TRAIL FORTRESS

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Rough Country 502028 Installation Instructions

M1 Adjustable Leveling Struts for 2012–2018 Ram 1500 4WD

Part number: 502028

trailfortress.com/m1-adjustable-leveling-struts-ram-1500-4wd-rough-country-502028

Scan for fitment, price and install help

ROUGH COUNTRY SUSPENSION SYSTEMS®

2006-19 Dodge Ram 1500 Loaded Struts

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 kit contents list. Be sure you have all needed parts and know where they go. Also please review tools needed list and make sure you have the tools needed to install the kit.

⚠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. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

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. We will be happy to answer any questions concerning the design, function, and use of our products.

⚠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. By purchasing any item sold by Rough Country, LLC, the buyer expressly warrants that he/she is in compliance with all applicable Federal, 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.

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.

Tools Needed:

Hammer
5mm Allen Wrench
15mm Socket / Wrench
21mm Socket / Wrench
22mm Socket
24mm Socket / Wrench
Torque Wrench
Jack
Jack Stands

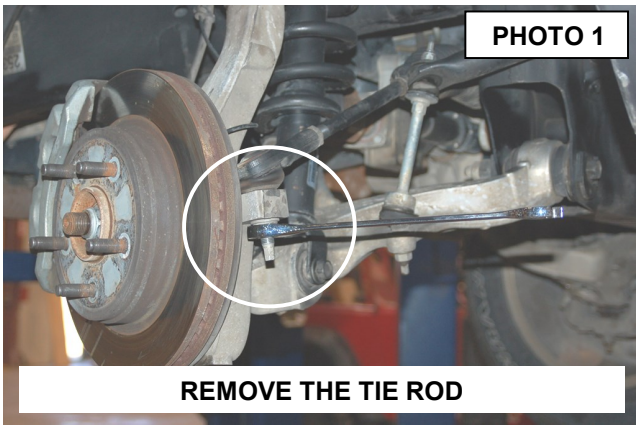
Torque Specs:

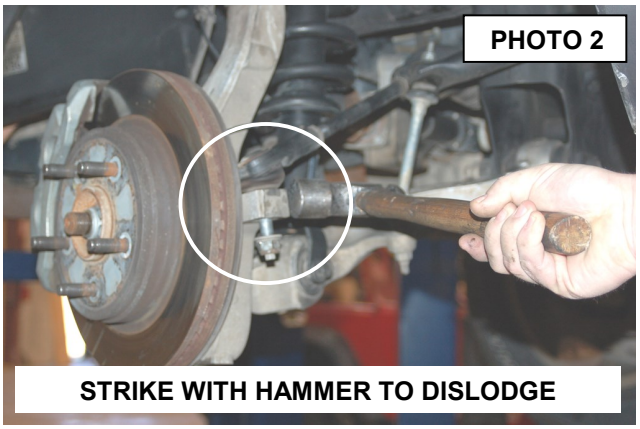
Size	Grade 5	Grade 8
5/16”	15 ft/lbs	20 ft/lbs
3/8”	30 ft/lbs	35 ft/lbs
7/16”	45 ft/lbs	60 ft/lbs
1/2”	65 ft/lbs	90 ft/lbs
9/16”	95 ft/lbs	130 ft/lbs
5/8”	135 ft/lbs	175 ft/lbs
3/4”	185 ft/lbs	280 ft/lbs

Class 8.8	Class 10.9
6MM	5 ft/lbs	9 ft/lbs
8MM	18ft/lbs	23 ft/lbs
10MM	32ft/lbs	45ft/lbs

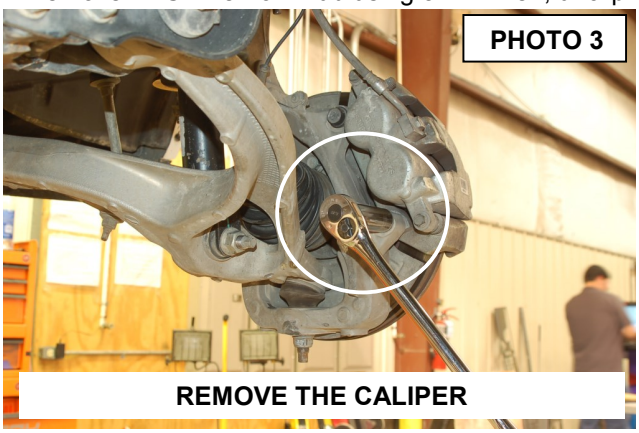
INSTALLATION INSTRUCTIONS

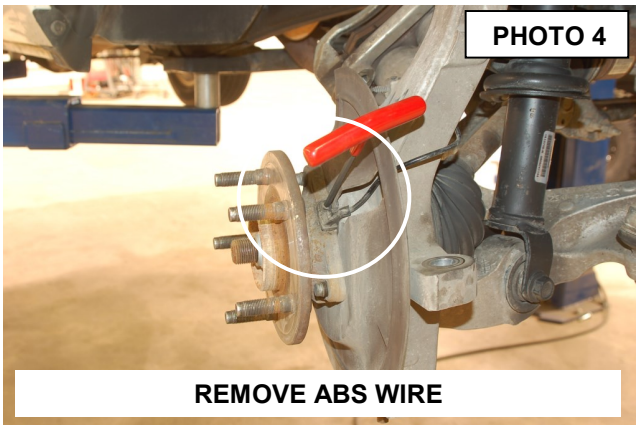
1. Chock rear wheels of the vehicle and raise the front of the vehicle using a floor jack.
2. Support the vehicle with jack stands.
3. Remove wheel using 22mm socket.
4. Remove tie-rod end nut using 21mm as shown in **Photo 1**. Retain hardware.
5. Strike with hammer to dislodge the tie rod from the knuckle. **See Photo 2.**





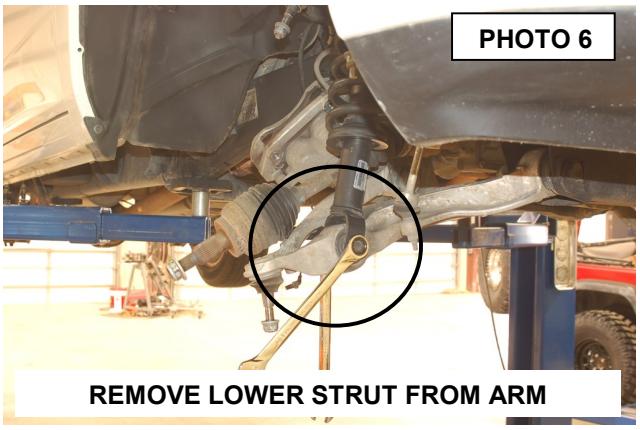
6. Remove brake caliper using 21mm wrench. Retain hardware. **See Photo 3.** Secure caliper out of the way. **Do not hang caliper by the brake line.**
7. Remove ABS wire from hub using 5mm Allen, unclip ABS wire from knuckle also. **See Photo 4.** Retain hardware.



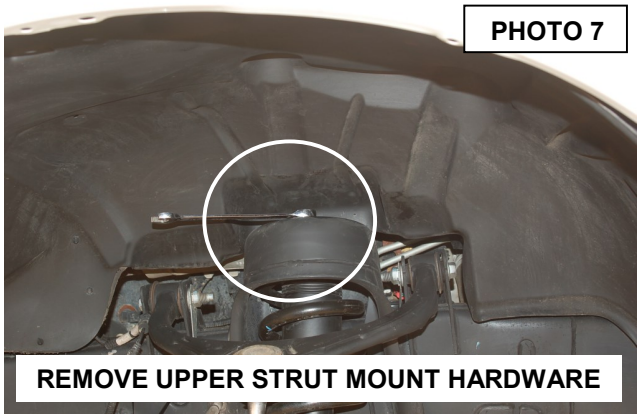


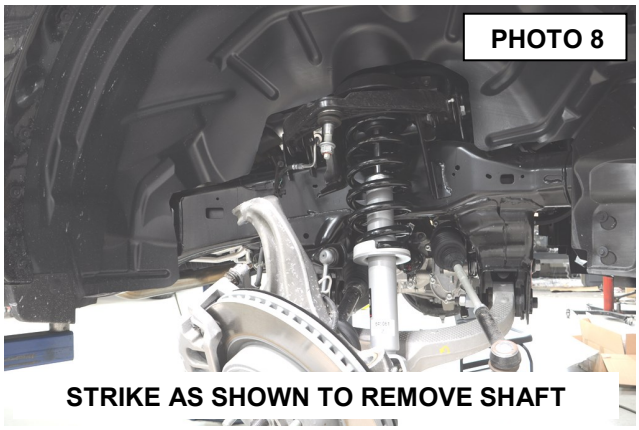
8. Place a jack or jack stand under the knuckle for support.
9. Remove the upper ball joint using 21mm wrench. Strike with hammer as shown to dislodge the ball joint. **See Photo 5.**
10. Remove lower strut mount using 21mm and 24mm wrench. Retain hardware. **See Photo 6.**





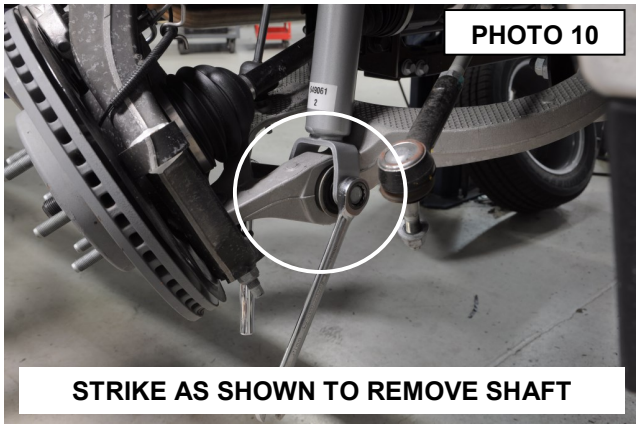
11. Remove upper strut mount hardware using a 15mm wrench and remove strut. Retain hardware. **See Photo 7.**
12. Install the supplied strut into the upper strut mount. **See Photo 8.**



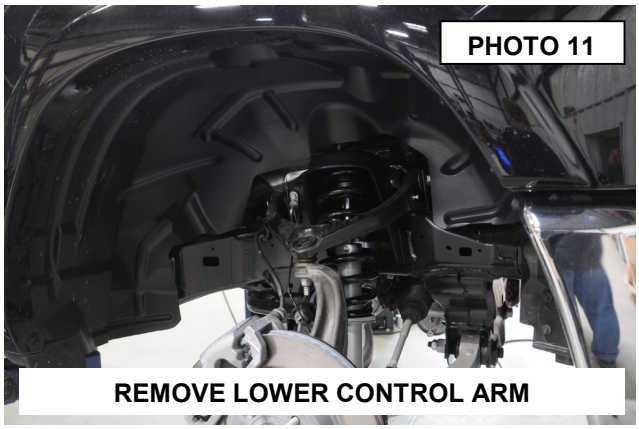


13. Secure the upper strut mounts using the factory hardware. Torque to 32ft/lbs using a 15mm socket. **See Photo 9.**
14. Attach the lower strut mount to the lower control arm using the factory hardware. Torque to 120ft/lbs using a 21mm wrench and 24mm socket. **See Photo 10.**





15. Install the upper ball joint into the knuckle using the factory hardware. Tighten using a 21mm wrench. **See Photo 11.**
16. Install the brake caliper using the factory hardware. Torque to 120ft/lbs using a 21mm socket.
17. Install the ABS sensor in the knuckle using the factory hardware. Tighten using a 5mm Allen.
18. Install the tie rod into the knuckle using the factory hardware. Tighten using a 21mm wrench.
19. Repeat steps 3-18 on the opposite side of the vehicle.
20. Install the wheels and tires using a 22mm socket.
21. Jack up the vehicle and remove the jack stands. Lower the vehicle to the ground and torque all bolts to factory specifications.
22. Vehicle will have to have a front-end alignment.



POST INSTALLATION

1. Check all fasteners for proper torque. Check to ensure there is adequate clearance between all rotating, mobile, fixed and heated members. Check steering for interference and proper working order. Test brake system.
2. Perform steering sweep. The distance between the tire sidewall and the brake hose must be checked closely. Cycle the steering from full turn to full turn to check for clearance.
3. Re torque all fasteners after 500 miles. Visually inspect components and re torque fasteners during routine vehicle service.
4. Readjust headlights to proper settings and take truck in for a front-end alignment to a qualified alignment professional.

Thank You for choosing Rough Country for your off road needs!!!

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