

# ROUGH COUNTRY

## SUSPENSION SYSTEMS®

### GMC 2019-23 1500 AT4 Leveling 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 parts list on this 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.

This suspension system was developed using a 285/55R20, tire with factory 20" wheels. **Note** if wider tires are used, offset wheels will be required and trimming will be required.

#### ⚠ NOTICE

If equipped the electric power steering must be unplugged before any of the steering components are removed. Failure to do so may cause damage to the electric power steering.

If you have any questions concerning the design, function, and correct use of our products please contact us at 800-222-7023.

#### ⚠ 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.

#### Torque Specs:

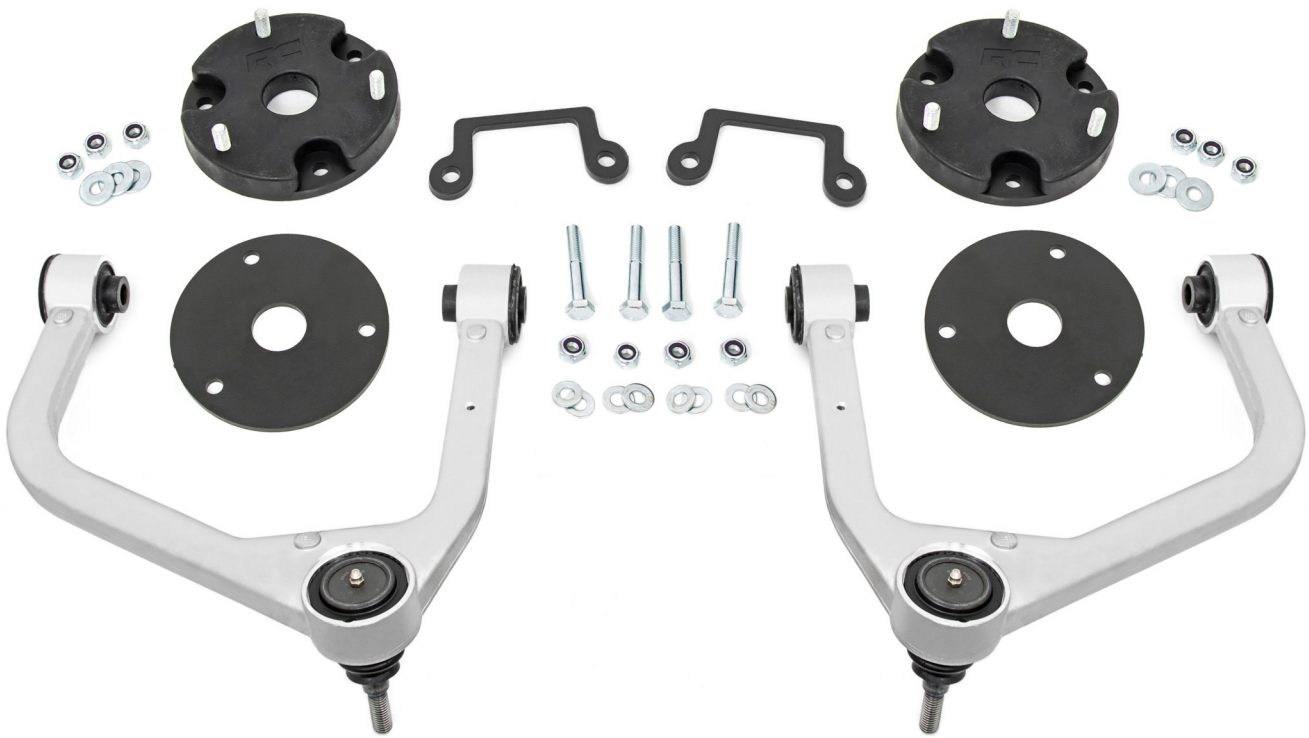
| Size  | Grade 5   | Grade 8   | Size | Class 8.8 | Class 10.9 |
|-------|-----------|-----------|------|-----------|------------|
| 5/16" | 15 ft/lbs | 20ft/lbs  | 6MM  | 5ft/lbs   | 9ft/lbs    |
| 3/8"  | 30 ft/lbs | 35ft/lbs  | 8MM  | 18ft/lbs  | 23ft/lbs   |
| 7/16" | 45 ft/lbs | 60ft/lbs  | 10MM | 32ft/lbs  | 45ft/lbs   |
| 1/2"  | 65 ft/lbs | 90ft/lbs  | 12MM | 55ft/lbs  | 75ft/lbs   |
| 9/16" | 95 ft/lbs | 130ft/lbs | 14MM | 85ft/lbs  | 120ft/lbs  |
| 5/8"  | 135ft/lbs | 175ft/lbs | 16MM | 130ft/lbs | 165ft/lbs  |
| 3/4"  | 185ft/lbs | 280ft/lbs | 18MM | 170ft/lbs | 240ft/lbs  |



**KIT CONTENTS:**  
Upper Strut Spacers x2  
Bolt Retaining Plate x2  
Lower Strut Spacers x2  
Dr Side Upper Control Arm x1  
Pass Side Upper Control Arm x1

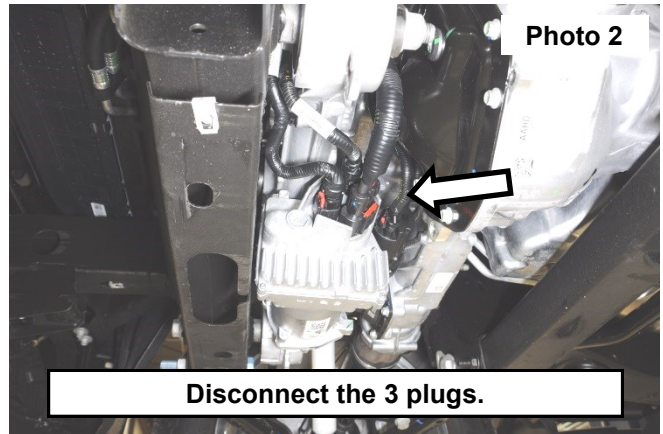
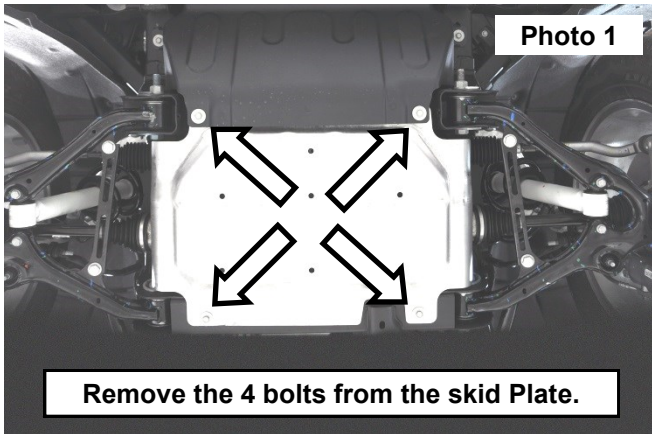
**TOOLS NEEDED:**  
10mm Wrench or Socket  
13mm Socket  
15mm Wrench or Socket  
17mm Socket  
18mm Socket  
21mm Socket  
36mm Socket  
Paint Pen  
Strut Compressor  
Cut Off Wheel  
Tape Measure

**HARDWARE INCLUDED:**  
10mm-1.5 x 40mm Hex Head Bolt x6  
10mm-1.50 x 65mm Hex Head Bolt x4  
10mm Flat Washers x18  
10mm Nylock Nuts x16

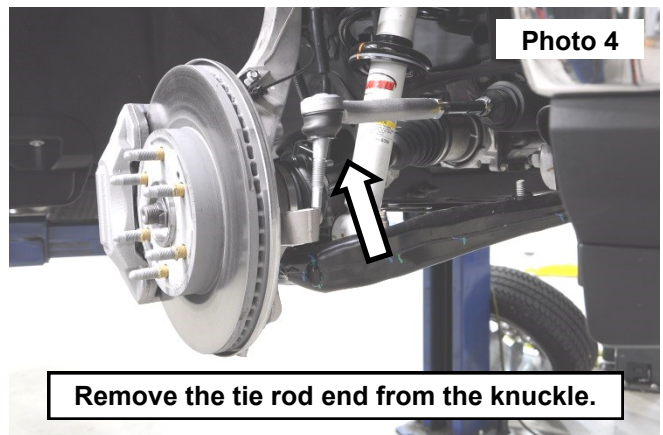
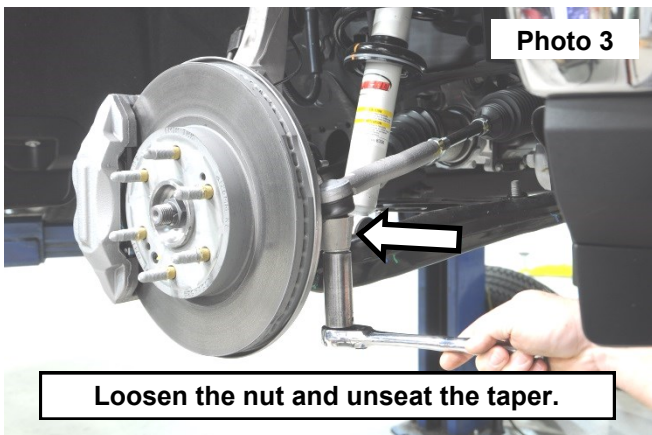


## INSTALLATION INSTRUCTONS

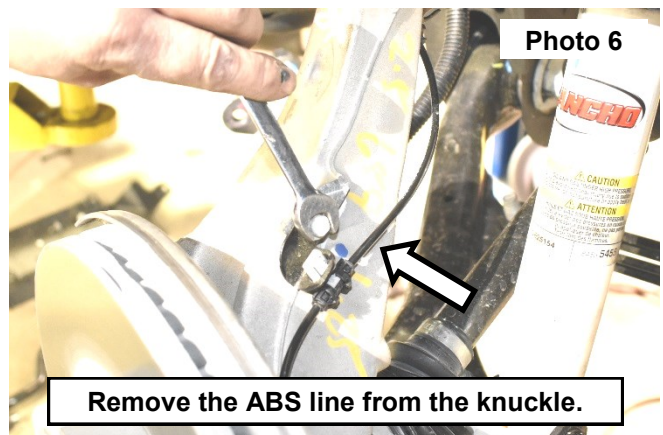
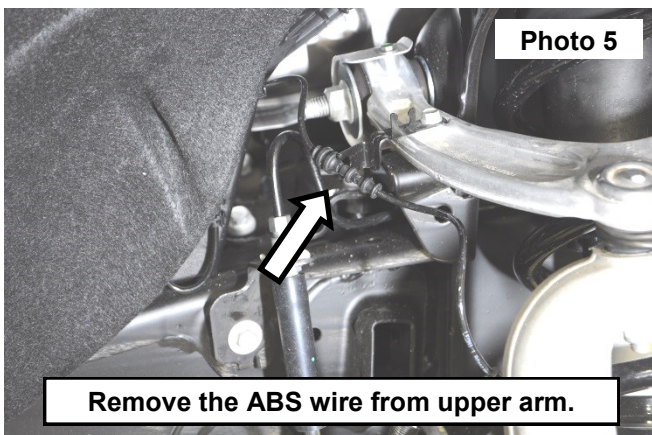
1. Place vehicle in park and chock the rear wheels. Raise the front of the vehicle with a jack and secure a jack stand beneath each frame rail behind the front control arms. Ease the frame down onto the stands.
2. Remove the front tires/and wheels using a 21mm deep well socket.
3. Remove the 4 bolts and remove the skid plate, set aside. Use a 13mm socket. **See Photo 1.** Retain hardware for reuse.
4. Disconnect the 3 plugs at the power steering rack. **See Photo 2.**



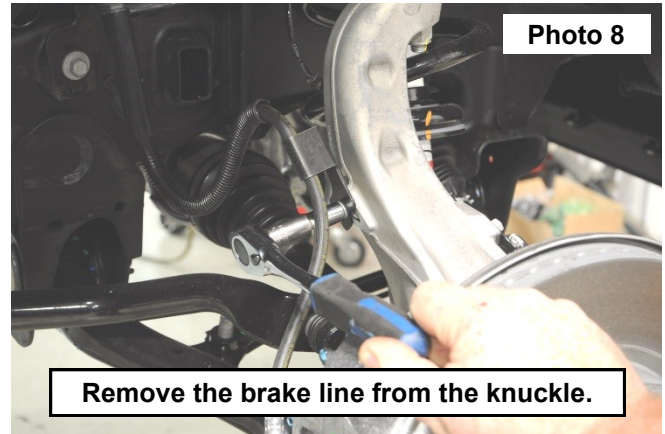
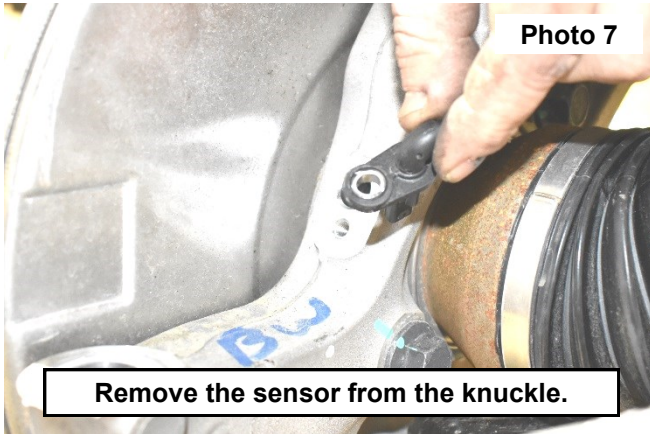
5. Loosen the tie rod end nut using a 21mm socket. Use a hammer to unseat the taper by striking only the front of the knuckle. **See Photo 3.**
6. Remove the nut and the tie rod end from the knuckle. **See Photo 4.**



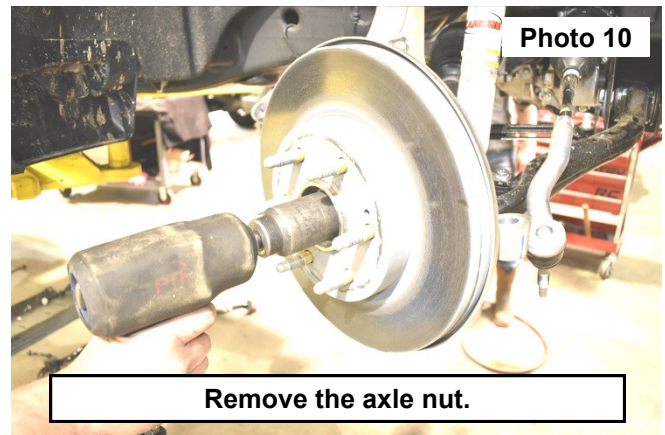
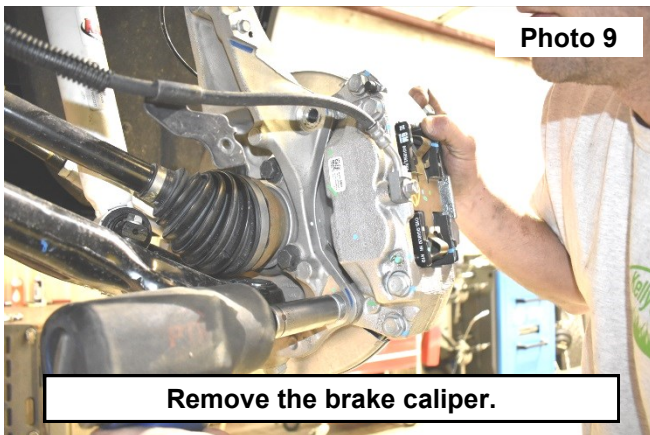
7. Remove the ABS line from the mount on the arm. **See Photo 5.**
8. Remove the ABS line from the knuckle using a 10mm wrench. Retain hard ware for reuse. **See Photo 6.**



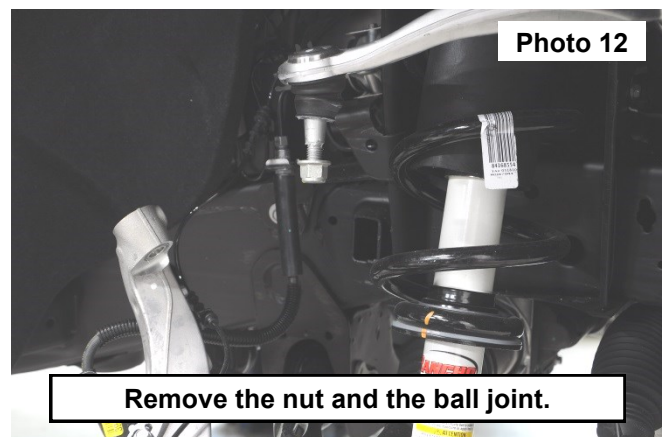
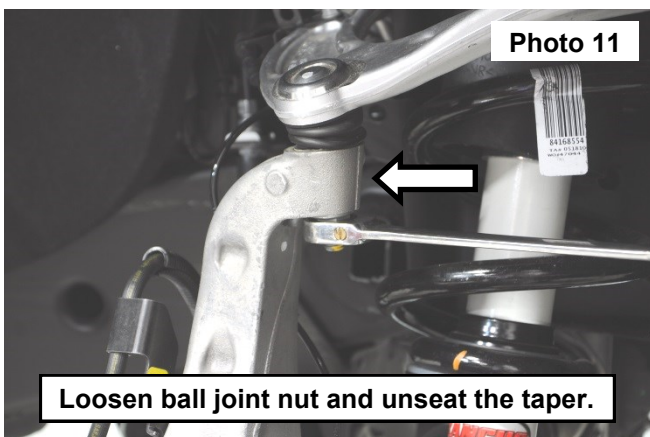
9. Remove the ABS sensor from the knuckle using a 10mm wrench. Retain hardware for reuse. **See Photo 7.**
10. Remove the brake line from the knuckle using a 10mm socket. Retain hardware for reuse. **See Photo 8.**



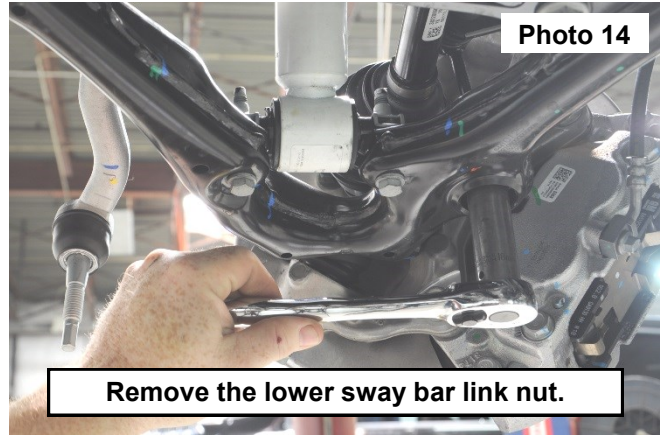
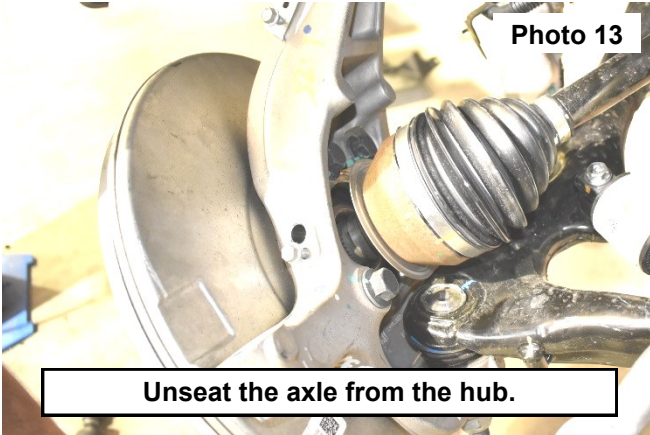
11. Remove the brake caliper using a 18mm socket. Retain the bolts for reuse. **See Photo 9.** Hang caliper out of harms way. Do not hang by the brake line.
12. Remove the axle nut using a 36mm socket. Retain nut for reuse. **See Photo 10.**



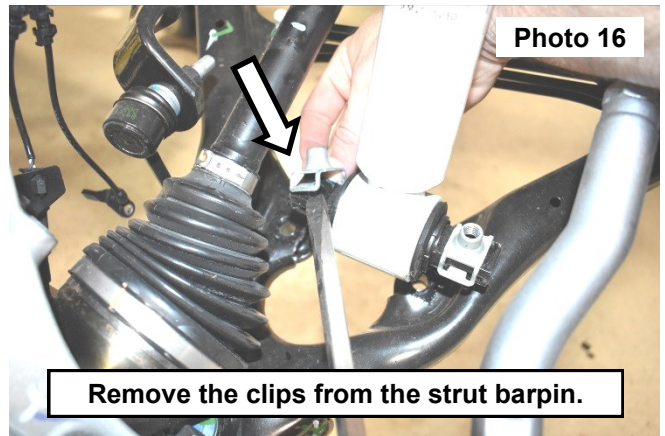
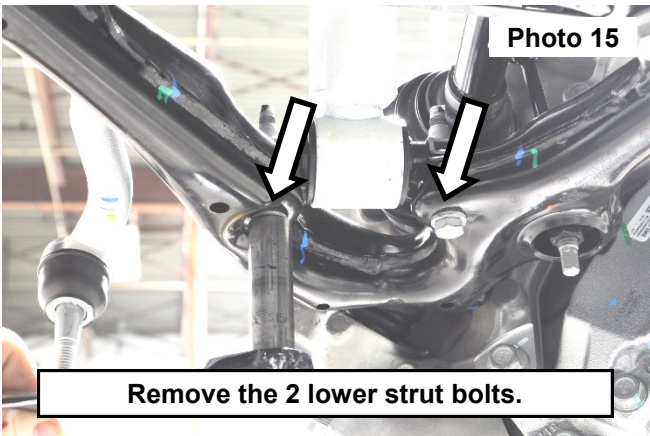
13. Loosen the upper ball joint nut using a 18mm socket. Use a hammer to unseat the taper by striking only the front of the knuckle. **See Photo 11.**
14. Support the lower control arm then remove the nut then remove the upper ball joint from the knuckle. **See Photo 12.**



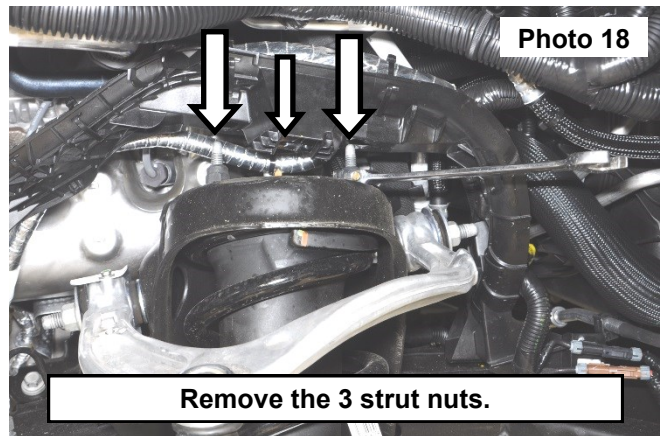
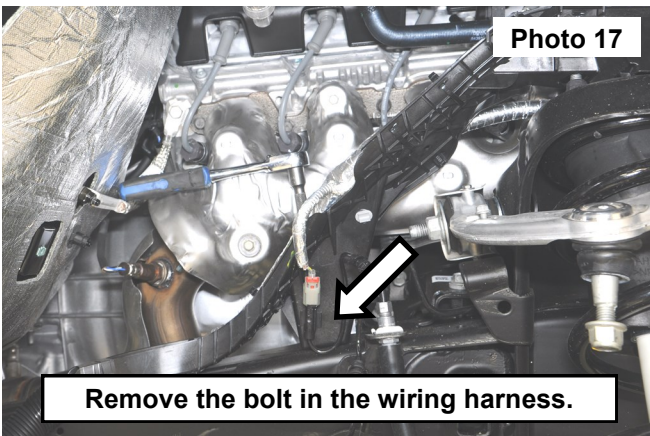
15. Unseat the axle from the hub when leaning the knuckle back. Take care not to over extend or damage the axle or the axle boot. **See Photo 13.**
16. Using an 18mm socket remove the nut from the lower sway bar link nut. **See Photo 14.**



17. Remove the 2 lower strut bolts using a 15mm socket. **See Photo 15.**
18. Using a small pry bar remove the clips from the lower strut barpin. **See Photo 16.**

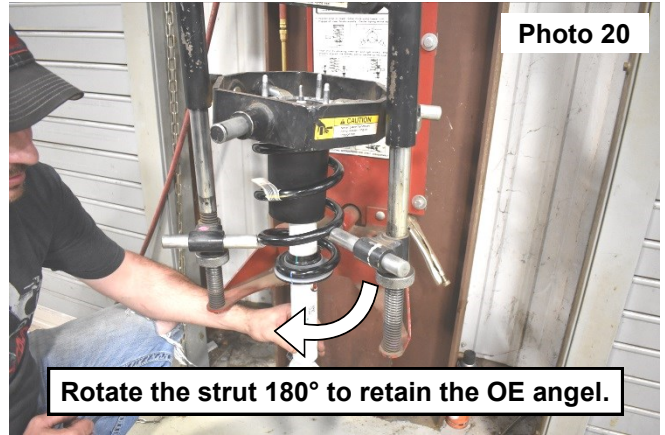
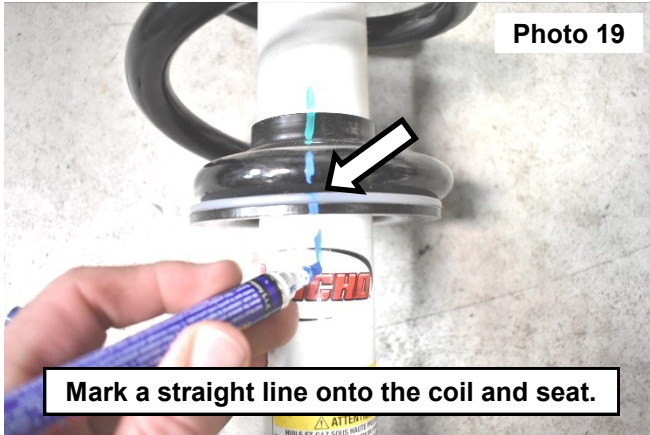


19. (Shown with the inner liner removed) Using a 10mm socket remove the bolt securing the wiring harness to the frame. **See Photo 17.**
20. Remove the 3 nuts from the top of the strut using an 18mm wrench then remove the strut. **See Photo 18.**



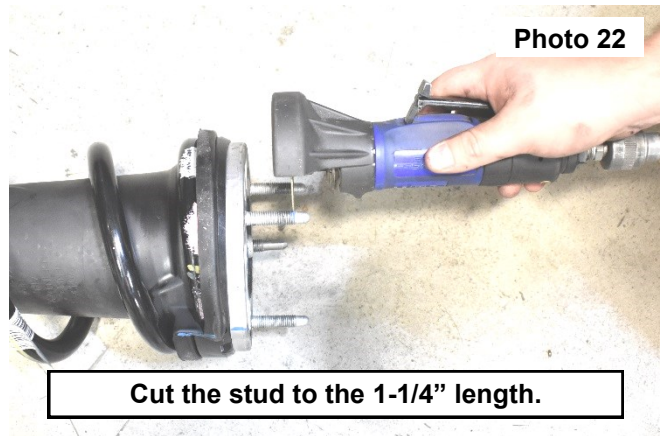
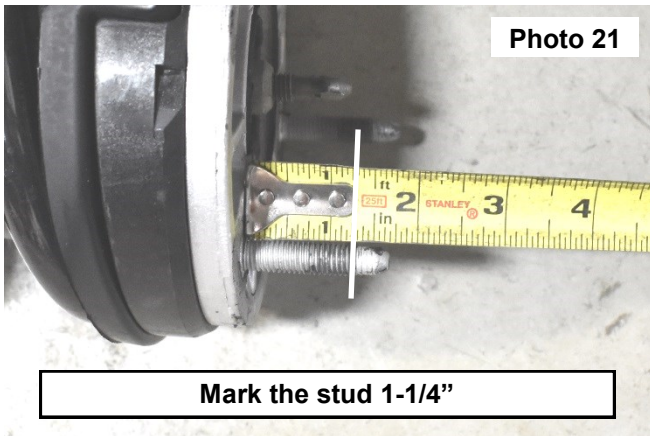
21. Mark the strut at the coil and the coil spring seat. **See Photo 19.**

22. Place the strut in a spring compressor to rotate the strut 180° to retain the OE bargin angle. **See Photo 20.**



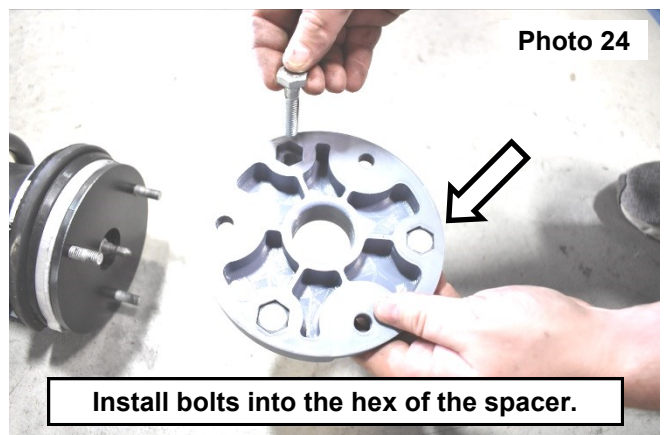
23. Mark the (3) studs on the top of the strut to 1-1/4". **See Photo 21.**

24. Use a cut off wheel to cut the top of the 3 studs off. **See Photo 22.**



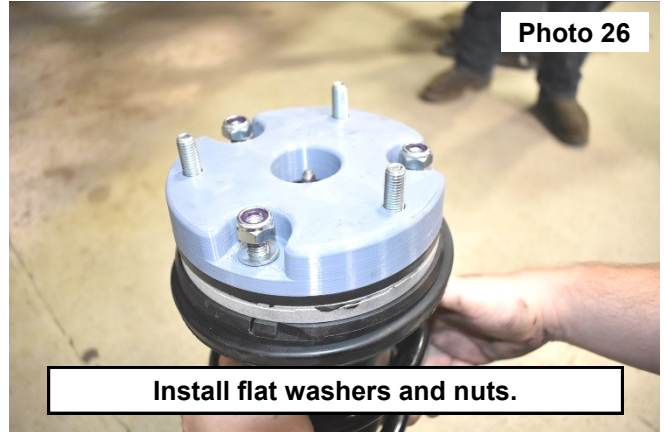
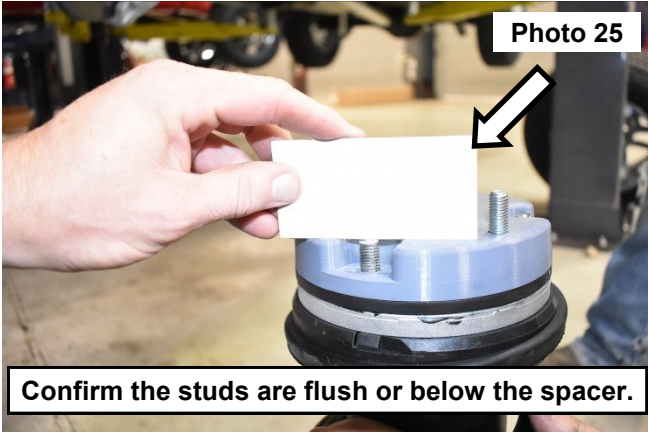
25. Install the cover plate onto the top of the strut. **See Photo 23.**

26. Install (3) of the supplied 10mm-1.50 x 40mm Hex Head Bolts into the bottom of the strut spacer. Seat the bolt head into the hex of the spacer. **See Photo 24.**



27. Use a straight edge to confirm that the studs are flush or just below the top of the spacer installed onto the strut. **See Photo 25.**

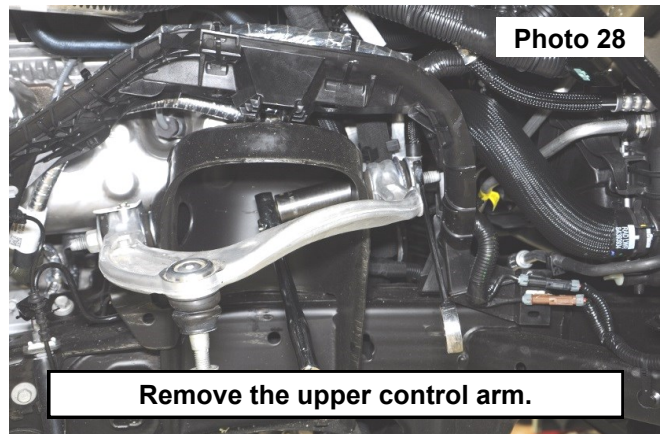
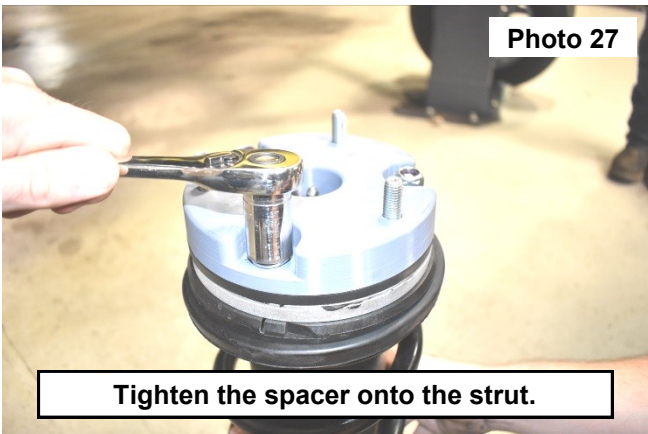
28. Secure the strut spacer using (3) of the supplied 10mm flat washers and (3) 10mm-1.50 nylock nuts. **See Photo 26.**



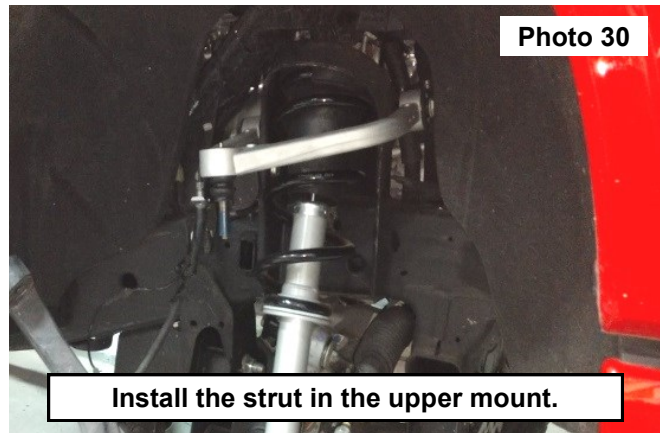
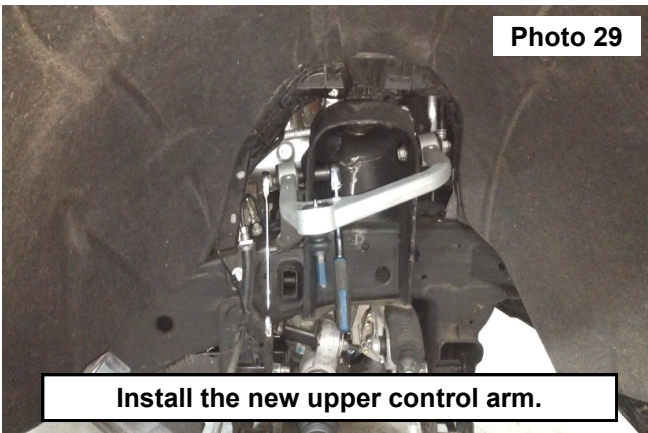
29. Tighten the upper strut nuts using a 17mm socket. **See Photo 27.**

30. Remove the upper control arm using a two 21mm socket/wrenches. **See Photo 28.**

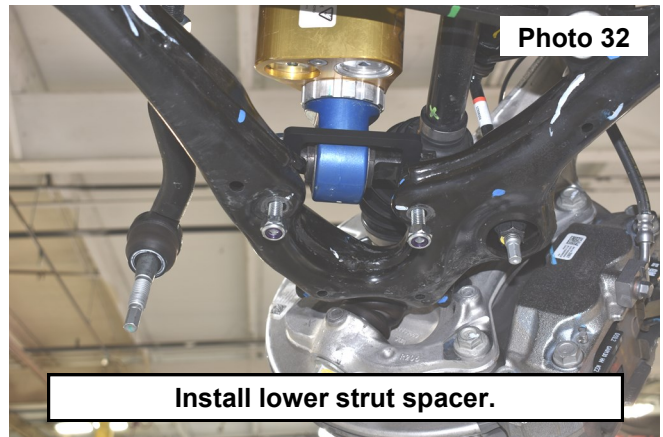
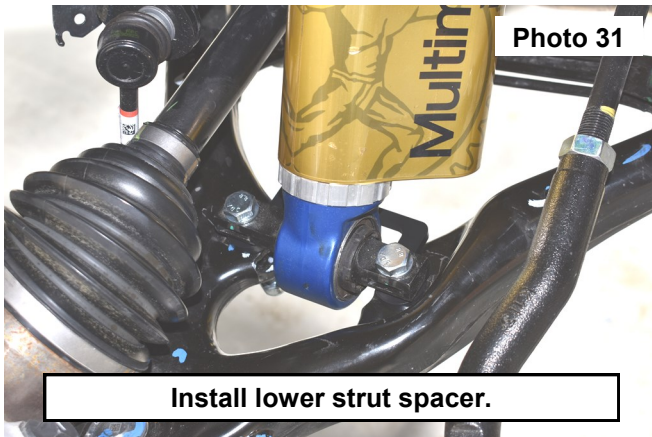
31. Install the new upper control arm using the stock hardware. **See Photo 29.**



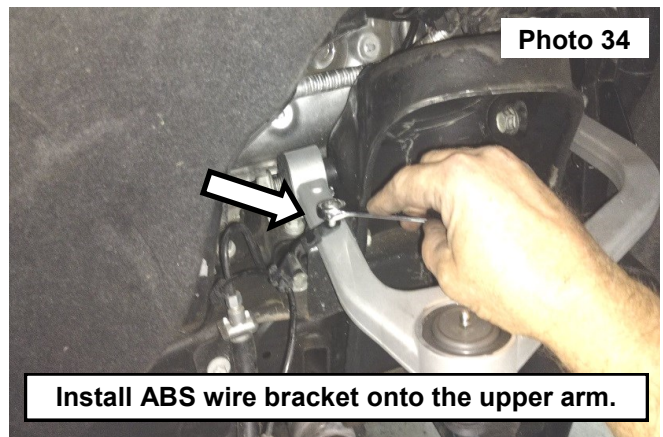
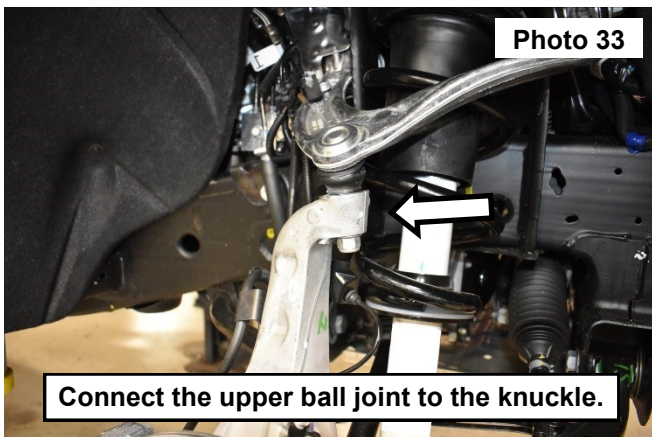
32. Install the strut into the upper mount of the vehicle and secure using (3) of the supplied 10mm flat washers and (3) 10mm-1.50 nylock nuts. **See Photo 30.** Do not tighten at this time.



33. Secure the lower strut using the supplied 10mm x 65mm bolts, flat washers, and nuts using a 17mm socket/wrench. **See Photos 31 and 32. NOTE: The AT4x strut is shown in the photos.**



34. Seat the axle in the hub. Then connect the upper ball joint to the knuckle, tighten using a 18mm. **See Photo 33.**  
35. Install the ABS wire bracket on top of the upper control arm. **See Photo 34.**



36. Reinstall the remainder of the components in reverse order of tear down.  
37. Install the front tires/and wheels using a 21mm deep well socket.  
38. Raise the front of the vehicle with a jack and remove the jack stand remove the wheel chocks.

By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable, State, and Local laws and regulations regarding the purchase, ownership, and use of the item. It shall be the buyers responsibility to comply with all Federal, State and Local laws governing the sales of any items listed, illustrated or sold. The buyer expressly agrees to indemnify and hold harmless Rough Country, LLC for all claims resulting directly or indirectly from the purchase, ownership, or use of the items.

