



# Part # 33505 and 33506

2019 Ram 1500 4x4 (Excludes Rebel models, and Air-ride models)

## 3.5" lift kit

| Part #    | Description                      | Qty. |
|-----------|----------------------------------|------|
| 33505-01  | front upper strut spacer         | 2    |
| 34105-01  | driver side upper control arm    | 1    |
| 34105-02  | passenger side upper control arm | 1    |
| 32102-02  | rear coil spring spacer          | 2    |
| 32105-01  | Internal strut spacer            | 2    |
| 33505NB   | hardware bag                     | 1    |
| *34106-01 | driver side upper control arm    | 1    |
| *34106-02 | passenger side upper control arm | 1    |
| *33506NB  | hardware bag                     | 1    |

\* Items included in 33506 kit only

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.

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.

For a list of parts, please refer to the back of the installation manual for photos of parts that are included in this suspension system.

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

After the completion of the installation a front end alignment is required.

**\*\*\*NOTE: Not for use on trucks that are factory pre-lifted/leveled or that have the "off-road package". Check factory height prior to ordering or installing. Trucks with more than 22.5" of wheel hub to fender lip height may require less lift.\*\*\*\*\***

# Installation Manual 2019 Ram 1500 4x4 3.5" Lift kit

(Excludes Rebel models, and Air-ride models)

## Part # 33505 and 33506

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**Please be aware that some Dodge Ram owners may experience a vibration in the front end or a violent shaking vibration of the front wheels when going over a bump at certain speeds. This is due to the front differential and suspension when Dodge Ram trucks are in 4x4 mode. These two symptoms are often lumped together and called a "steering oscillation" however it is actually two different problems with the Ram Truck. The 4Hi mode vibration is a vibration or shudder that occurs when accelerating in 4x4 high mode. This symptom appears isolated to 1500 non-Mega Cab model trucks and only when in 4-hi mode. Dodge could not discover why their stock trucks would do this for some customers and not others, so the final official statement from Dodge was that there is no problem and that all of the new Rams will shudder or shake when in 4x4 high.**

**Therefore, after installing this kit on your Dodge Ram truck, if you experience either of the two symptoms mentioned above, Tuff Country recommends two options. 1). Remove the kit from the vehicle and send it back to the company you purchased it from for a full refund or 2). Install High angle CV joints that will stabilize the factory vehicles issues. 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 imbal-

ance 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.

#### **IMPORTANT!**

This kit will NOT work on vehicles equipped with Active-Level™ Four-Corner Air Suspension. If your vehicle is equipped with this type of suspension, please contact the company you purchased the lift kit from and arrange for returning the parts.

#### **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:

Due to the different variation of the stock strut spring rate, height after installation of the spacer may vary. Any questions please feel free to contact Tuff Country or your local Tuff Country dealer.

New rear shock absorbers are required for the installation of this kit, Tuff Country recommends a shock that measures roughly 27 1/2" fully extended.

Tuff Country recommends a 35" x 12.50" tire once part # 33505/33506 has been installed. If larger than a 35"x12.50" tire is installed on your vehicle in conjunction with part # 33505/33506, Tuff Country assumes no liability and the warranty will be VOID. **Due to different types of tread patterns, some aggressive tires in this size recommendation may require slight trimming of inner fender plastic.**

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.

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 instal-

lation manual, please have them visit our website at [www.tuffcountry.com](http://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.

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

Hardware bag 33505NB includes:

| Description |                               | Quantity |
|-------------|-------------------------------|----------|
| TC-002      | poly bushing                  | 8        |
| S10254      | .750" x .563" x 1.950" sleeve | 4        |
| 12WA        | 1/2" flat washer              | 2        |
| SERT04      | grease fitting                | 4        |
| 38NLN       | 3/8" nylon lock nut           | 6        |
| 516WA       | 5/16" flat washer             | 8        |
| 38114B      | 3/8" x 1 1/4" bolt            | 2        |
| 38FLN       | 3/8" flange nut               | 2        |
| SHOCKTIE    | zip tie                       | 2        |

Hardware bag 33506NB includes:

| Description |                               | Quantity |
|-------------|-------------------------------|----------|
| TC-002      | poly bushing                  | 8        |
| S10254      | .750" x .563" x 1.950" sleeve | 4        |
| S10255      | Tapered mis- alignment sleeve | 2        |
| S10246      | uniball mis-alignment sleeve  | 2        |
| 9165B       | 9/16" x 5" bolt               | 2        |
| 916UN       | 9/16" unitorque nut           | 2        |
| 12WA        | 1/2" flat washer              | 6        |
| SERT04      | grease fitting                | 4        |
| 38NLN       | 3/8" nylon lock nut           | 6        |
| 516WA       | 5/16" flat washer             | 8        |
| 38114B      | 3/8" x 1 1/4 bolt             | 2        |
| 38FLN       | 3/8" flange nut               | 2        |
| SHOCKTIE    | zip tie                       | 2        |

Recommended tools selection:

Wall mounted strut compressor  
Torque wrench  
Standard socket set  
Standard wrench set  
Metric socket set  
Metric wrench set  
Tape measure  
Hydraulic floor jacks

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: \_\_\_\_\_

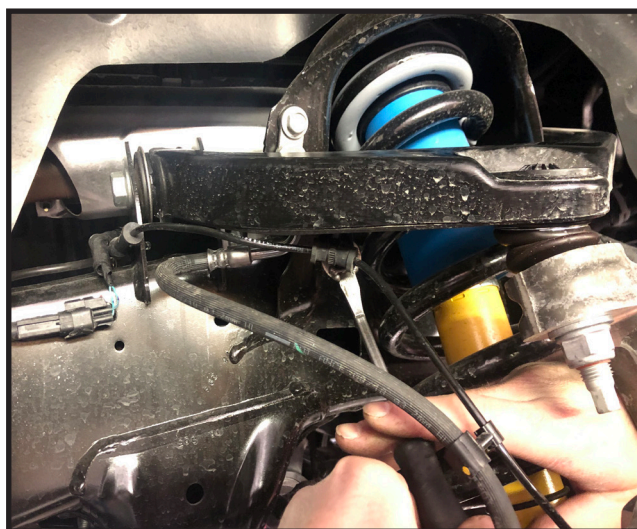
Driver side rear: \_\_\_\_\_

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 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.

2. Working on the driver side, locate and remove the ABS wire harness clip from the upper control arm.

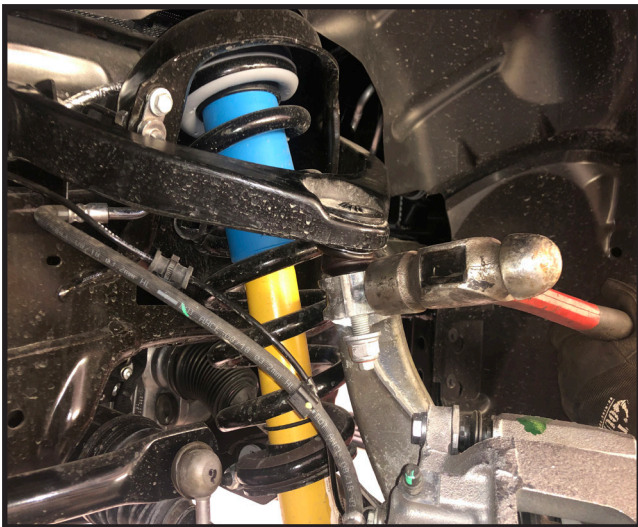


3. On the driver side, support the lower control arm with a hydraulic jack so that the suspension cannot drop. Locate and remove the upper ball joint nut.





4. Using a hammer, carefully strike the steering knuckle to knock the taper loose and separate the ball joint from the knuckle.



5. Next, remove the 2 bolts and hardware that are holding the upper control arm to its frame pockets. Save the hardware for re-installation. Remove the upper control arm from the vehicle.

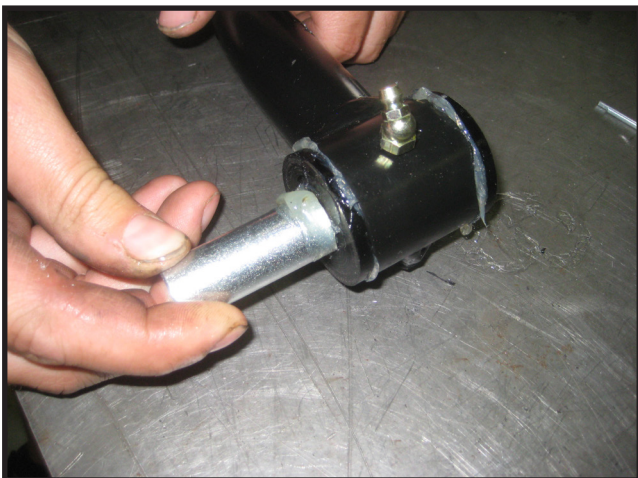


6. Locate the new upper control arms, also locate the (4) grease fittings. Install the grease fittings into each eyelet of the control arms so that they are facing towards the outside of the vehicle. **Special note: Be extra careful not to over tighten these small brass grease fittings.**





7. Locate (8) TC-002 control arm bushings, and (4) S10254 crush sleeves. Install the bushings and sleeves into each control arm. **Special note: Make sure to use a fair amount of lithium or moly base grease before installing the new bushings and sleeves into the control arms. This will increase the life of the bushing as well as help prevent squeaking.**



8. Working on the driver side, Install the new upper control

arm into the vehicle using the OE hardware. Torque to 75 ft lbs.



9. At this point if you are installing the ball joint style upper control arms, connect the upper ball joint to the steering knuckle using the new castle nut, washer, and cotter pin, and skip to step # 11. If you are installing the uniball style upper control arms, see the next step.

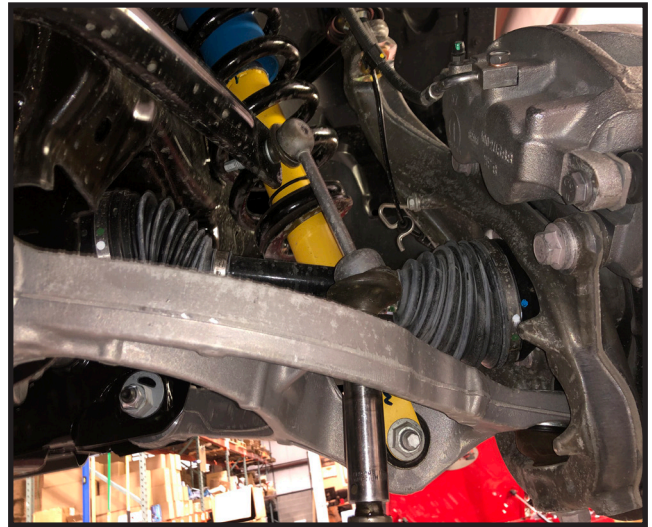


10. Locate (1) S10246, (1) S10255, (1) 9165B, (2) 12WA, and (1) 916UN. Install uniball mis-alignment sleeves into the uniball as shown in the pictures below and re-attach the arm to the steering knuckle using the new 9/16" bolt and hardware. **Torque to 95 ft lbs**





11. Working on the driver side, locate and remove the sway bar end link from the lower control arm. Save the hardware



12. Remove 2 of the 3 upper strut mount nuts and loosen the 3rd one.

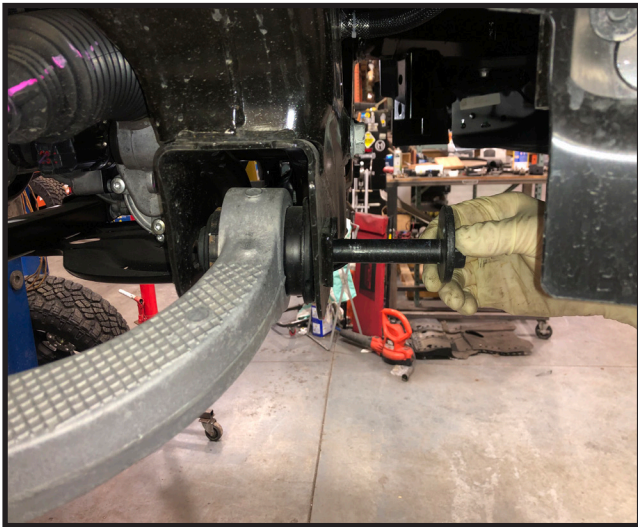


13. Loosen but do not remove the lower strut mounting bolt and hardware.





14. Remove both lower control arm cam adjustment bolts and save for later re-installation. the entire strut assembly from the vehicle.



15. Carefully remove the lower strut mounting bolt from the lower control arm and lower the arm down out of the way.



16. Remove the 3rd upper strut mounting nut and remove



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

17. On the top portion of the strut, make a mark on the top plate, rubber isolator, and the coil spring in a straight line. This is done so that it can be re-assembled in the same orientation.



18. Using the proper wall mounted strut compressing machine, carefully put pressure on the strut assembly and remove the upper shock nut.





19. Lift off the upper strut plate and set aside.

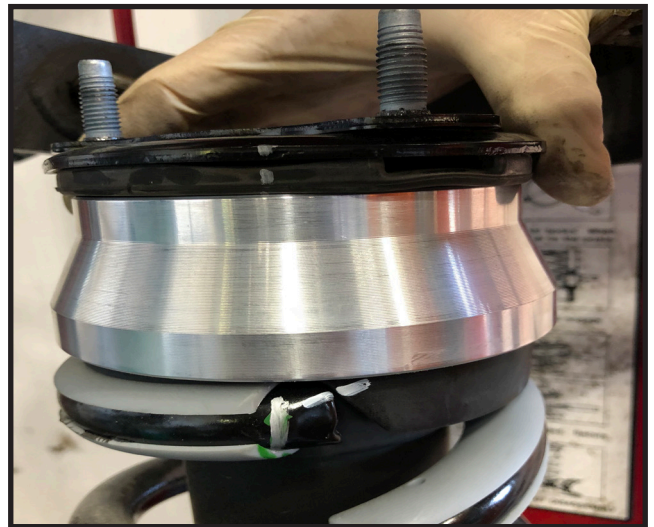


20. Locate a new internal strut spacer and install on the top of the coil spring.



21. Re- install the top strut plate making sure to line up your

marks you made on it and the coil spring.



22. Carefully compress the strut assembly back together and re-install the OE upper shock nut.



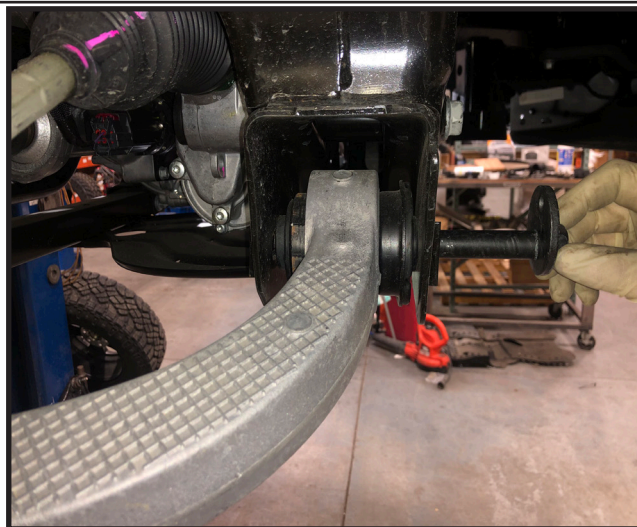
23. Remove the strut assembly from the compressing tool,

24. Locate a new upper strut spacer part #33505-01, Install it on top of the OE strut and secure using the OE hardware.





25. Re-install the strut assembly into the vehicle and loosely start 2 of the 3 upper nuts. Use the new 3/8" nylon lock nuts and 5/16" flat washers.



25. Swing the lower control arm back up until you can pin the lower strut mounting bolt. Do not tighten at this time.



26. Raise the lower control arm up and re-install the cam adjustment bolts the same direction that they were removed. Do not tighten at this point. **Special note: we typically set the adjustment bolts in the center position until they can be adjusted on an alignment machine.**

Repeat steps #2 - 26 on the passenger side of the vehicle.

27. Re-install both front sway bar end links to the lower control arm mounting locations.





28. Using the provided zip ties, tie the ABS wire harness to the rubber brakeline on both sides of the vehicle.

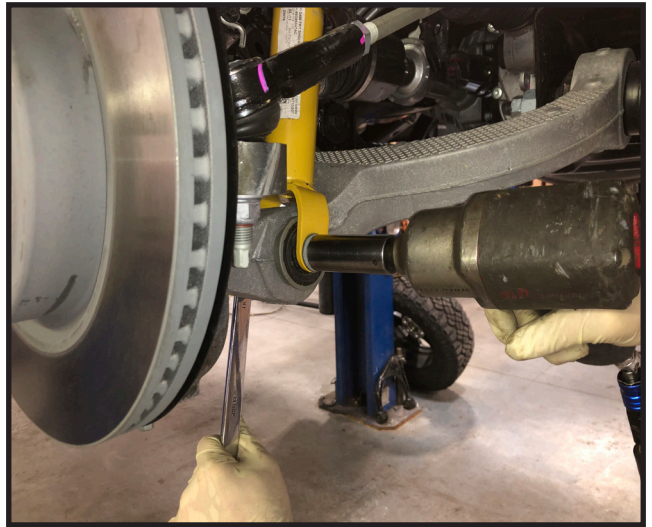


29. If you have not applied grease to the upper control arm bushings, then now is the best time to use the grease fittings and apply grease until you see it seeping out of the bushings.



30. Re-install the tires and wheels and carefully lower the vehicle back to the ground.

31. With the vehicle sitting back under its own weight, go back and tighten the lower strut mounting bolts, Cam adjustment bolts, and the 3 nuts on the top of each strut assembly.



**Front end Installation Complete!**

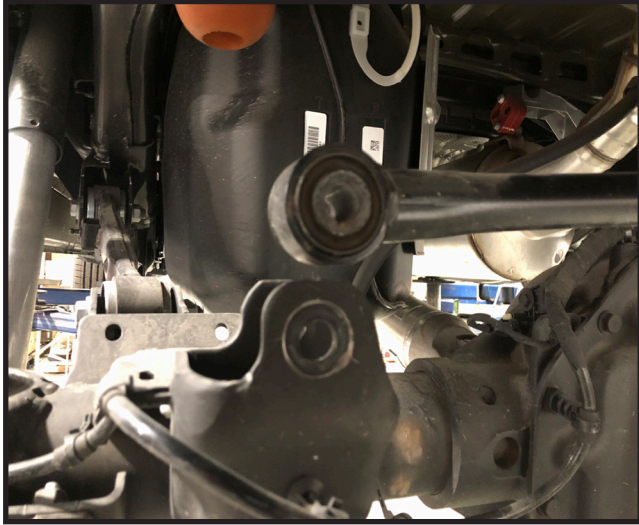
**Rear Installation:**



32. Block the front tires so that the vehicle can't roll, carefully raise up on the rear axle with a floor jack until wheels and tires can be removed.

33. Support both sides of the frame with jack stands and allow enough room to lower the rear axle down a few inches.

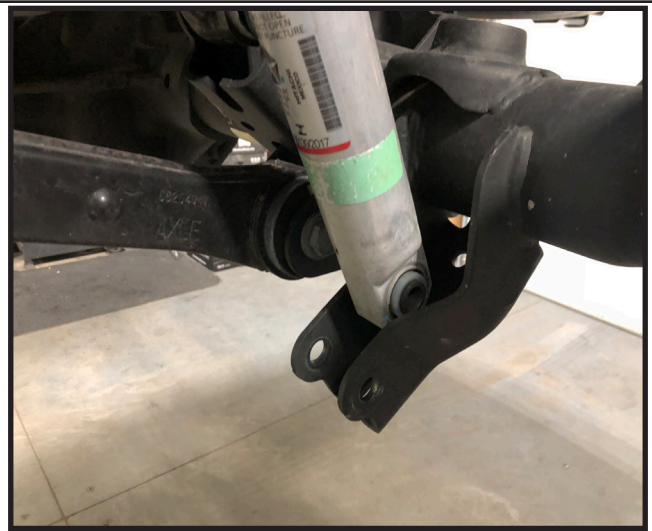
34. Remove the rear track bar mounting hardware at the axle bracket. Save the hardware



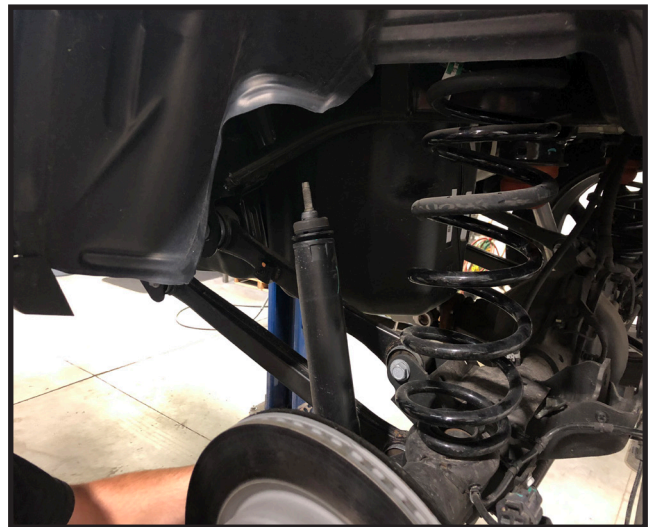
35. On both sides, remove the mounting hardware at the top of the sway bar end link. Save the hardware



36. On both sides, remove the hardware at the lower shock mount. Save the hardware.



37. Remove the upper shock mounting hardware. **Special note: you can remove the plastic access panel from the inner fender liner to gain better access to the upper shock hardware.** Remove the shock.



38. Carefully lower down the floor jack so that the coil springs can be removed. Take special care to not over stretch any brake lines or wire's.

39. Looking up into the OE coil spring mounting tower on the frame, Insert a new 3/8" x 1 1/4" bolt with 5/16" washer from the top down in an existing hole located towards the inner front of the pocket.





40. Install a new rear coil spacer making sure the mounting tab is attaching to the new 3/8" x 1 1/4" bolt. **Torque bolt to 25 ft lbs.**



41. Locate the OE rubber coil spring isolators and cut the 2 locating nubs off flush.



42. Re-install the rubber coil spring isolators on top of the coils and re-install the coils.

43. Install the new rear shock absorbers using OE lower hardware and new upper hardware. **Special note: Some shock manufacturers will have a slightly narrower lower eyelet than the pocket it mounts into, so we have included 2 extra 9/16" flat washers to use as shims to take up some space.**



44. Re-attach the rear track bar to the axle bracket using the OE hardware. **Special note: It may be easier to perform this step with the vehicle back down on the ground under its own weight so that the track bar aligns with the bracket better.**



45. Re-install the wheels and tires and torque the lug nuts according to the vehicle or wheel manufacturer's specifications.

46. Remove the jack stands and carefully lower the vehicle back down to the ground.



## **Congratulations! Installation is Complete**

Check and double check to make sure that all steps were performed properly. After the completion of this install, Tuff Country Recommends taking the vehicle in for a complete front end alignment.

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 the system after the first 100 miles of installion. It is also the Customers responsibility to do a complete re-torque after every 3,000 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.