Installation manual
6” Suspension Kit
2009-2014 F150 4X4
Part # 26100

SS02152022

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.

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. 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.

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

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 of 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 Developed this system using a 35"x12.50"x18" tire with a 18 x 9 wheel using 4.5" backspacing. If you are using OE wheels, the tire width will need to be a maximum of 11.5" 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.

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.

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.

Recommended tools selection:

Torque wrench
Standard socket set
Standard wrench set
Metric socket set
Metric wrench set
Tape measure
Hydraulic floor jacks
Sawzall, or cutoff wheel
Drill
Assorted drill bit sizes

Part's List

Part #	Descripton	Qty
26100-01	Front Crossmember	1
26100-02	Rear Crossmember	1
26100-03	Driver side differential bracket	1
26100-04	Passenger side differential bracket	1
26100-05	Driver side pinion support bracket	1
26100-06	Front strut spacer	2
26100-07	Passenger side sway bar bracket	1
26100-09	Front drive line spacer	1
26100-10	Large E-brake cable bracket	1
26100-11	Small E-brake cable bracket	1
26100-12	Front brake line bracket	2
26100-13	Rear brake line bracket	1
26100-14	Driver side sway bar bracket	1
26100-15	Front skid plate	1
26100-16	Driver side steering knuckle	1
26100-17	Passenger side steering knuckle	1
26100-18	Brake caliper spacer washer	4
BL405	Rear lift block	2
5U-2514S	Rear U-bolts	4
916NW	U-bolt hardware pack	1
Shocktie	zip ties	6
26100NB	Hardware bag	1
764VL	rubber vacuum hose	2
532VL	rubber vacuum hose	2
S10340	1.000" x .625" x .817" spacer sleeve	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:_____

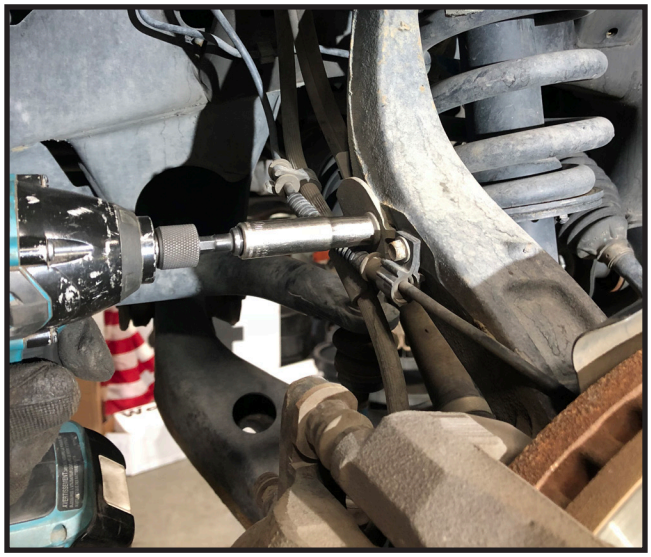
Front end installation:

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 stand on both the driver and the passenger side. Next, remove the front wheels and tires from both sides.

2. If the vehicle you are working on is equipped with EPAS (electronic power assist steering), Un-plug the 2 connector wire harness from the steering rack.

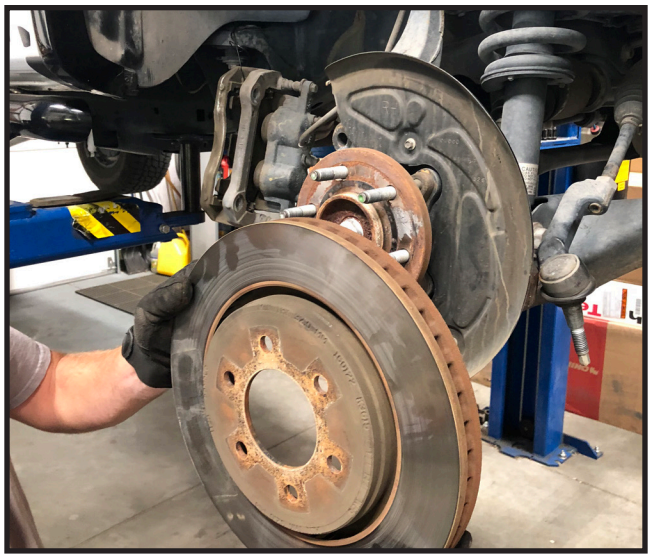
3. Carefully remove the outer tie rods from the steering knuckles by using a hammer to carefully hit the steering knuckle.

4. Remove the brake line and ABS wire harness bracket from the neck of the steering knuckles. Save hardware.

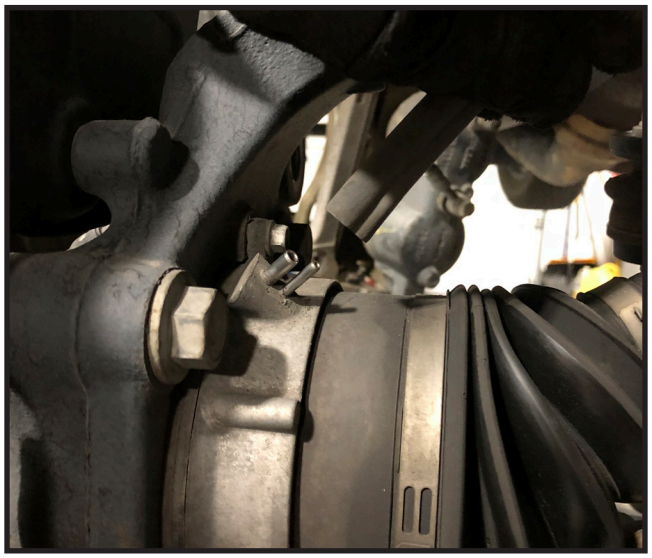


5. Remove the brake calipers and carefully tie them up out of the way.

6. Remove the brake rotors and set aside

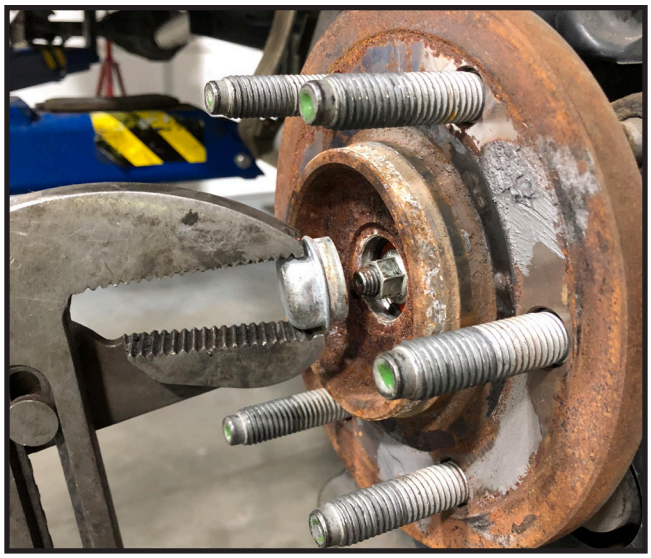


7. Un-plug the vacuum hoses from the hub

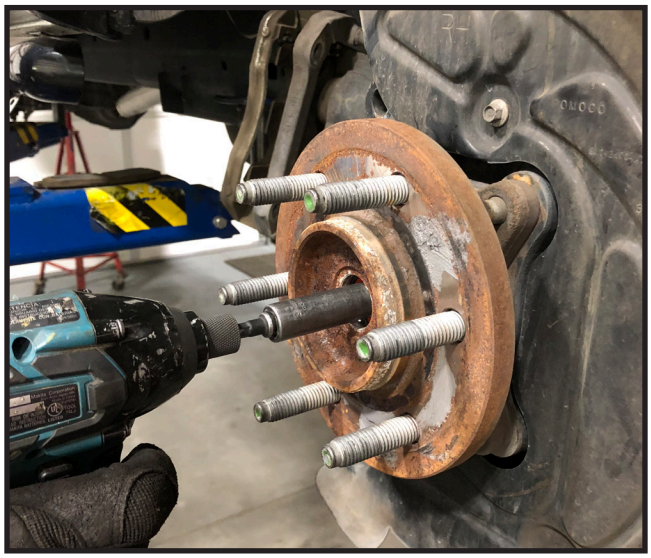


8. Remove the wheel speed sensor from the top of the steering knuckle/hub.

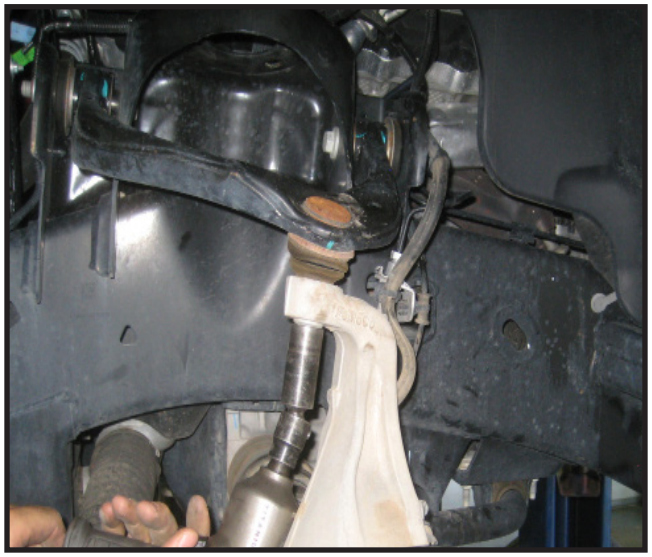
9. Remove the dust cap from the CV axle nut



10. Remove the CV axle nut and save for later.



11. Loosen, but do not remove the upper ball joint nut

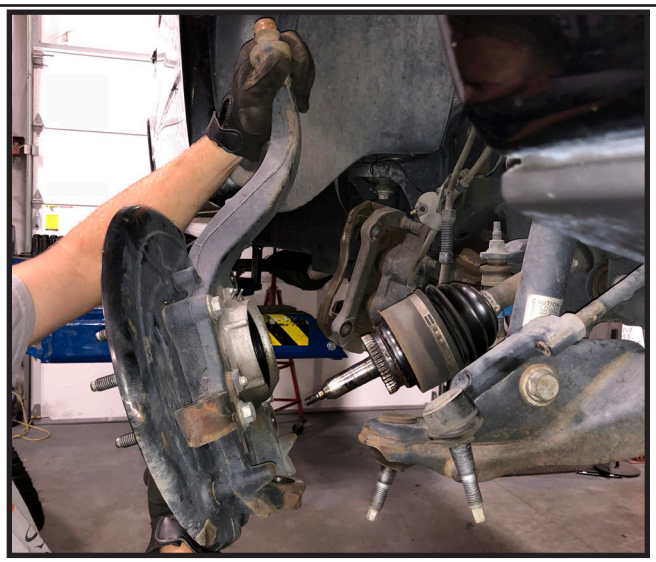


12. Carefully strike the top of the steering knuckle with a hammer to release the tapered fit of the upper ball joint from the knuckle.

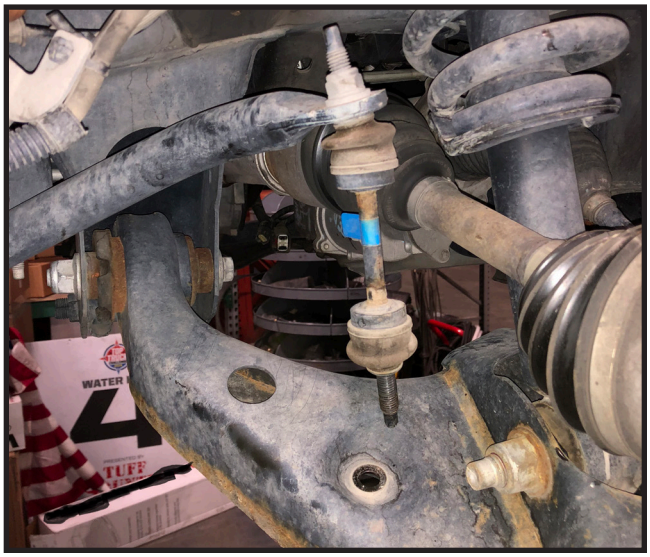
13. Move to the lower ball joint and loosen, but do not remove the nut.

14. Carefully strike the bottom of the steering knuckle with a hammer to release the tapered fit of the lower ball joint from the knuckle.

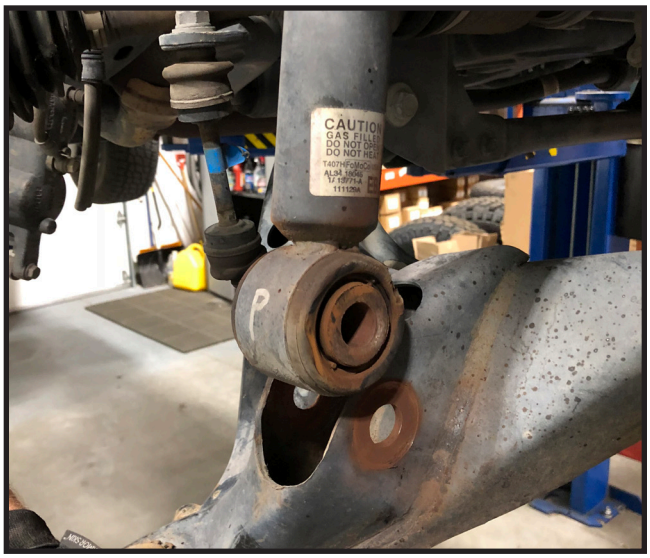
15. Remove both the upper ball joint nut, and the lower ball joint nut and remove the entire steering knuckle assembly from the vehicle. **Take special care not to damage the CV axle OR the 4X4 actuator during this process**.



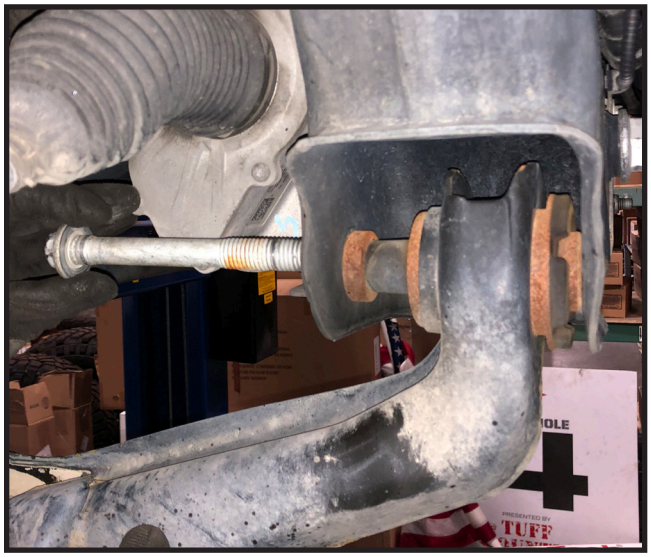
16. Detach the sway bar end links from the lower control arms.



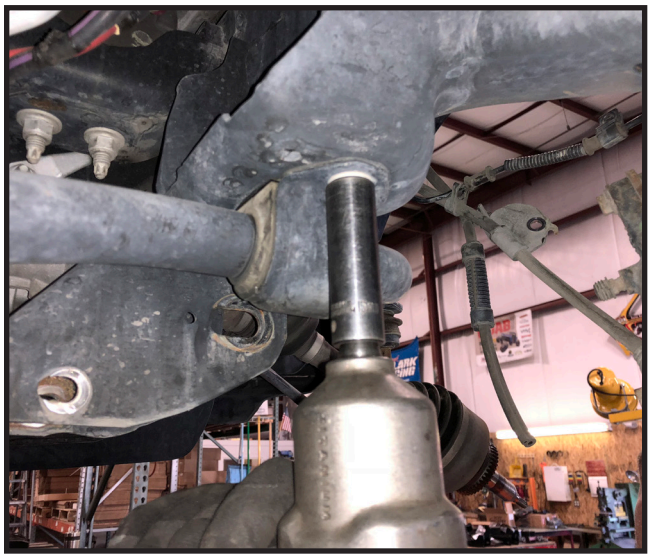
17. Remove the lower strut mounting bolt and hardware



18. Remove the lower control mounting bolts and hardware, and remove the lower control arms

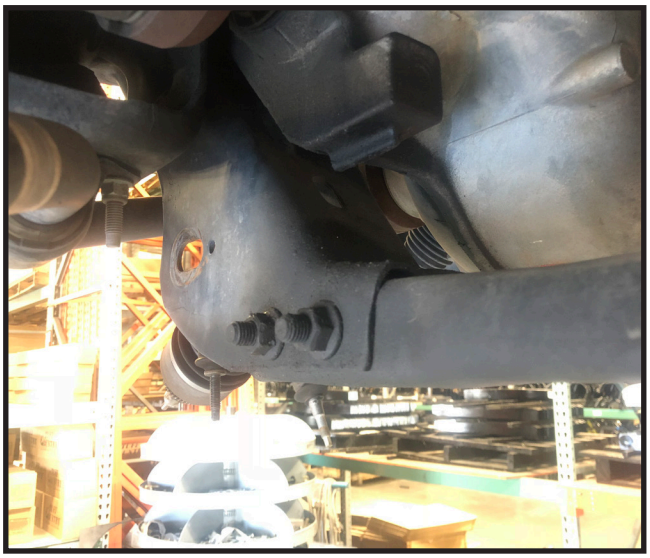


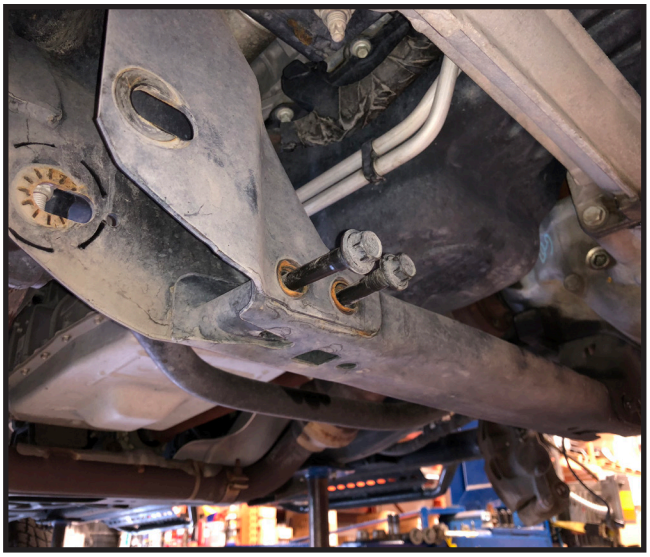
19. Completely remove the sway bar from the vehicle and set out of the way.



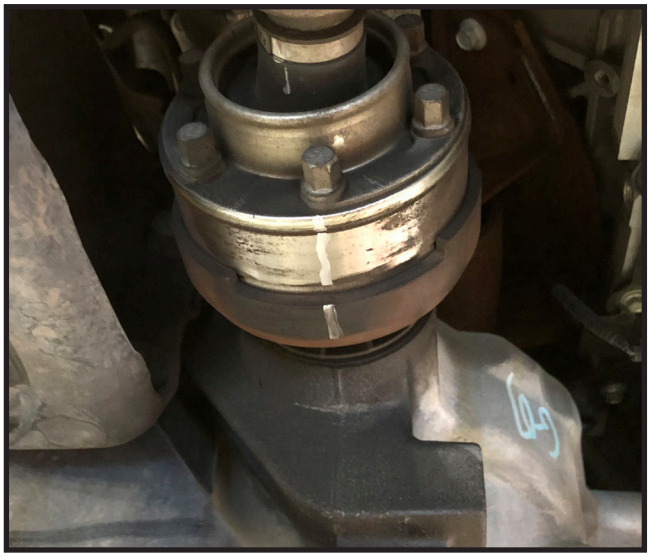
20. Remove the 3 nuts at the top of the struts and completely remove the struts from the vehicle. **Keep note of which side each one came off of. (Driver and Passenger side).**

21. Remove the rear cross member that spans across the lower control arm mounts.





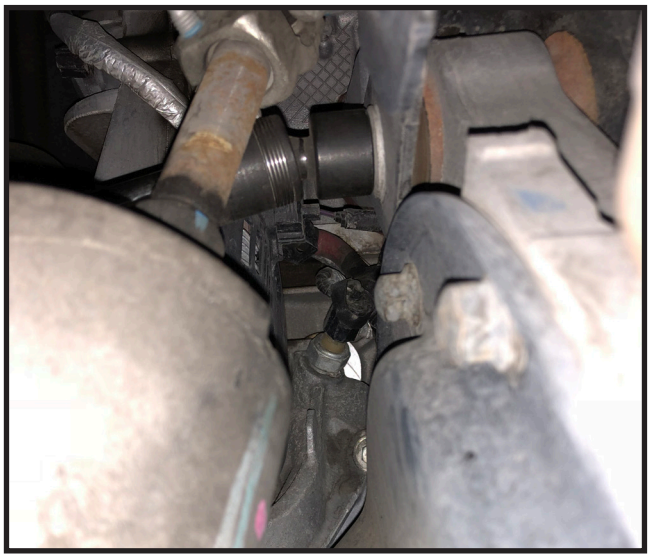
22. Working on the front drive shaft, make a reference mark for the direction that it is connected to the front differential.

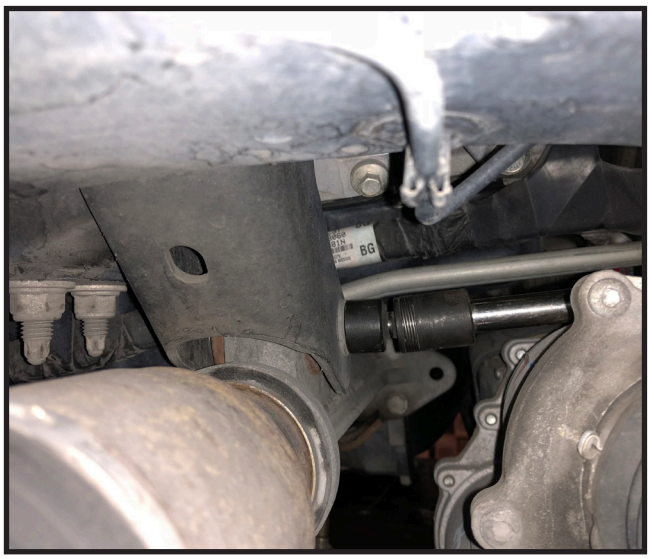


23. Once the drive shaft has been marked, remove it from the front differential and tie up out of the way. **We use a wire or something similar to tie it up as high and out of the way as possible.**

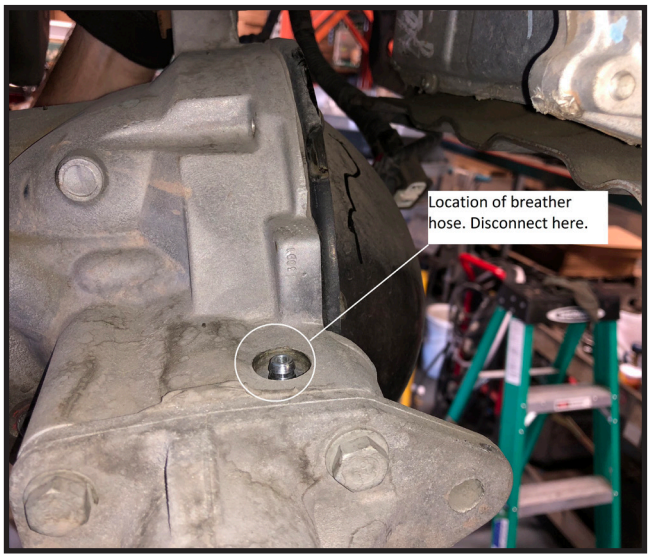
24. Using a suitable jack, support the front differential for removal.

24. The front differential is mounted in the vehicle using 3 locations: the passenger side, driver side, and driver side pinion area. At this time, remove the bolts and hardware from these 3 locations **Making sure the differential is properly supported with a jack.**



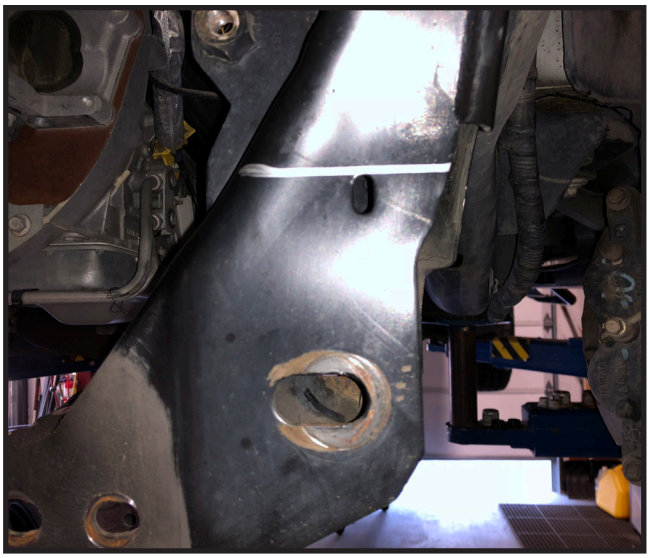


25. Carefully lower the front axle assembly down enough to disconnect the breather hose from the top center of the differential.

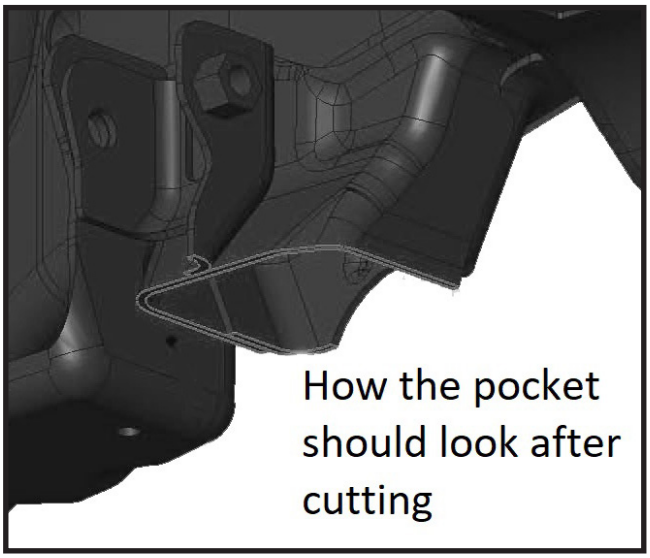


26. Lower the front axle assembly down and completely out of the vehicle. Set aside somewhere safe and secure.

27. Working on the driver side, rear lower control arm pocket, Measure 3” straight up from the top of the OE slotted hole, and mark a straight line. **See photo below.**

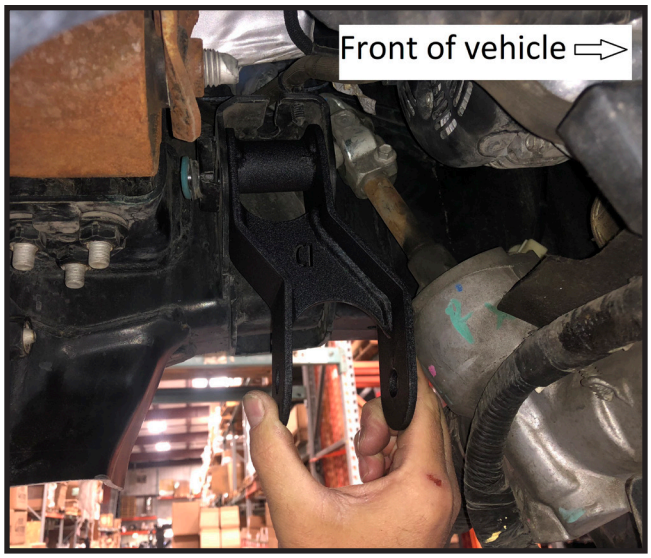


28. Using a cutoff wheel or sawzall, and following your reference line, cut completely through the rear pocket.



29. Locate and install the new driver side pinion support bracket using the OE bolt. **Leave loose at this time.**

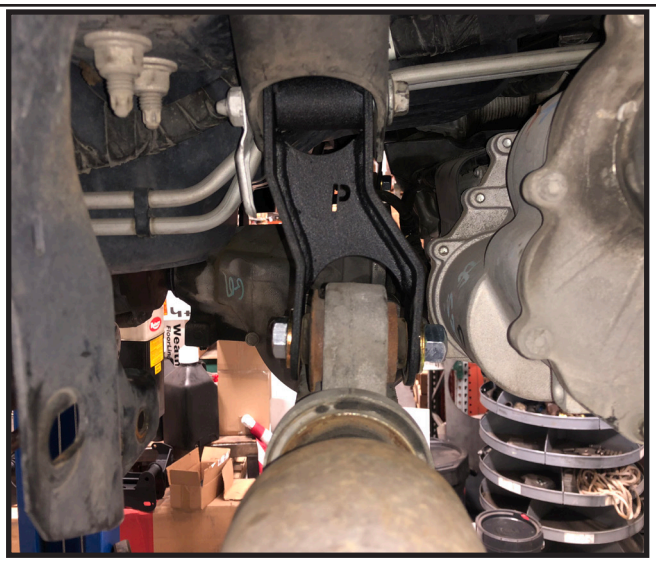
30. Locate and install the new driver side differential bracket into the OE pocket using the OE bolt. **Leave loose at this time. Special note: make sure the bracket is installed so the letter “D” can be read from the outside of the vehicle.**



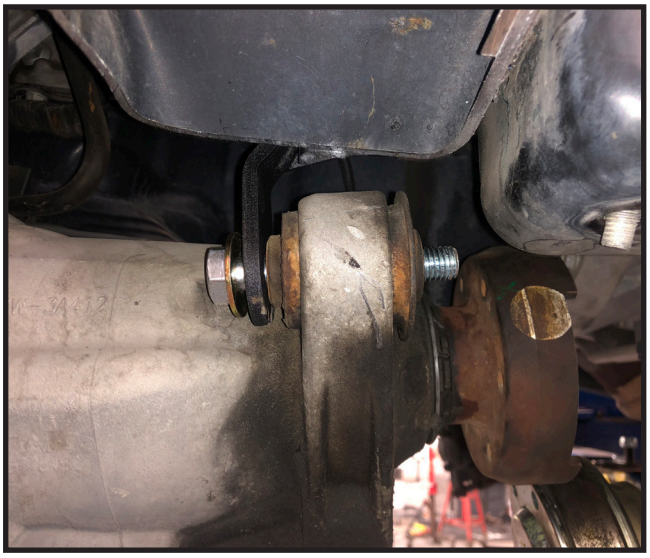
31. Locate and install the new passenger side differential bracket into the OE pocket using the OE bolt and hardware. **Leave loose at this time. Special note: make sure the bracket is installed so the letter “P” can be read from the outside of the vehicle.**

32. Carefully raise the entire front axle assembly back up into the vehicle aligning the passenger and driver side mounts to the new drop brackets.

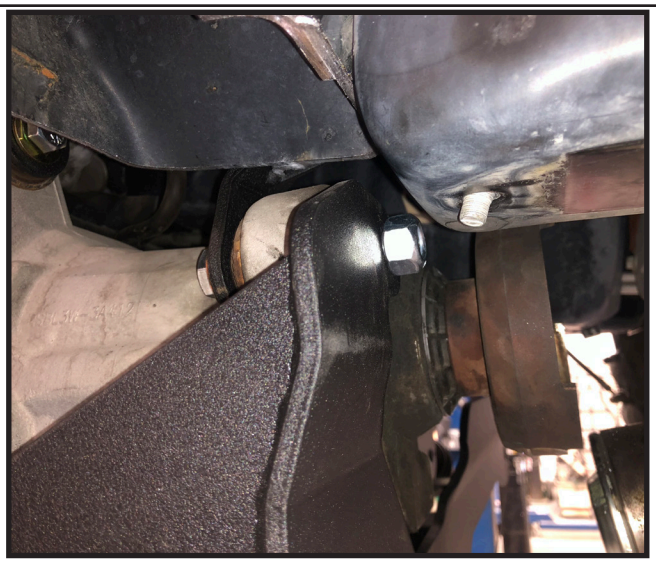
33. Locate (2) new 14mm x 90mm bolts, washers, and nuts. Install into the new driver and passenger side differential drop brackets. **Leave loose at this time.**

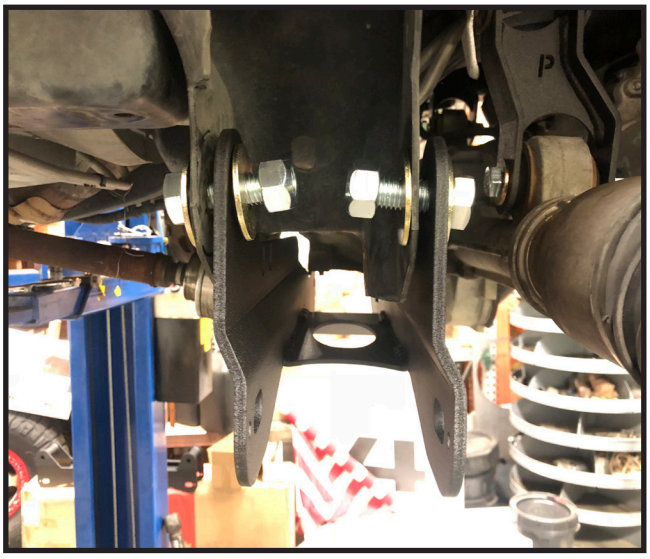


34. Locate a new 14mm x 90mm bolt with (1) flat washer. install this bolt through the driver side pinion support bracket and pinion mount on the front differential. **See photo below for bolt direction.**



35. Install the new rear crossmember, the driver side will install over the pinion support bracket bolt, and the passenger side will use (2) 18mm x 50mm bolts with washers and nuts. **Leave loose at this time.**



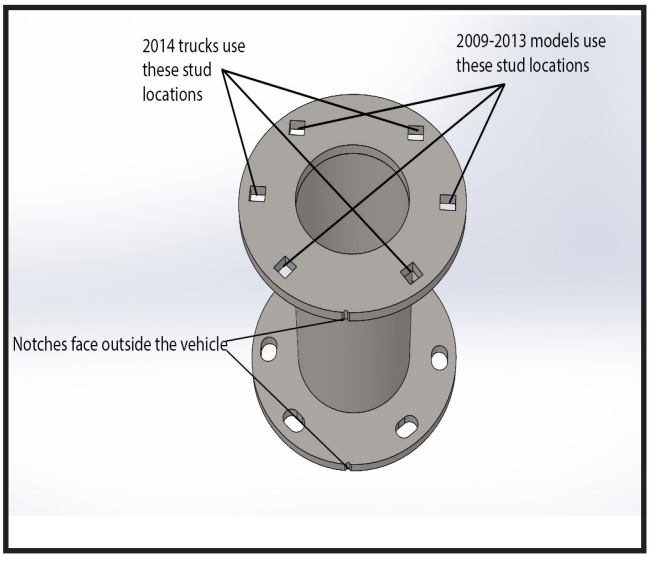


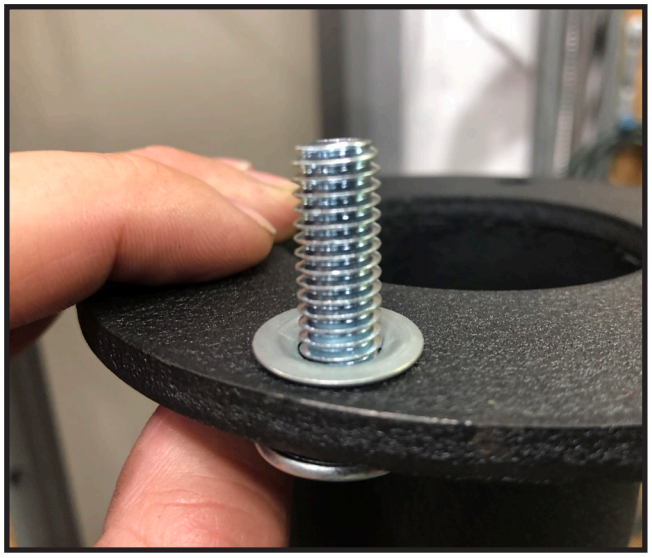
36. On the passenger side of the new rear cross member, install 4 new 1/2” x 1 1/2” bolts with washers and nuts. **Special note: the 2 front mounting holes will need the S10340 spacer sleeves. Leave loose at this time.**

37. Locate and install the new front cross member into the OE front control arm pockets making sure it is dropping down and forward. Use the OE bolts and nuts. **Leave loose at this time.**

38. Move back to the 1/2” x 1 1/2” bolts that were installed in step #36, tighten the REAR bolt only.

39. Locate the new front strut spacers, studs, and push nuts. Using the diagram below, install the studs into the new spacers using the push nuts to hold them in place.





40. Install the new spacers on top of the OE struts using OE hardware and making sure that the notches in the spacers will face towards the outside of the vehicle.

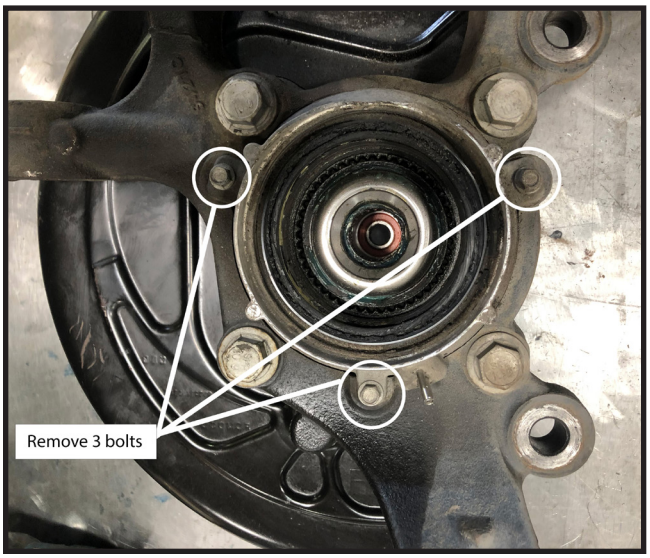
41. Re-install the struts into the vehicle using new upper 3/8” uni torque nuts and flat washers. **Leave loose at this time.**

42. Re-install the lower control arms using new 18mm x 150mm and 18mm x 160mm bolts and hardware. **Leave loose at this time.**

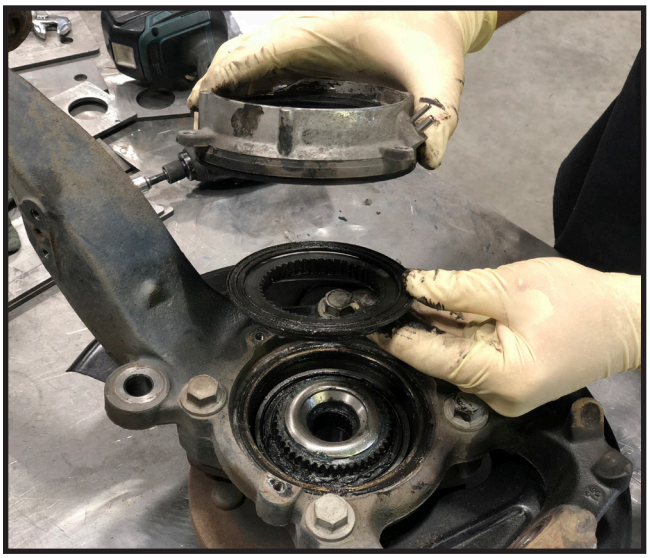
43. Swing the lower control arms up and connect the lower strut mounts to them using the OE bolts and hardware. **Leave loose for now.**

Move to a work bench or spacious work top to begin swapping the wheel hubs from the old steering knuckles to the new ones.

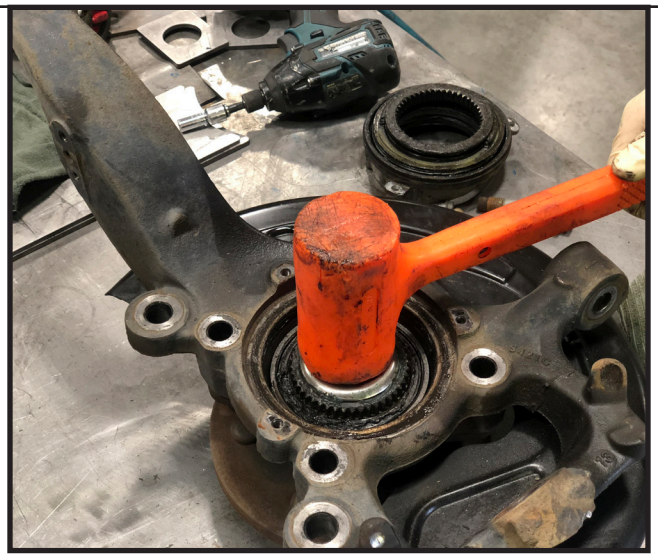
44. Looking at the back side of the steering knuckle, remove the 3 small bolts that hold the vacuum hub actuator to the knuckle.



45. Carefully remove the vacuum hub actuator and set aside. **Take extra care to keep any and all parts of the actuator in order that they come out.**



46. Remove the 4 hub bolts and using a rubber mallet or similar soft hammer, carefully knock the hub assembly out of the knuckle.

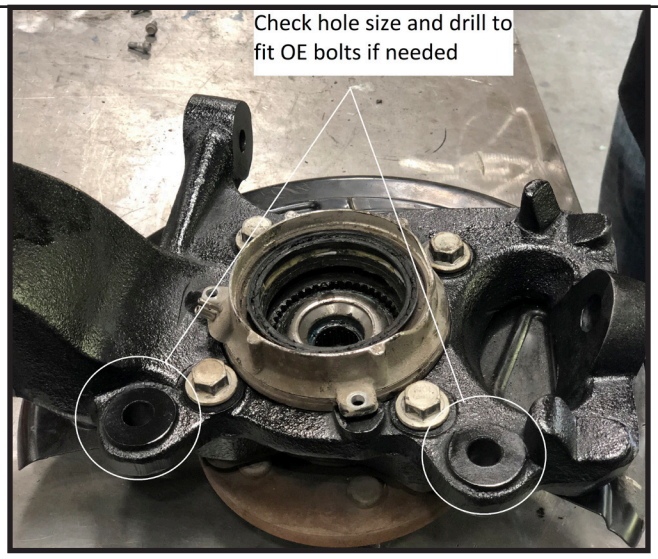


47. Turn the steering knuckle over and remove the brake rotor dust shield.

48. Locate the new steering knuckle and install the brake rotor dust shield using the OE hardware.

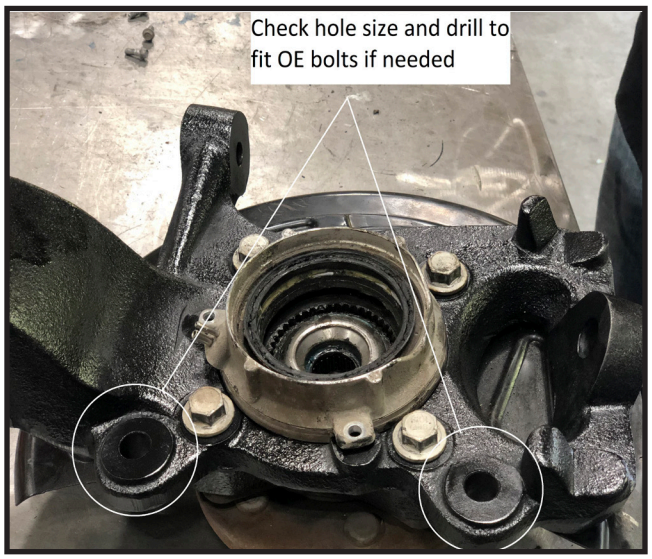
49. Re-install the hub assembly into the new steering knuckle making sure that the hole for the wheel speed sensor is facing upwards.

50. Re-install the vacuum actuator in the same order that it was removed and using the OE bolts.



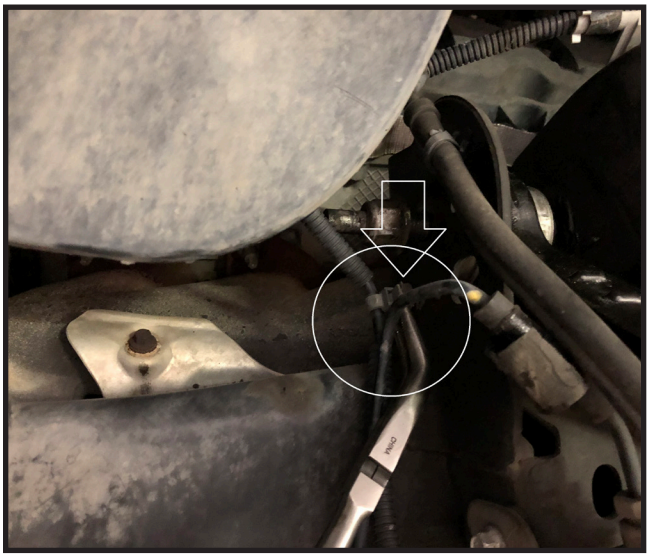
****Special note****

Some trucks in this year range, use a different size bolt for the front brake caliper, we recommend checking the OE bolts to make sure they will fit into the new steering knuckle, and if they do not, you will need to drill out the steering knuckle to accept the OE bolts.



51. Re-install the new steering knuckle assemblies into the vehicle using the OE upper ball joint nut, Lower ball joint nut.

52. Follow the ABS sensor wire up to where it connects to the brake line bracket, and upper control arm bracket, pull the small plastic wire ties out of those 2 locations.

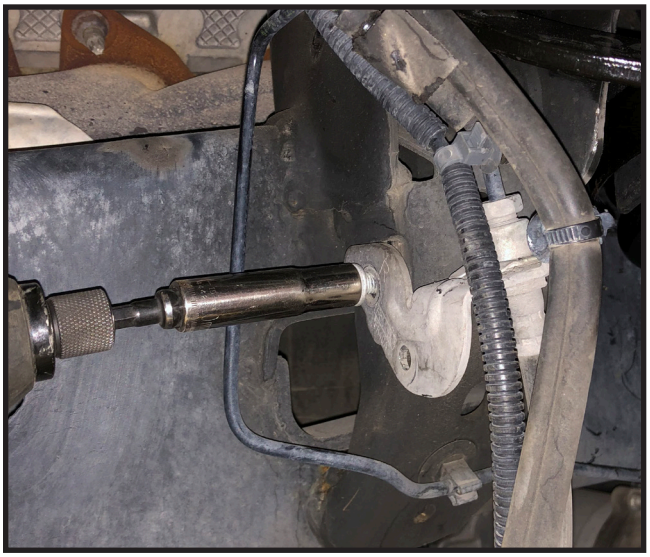


53. Now with the gained slack in the wire, re-install the ABS sensor in the top of the wheel hub.

54. Re-install the brake rotor.

55. Re-install the CV axle nut and carefully tighten using hand tools only. Re-install dust cap.

56. Follow the brake line up to where it meets the hard line, and remove the bracket from the frame. Save hardware.



57. Remove the brake hard line from the plastic frame clip.

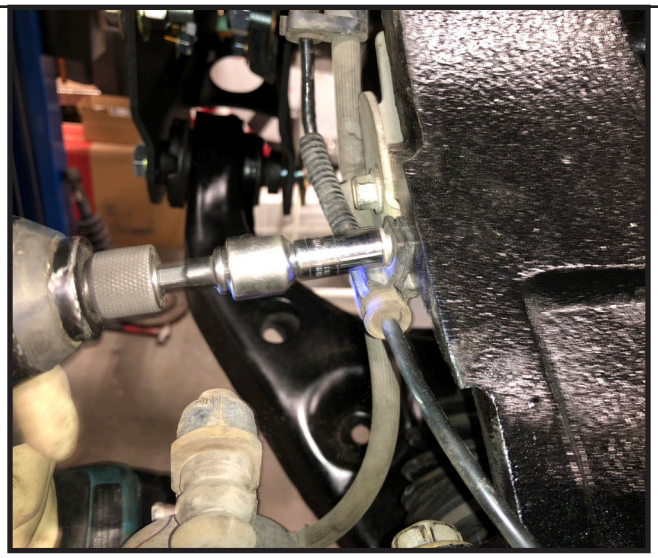
58. Install the new brake line extension bracket using the OE bolt on the frame and a new 1/4” bolt with hardware on the brake line bracket.

59. Re install the brake caliper using OE bolts. If bolts do not fit in the steering knuckle, refer to special note on page 15 of this manual.

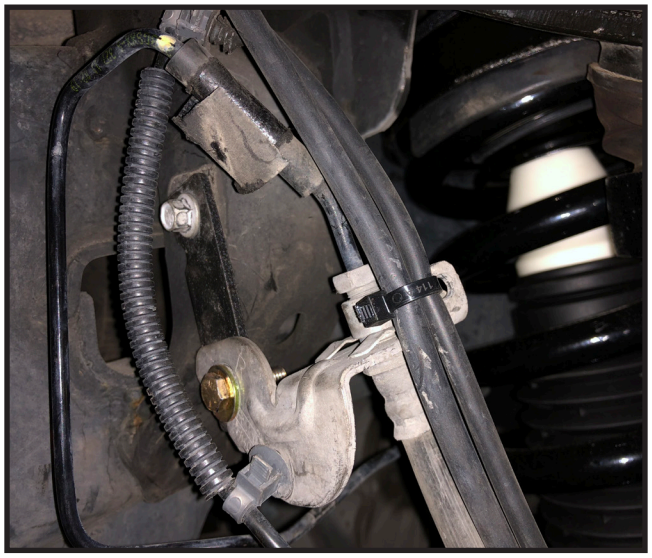
60. Disconnect the front vacuum hoses from the plastic junction located near the upper control arm mount. Discard the OE vacuum hose.

61. Plug the NEW vacuum hoses into the plastic junction.

62. Using the OE hardware, re-install the bracket line bracket and ABS wire to the new steering knuckle.



63. Using supplied zip-ties, button up any loose hoses and wires.

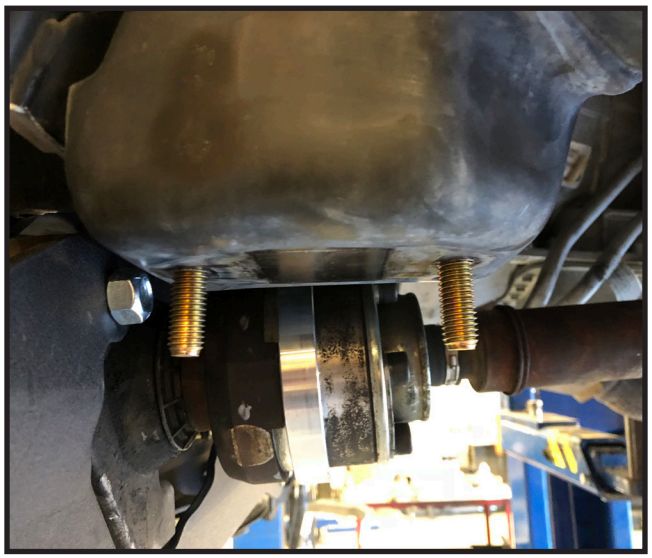


64. Re-install the outer tie rods into the new steering knuckles.

65. Locate the new front drive line spacer and (6) 10mm Allen headed bolts. Install the spacer between the front differential, and the drive line. **Special note: Make sure to line the drive line up with the reference mark that was made in step #22.**

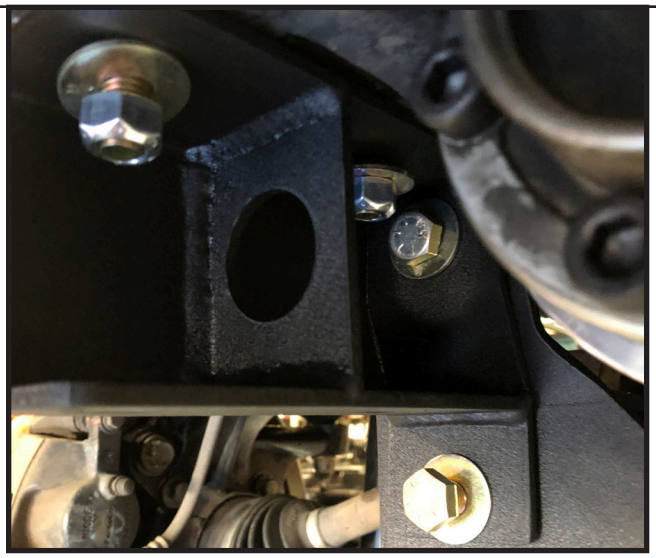
66. Working on the driver side sway bar mount, Drill the OE bolt holes out to 1/2”.

67. Locate (2) 1/2” x 1 1/2” bolts, (2) 7/16” flat washers and insert them in to the sway bar mounting holes with the bolt head up top.



68. Fit the new driver side sway bar drop bracket over the just installed bolts and loosely start the 1/2” nuts.

69. Install 2 more 1/2” x 1 1/2” bolts with hardware to connect the sway bar drop bracket to the backside of the new rear cross member. **Leave all hardware loose for now.**



70. Locate the new front skid plate and install it to the front and rear cross members, using 1/2” x 1 1/4” bolts with nuts and washers. **Leave loose at this time.**

71. Working on the passenger side sway bar mount. Install the new drop bracket using 7/16” x 1 1/2” bolts with washers and nuts. **Torque hardware to 40 ft lbs.**

72. Move back to all 3 front differential mounting points and tighten all the hardware associated with these and the new drop brackets.

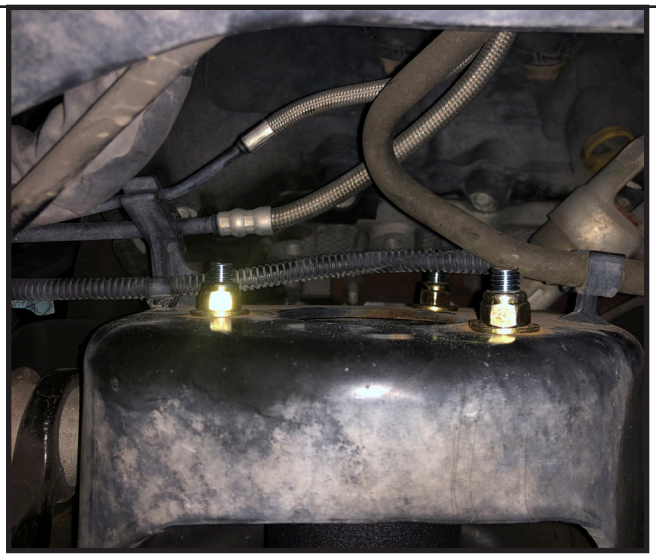
73. Tighten all the hardware associated to mounting the new rear cross member to the vehicle.

74 Tighten all the hardware associated to mounting the new front cross member to the vehicle.

75. Tighten the mounting hardware for the driver side sway bar drop bracket.

76. Tighten all 5 skid plate mounting bolts and hardware.

77. Tighten the top strut hardware.



78. Re-install the sway bar to the new sway bar drop brackets using new 7/16” x 1/1/2 bolts and hardware.

Congratulations, Front end complete!

****Special Note****
We recommend waiting until the vehicle is on the ground under its own weight before torquing the 4 lower control arm mounting bolts.

Rear Installation

79. To begin installation, block the front tires of the vehicle so that the vehicle is stable and can't roll forwards. Safely lift the rear 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. Next, remove the wheels and tires from both sides.

80. Working on the driver side, emergency brake cable. Remove the small wire bracket that holds the cable to the rear spring hanger bracket. Save hardware.

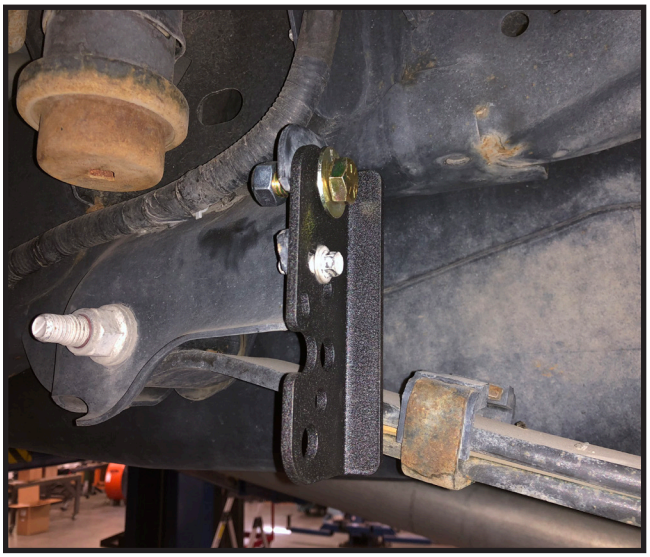
81. Follow the other cable up to the metal union and slide the cable forward and out of the bracket.

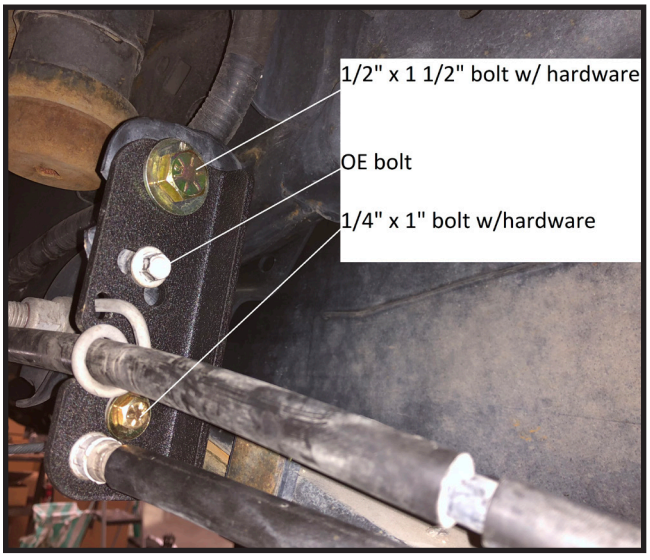
82. Remove that upper cable from the spring hanger bracket and relocate it on TOP of the rear leaf spring.

83. Follow the lower cable up to the metal union bracket and carefully drill out the pinch point that is holding the cable in the bracket.

84. Working on the upper cable again, carefully squeeze the 2 tabs on the plastic collar and remove the cable from the metal bracket.

85. Locate the new emergency brake cable drop bracket and install on the rear spring hanger using a combination of OE hardware and 1/2” x 1 1/2” bolt with nut and washers, and 1/4” x 1” bolt with nut and washers. **See Photos below for proper installation.**





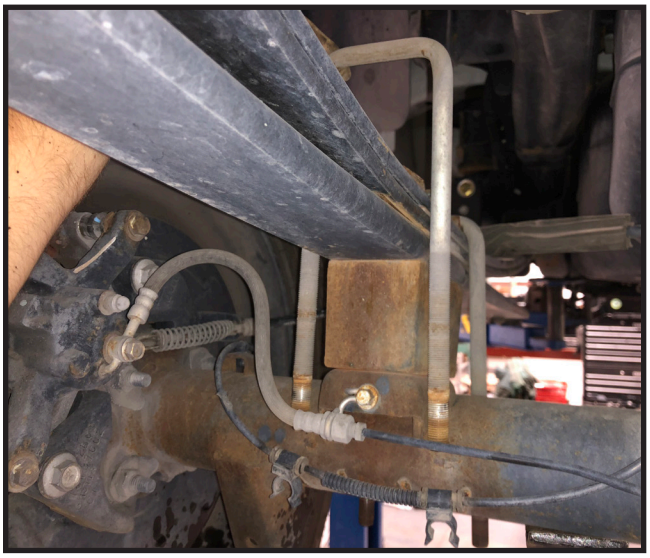
86. Locate the smaller new emergency brake cable bracket and install it so that it connects the upper cable to the lower cable again.

87. Remove the rear shock absorbers, Save the OE hardware.

89. On the driver side, follow the rubber brake hoses up to where they meet the hard lines and remove the bolt holding the bracket to the frame rail.

90. Working on the passenger side, loosen, but do not remove the u-bolts.

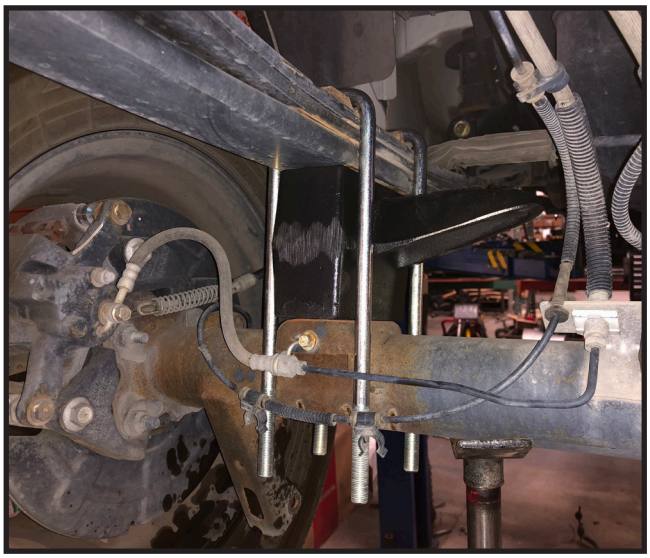
91. Working on the driver side, remove the u-bolts and carefully lower the axle down enough to remove the OE block if it is equipped with one.



92. Install the new lift block and u-bolts but only hand tighten the u-bolts at this time.

93. Move back to the passenger side and completely remove the u-bolts and block, carefully lower the axle down and install the new block and u-bolts.

94. **Torque all 4 new u-bolts to 110 ft lbs.**



95. Locate the new rear brake line relocation bracket and install it up at the frame using the OE bolt and new 1/4” bolt with hardware.

96. Install new rear shock absorbers. **OE length shocks will not be long enough once this lift system has been installed. If you have not already purchased new longer shocks, you will need to.**

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.

This Suspension System 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.

If you have any questions or concerns, please feel free to contact Tuff Country or your local Tuff Country dealer.