



Installation Manual **2021 - 2022 Ford Bronco** **3.5" Suspension Lift Kit** **Part # 23500**

SS07212022

Part # 23500
 2021-2022 Ford Bronco
 3.5" Suspension Lift kit

<i>Part #</i>	<i>Description</i>	<i>Qty.</i>
23500-01	Driver side upper control arm	1
23500-02	Passenger side upper control arm	1
22500-01	Front strut spacer	2
23500-03	Rear strut spacer	2
23500-04	Driver side differential bracket	1
23500-05	Strut pre-load spacer	2
23500-06	Rear track bar bracket	1
23500-07	1/4" strut spacer plate	2
23500NB	Hardware Bag	1
23500PL	Bushing & Sleeve Bag	1

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 instal-

lation.

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. Usually OE alignment specs are Ideal but on these particular kits we like to see the Castor a little bit lower than specs. It will help with tire wear and drivability.

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:

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.

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.

Tuff Country recommends using loctite on all new and stock hardware associated with the installation of this suspension system.

Part # 23500 does not work with the following Models. Bronco Sport, Badlands, Widtrack, First Edition Model. Any Models with Sasquatch Package.

Tuff Country recommends a 35" x 12.50" sized tire once part # 23500 has been installed. 37" x 12.50" tires can be used with various modifications and trimming. Due to different types of tread patterns, some aggressive tires in this size recommendation may require slight trimming of inner fender plastic. **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.**

Recommended tools selection:

- Torque wrench
- Standard socket set
- Standard wrench set
- Metric socket set
- Metric wrench set
- Tape measure
- Hydraulic floor jacks
- Measuring Caliper
- Drill & Assorted drill bits

Please follow these instructions carefully:

Before installation begins, measure from the center of the wheel 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. Safely lift the front of the vehicle and support the vehicle with a pair of jack stands. Place a jack stand on both the driver and the passenger side frame rail. Next, remove the front wheels and tires from both sides.

2. Remove the front plastic skid plate and set aside.



3. Next, remove the steel skid plate from the bottom of the front and rear cross members. Set aside.



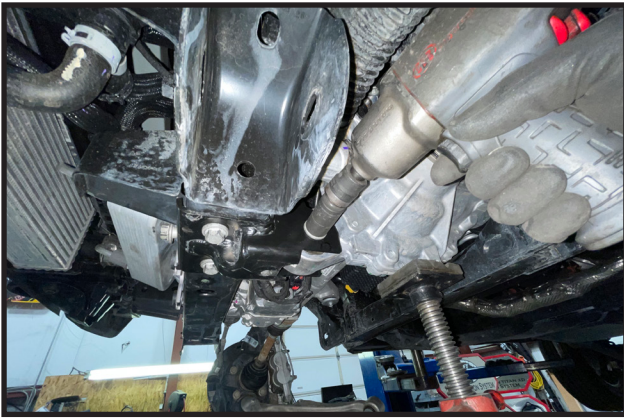
4. Locate the heat exchanger on the front crossmember and remove the 4 mounting bolts. (2 on top, and 2 on bottom).



5. Using a floor jack or similar supporting device, support the front differential.



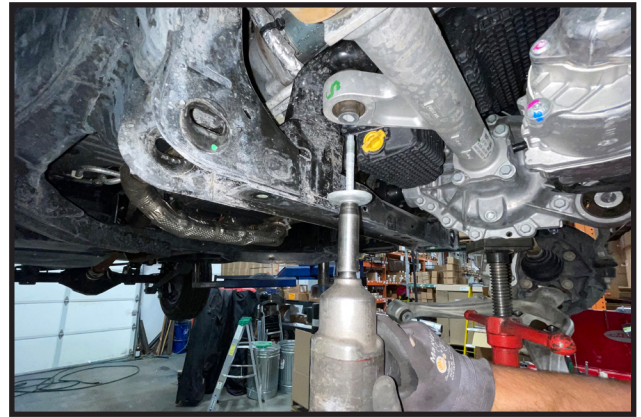
6. Remove the bolt holding the front differential to cross-member mount.



7. Remove the 3 bolts that are holding the differential bracket to the front crossmember and remove the bracket.



8. Locate and remove the passenger side differential mounting bolt. **Special Note: Once this bolt is removed, the front differential will be able to move freely, be careful to not let it fall off of the jack.**



9. Install the new driver side differential bracket. Use the OE bolts that go into the bottom of the crossmember, and use the OE bolt with NEW nut and washer for the through bolt. Leave hardware loose at this time.





10. Carefully lower the front differential down slightly, and locate the new spacer sleeve, 10mm x 90mm bolt, and over sized washer. Install the spacer sleeve on the passenger side differential mount so that it is spacing the entire front differential down. Start but do not tighten the new 10mm x 90mm bolt with the over sized washer. **Note: photo below shows OE bolt and washer, do not use the OE bolt and washer.**



11. Move back to the driver side and start the OE bolt with new nut and washer to mount the differential to the new bracket.



12. Tighten all hardware for the new driver side bracket as well as the 10mm bolt on the passenger side.



13. Re-install the OE hardware for the heat exchanger that was removed in Step #4



14. Working on the driver side, Remove the 3 nuts on the top strut mount, leave one of the nuts finger tight. Repeat on passenger Side



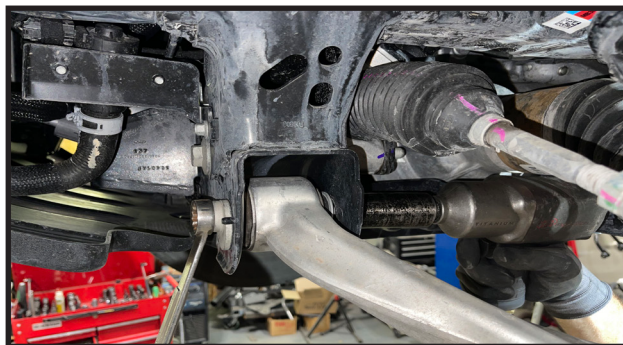
15. Remove the lower sway bar endlink hardware on the driver and passenger lower control arms. Remove the hardware securing the sway bar to the frame and remove the sway bar.



16. Remove the lower strut mounting hardware on the driver and passenger side.

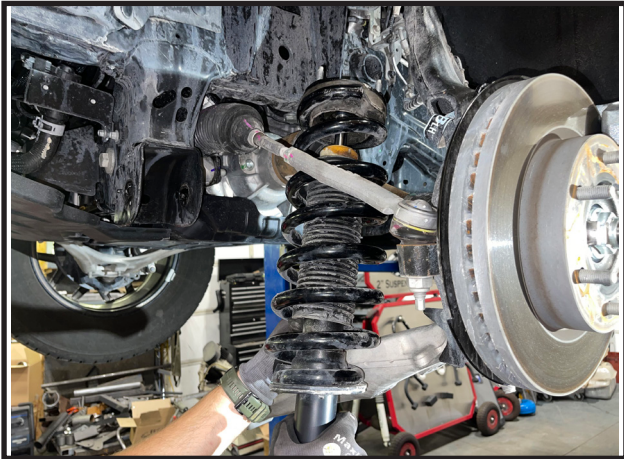
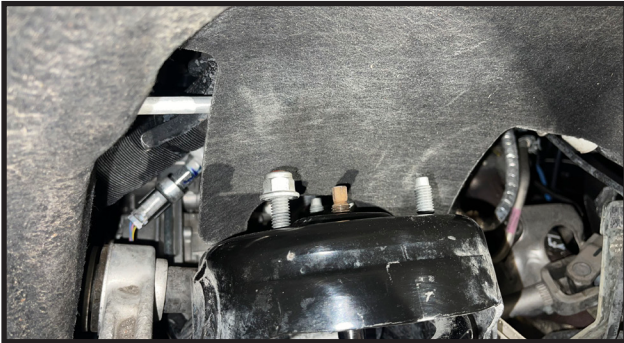


17. Remove lower control arm cam bolt hardware on the driver and passenger side.



18. Remove lower control arms from mounting pockets and lower strut mounts. Remove the remaining nut on the top

strut mount and remove struts.



19. Remove the guide pin from the strut top hat. Looking at where the coil spring ends, mark a line on the spring, Isolator and top hat, on the center of the 2 studs.



20. Using a strut spring compressor, Remove the nut on the top hat. Lift the top hat off the strut and KEEP the OE rubber isolator in place on top of the coil spring.



21. Install the new strut preload spacer on top of the OE rubber spring isolator.



22. Re-install the OE top hat **Special Note: Rotate the top hat 180° from the OE position.**

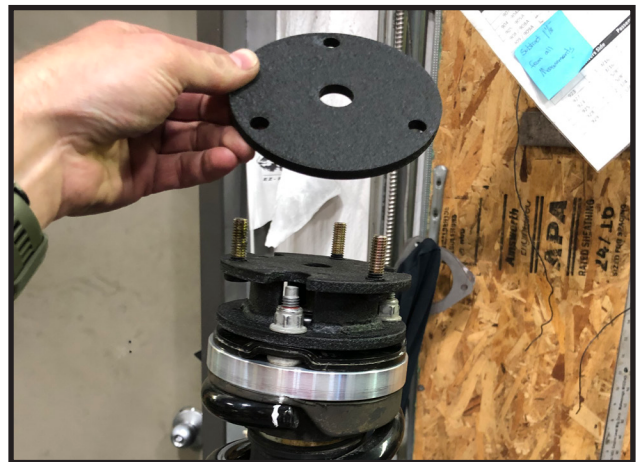


23. Carefully compress the strut assembly enough to re-install the OE nut and torque to OE specs.

24. Locate the new top strut spacer and install over the OE strut top hat, secure using the OE nuts.



25. Locate the new 1/4" thick top spacer plate and place it over the top of the new strut spacer.



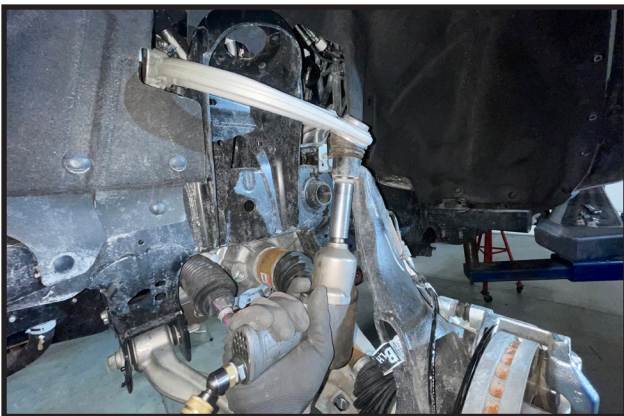
Repeat Steps #19-25 on the passenger side strut.

26. Working on the driver side, use the OE bolts to pin the lower control arm back to its mounting locations, do not tighten the bolts.

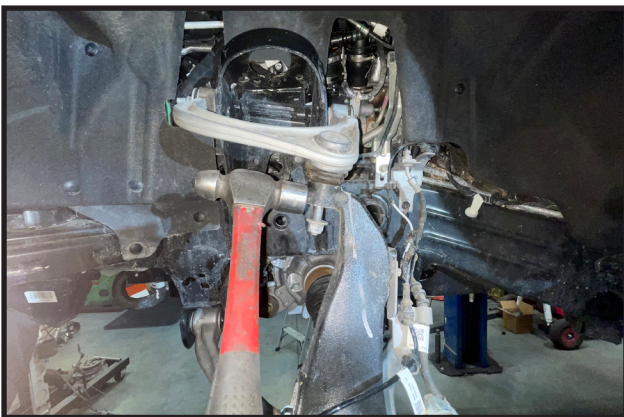


27. Place a floor jack or suitable supporting device under the lower control arm.

28. Loosen but do not remove the upper ball joint nut.



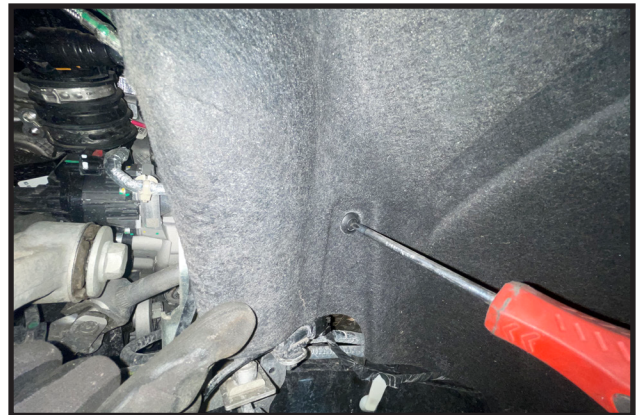
29. Using a hammer, carefully strike the top part of the steering knuckle where the ball joint is installed, You will need to hit this part until the ball joint pops loose.



30. Fully remove the upper ball joint nut and separate the ball joint from the steering knuckle.

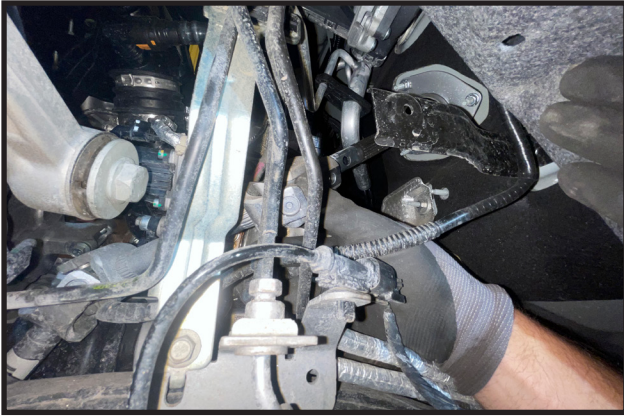


31. Remove the small Phillips head screw from the inner fender liner to access the steering shaft.



32. Locate the steering shaft coupler closest to the firewall, remove the pinch bolt so that the coupler can slide off of the steering shaft splines. **Important Note: Do not let anyone turn the steering wheel while this piece is disconnected, as it could cause damage to steering column components.**





33. Pop out the plastic body clips holding the inner splash guard to the frame rail to gain access to the front upper control arm bolt.



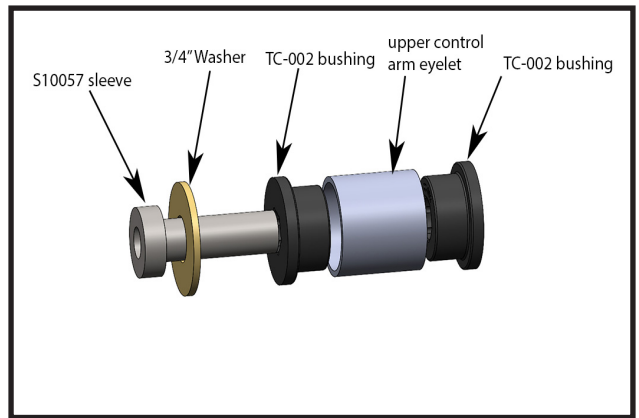
34. Remove the OE upper control arm bolt and set aside.



35. Remove the upper control arm from the vehicle.



36. Locate the new driver side upper control arm Part #23500-01. Using the diagram below, install the bushings, washers and sleeves. **Make sure to apply grease to the bushings before installing them.**

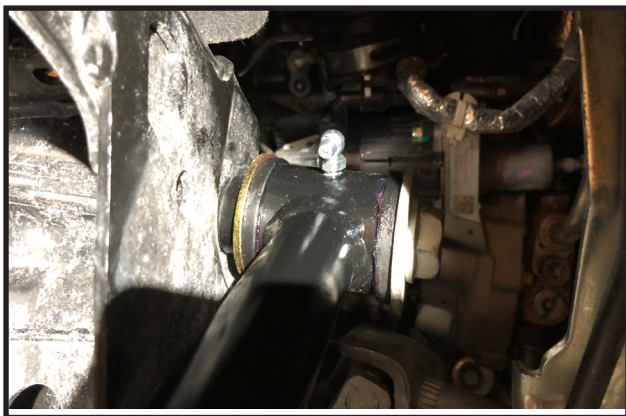




37. Install the grease fittings into each eyelet of the upper control arm. **Take special care to not over tighten the fittings.**



38. Install the new upper control arm back into the vehicle using the OE bolt, torque to **100 ft lbs.**



39. Using the new castle nut, washer and cotter pin, secure the upper ball joint to the steering knuckle.



40. Re-attach the steering shaft coupler and install the OE pinch bolt.



Repeat Steps #26-40 on the passenger side. (minus the steering shaft steps)

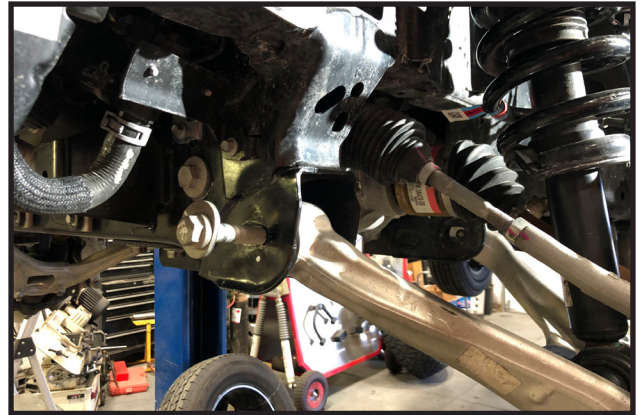
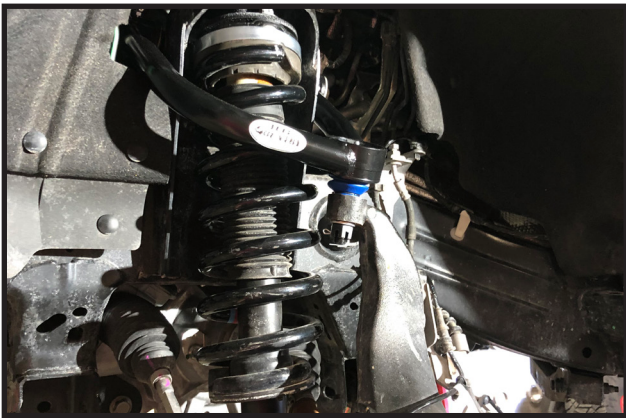
41. Remove the lower control arm bolts so that the lower control arms can hang down and out of the way.



42. Locate 3 new 3/8" flange nuts, install the strut assembly back into the vehicle and LOOSELY start only 1 of the flange nuts.



44. Re-install the lower control arm mounting bolts, washers, and nuts. **Do Not tighten at this time.**



45. Move back to the lower strut mount and tighten the nuts.



43. Swing the lower control arm back up so that you can start the 2 lower nuts on the strut.

46. Finish installing the 3/8" flange nuts on the top of the strut and torque to **35 ft lbs.**



Repeat Steps #41-46 on the passenger side.

47. Re-install the front sway bar using OE hardware.



48. Make sure to grease the grease fittings at the upper control arm eyelets, and upper ball joints.



49. Re-install the plastic and steel front skidplates using the OE hardware. **Note: the mounting location on the front differential bracket will no longer be used.**



50. Install the tires and wheels making sure to torque the lug nuts to the manufacturer's spec's. Carefully lower the vehicle back to the ground.

51. Torque the Lower control arm bolts to **125 ft lbs.**

Front end Installation Complete!

Rear end Installation:

52. Block the front tires so the vehicle can't roll away. Carefully jack the rear of the vehicle up so the tires are off the ground. Support the frame rails on each side so that you can lower the jack and let the suspension de-compress. Remove the tires and wheels.

53. Remove the two inner fender well clips, To help gain access. You can also fully remove the inner fender well if you would like. Repeat on passenger side.



53. Working on the top of the strut, remove the 3 OE nuts. Repeat on the passenger side.



54. Remove the lower mounting bolts and carefully remove the struts from the vehicle.



55. Using pliers, remove the dowel pin from the top of the strut hats.

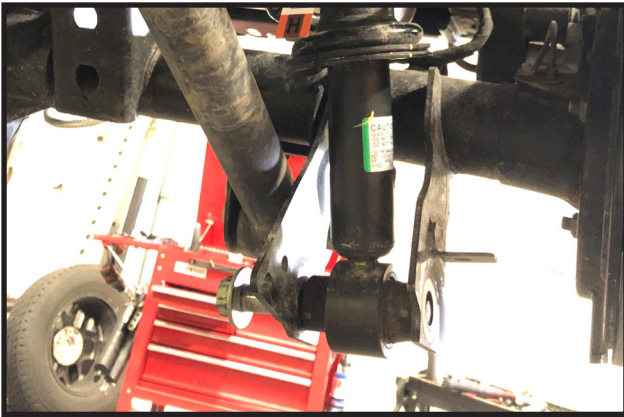


56. Locate and install the new rear strut spacers on top of the OE struts using the OE hardware.

57. Locate new 3/8" flange nuts, and install the struts back into the vehicle. Leave the flange nuts loose at this time.



58. Working on the lower mount for the strut, start the OE bolt but do not tighten yet.



59. Working on the passenger side where the track bar is mounted to the axle bracket, remove the OE bolt and set aside.



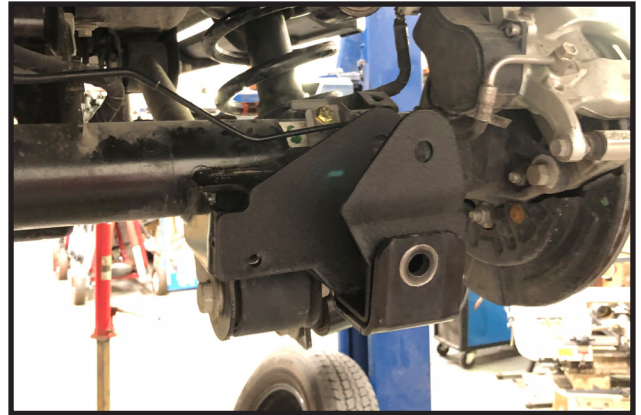
60. Remove the bolt that is holding the rubber brake line bracket to the track bar bracket and carefully lift the brake hard line up about 2 inches.



61. Locate the new rear brake line relocation bracket along with (1) 5/16" x 1" bolt, (1) 1/4" flat washer, and (1) 5/16" flange nut. Install the bracket using the OE bolt on the axle mount and the new bolt with hardware on the brake line bracket.

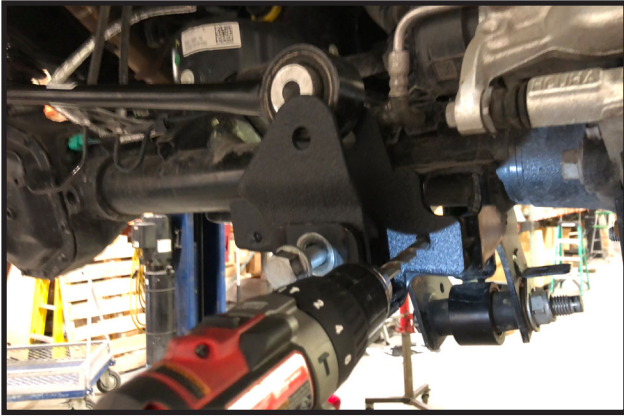


62. Locate the new rear track bar bracket part #23500-06 and place it to the inside of the OE axle bracket. Use the OE bolt to hold in place for now.

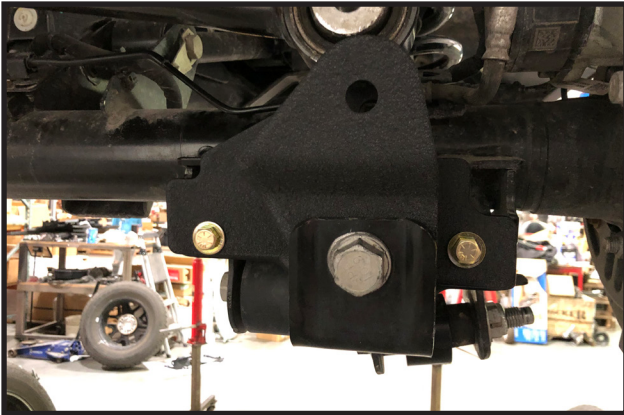


63. Using the new bracket as a guide, drill (2) 3/8" holes into the OE axle bracket.

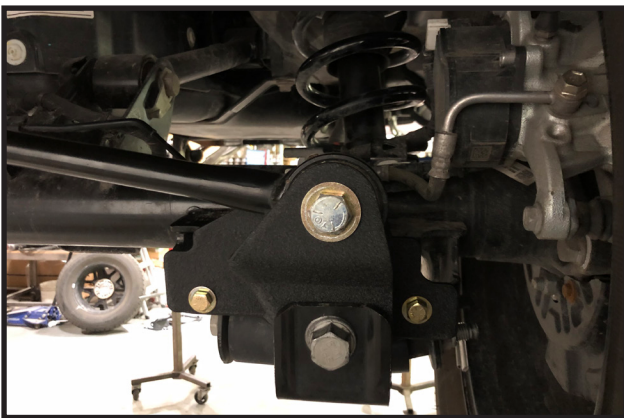




64. In each of the newly drilled holes, install (1) 3/8" x 1" bolt, (1) 5/16" flat washer, and (1) 3/8" flange nut.



65. Line the track bar up with the newly installed bracket and install (1) 5/8" x 4" bolt, (2) 9/16" flat washers, and (1) 5/8" unitorque nut.



66. Torque the OE bolt to manufacturer's spec's. Torque the new 3/8" bolts to **35 ft lbs**, and torque the new 5/8" bolt to **125 ft lbs**.

67. Move back to the upper strut mounts and torque the 3/8" flange nuts to **35 ft lbs**. Re-install the plastic inner fender liner clips.

68. Torque the lower strut bolts to the manufacturer's spec's.



69. Re-install the tires and wheels and torque the lug nuts according to the wheel manufacturer's spec's

70. Carefully remove the jack stands and lower the vehicle back down to the ground.

Installation 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.