# Rough Country 746.20 Installation Instructions

4-Inch Lift Kit with N3 Shocks for 2005–2015 Toyota Tacoma

Part number: 746.20

trailfortress.com/rough-country-4-inch-lift-kit-746-20

Scan for fitment, price and install help

92174600A

ROUGH COUNTRY SUSPENSION SYSTEMS®

1746BAG8

# TACOMA 05-18 2WD/4WD 4” 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.

Please read instructions before beginning installation. Check the kit hardware against the parts list on this 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 32” X 10.5” 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

**Tools Needed:**

10mm Wrench
12 mm Socket/Wrench
14 mm Socket/Wrench
17 mm Socket/Wrench
19 mm Socket/Wrench
21mm Socket/Wrench
22mm Socket/Wrench
35mm Socket
5mm Allen Wrench
9/16” socket/wrench
1 1/16” Wrench
1 1/8” Wrench
11/32” Drll Bit
Hammer
Jack Stands
Floor Jack
Flat Screwdriver

**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 |

# Parts List

## 1746BOX1

| Qty | Part # | Description |
|---|---|---|
| 1 | 94003330 | Front Cross Member |
| 1 | 94003331 | Rear Cross Member |
| 1 | 94003320 | Driver Front Bump Stop |
| 1 | 94003321 | Passenger Front Bump Stop |
| 2 | 90603415 | Bump Stop |
| 1 | 1746bag1 | Cross Member Bag |
| 1 | 1770bag9 | Bump Stop Bag |

## 1746BOX2

| Qty | Part # | Description |
|---|---|---|
| 1 | 94003333 | Front Skid Plate |
| 1 | 94003334 | Rear Skid Plate |

## 1749BOX2

| Qty | Description |
|---|---|
| 1 | Driver Side Knuckle |
| 1 | Passenger Side Knuckle |

## 1746BOX5

| Qty | Part # | Description |
|---|---|---|
| 1 | 94003305 | Passenger Diff Bracket |
| 1 | 94003332 | Driver Diff Bracket |
| 1 | 94003335 | Driver Steering Stop |
| 1 | 94003336 | Passenger Steering Stop |
| 1 | 94003338 | Rear Brake Line Bracket |
| 2 | 94003339 | E-Brake Bracket |
| 1 | 9/16bag | U-bolt Bag |
| 1 | 1746bag2 | Diff Drop Bag |
| 1 | 8127bag1 | Rear Shock Bag |
| 2 | 1746bag5 | Rear Brake Line Bag |
| 1 | 1746Bag6 | Carrier Bearing Drop Bag |
| 2 | 660799 | Rear Shocks |
| 2 | 94003314 | Sway Bar Bracket |
| 2 | 94003312 | Front Bump Stop Ext. |
| 1 | 1770bag4 | Sway Bar Bag |
| 2 | 94003342 | 4” Strut Spacers |
| 1 | 3/8studbag | Press In Strut Studs |
| 2 | 94003919 | Rear Shock Brackets |
| 4 | 90900900 | Rear U-bolts |
| 2 | 90909240 | 2” Rear Blocks |
| 2 | 94003319 | Axle Brake Line Bracket |
| 2 | 94058000 | Brake Line Bracket |
| 2 | 94004415 | Front Brake Line Bracket |

# Kit Bags

1746Bag1
- 2-9/16” x 5” bolts
- 2-9/16” nylocks
- 4-9/16” washers
- 2-3/4” x 4.5” bolts
- 2-3/4” nylocks
- 4-3/4” washers

1746Bag2
- 6-bushings
- 3-9/16” x 3/4” x 2.41” Sleeve
- 3-9/16” x 3.5” bolt
- 3-9/16” top lock
- 9-9/16” washer
- 3-14mm x 25mm bolt
- 6-3/8” x 1.25” bolt
- 6-3/8” washer
- 2-10mm nylock
- 2-10mm x 35mm bolt

1746Bag5
- 5-1/4” x 3/4” bolt
- 10-1/4” washer
- 5-1/4” 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

1746Bag6
- 6-carrier bearing shims
- 2-hardened washers
- 2-10mm x 50mm bolts

1746Bag4
- 1-instruction sheet
- 1-warning to driver

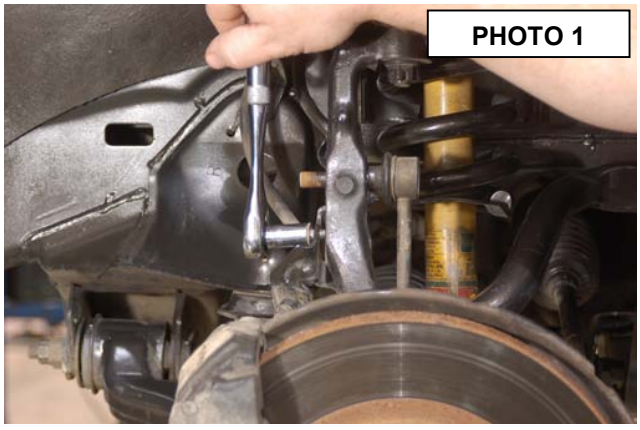
1770Bag9
- 6-3/8” self tapping bolt

9/16Bag
- 8-9/16” nylocks
- 8-9/16” washers

1170Bag4
- 4-5/16” washers
- 4-3/8” nuts
- 4-3/8” lock washers
- 4-3/8” x 1” bolt

## FRONT INSTALLATION

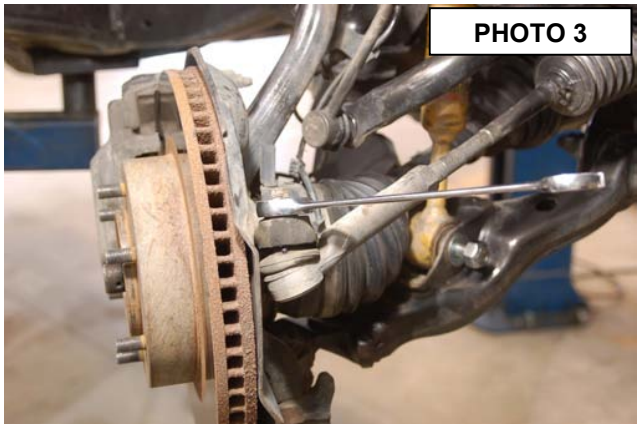
1. Jack up the front of the vehicle and support the vehicle with jack stands, so that the front wheels are off the ground
2. Remove the front tires/wheels. Using a 21mm deep well socket.
3. Remove the factory bolts holding on the skid plate with a 12mm socket and the six bolts holding the two bracket 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.**







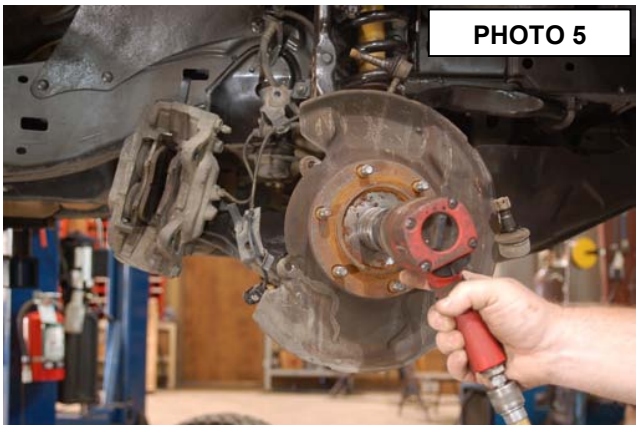
7. Next remove the ABS sensor from the knuckle using a 10mm socket.
8. Remove cotter pin from the outer tie rod end on the steering linkage. Using 19mm socket remove the nut. Using a hammer hit on the side of the cast knuckle to allow the tie rod end to separate from the knuckle. Remove the linkage from 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.**



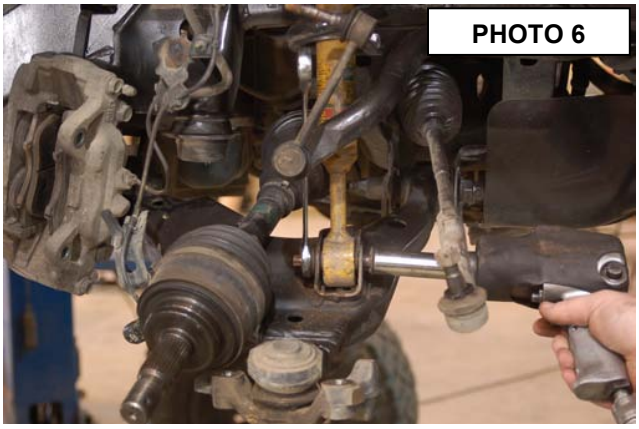


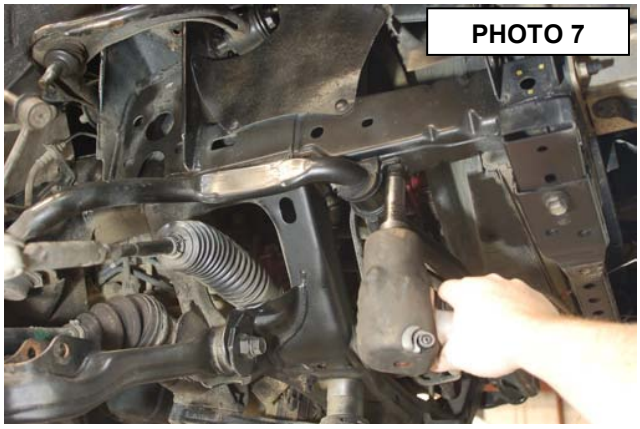


11. **(4WD MODELS ONLY)** Remove the outer dust cap with a small flathead screwdriver and remove the axle nut with a 35mm socket. Retain factory hardware. **See Photo 5.**
12. Using a 17mm wrench loosen the 4 bolts holding the hub to the knuckle.
13. Remove the upper ball joint and the two lower ball 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. Insert the factory hub and dust shield into the Rough Country lifted knuckle and tighten with a 17mm wrench.



16. Place a jack or jack stand below the lower control arm and remove the top three strut nuts with a 14mm wrench.
17. Using a 19mm socket and wrench remove the bolt on the lower strut mount. **See Photo 6.** Remove the strut from the truck and set aside.
18. Next remove the sway bar from the frame using a 14mm socket. **See Photo 7.**



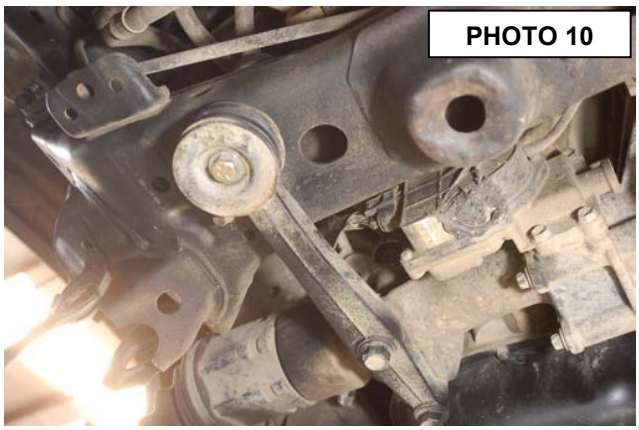

19. Remove the lower control arm with a 19mm socket and wrench. **See Photo 8.**
20. Repeat steps 4-19 on the driver side.
21. **(2WD Models skip to step 26)** Remove the front driveshaft from the diff using a 14mm socket. Retain factory hardware. **See Photo 9.**

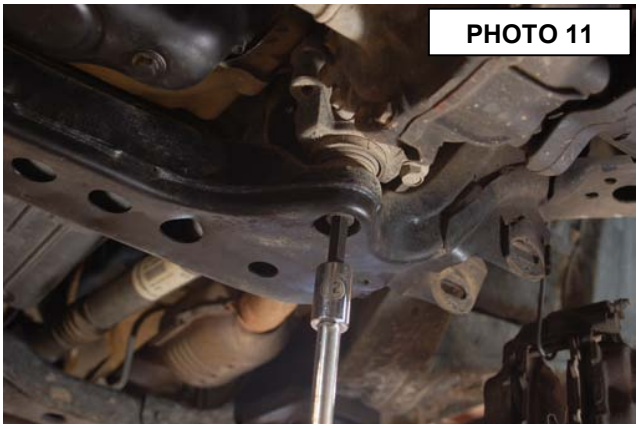






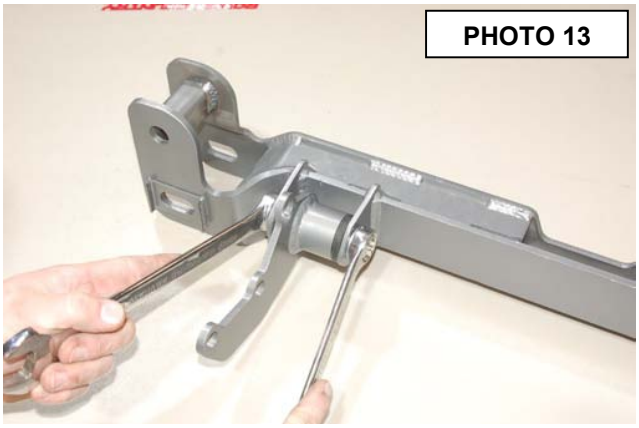
22. Unplug the vent tube and remove the diff actuator using a 12mm socket. Remove the actuator wires from the diff on the passenger side. Unplug and remove the vent tube from the top of the diff using a 12mm socket.
23. Support the diff with a jack, remove the driver and passenger diff bracket using a 22mm socket on the frame side and a 19mm socket on the diff side of the bracket. **See Photo 10.**
24. Using a 12mm Allen socket remove the rear diff mount. **See Photo 11.**
25. Lower the diff on the jack and remove from the truck.



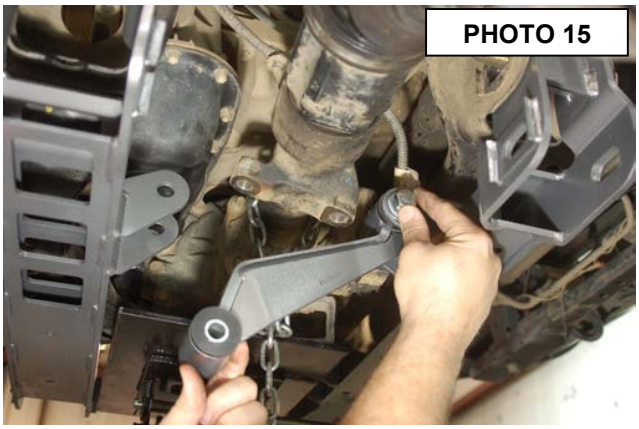
26. Starting from the edge of the cam bolt plate on the back side of the rear cross-member make a mark at 3” and another mark at 12”. This is where the rear cross-member needs to be cut to allow the diff to drop down. **See Photo 12.**
27. Take a reciprocating saw and cut straight through the marks at 3” and 12”.
28. **(2WD Models skip to step 30)** 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 13.**
29. Raise the diff back into the correct location while sitting on the jack.


PHOTO 12


PHOTO 13

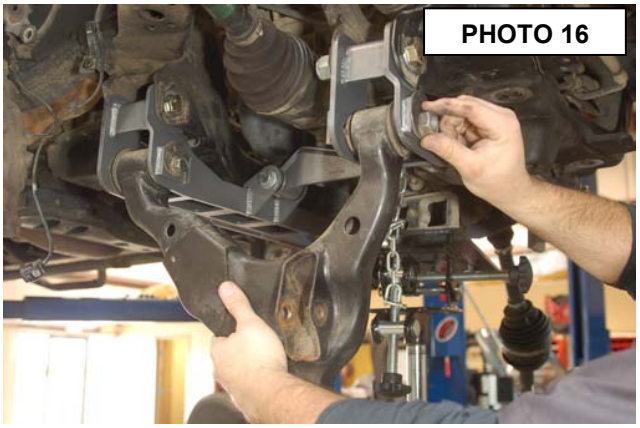
30. Insert the rear cross-member into the frame using the supplied 9/16 x 5” bolts, washers, and locking nut from 1746bag1 on each side. Hand tighten.
31. Insert the front cross-member into the frame using the supplied 3/4 x 4.5” bolts, washers, and locking nut from 1746bag1 on each side. Hand tighten with a 1 1/8” and 1 1/16” wrench. **See Photo 14.**
32. **(2WD Models skip to step 37)** 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.
33. 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.
34. 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.


PHOTO 14

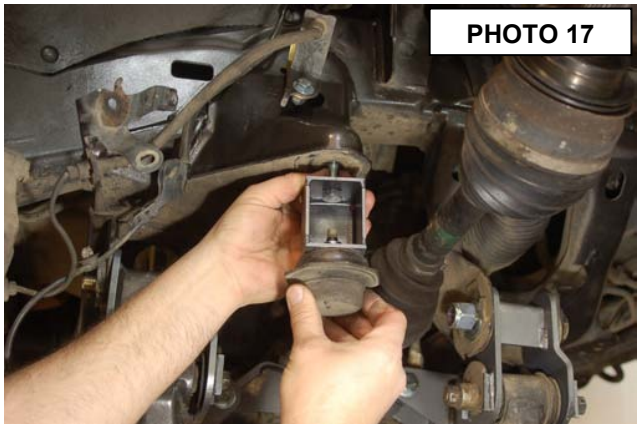

PHOTO 15

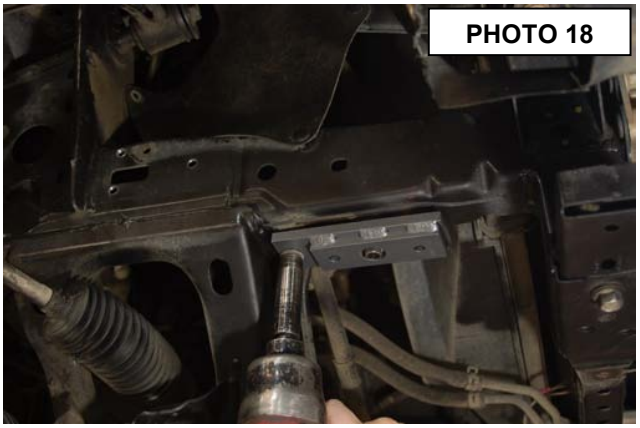
Hand tighten using a 21mm and 22mm socket and wrench. **See Photo 15.**

35. 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.
36. Attach the front driveshaft to the diff using factory hardware and a 14mm socket.
37. 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 16.**
38. **4WD Models** torque all the diff bolts and **2WD/4WD** torque upper cross-member bolts to the correct specs.

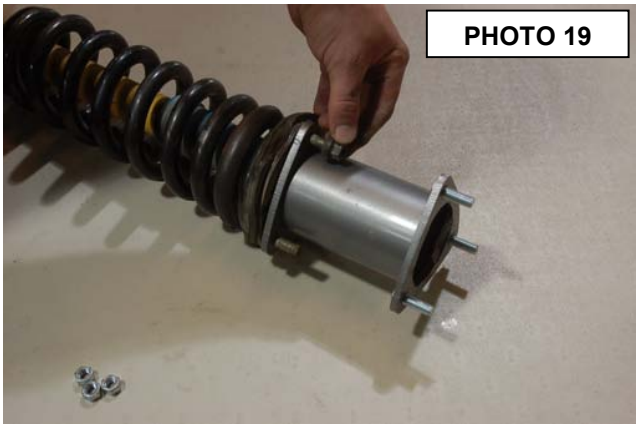

PHOTO 16

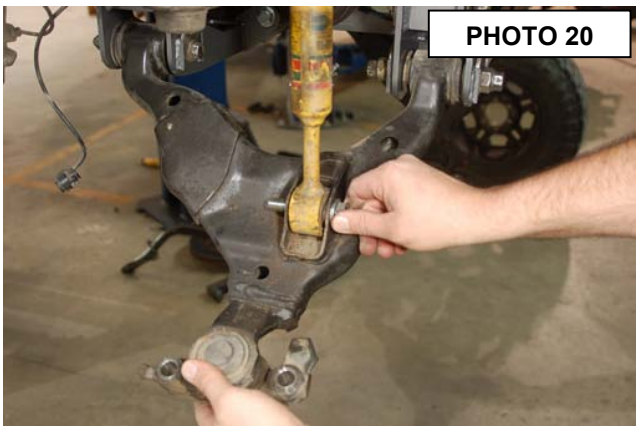
39. Using a 3” adjustable wrench, unscrew the bumpstops from the truck. Using the supplied 10mm x 35mm bolts in 1746bag2 attach the bumpstop extension to the frame. Next using the 10mm locking nuts from 1746bag2 attach the factory bumpstop to the extension. **See Photo 17**. Tighten both bolts using a 17mm wrench.
40. Locate the sway bar relocation brackets and insert two of the 3/8” nuts from 1770bag4 on the back side of the bracket. Mount to the frame using factory hardware with offset forward. **See Photo 18.** Tighten with a 14mm socket.



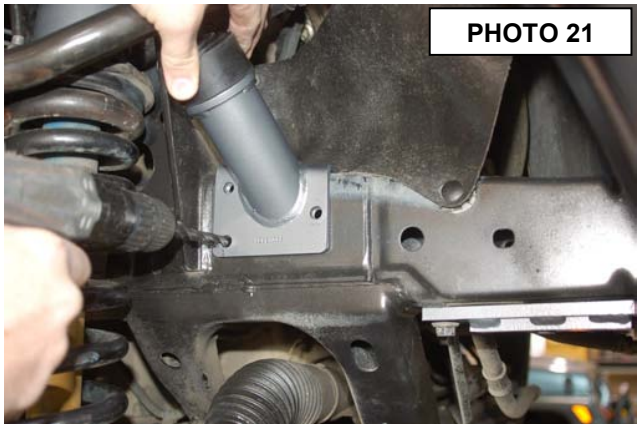




41. Using the supplied 3/8 stud bag, place each stud in the smaller hole end of the strut spacer facing up. Use a washer and nut and a 9/16 socket to pull each stud into place. Slide the strut spacer over the factory strut bolts and tighten using a 14mm wrench and factory hardware. **See Photo 19.**
42. Place the strut assembly into the strut tower and secure with the 3/8 nuts and washers from 1770bag4. Tighten with a 9/16 wrench.
43. Attach the lower strut mount to the lower control arm using 19mm socket and wrench. **See Photo 20.**



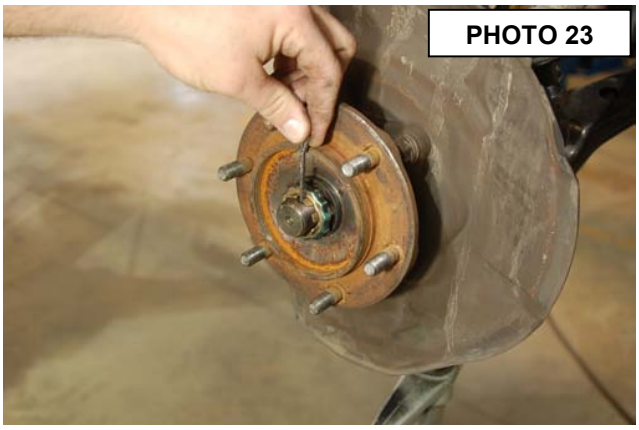




44. Locate the supplied bump stops and bump stop brackets, screw the bump stop down tight and place the bracket on the frame rail as shown in **Photo 21.** Use a 11/32” drill bit and the bump stop bracket as a drill guide and drill the three holes in the frame. Use the self-tapping 3/8” x 1” bolts in 1770bag9 to secure bracket to the frame.
45. After sliding the steering stop bracket over the front lower ball joint bolt reinstall the new knuckle to the lower control arm. **(4WD Models)** Slide the CV shaft through the bearing hub before tightening the bolts. Tighten with a 19mm wrench. **2WD/4WD** Pull down the upper ball joint and secure with factory nut. **See Photo 22.**





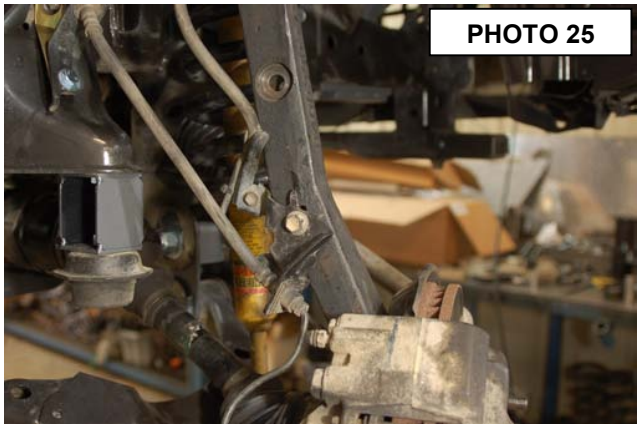

46. **(4WD Only)** Install factory axle nut and tighten with a 35mm socket. Push in the factory cotter pin to secure nut. **See Photo 23.**
47. Using a 12mm wrench install the new brake line bracket to the frame using stock hardware. Use the supplied 5/16" bolts, washers, and nuts from 1746bag5 to bolt the factory bracket to the new drop bracket. Tighten with a 13mm

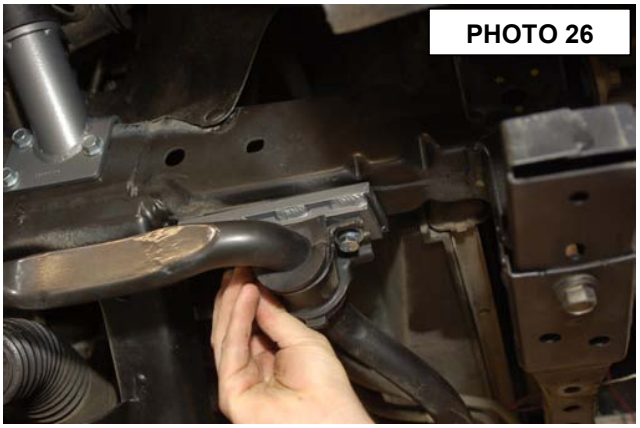




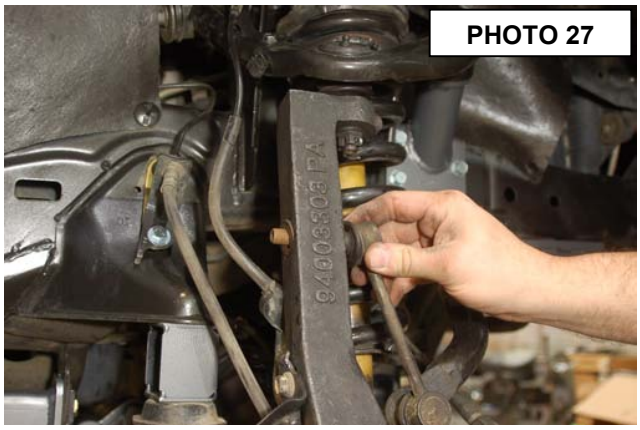


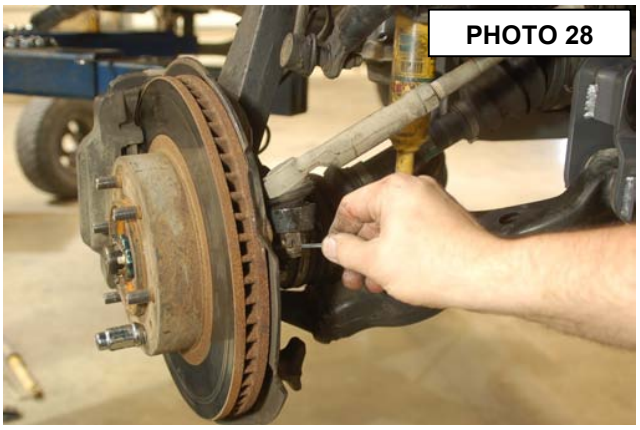
socket and wrench. **See Photo 24**.
48. Push on the dust cap over the axle nut and slide on the brake rotor. Using factory hardware and a 17mm wrench install the brake caliper to the new knuckle.
49. Using a 5mm Allen wrench install the ABS sensor to the new knuckle with factory hardware.
50. Reinstall the ABS bracket to the knuckle using factory hardware and a 12mm socket.
51. Install the brake line bracket to the new knuckle using a 12mm socket. **See Photo 25.**
52. 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 26.**




53. Insert the sway bar link through the new knuckle and secure using factory hardware. Tighten with a 14mm socket. **See Photo 27.**
54. Insert the tie rod end into the knuckle using factory hardware. Tighten with a 19mm wrench. Reinstall the factory cotter pin. **See Photo 28.**



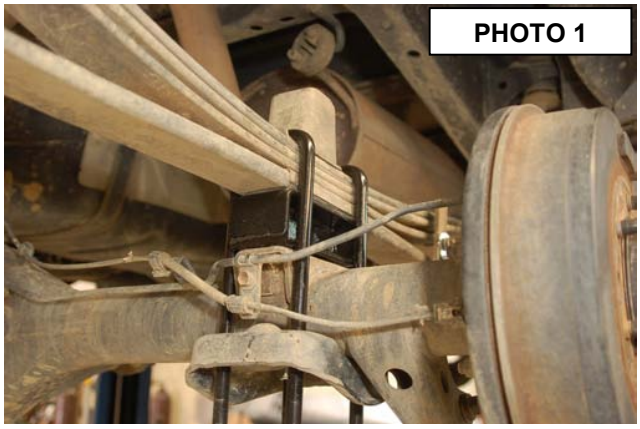
55. Repeat steps 39-54 on the driver side of the truck.
56. Align the front skid plate with the two passenger side bolt holes on the bottom of the front cross-member and insert two of the 3/8” x 1.25” bolts and washers from 1746bag2. Hand tighten. **See Photo 29.** Use the factory hardware on the top of the skid plate and tighten with a 17mm socket.
57. 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 30.**
58. Install tires and wheels and set the truck on the ground. Using a 19mm wrench tighten the lower control arm cam bolts.

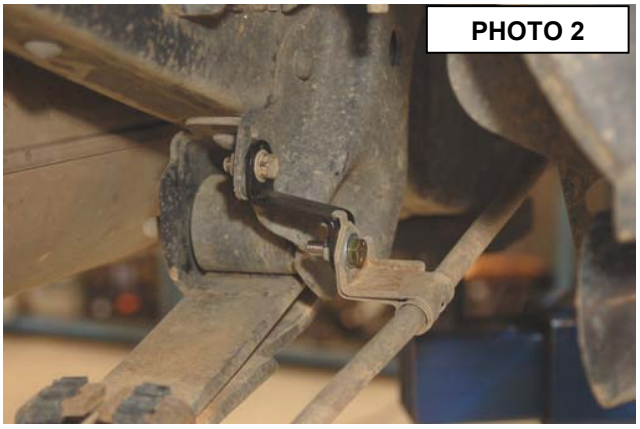




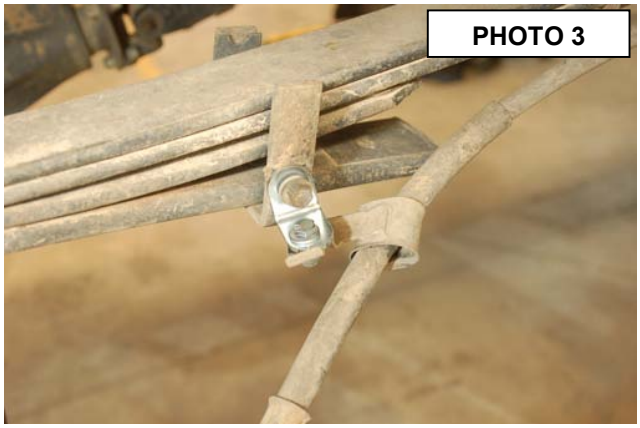

## REAR INSTALLATION

1. Jack up the rear of the vehicle and support the vehicle with jack stands, so that the rear tires are off the ground
2. Remove the rear tires/wheels. Using a 21mm deep well socket.
3. Using a 17mm socket and wrench remove the rear shocks. Retain the lower shock hardware for reuse.
4. Using a 12mm socket remove all brake line and e-brake brackets.
5. Using a 19mm socket remove the rear u-bolts.
6. Lower the rear axle down to allow for clearance for the 2” rear block to be installed.
7. Install the rear block between the leaf spring and the spring perch on the axle. Make sure the block is setting flat on the spring perch and leaf spring. **See Photo 1.**
8. Raise axle back up and install new u-bolts using a 22mm socket. Tighten u-bolts in an x pattern. Torque u-bolts to 75-90 ft. lbs.
9. Install the bushings and cup washers from 8127bag1 on the stem. Install the shock in factory location. Use stock hardware for the lower mount and new hardware provided for the upper mount. Tighten using a 17mm wrench for the lower mount and a 15mm wrench for the upper.
10. Install the e-brake bracket as shown in **Photo 2** to the hanger mount with a factory hardware. Use the supplied 3/8” x 1” bolts, washers, and nuts to attach the factory mount to the new bracket.




11. Install the small 90 degree e-brake bracket and factory hardware on the spring clip. **See Photo 3.** Use the supplied 1/4” bolts, washers, and locking nuts to attach the factory mount to the new bracket.



12. On the driver side of the rear axle bolt the rear brake extension bracket to the axle using factory hardware and a 12mm wrench. Attach the factory bracket to the new extension bracket using the supplied 1/4” bolts, washers, and locking nuts. Tighten with a 11mm socket and wrench. **See Photo 5.**
13. Bolt the two flat brake line brackets to the axle as shown in **Photo 5** with factory hardware. Tighten with a 12mm socket. Use the supplied 1/4” bolts, washers, and locking nuts to attach the brake line the new brackets. Tighten with a 11mm socket and wrench.
14. Loosen the two bolts holding the carrier bearing and then remove one side using a 17mm socket. Slide 3 of the shim plates between the frame and carrier bearing on one side. Insert the supplied 10mm x 50mm bolt and washer from 1746bag6 and hand tighten. Remove the factory bolt from the other side and slide 3 shim between the frame and carrier bearing. Insert the other supplied 10mm x 50mm bolt and washer and tighten both bolts with a 17mm socket. **See Photo 6.** The number of shim plate can be adjusted if the rear drive shaft has vibration during acceleration.


**PHOTO 5**


**PHOTO 6**

15. Reinstall wheels and tires using a 21mm deep well socket.
16. 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.




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