and secure with the 10mm nuts and washers from 10MMSTUDBAG-2. Tighten with a 17mm wrench.
46. Attach the lower strut mount to the lower control arm using 19mm socket and wrench. **See Photo 24.**
47. Locate the supplied bump stops and bump stop brackets, screw the bump stop down tight and place the bracket on the frame rail as shown in **Photo 25.** Use a 11/32” drill bit and the bump stop bracket as a drill guide and drill the three holes in the frame. Use the self-tapping 3/8” x 1” bolts in 1770Bag9 to secure bracket to the frame.

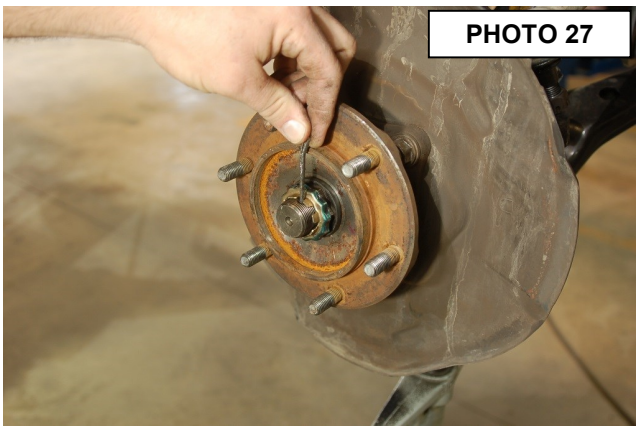


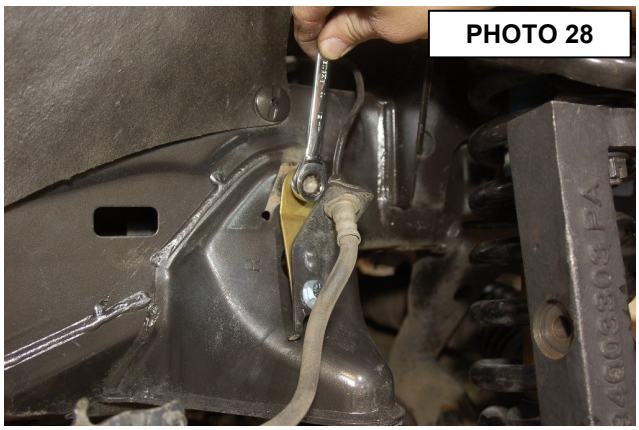


48. After sliding the steering stop bracket over the front lower ball joint bolt reinstall the new knuckle to the lower control arm. Slide the CV shaft through the bearing hub before tightening the bolts. Tighten with a 19mm wrench. Pull down the upper ball joint and secure with factory nut. **See Photo 26.**

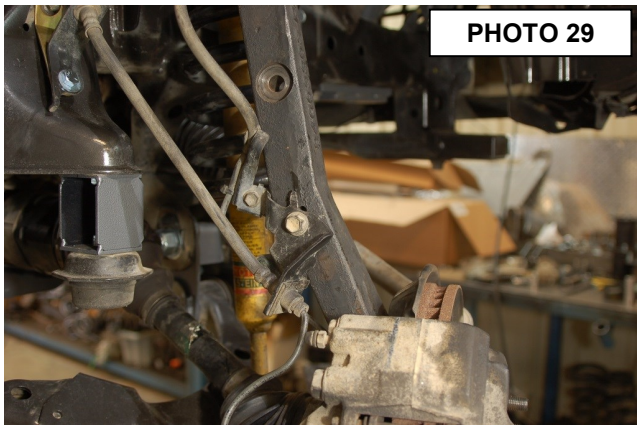


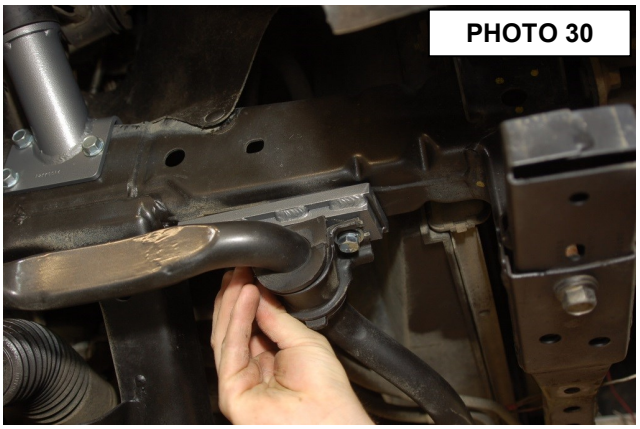
49. **(4WD Models)** Install factory axle nut and tighten with a 35mm socket. Push in the factory cotter pin to secure nut. **See Photo 27.**
50. Using a 12mm wrench install the new brake line bracket to the frame using stock hardware. Use the supplied 5/16" bolts, washers, and nuts from 1748Bag5 to bolt the factory bracket to the new drop bracket. Tighten with a 13mm socket and wrench. **See Photo 28**.


PHOTO 27


PHOTO 28

51. Slide on the brake rotor, use the factory hardware and a 17mm wrench install the brake caliper to the new knuckle, **(4WD Models)** Push on the dust cap over the axle nut.
52. Using a 10mm Allen wrench install the ABS sensor to the new knuckle with factory hardware.
53. Reinstall the ABS bracket to the knuckle using factory hardware and a 12mm socket.
54. Install the brake line bracket to the new knuckle using a 12mm socket. **See Photo 29.**
55. Install the sway bar to the new relocation bracket with the supplied 3/8' bolts from 1770Bag4. Tighten with a 9/16 socket. **See Photo 30.**


PHOTO 29


PHOTO 30

56. Insert the sway bar link through the new knuckle and secure using factory hardware. Tighten with a 14mm socket. **See Photo 31.**
57. Insert the tie rod end into the knuckle using factory hardware. Tighten with a 19mm wrench. Reinstall the factory cotter pin. **See Photo 32.**

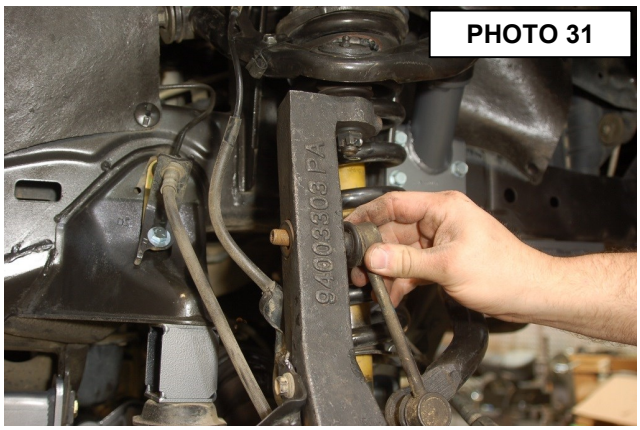
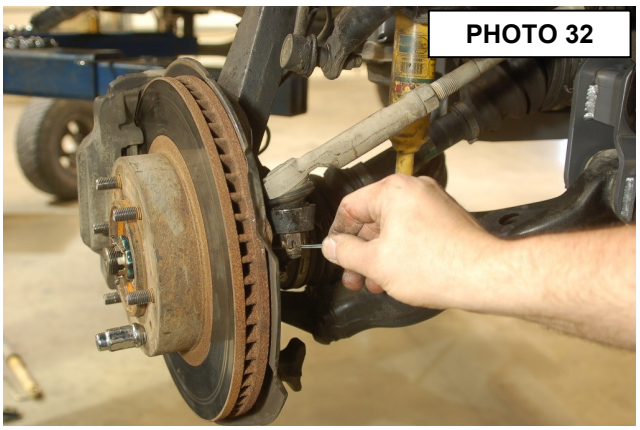
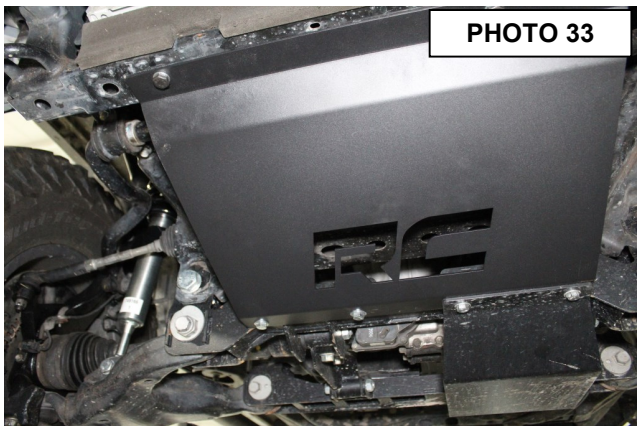
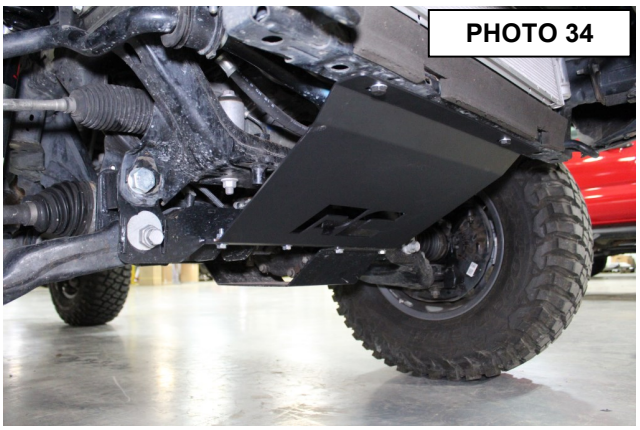


PHOTO 31


PHOTO 32

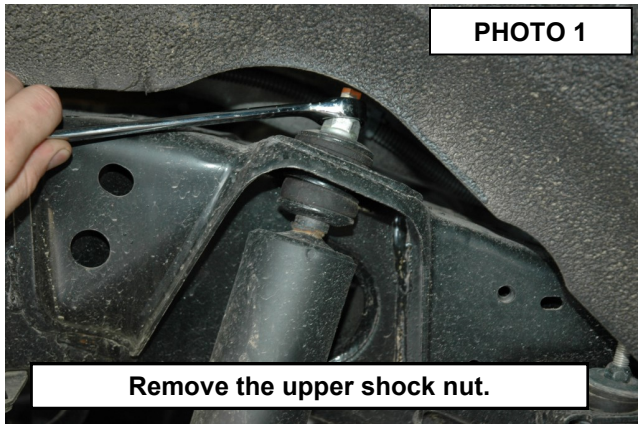
58. Repeat steps 39-54 on the driver side of the truck.
59. Align the front skid plate with the two passenger side bolt holes on the bottom of the front cross-member and insert two of the 3/8” x 1.25” bolts and washers from 1746Bag2. Hand tighten. **See Photo 33.** Use the factory hardware on the top of the skid plate and tighten with a 17mm socket.
60. Using four of the 3/8” x 1.25” bolts and washers from 1746Bag2, bolt the lower skid plate to the driver side of the front and rear cross-member. Tighten all upper and lower cross-member bolts using 9/16” socket. **See Photo 34.**
61. Install tires and wheels and set the truck on the ground. Using a 22mm wrench tighten the lower control arm cam bolts.

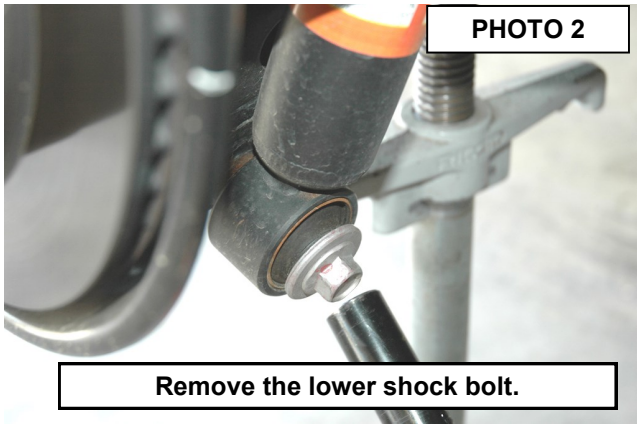




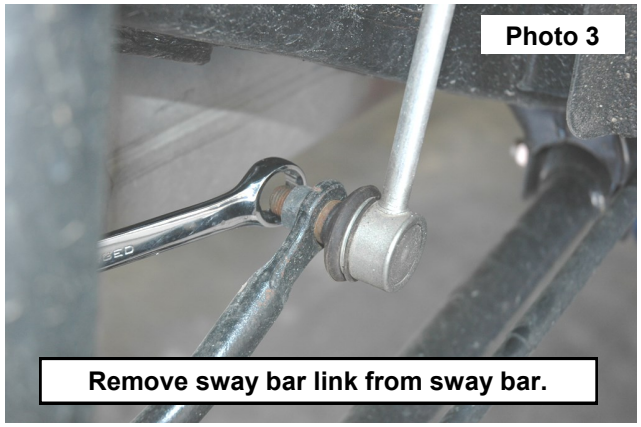
REAR INSTALLATION

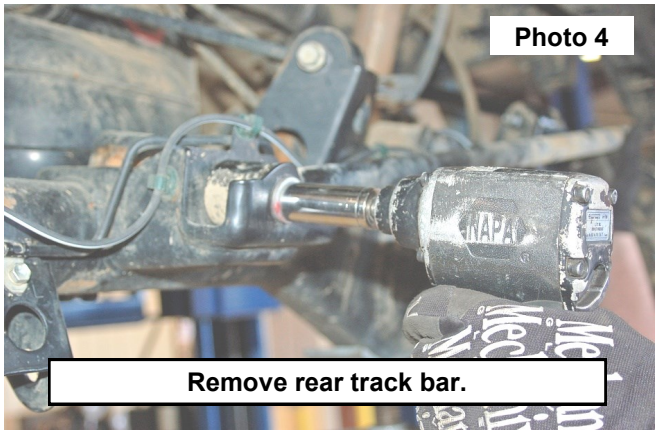
1. Chock front wheels. Jack up the rear of the vehicle and support the vehicle with jack stands, so that the rear tires are off the ground. **NOTE:** Be sure to support rear axle with jack stands while the shocks and springs are being removed
2. Remove the rear tires/wheels with a 21mm deep well socket.
3. Remove the shocks on both sides of the vehicle with a 17mm wrench. Retain lower shock hardware for reuse. **See Photo 1 and Photo 2. NOTE:** It may be necessary to slightly raise the axle to unload the shocks for removal.



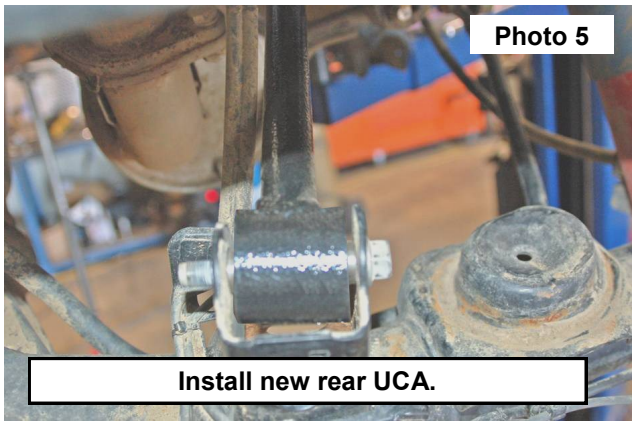


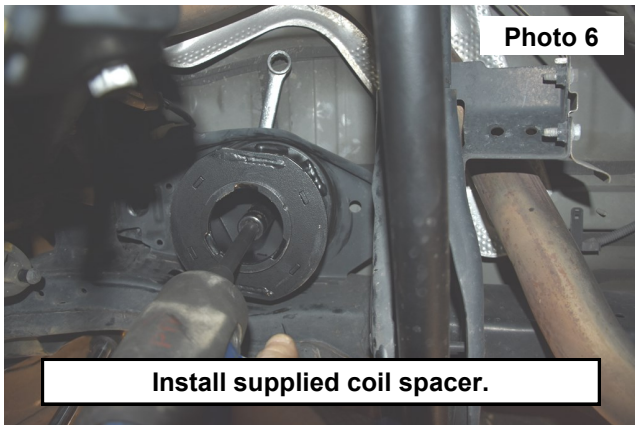
4. Use a 17mm wrench to disconnect the sway bar links. Retain hardware for reuse. **See Photo 3.**
5. Use a 19mm wrench and socket to remove the rear track bar from the axle and frame mount. Retain stock hardware for reuse. **See Photo 4.**



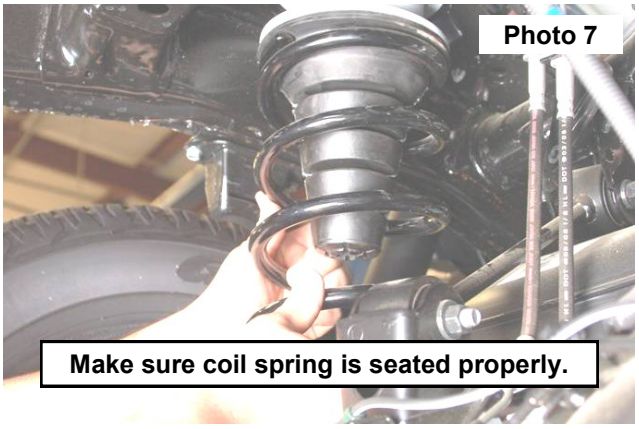


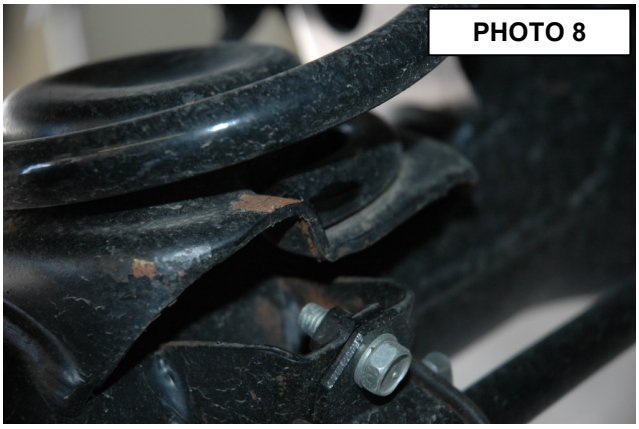
6. With a 19mm socket and wrench, loosen the lower control arm.
7. Remove rear factory coil spring by allowing the axle to slightly drop with a floor jack to unload the coil springs.
8. Use a 17mm wrench and socket to remove the factory rear upper control arm.
9. Install new rear upper control arm with stock hardware and into the stock location with the offset to the top for clearance for the fuel tank. **See Photo 5.**
10. Install new coil spring spacer in the factory pocket with the supplied 1/2” x 1 1/4” bolts, washers, and nuts. **See Photo 6.**





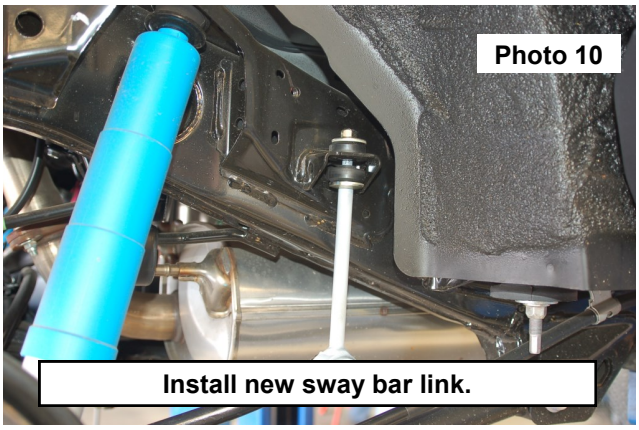
11. After the spacer has been properly secured to the frame, reinstall the new coil spring and rubber bump stomp. **See Photo 7.** Make sure lower coil is positioned correctly on the lower spring seat. **See Photo 8.**



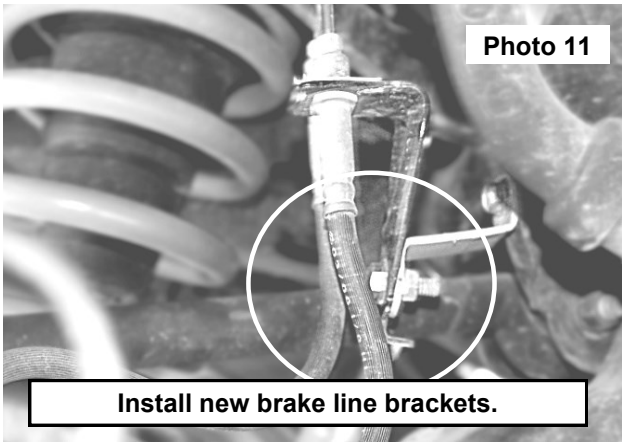


12. Insert the bushings and sleeves from 1770Bag7 into the new rear track bar. Use a 19mm socket and stock hardware to install the new rear track bar in the original mount. **See Photo 9.**
13. Use a 13mm wrench to reinstall the upper sway bar link
14. Insert the sleeves in 1770Bag11 in the eyelet and install using the supplied 12mm x 65mm Bolts & lock nuts. Tighten using a 19mm socket. **See Photo 10.**





15. Use supplied upper shock hardware and factory lower shock hardware to reinstall new rear shocks, part #**660820**, back into factory mounts.
16. Install the new rear brake line brackets using the stock hardware and 3/8” bolts, washers and nuts from 1770Bag5. **See Photo 11.**
17. Reinstall the wheels and lower vehicle to the ground.



POST INSTALLATION

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. Have vehicle aligned to factory specifications.
4. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.
5. Adjust headlights to proper settings given increased vehicle height.

MAINTENANCE INFORMATION

It is the ultimate buyers responsibility to have all bolts/nuts checked for tightness after the first 500 miles and then every 1000 miles. Wheel alignment steering system, suspension and driveline systems must be inspected by a qualified professional mechanic at least every 3000 miles.



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