



Installation Manual
3" suspension system
2013 - 2018
Ram 3500 4WD
Part # 33119

SS06092018

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2013-2018 Ram 3500 4wd
3" suspension system

| Part # | Description | Qty. |
|---------------|------------------------------------|-------------|
| 33118-01 | front coil spring spacer | 2 |
| 33118-04 | front track bar relocation bracket | 1 |
| DS2009A | pitman arm | 1 |
| 33119NB1 | hardware bag | 1 |
| 5U-41815R | rear u-bolt | 4 |
| 916NW | u-bolt hardware bag | 1 |
| CAM-18 | Cam bolt | 1 |
| CAM-19 | Cam washer | 2 |
| BL102 | rear lift block | 2 |

Congratulations on your selection to purchase a Tuff Country EZ-Ride Suspension System. We at Tuff Country EZ-Ride Suspension are proud to offer a high quality product at the industries most competitive pricing. Thank you for your confidence in us and our product.

If you desire to return your vehicle to stock, it is the customers responsibility to save all stock hardware and components.

The Tuff Country EZ-Ride Suspension product safety label that is included in your kit box must be installed inside the cab in plain view of all occupants.

Special note: Before installation begins, it is the customers/installers responsibility to make sure that all parts are on hand. If any parts are missing, please feel free to call one of our customer service representatives @ (801) 280-2777.

Important customer information:

Tuff Country EZ-Ride Suspension highly recommends that a qualified or a certified mechanic performs this installation.

It is the responsibility of the customer/installer to wear safety glasses at all times when performing this installation.

It is the customers/installers responsibility to read and understand all steps before installation begins. If you have any questions or concerns, please contact our technical department @ (801) 280-2777. Also, the OEM manual should be used as a reference guide.

This vehicles reaction and handling characteristics may differ from standard cars and/or trucks. Modifications to improve and/or enhance off road performance may raise the intended center of gravity. Extreme caution must be utilized when encountering driving conditions which may cause vehicle imbalance or loss of control. **DRIVE SAFELY!** Avoid abrupt maneuvers: such as sudden sharp turns which could cause a roll over, resulting in serious injury or death.

It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use.

After the original installation, Tuff Country EZ-Ride Suspension also recommends having the alignment checked every 6 months to ensure proper tracking, proper wear on tires and front end components. Tuff Country EZ-Ride Suspension takes no responsibility for abuse, improper installation or improper suspension maintenance.

Limited lifetime warranty

Notice to all Tuff Country EZ-Ride Suspension customers: It is your responsibility to keep your original sales receipt! If failure should occur on any Tuff Country EZ-Ride Suspension component, your original sales receipt must accompany the warranted unit to receive warranty. Warranty will be void if the customer can not provide the original sales receipt. Do not install a body lift in conjunction with a suspension system. If a body lift is used in conjunction with any Tuff Country EZ-Ride Suspension product, your Tuff Country EZ-Ride Suspension WARRANTY WILL BE VOID. Tuff Country Inc. ("Tuff Country") suspension products are warranted to be free from defects in material and workmanship for life if purchased, installed and maintained on a non-commercial vehicle; otherwise, for a period of twelve (12) months, from the date of purchase and installation on a commercial vehicle,

or twelve thousand (12,000) miles (which ever occurs first). Tuff Country does not warrant or make any representations concerning Tuff Country Products when not installed and used strictly in accordance with the manufacturer's instructions for such installation and operation and accordance with good installation and maintenance practices of the automotive industry. This warranty does not apply to the cosmetic finish of Tuff Country products nor to Tuff Country products which have been altered, improperly installed, maintained, used or repaired, or damaged by accident, negligence, misuse or racing. ("Racing is used in its broadest sense, and, for example, without regards to formalities in relation to prizes, competition, etc.) This warranty is void if the product is removed from the original vehicle and re-installed on that or any other vehicle. This warranty is exclusive and is in lieu of any implied warranty of merchantability, fitness for a particular purpose or other warranty of quality, whether express or implied, except the warranty of title. All implied warranties are limited to the duration of this warranty. The remedies set forth in this warranty are exclusive. This warranty excludes all labor charges or other incidental or consequential damages. Any part or product returned for warranty claim must be returned through the dealer of the distributor from whom it was purchased. Tuff Country reserves the right to examine all parts returned to it for warranty claim to determine whether or not any such part has failed because of defect in material or workmanship. The obligation of Tuff Country under this warranty shall be limited to repairing, replacing or crediting, at its option, any part or product found to be so defective. Regardless of whether any part is repaired, replaced or credited under this warranty, shipping and/or transportation charges on the return of such product must be prepaid by the customer under this warranty. Important information that needs to be read before installation begins:

Tuff Country recommends a 35" x 12.50" tire to be used with this kit. **Our tire and wheel fitments are only a guideline. Different production times or tolerances will vary and this size should only be used as a starting point. Each vehicle is different and will need to be treated as such.**

This Suspension kit comes with (1) installation manual and some post installation procedure literature and it is the installers responsibility to make sure that the customer receives the post installation procedure literature. If a customer would like a copy of the installation manual, please have them visit our website at www.tuffcountry.com. Have them go to the customer care section to download these instructions. If you have any questions, please feel free to call us at (801) 280-2777.

Once this suspension kit has been installed, longer front shocks will be needed, and the new shocks will have to be ordered as a separate part #. If you have not already ordered your new front shocks, please contact Tuff

Country or your local Tuff Country dealer. Tuff Country recommends installing a 27" - 28" fully extended shock for the front. The stock rear shocks will work once this kit has been installed but if you want to replace the rear shocks, Tuff country recommends installing a 30" fully extended shock.

Before installation begins, Tuff Country EZ-Ride Suspension highly recommends that the installer performs a test drive on the vehicle. During the test drive, check to see if there are any uncommon sounds or vibrations. If uncommon sounds or vibrations occur on the test drive, uncommon sounds or vibrations will be enhanced once the suspension system has been installed. Tuff Country EZ-Ride Suspension highly recommends notifying the customer prior to installation to inform the customer of these issues if they exist.

Make sure to use loctite on all new and stock hardware associated with the installation of this suspension system.

Tuff Country EZ-Ride Suspension recommends a wall mounted strut compressor be used when performing the steps that talk about installing the pre-load spacer into the strut. If you do not have a wall mounted strut compressor, please have these steps performed by your local Ford Dealership

Recommended tools selection:

- Torque wrench
- Standard socket set
- Standard wrench set
- Metric socket set
- Metric wrench set
- Tape measure
- Hydraulic floor jacks
- Drill bits
- Drill

Hardware bag 33119NB1

| Description | Quantity | |
|-------------|----------------------|---|
| M18UN | 18mm uni torque nut | 1 |
| 381B | 3/8" x 1" bolt | 2 |
| 38UN | 3/8" uni torque nut | 2 |
| 516WA | 5/16" flat washer | 4 |
| 716114B | 7/16" x 1 1/4" bolt | 1 |
| 716UN | 7/16" uni torque nut | 1 |
| 38WA | 3/8" flat washer | 2 |

Please follow instructions carefully:

Before installation begins, measure from the center of the hub, to the bottom of the fender well, and record measurements below.

Pre-installation measurements:

Driver side front: _____

Passenger side front: _____

Driver side rear: _____

Passenger side rear: _____

At the end of the installation take the same measurements and compare to the pre-installation measurements.

Post-installation measurements:

Driver side front: _____

Passenger side front: _____

Driver side rear: _____

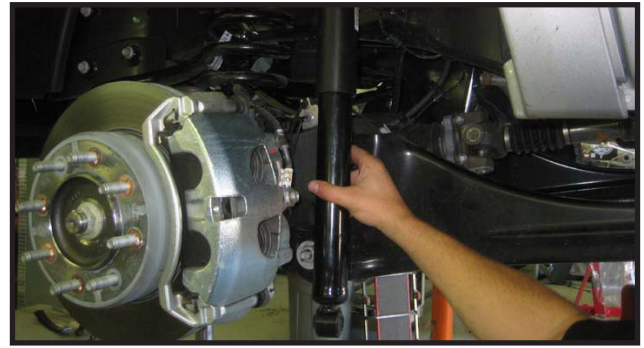
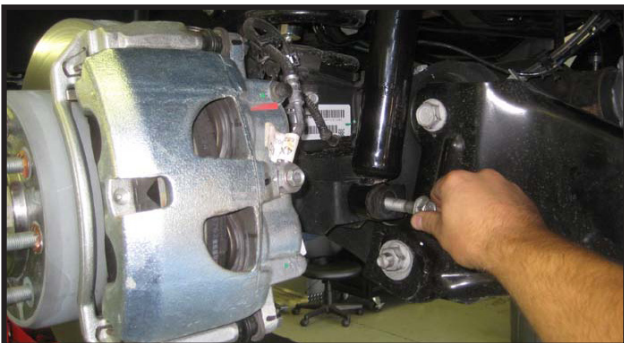
Passenger side rear: _____

Front end installation:

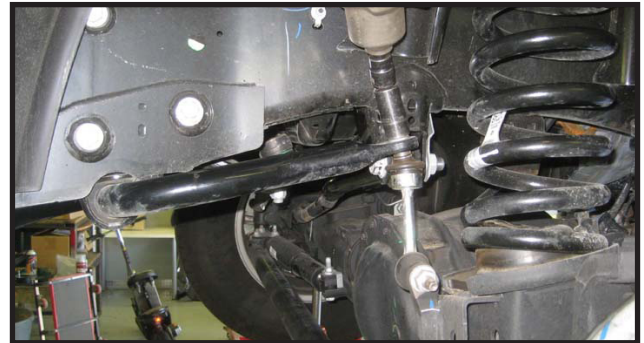
1. To begin installation, block the rear tires of the vehicle so that the vehicle is stable and can't roll backwards. Safely lift the front of the vehicle and support the vehicle with a pair of jack stands. Place a jack on both the driver and passenger side'

2. Place a pair of hydraulic floor jacks under the front axle. Place one on the driver side and passenger side. Carefully raise up on both hydraulic jacks at the same time until they come in contact with the front axle. Remove the front wheels and tires.

3. Working on the driver side, remove the shock from the upper and lower mounting locations and save the lower hardware. The upper hardware and shock may be discarded. Repeat procedure on the passenger side. **Special note: Once this suspension kit has been installed, longer front shocks will be needed and the front shocks will need to be ordered as a separate part #. If you have not already ordered your new shocks, please contact Tuff Country or your local dealer and order new front shocks. Tuff Country recommends installing a front shock that is 27" - 28" fully extended.**



4. Working on the driver side, remove the sway bar end link from the sway bar. Save the hardware. Repeat procedure on the passenger side.



5. Working on the driver side, remove the nut that connects the draglink tierod end to the pitman arm, save the nut. Using a hammer, carefully strike the pitman arm to break the taper of the tie rod end. **Special Note: Take extra care not to rip or tear the draglink tie rod end boot.**

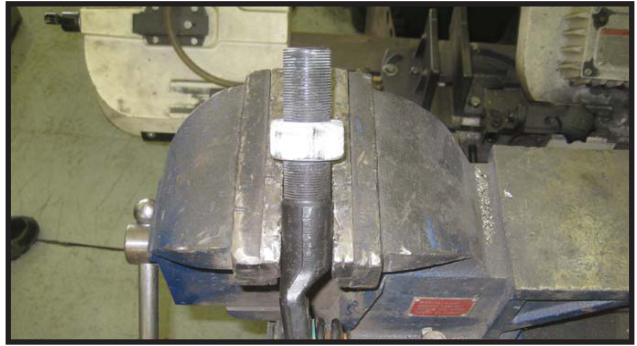
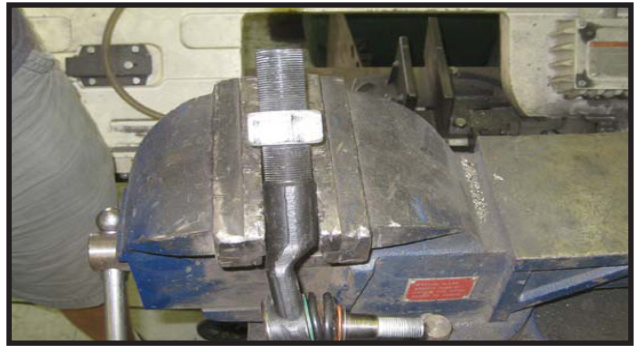
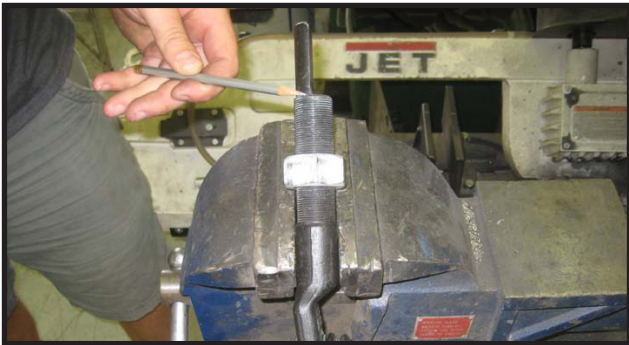


6. Next, remove the nut and lock washer from the steering gear box. Save the hardware. Using a pitman arm puller, carefully remove the pitman arm from the steering gear, the stock pitman arm may be discarded.



7. Locate the new pitman arm, using the OE hardware, install the new pitman arm on to the steering gear box making sure it is oriented the same way the OE one was removed. Torque the nut to **225 ft lbs.**

8. Working on the steering drag link, completely un-thread the adjuster sleeve and place the rod end in a vice. Carefully cut the half round locking portion off of the rod end.



9. Now working on the drag link portion that is still connected to the vehicle, carefully cut the half round locking portion off of this end.



10. Re-connect the drag link and tierod end using the adjuster sleeve. Install the rod end into the new pitman arm. **Special note: the new pitman arm is tapered opposite from the OE pitman arm, so the rod end will now be installed from the bottom.** Secure the rod end to the pitman arm using the OE hardware and torque to **85 ft lbs.** Make sure to re-tighten the 2 large jam nuts on the adjuster sleeve.

11. Locate the front Track bar (panhard bar), and remove it from its frame mounting location. Save the hardware.



12. Locate the new front track bar bracket and install it into the OE frame bracket using the OE nut and bolt.

13. With the new track bar bracket pressed against the frame crossmember, using the hole in the new bracket as a guide, carefully drill the crossmember out to 7/16". **Special note: Be extremely careful not to drill into the bottom of the engine oil pan. For extra precaution, it may even be necessary to place a small piece of scrap metal in between the crossmember and oil pan to block the drill bit from going too far.**



14. Locate (1) 7/16" x 1 1/4" bolt, (2) 38WA, and (1) 38UN from hardware bag 33119NB1. Install this hardware into the newly drilled hole and torque to 28 ft lbs. Also torque the OE bolt to 85 ft lbs.

15. Install the track bar to the newly installed bracket and secure it using the new eccentric cam bolt, cam washer, and nut. Torque to 135 ft lbs. **Special note: if you are not able to install the track bar to the new bracket at this time, this step will need to be performed when the suspension system is completely installed and the weight of the vehicle is back on the ground. Final side to side adjustment of the front end should be performed by an alignment shop and technician.**



16. Carefully lower down on both hydraulic floor jacks at the same time allowing enough room for the coil springs to be removed. Working on the driver side, remove the coil spring and set aside. Repeat procedure on the passenger side. **Special note: take special care not to over extend any brake lines or hoses.**



17. Locate the new coil spring spacers. Also, locate (2) 3/8" x 1" bolts, (4) 5/16" flat washers, and (2) 3/8" unitorque nuts from hardware bag 33119NB1. Working on the driver side,

install the new spacer to the upper coil spring pocket and secure using the new 3/8" hardware. Torque to 28 ft lbs. **Special note: The spacer is tapered, so make sure to install the taller side facing outside the vehicle. Also, there is a notch in the upper ring of the spacer that needs to face the outside of the vehicle.** Repeat on the passenger side.



18. Locate the OE coil spring rubber isolator. Working on the driver side, install the rubber isolator to the newly installed coil spring spacer. **Special note: Make sure that the nipple of the isolator fits properly into the hole on the lower ring of the coil spacer.** Repeat procedure on the passenger side.



19. Locate the OE coil springs. Working on the driver side, install the coil spring back into the vehicle. Carefully raise up on the hydraulic floor jack until the coil spring seats properly into the new coil spacer. Repeat on the passenger side.



20. Locate the new front shocks. **Special note: Once this suspension kit has been installed, longer front shocks will be needed and the shocks need to be ordered as a separate part #. If you have not already ordered your new front shocks, please contact Tuff Country or your local Tuff Country dealer and order your new front shocks. Tuff Country recommends installing a shock that measures 27" - 28" fully extended.** Working on the driver side, install the new shock into the OE location using the original hardware. torque to 85 ft lbs. Secure the upper portion of the shock into the original location using the new hardware provided with the shock. Repeat on the passenger side.

21. Working on the driver side, install the sway bar back to the sway bar end link and secure using the OE hardware. Torque to 40 ft lbs. repeat on the passenger side.

22. Install the tires and wheels and carefully lower the vehicle

to the ground

23. Carefully remove the hydraulic floor jacks from the under the front end.

24. If you were not able to install the front track bar into the new bracket in step # 15, now is the time to do so. **Tip: if you have a helper move the steering wheel one way or another it can help shift the vehicle side to side to allow this.**

Front end installation complete.

Rear end installation.

25. To begin installaion, block the front tires of the vehicle so that the vehicle is stable and can't roll forward. Safely lift the rear of the vehicle and support the frame with a pair of jack stands. Place a jack stand on both the driver and passenger side, next remove the wheels and tires from both sides.

26. Position a pair of hydraulic floor jacks under the rear axle. Place one jack on the driver side and one on the passenger side, raise up on both hydraulic floor jacks at the same time until they make contact with the rear axle.

27. Working on the driver side, remove the shock and save the hardware for later installation. **Special note: The stock rear shocks will work once this suspension kit has been installed, but if you want to replace the rear shocks, Tuff Country recommends installing a shock that measures 30" fully extended. If you have not already ordered your shocks, please contact Tuff Country or your local Tuff Country dealer and order them.** Repeat on passenger side.

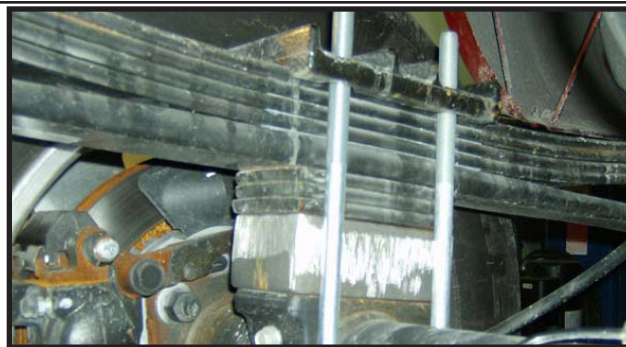
28. Working on the driver side, remove the rear u-bolts. The rear u-bolts and hardware may be discarded. Set the stock upper u-bolt plate aside for later re-installation. Repeat procedure on passenger side.

29. Carefully lower down on both hydraulic floor jacks at the same time until the springs seperate from the rear axle. Lower down approximately 2". **Special note: make sure not to over extend any brake lines or wires when lowering the axle.**

30. Locate the new rear blocks. Working on the driver side, install the new rear block between the rear axle and the leaf spring assembly. Repeat procedure on the passenger side.

31. Raise up on both hydraulic floor jacks at the same time until the leaf springs seat against the top of the new blocks.

32. Locate (4) new u-bolts, also locate the new u-bolt hardware bag 916NW. Locate the OE upper u-bolt plate, working on the driver side, install the new u-bolts into the OE location using the new 9/16" hardware. Torque to 120 ft lbs. Repeat on the passenger side.



33. Locate the rear shocks. **Special note: The stock rear shocks will work once this suspension kit has been installed, but if you want to replace the rear shocks, Tuff Country recommends installing a shock that measures 30" fully extended. If you have not already ordered your shocks, please contact Tuff Country or your local Tuff Country dealer and order them.** Locate the upper and lower shock hardware, install the proper metal crush sleeve into the upper and lower eyelets of the shocks. Working on the driver side, install the rear shock back into the vehicle using the OE hardware. torque to 85 ft lbs. Repeat on the passenger side. **Special note: Tuff Country highly recommends that the shocks are installed with the shock boots. if the shock boots are not installed, damage may occur to the piston of the new shock.** Repeat procedure on the passenger side.

34. Check and double check to make sure all steps have been performed properly.

35. Re-install the tires and wheels and carefully lower the vehicle back down to the ground. Remove both hydraulic floor jacks.

Congratulations, installation complete!

Special note: After the completion of the installation, Tuff Country EZ-Ride Suspension recommends taking the vehicle to an alignment shop and having a proper front end alignment performed.

Tuff Country EZ-Ride Suspension recommends that a complete re-torque is done on all bolts associated with this suspension system. It is the customers responsibility to make sure that a re-torque is performed on all hardware associated with this suspension system after the first 100 miles of installation. It is also the customers responsibility to do a complete re-torque after every 3000 miles or after every off road use. Neglect of following these steps could cause brackets to come loose and cause serious damage to the suspension system and to the vehicle.