TRAIL FORTRESS

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Rough Country 50100 Installation Instructions

2.5-Inch Leveling Kit for 2019–2024 Ford Ranger

Part number: 50100

trailfortress.com/2-5-inch-leveling-kit-ford-ranger-rough-country-50100

Scan for fitment, price and install help

ROUGH COUNTRY SUSPENSION SYSTEMS®

FORD 2019-2023 Ranger 2.5 Leveling 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 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. 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 The taller a vehicle is, the easier it will roll. We strongly recommend, because of rollover possibility that seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

⚠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.

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 them concerning the design, function, and correct use of our products.

This 2.5” suspension system was developed using a 265/70R17, 255/75R17 or 265/65R18 tire on factory wheels. Aftermarket wheels must have a minimum of 93.1mm center bore, and maximum 6.5” back spacing. Wheels with less than 6.5” backspacing may require slight trimming. 9” wide wheels will require trimming. Due to manufacturing, dimension variances, and inflation, all tire and wheel combinations should be tested prior to installation on all oversized / wider then stock tires.

⚠NOTICE **Vehicles will require the EPAS (Electronic Power Assist Steering) plugs to be disconnected prior to beginning installation of this kit. See installation instructions. Failure to disconnect these plugs may result in damage to the EPAS module resulting in an error message being displayed, which will require replacement of the EPAS module**

⚠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.

TOOLS NEEDED:
8mm Wrench and Socket
10mm socket
15mm Socket
18mm wrench and socket
19mm Socket
3/4 Wrench
Ratchet
Hammer
Wheel chocks

KIT CONTENTS:
2-Front Strut Extensions

HARDWARE INCLUDED:
10mm bolt bag
6-10mm Bolts
6-10mm Lock Washers

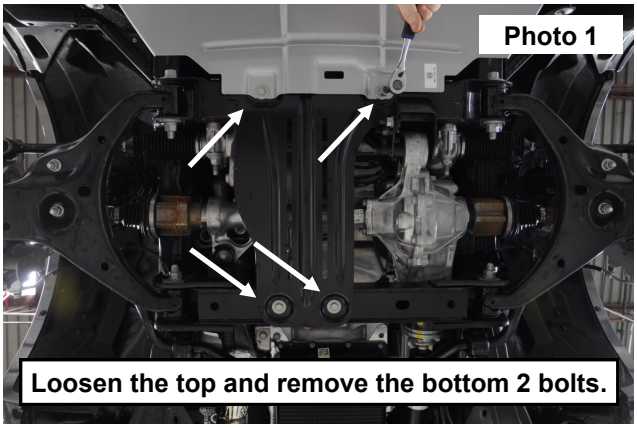


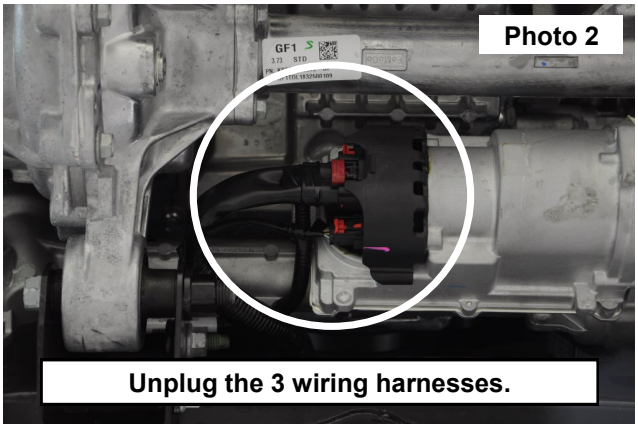
Torque Specs:

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

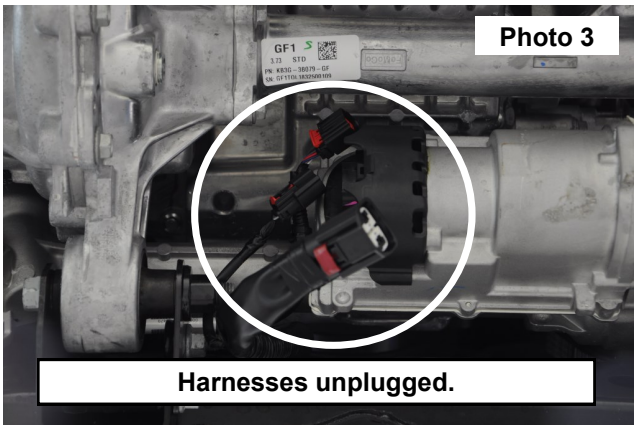
INSTALLATION INSTRUCTONS

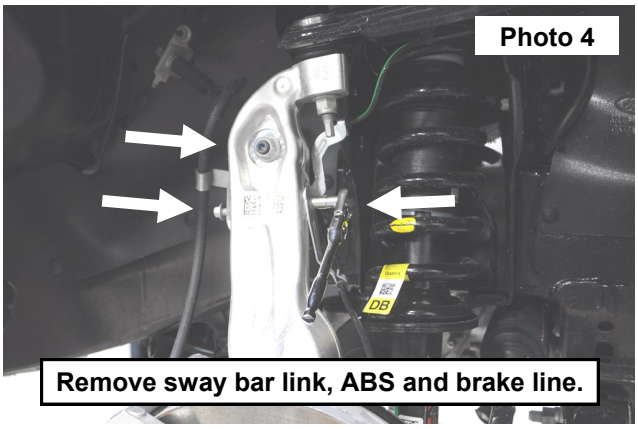
1. Chock the rear wheels and jack up the front of the vehicle.
2. Place jack stands under the frame rails and lower onto jack stands.
3. Remove the wheels/tires using a 19mm socket.
4. Loosen the front 2 skid plate bolts, remove the rear 2 bolts this will allow you to slide the skid plate back and remove, use a 15mm socket. set aside the bolts and skid plate for reuse. **See Photo 1.**
5. Remove the (3) EPAS (Electronic Power Assist Steering) Plugs as shown located on the steering assembly by the front differential. **See Photo 2 & 3. <u>This must be done BEFORE installation is started.</u>**



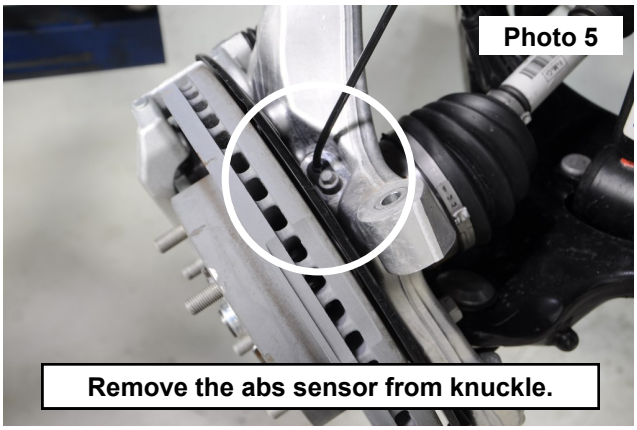


6. Disconnect the sway bar link from the knuckle, use an 18mm to remove the nut. Retain hardware for reuse.
7. Remove the ABS wire bracket from the front side of the knuckle, use a 8mm socket, remove the brake line bracket from the back side of the knuckle, use a 10mm socket. Retain hardware for reuse. **See Photo 4 for Step 6 and 7.**



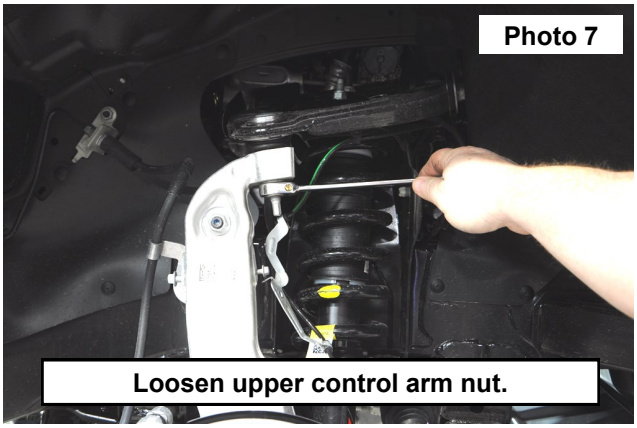


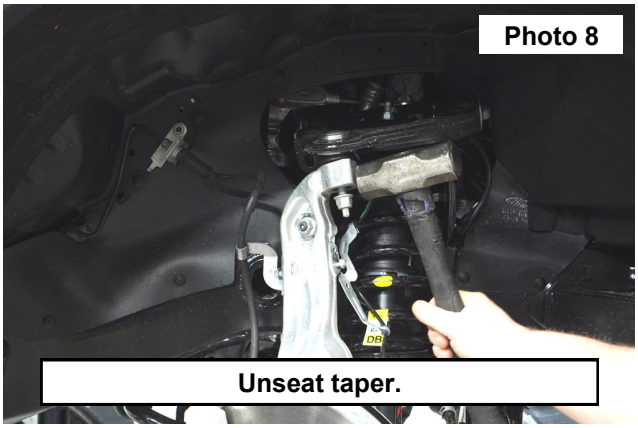
8. Remove ABS sensor from the top of the knuckle, use a 8mm socket. **See Photo 5.**
9. Loosen the nut on the tie rod end, using a 15mm socket, use a hammer to unseat the taper, striking the end of the knuckle, finish removing the nut. **See Photo 6.**





10. Loosen the nut on the upper control arm, using a 18mm wrench. **See Photo 7.**
11. Unseat the taper between the upper ball joint and the knuckle, strike the front of the knuckle using a hammer to release the taper, remove the ball joint nut. **See Photo 8.** Retain hardware for reuse.
12. Let the knuckle relax back. **Do not let the CV shaft pull out.**



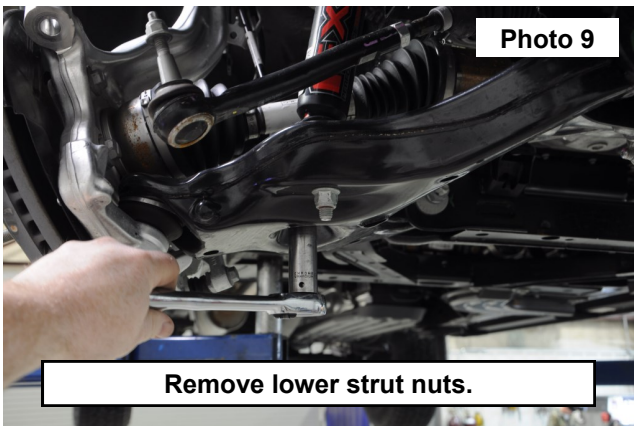


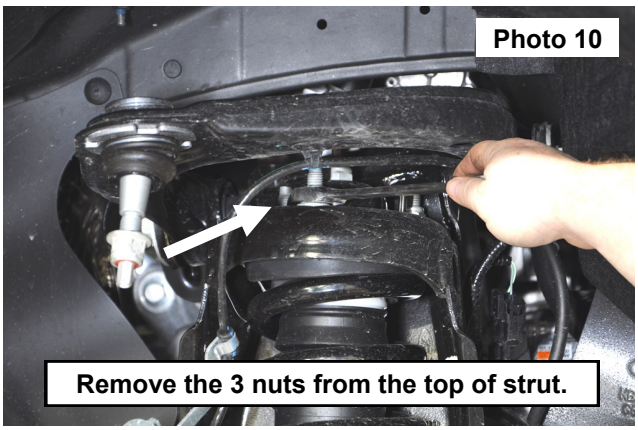
13. Remove the 2 strut nuts from the bottom of the lower control arm, using a 18mm socket. Retain hardware for reuse. **See Photo 9.**

NOTICE

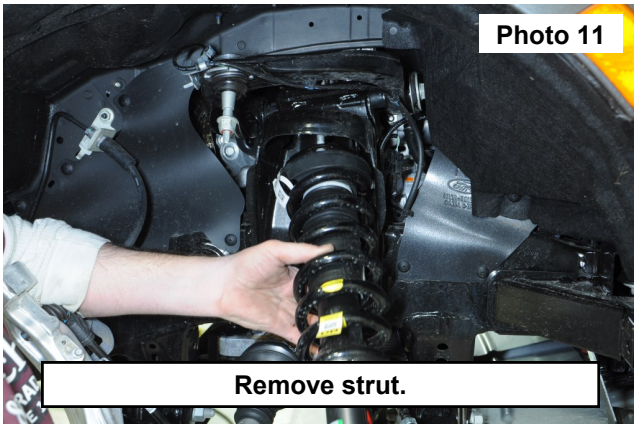
Do not let the control arm drop to far down or the CV shaft may pul

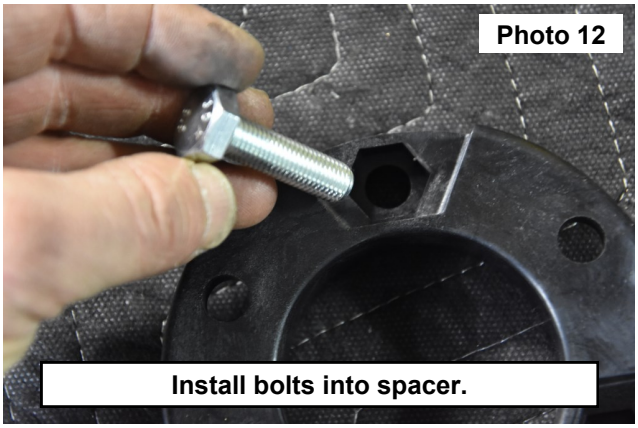
NOTICE



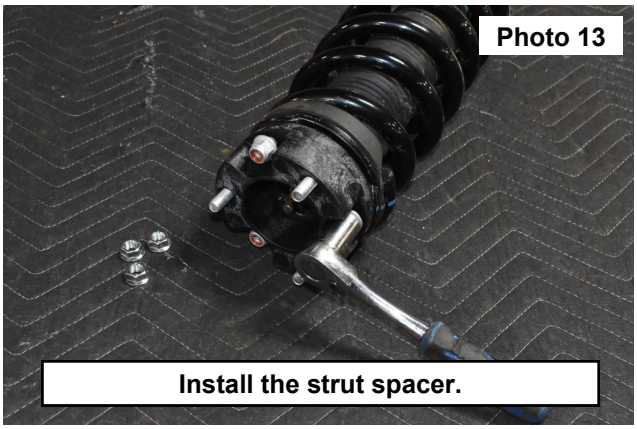


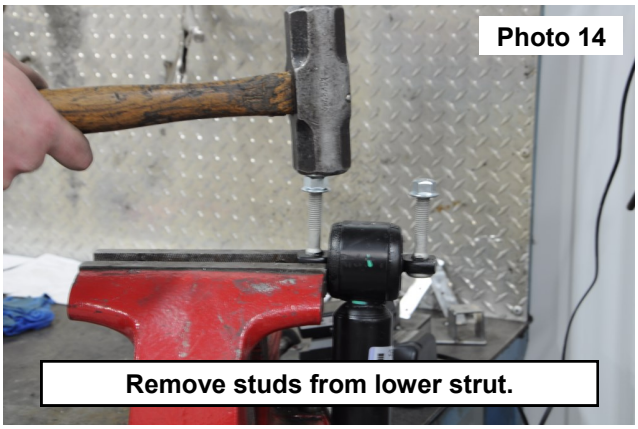
14. Remove the 3 nuts on top of the strut hat, use an 18mm wrench. **See Photo 10.** Retain hardware for reuse.
15. Remove the strut from the upper mount. **See Photo 11.**
16. Install supplied 10mm bolts into the spacer. **See Photo 12.**



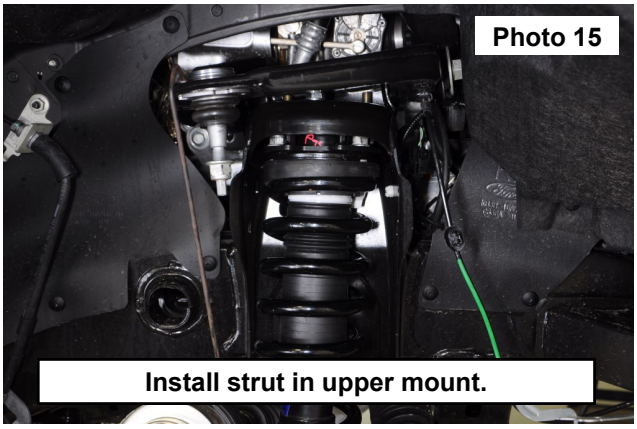


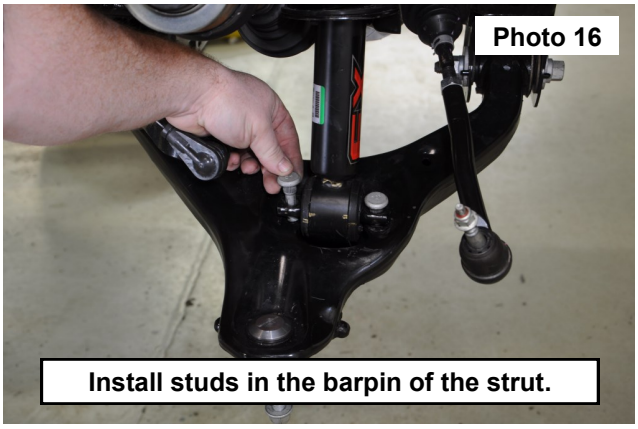
17. Place the strut spacer on top of the studs, use factory hardware, tighten with a 15mm. Torque at 32ft/lbs. **See Photo 13.**
18. Place the bar pin of the lower strut mount into a vise and hand start the nuts. Next use a hammer and knock the studs out of the bar pin. Retain factory hardware for reuse. **See Photo 14.**



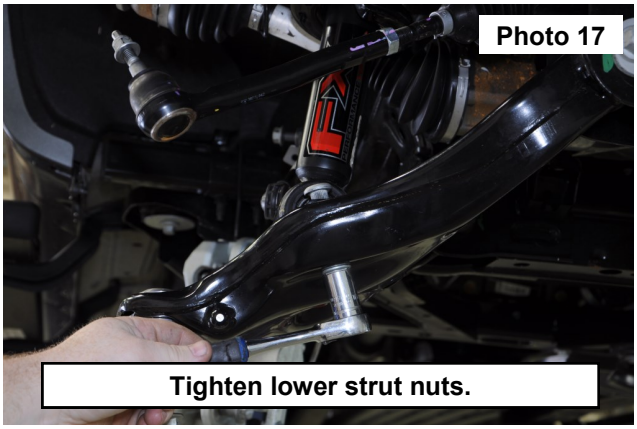


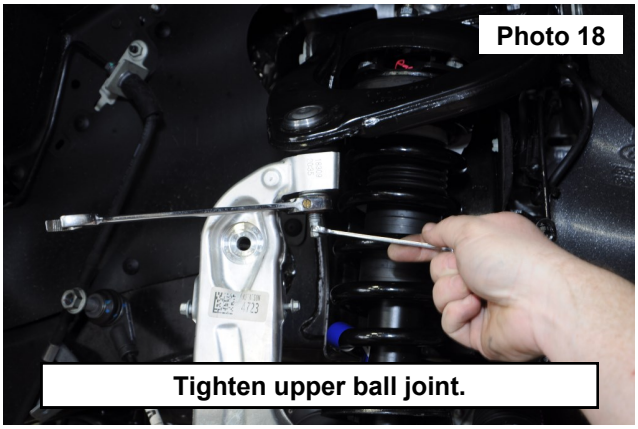
19. Install the strut assembly in the factory mount with the supplied 10mm nuts/washers &lock-washers on the upper mount. **See Photo 15.**
20. Align the lower mount of the strut with the lower control arm mount. Install the factory studs back into the barpin on the lower mount of the strut. **See Photo 16.**
21. It may be necessary to hit the top of the studs with a hammer to seat the splines, tighten the factory nuts with a 18mm. Torque at 78ft/lbs. **See Photo 17.**



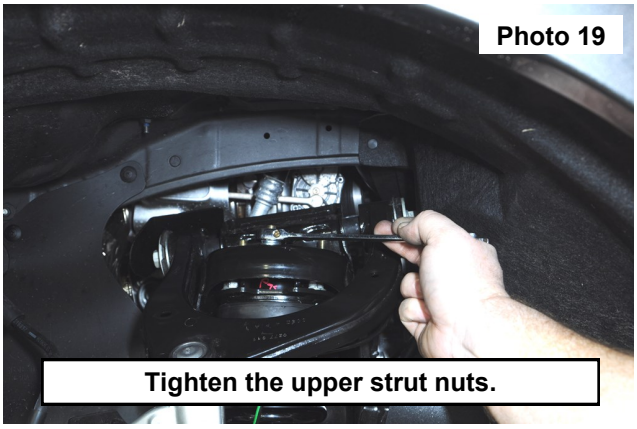


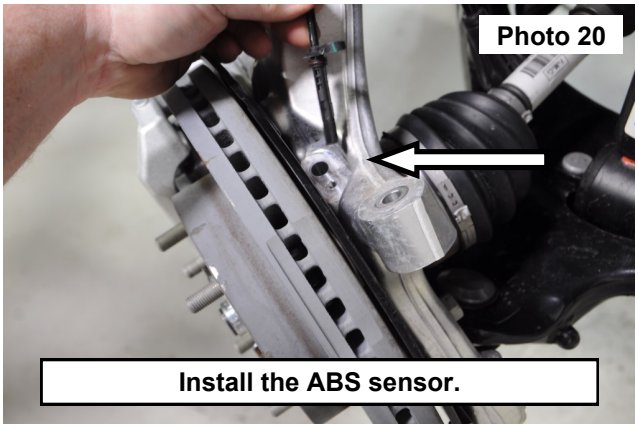
22. Install the upper ball joint into the knuckle using the stock hardware. Hold the ball joint stud with an 8mm wrench and tighten the nut using a 15mm wrench. Torque at 32ft/lbs. **See Photo 18.**
23. Tighten the (3) upper strut nuts, use a 17mm wrench. Torque at 32ft/lbs. **See Photo 19.**



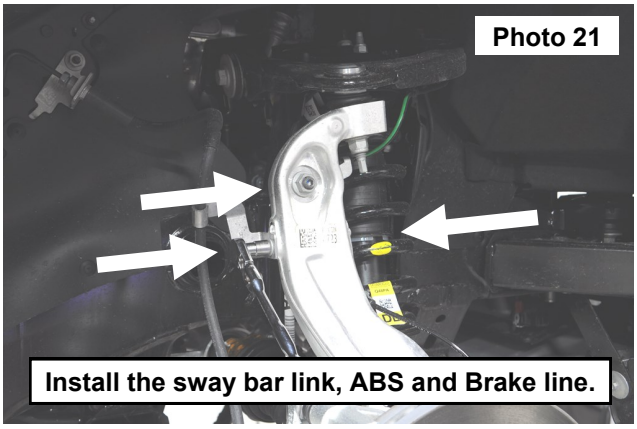


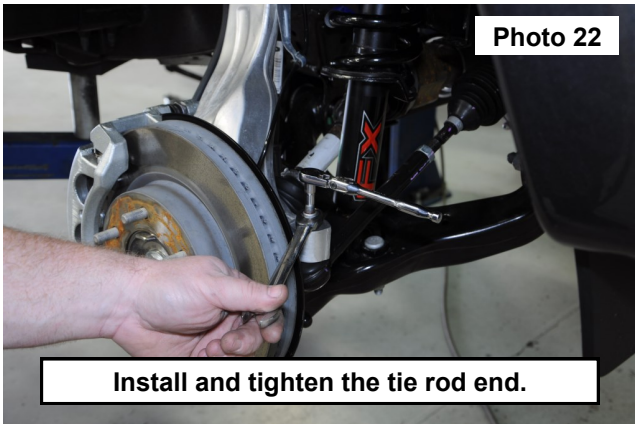
24. Install the ABS sensor into the knuckle, use the bolt that was removed, tighten using a 8mm socket. Torque at 8ft/lbs **See Photo 20.**
25. Re install the ABS wire bracket onto the front of knuckle, use a 8mm socket to tighten, Torque at 8ft/lbs.



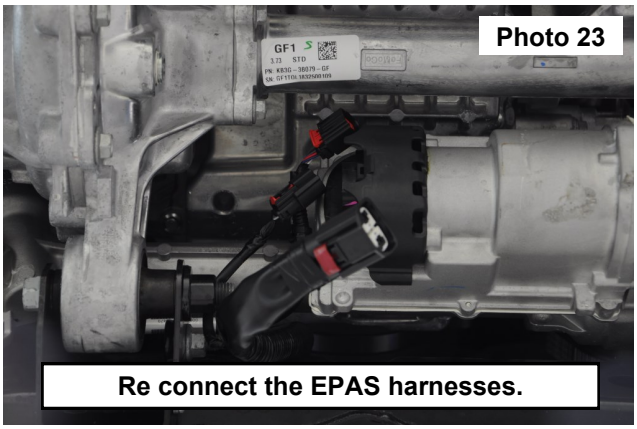


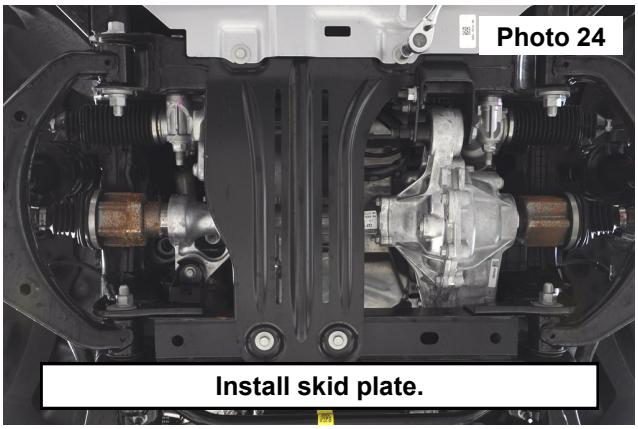
26. Install the brake line bracket onto the rear of the knuckle, use a 10mm socket to tighten. Torque at 22ft/lbs. **See Photo 21. For Step 25 and 26.**
27. Re install the tie rod into the knuckle using the stock hardware, Hold the ball joint stud with an 8mm wrench and tighten the nut using a 15mm wrench. Torque to 32ft/lbs. **See Photo 22.**
28. Repeat steps 6-27 on the opposite side of the vehicle.





29. Re connect the sway bar link into the knuckle on the drivers and passengers side using the stock hardware, use a 18mm socket to tighten. Torque to 32ft/lbs. **See Photo 21.**
30. Re connect the (3) EPAS (Electronic Power Assist Steering) Plugs. **See Photo 23.**
31. Re install the skid plate in the original location, use the removed hardware in the rear, tighten using a 15mm socket. Torque to 32ft/lbs. **See Photo 24.**





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. Have a qualified alignment center align the vehicle immediately. Realign to specifications on the next page.
5. Perform head light check and adjustment to proper settings.
6. Check and retighten wheels at 50 miles and again at 500 miles.
7. All kit components must be retightened at 500 miles and then every three thousand miles after installation. Periodically check all hardware for tightness.
8. Install “Warning to Driver” decal on sun visor Note: Installation of larger tires will require speedometer recalibration.

ALIGNMENT SPECS

Front	Minimum		Maximum
Total Toe	-0.10°	-0.00°	+0.10°
Front Camber	-0.44°	-0.13°	+0.31°
Caster	+2.90°	+3.28°	+3.65°
King-Pin	———	———	———
Incl. Angle	———	———	———
Rear			
Total Toe	°	°	°
Rear Camber	°	°	°
Thrust Angle	-.025°	+0.00°	+0.25°

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.