TRAIL FORTRESS

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Rough Country 1301 Installation Instructions

1.5-Inch Leveling Kit for Silverado 1500 ZR2 and Sierra AT4X

Part number: 1301

trailfortress.com/1-5-inch-leveling-kit-silverado-1500-zr2-and-sierra-at4x-rough-country-1301

Scan for fitment, price and install help



GMC 2022 AT4X Front 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 295/60/20, 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:
Strut Preload Spacers x 2
Upper Strut Spacers x2
Lower Strut Spacers x 2

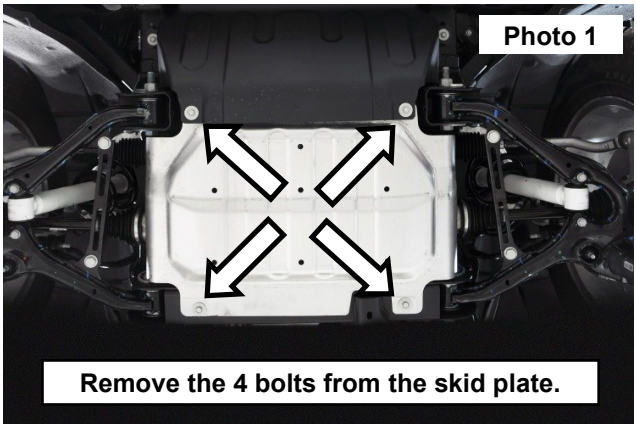
HARDWARE INCLUDED:
10mm-1.5 x 70mm Bolts x 4
10mm Flat Washers x 8
10mm-1.5 Lock Nuts x 4

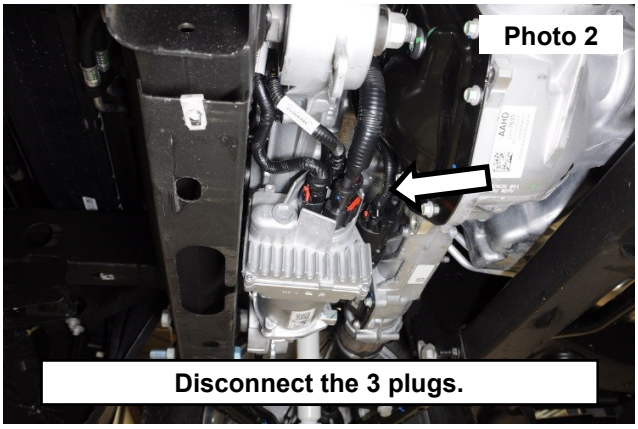


TOOLS NEEDED:
Spring compressor
hammer
Small pry bar
10mm socket and wrench
13mm socket
17mm socket and wrench
18mm socket
21mm socket
36mm socket

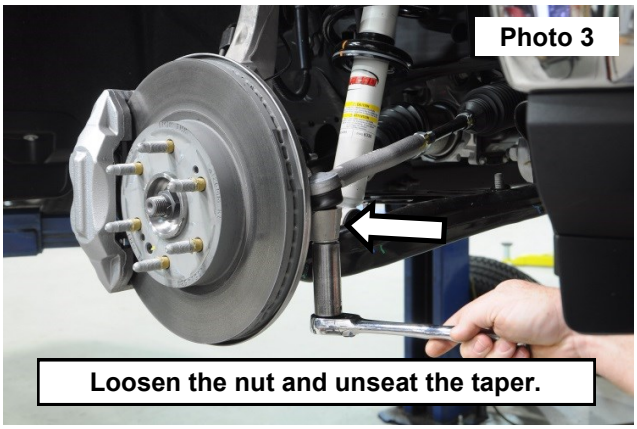
INSTALLATION INSTRUCTONS

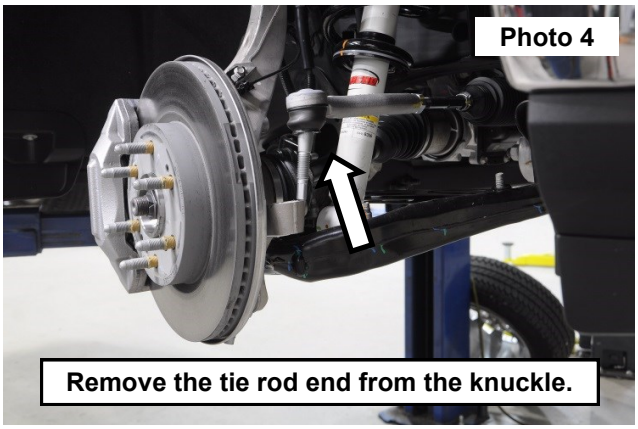
1. Place vehicle in park and chock the rear wheels. Raise the front of the vehicle with a jack and secure a jack stand beneath each frame rail behind the front control arms. Ease the frame down onto the stands.
2. Remove the front tires/and wheels using a 21mm deep well socket.
3. Remove the 4 bolts 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.**



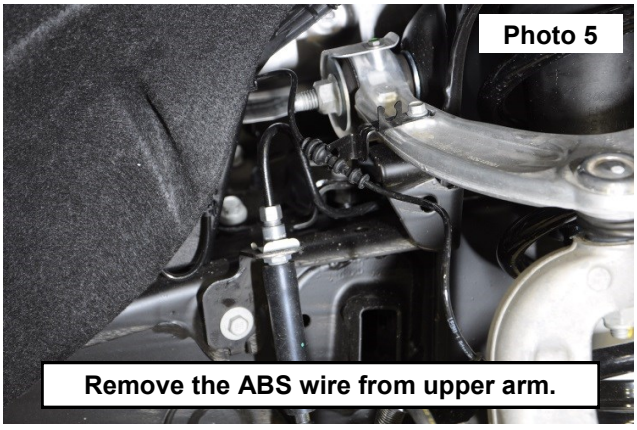


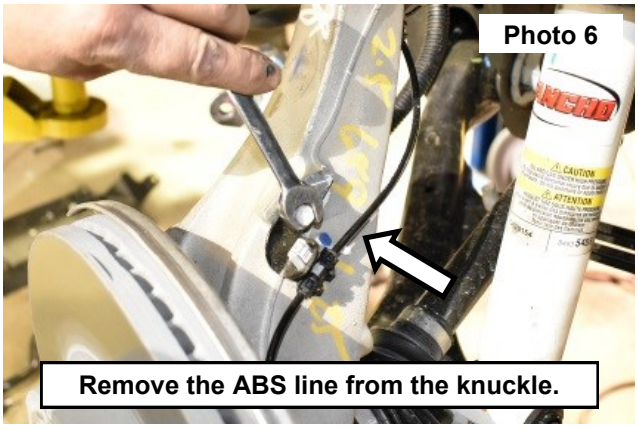
5. Loosen the tie rod end nut using a 21mm socket. Use a hammer to unseat the taper by striking only the front of the knuckle. **See Photo 3.**
6. Remove the nut and the tie rod end from the knuckle. **See Photo 4.**



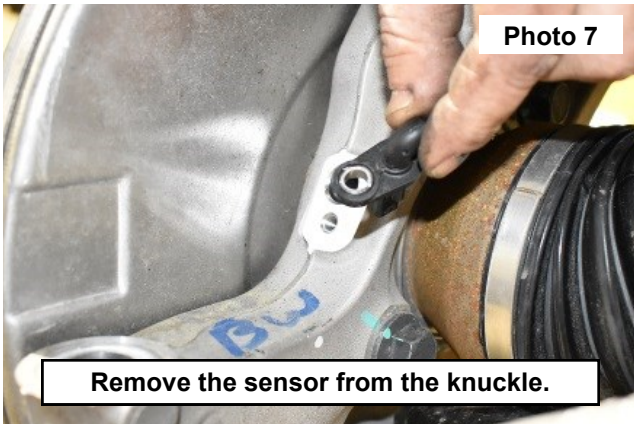


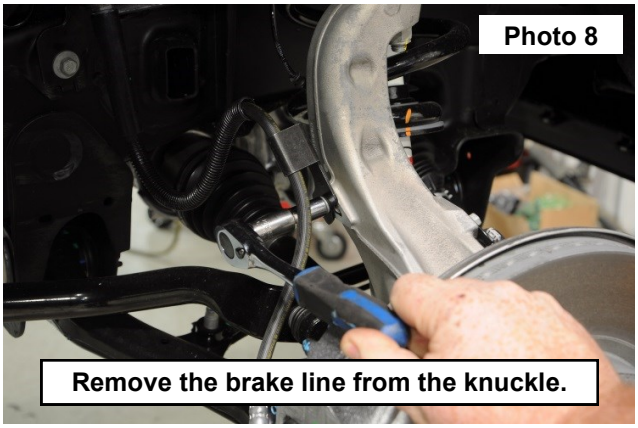
7. Remove the ABS line from the mount on the knuckle. **See Photo 5.**
8. Remove the ABS line from the knuckle using a 10mm wrench. Retain hard ware for reuse. **See Photo 6.**





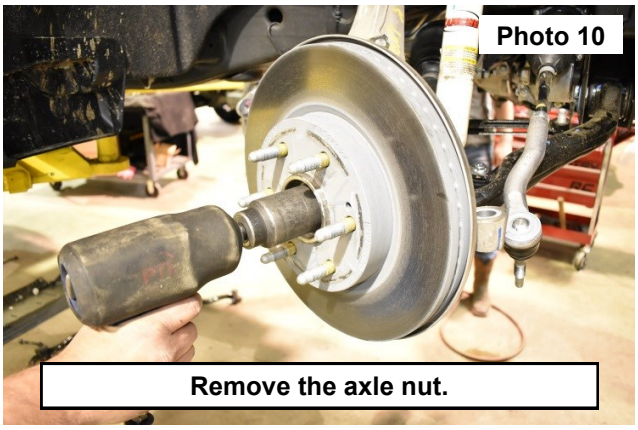
9. Remove the ABS sensor from the knuckle using a 10mm wrench. Retain hard ware for reuse. **See Photo 7.**
10. Remove the brake line from the knuckle using a 10mm socket. Retain hardware for reuse. **See Photo 8.**



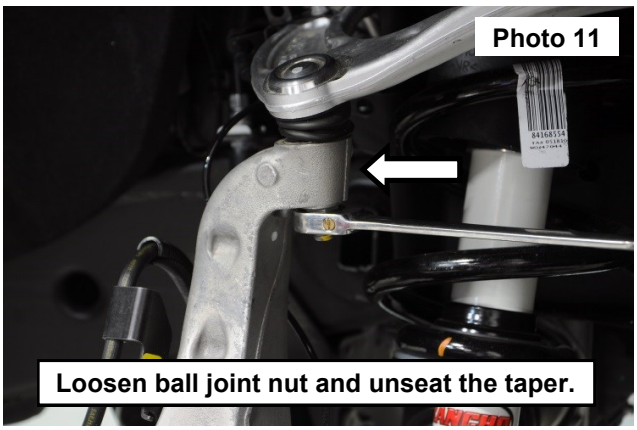


11. Remove the brake caliper using a 18mm socket. Retain the bolts for reuse. **See Photo 9.** Hang caliper by a steel hook.
12. Remove the axle nut using a 36mm socket. Retain nut for reuse. **See Photo 10.**



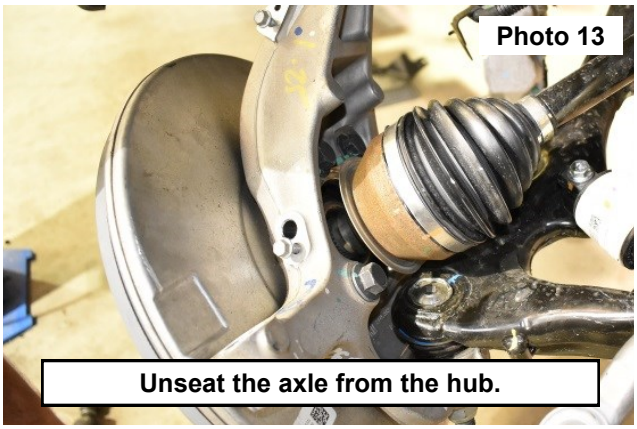


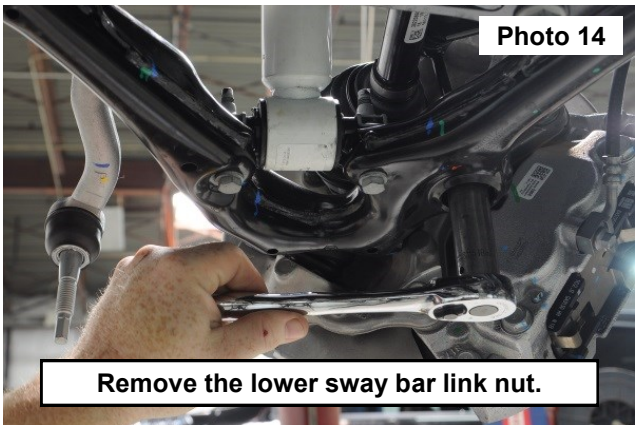
13. Loosen the upper ball joint nut using a 18mm socket. Use a hammer to unseat the taper by striking only the front of the knuckle. **See Photo 11.**
14. Remove the nut then remove the upper ball joint from the knuckle. **See Photo 12.**



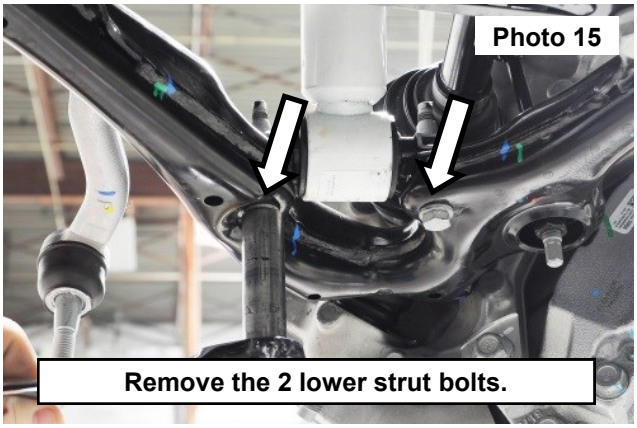


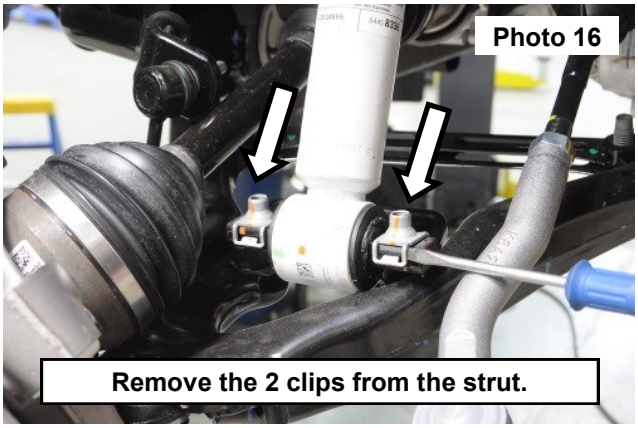
15. Unseat the axle from the hub when leaning the knuckle back. Take care not to damage the axle or the axle boot. **See Photo 13.**
16. Using an 18mm socket remove the nut from the lower sway bar link nut. **See Photo 14.**



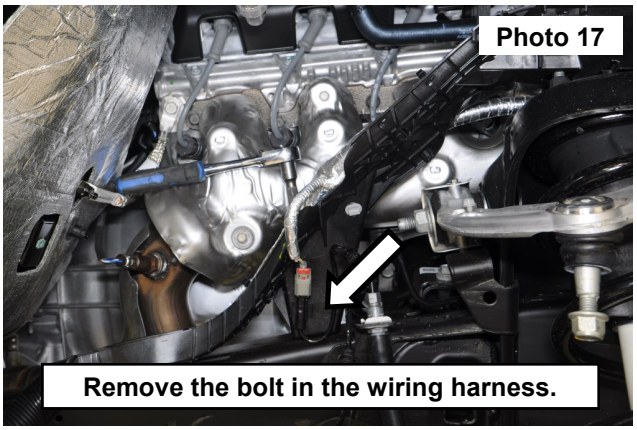


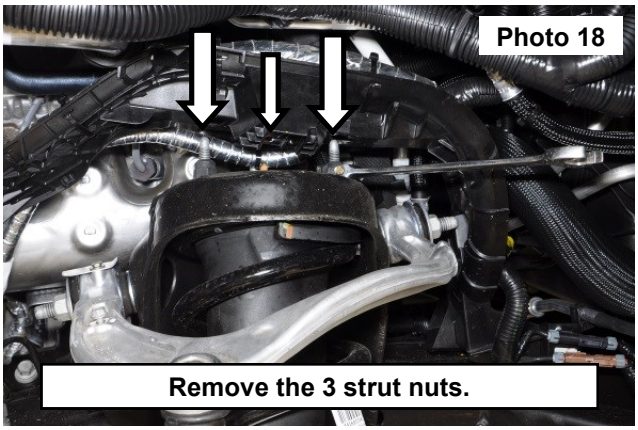
17. Remove the 2 lower strut bolts using a 15mm socket. See Photo 15.
18. Using a small pry bar remove the 2 clips from the lower strut. See Photo 16.



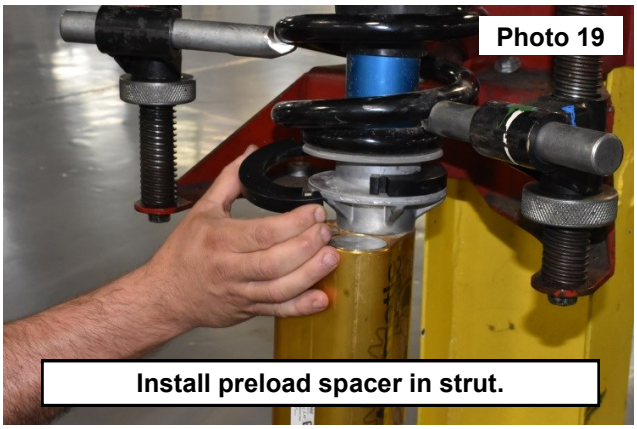


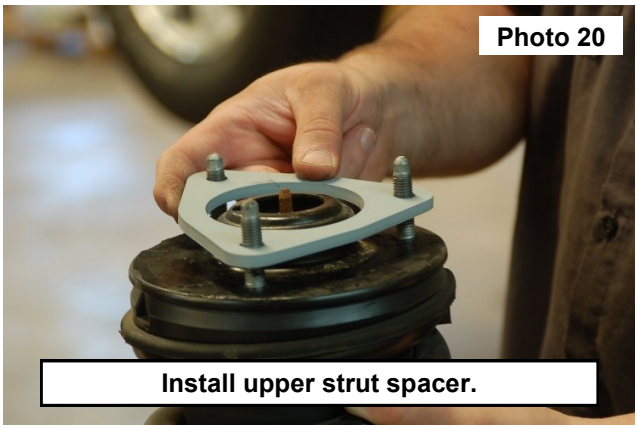
19. (Shown with the inner liner removed) Using a 10mm socket remove the bolt securing the wiring harness to the frame. **See Photo 17.**
20. Remove the 3 nuts from the top of the strut using an 18mm wrench then remove the strut. **See Photo 18.**



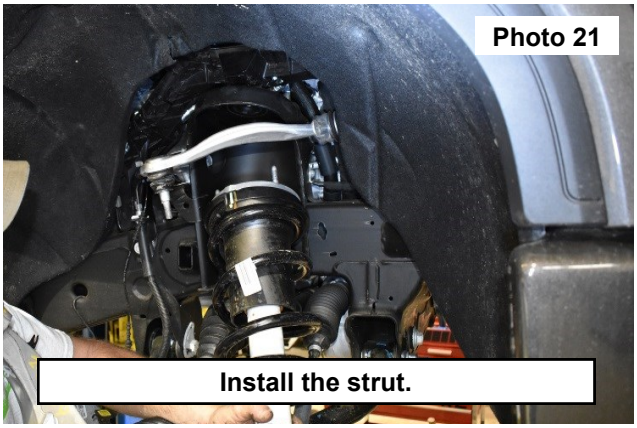


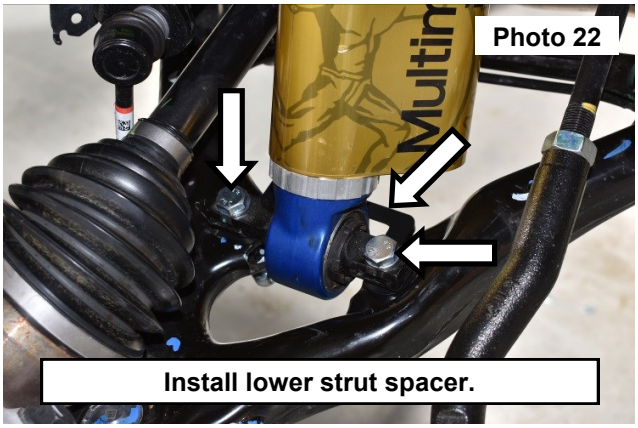
21. Place the strut in a spring compressor and compress enough to install the 2-piece preload spacer. **See Photo 19.**
22. Remove the strut from the spring compressor and make sure preload spacer is fully seated.
23. Install the triangular upper strut spacer on the top of the strut. **See Photo 20**.



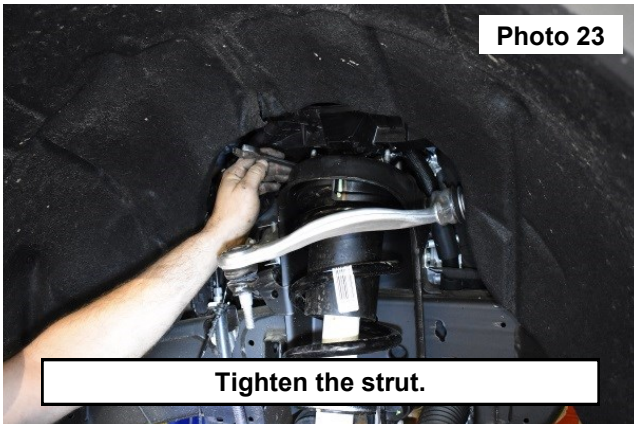


24. Install the strut assembly using the 3 retained nuts to hang the strut into the vehicle. Hand tighten. **See Photo 21.**
25. Install the U-shaped lower strut spacers in between the lower control arm and the lower strut mount. Use 2 of the supplied 10mm-1.5 x 70mm hex head bolts, (4) 10mm flat washers and (2) 10mm-1.5mm nylock nuts through the strut, strut spacers and the lower control arm. Torque to 32ft-lbs. using a 17mm socket and wrench. **See Photo 22.**
26. Torque the upper strut to 32 ft-lbs. using a 18mm socket. Install the wiring harness over the strut secure with the re-



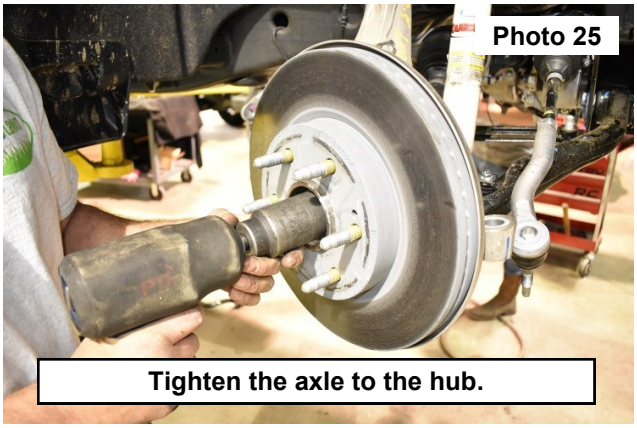


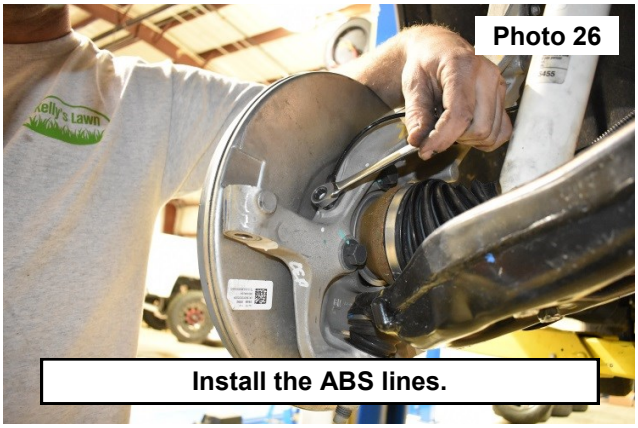
tained bolt tighten using a 13mm socket. **See Photo 23.**
27. Rise the knuckle up, sliding the axle back into the hub. Install the upper ball joint into the knuckle. Torque the upper ball joint to 40 ft-lbs. using a 18mm socket. **See Photo 24.**
28. Install the retained axle nut. Torque to 156 ft-lbs. using a 36mm socket. **See Photo 25.**

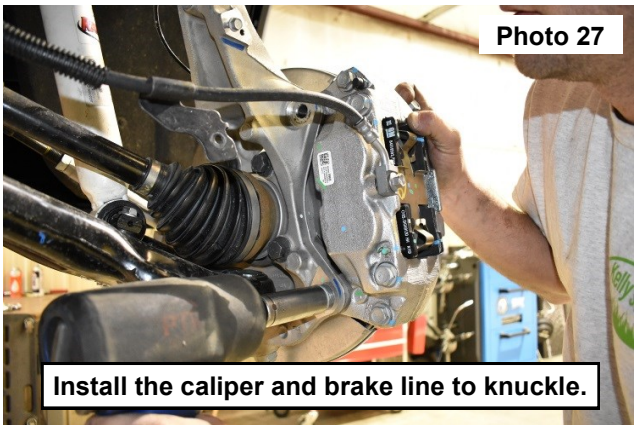


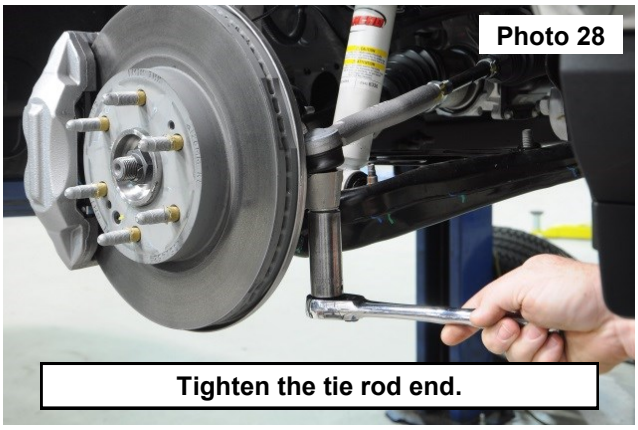


29. Install the ABS sensors into the knuckle and upper control arm using the retained bolts. Tighten using a 10mm wrench. **See Photo 26.**
30. Install the brake caliper onto the rotor secure using the retained bolts. Torque the caliper bolts to 130 ft-lbs. using an 18mm socket. Install the brake line onto the knuckle using the retained bolt. Tighten using a 10mm wrench. **See Photo 27.**
31. Install the tie rod end and the retained nut onto the knuckle. Torque to 32 ft-lbs. using an 21mm socket. **See Photo 28.**
32. Reinstall the wheels and lower.









⚠WARNING Take caution when installing the wheels, making sure they completely clear the brake caliper. Any pressure on the brake caliper from the wheel will cause an error in the brake system. The braking system will not function properly. The vehicle will have to be reset by a GM dealership.

POST INSTALLATION INSTRUCTIONS

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure.
3. On some vehicles the front lower skirting will need to be trimmed if using certain wheel /tire combinations and with heavy offset wheels. Trim only as needed.
4. Activate four wheel drive system and check front hubs for engagement.
5. Have a qualified alignment center align the vehicle immediately. Realign to factory specifications. The following are the recommended specifications:

Caster in degrees	4.0 +-1.0
Camber in degrees	-.4 +-.8
Toe In in degrees	0.1 +-.2

6. Perform head light check and adjustment to proper settings.
7. Check and retighten wheels at 50 miles and again at 500 miles.
8. All kit components must be retightened at 500 miles and then every three thousand miles after installation. Periodically check all hardware for tightness.
9. Install “Warning to Driver” decal on sun visor

Note: Installation of larger tires will require speedometer recalibration.

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