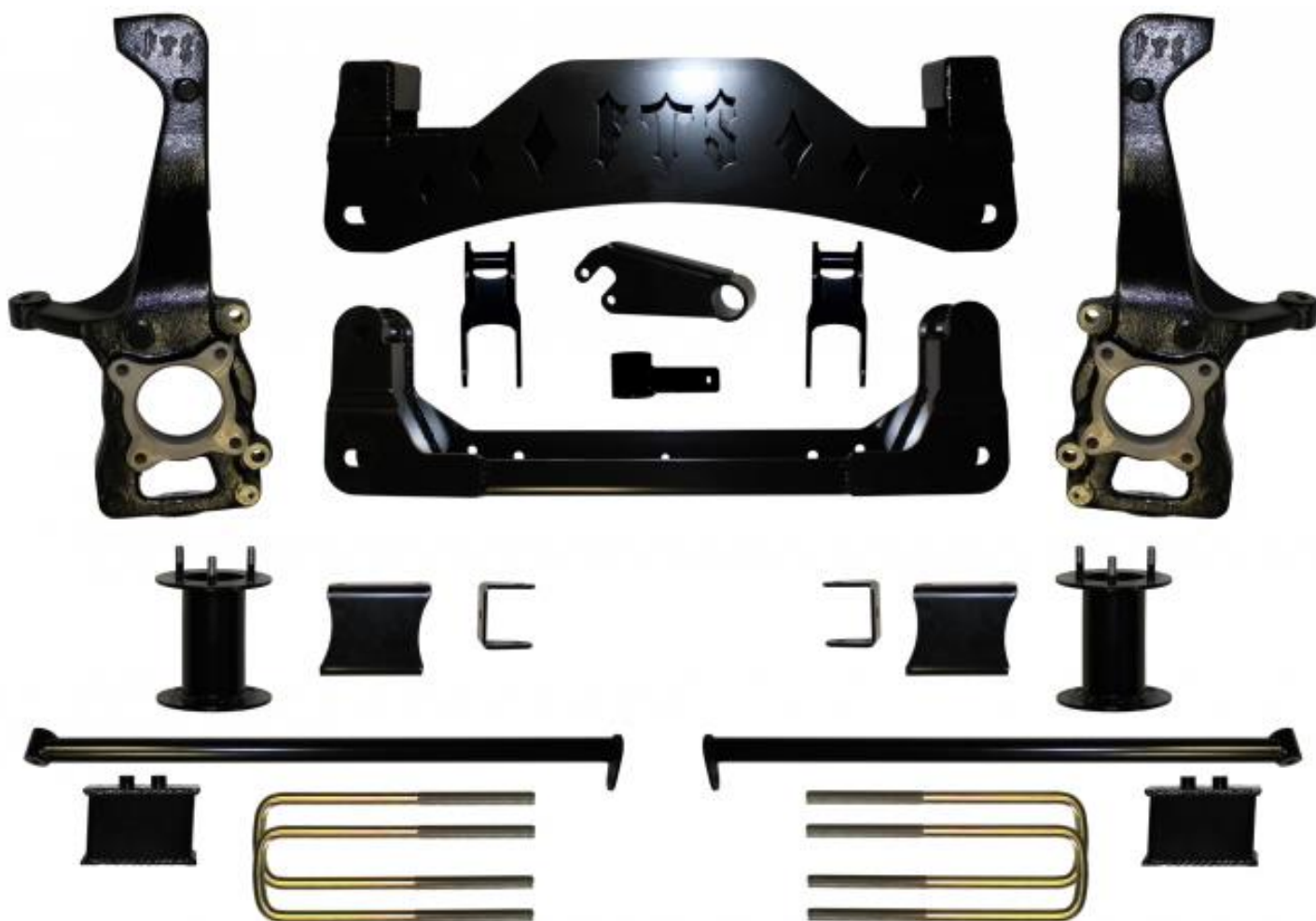


75005

FULL THROTTLE SUSPENSION

6" 2009-2014 FORD F150 4WD BASIC KIT

- 100% Bolt On Spindle Kit That Does Not Extend Track Width
- Impact Struts To Distribute Suspension Impact Throughout The Frame
- Structural Cross members Constructed Of 1/4" Thick Steel For Superior Strength
- Heavy Duty Semi-Gloss Black Powder For Long Life And Great Looks
- Offset Rear Lift Block Keeps The Rear Axle Centered
- Utilizes Ductile Iron Steering Knuckle For Stock Alignment
- Superior Drivability Both On And Off-road



75005

6" 2009-2014 FORD F150 4WD BASIC KIT

75001-4 Component Box 1

- 1) Front X Member
- 1) Rear X Member
- 1) Left Compression Strut
- 1) Right Compression Strut
- 2) 2 Sway Bar Drop Bracket
- 2) Tie Rods # T538
- 1) Left Strut Spacers
- 1) Right Strut Spacers
- 2) U Brackets
- 1) Rear Driver Diff Drop
- 1) Rear Center Diff Drop
- 2) Front Upper Diff Drops

Hardware Bag 3

- 3) 5/16" X 1" Bolts
- 3) 5/16" Nylock
- 6) 5/16" Washers
- 1) Left Front Brake Line Bracket
- 1) Right Front Brake Line Bracket
- 1) Rear Brake Line Bracket

Hardware Bag 2

- 1) 7/16" X 2 1/4" Bolts
- 1) 7/16" Nylock Nuts
- 2) 7/16" Washers
- 2) 1/2" X 1 1/2" Bolts
- 2) 1/2" X 4" Bolts
- 4) 1/2" Nylock Nuts
- 8) 1/2" Washers
- 4) Bushings
- 2) .510 X .625 X 2.70 Sleeves

Hardware Bag 1

- 2) 18mm X 150mm Bolts
- 2) 18mm X 160mm Bolts
- 4) 18mm Nylock Nuts
- 8) 18mm Washers
- 8) 7/16" X 1 1/4" Bolts
- 14) 7/16" Nylock Nuts
- 22) 7/16" Washers
- 2) 9/16" X 4" Bolts
- 2) 9/16" Nylock Nuts
- 4) 9/16" Washers

Hardware Bag 4

- 1) E Brake Bracket) 7/16" X 1 1/4" Bolts
- 1) 7/16" Nylock Nuts
- 2) 7/16" Washers
- 1) 5/16" X 1" Bolts
- 1) 5/16" Nylock
- 2) 5/16" Washers

75001-2 Left Knuckle/ Right Knuckle

- 1) Left Knuckle
- 1) Right Knuckle

75001-3 3" Rear Block Kit

- 2) 3" Rear Blocks
- 4) 9/16-18 X 3.25 Sq. X 13" U Bolts
- 8) 9/16-18 Nylock Nuts
- 8) 9/16" Washers

WARNING- INSTALLATION OF THIS SYSTEM WILL ALTER THE CENTER OF GRAVITY OF THE VEHICLE AND MAY INCREASE ROLL OVER AS COMPARED TO STOCK.

ALTERING THE FINISH OF THESE COMPONENTS FOR EXAMPLE- CHROMING, ZINC PLATING OR PAINTING. CHANGING THE FINISH CAN CAUSE STRUCTURAL FATIGUE OF COMPONENTS AND IS NOT RECOMMENDED.

VEHICLES THAT RECEIVE OVERSIZED TIRES SHOULD CHECK BALL JOINTS, TIE RODS ENDS EVERY 2500-5000 MILES FOR WEAR AND REPLACE AS NEEDED

CHECK ALL PARTS INCLUDED IN THIS KIT TO THE PARTS LIST ABOVE BEFORE BEGINNING INSTALLATION OF THE KIT. IF ANY PIECES ARE MISSING, CONTACT YOUR DEALER

READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION! IF THESE INSTRUCTIONS ARE NOT PROPERLY FOLLOWED, SEVERE FRAME, DRIVELINE AND / OR SUSPENSION DAMAGE MAY RESULT.

NOTE- PRIOR TO THE INSTALLATION OF THIS SUSPENSION SYSTEM THE FRONT END ALIGNMENT MUST BE WITHIN FACTORY SPECIFICATIONS. CHECK FOR FRAME AND SUSPENSION DAMAGE PRIOR TO INSTALLATION.

DO NOT COMBINE THIS SUSPENSION SYSTEM WITH ANY OTHER LIFT OR PARTS.

THIS SUSPENSION SYSTEM DOES NOT REQUIRE WELDING FOR INSTALLATION. DO NOT WELD ANY OF THESE COMPONENTS.

THE INSTALLATION OF THIS SUSPENSION SYSTEM SHOULD BE PERFORMED BY A PROFESSIONAL MECHANIC.

ON ECOBOOST 3.5L MODELS, DISCARD ALL AIR SHIELDS.

**USE 325/65R18 TIRE W/ 18X9 WHEELS W/ 5" BS W/ MINOR TRIMMING
USE 35/13.50R18 TIRE W/ 18X9 WHEELS W/ 5" BS W/ MINOR TRIMMING
USE 35/13.50R20 TIRE W/ 20X9 WHEELS W/ 5" BS W/ MINOR TRIMMING**

BE SURE TO USE THREAD LOCKING COMPOUND ON ALL HARDWARE.

FRONT SUSPENSION INSTRUCTIONS

1) Disconnect the negative terminal on the battery. With the vehicle on level ground, set the emergency brake and block the rear tires. Jack up the front end of the truck and support the frame rails with jack stands Remove the front tires.

NEVER WORK UNDER AN UNSUPPORTED VEHICLE!

2) Remove the dust cap covering the hub assembly nut.



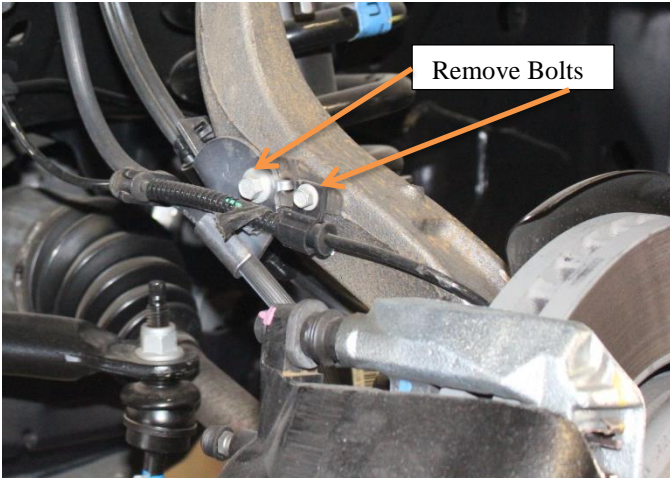
3) Break the tie rod jam nut loose using a 15/16" wrench.



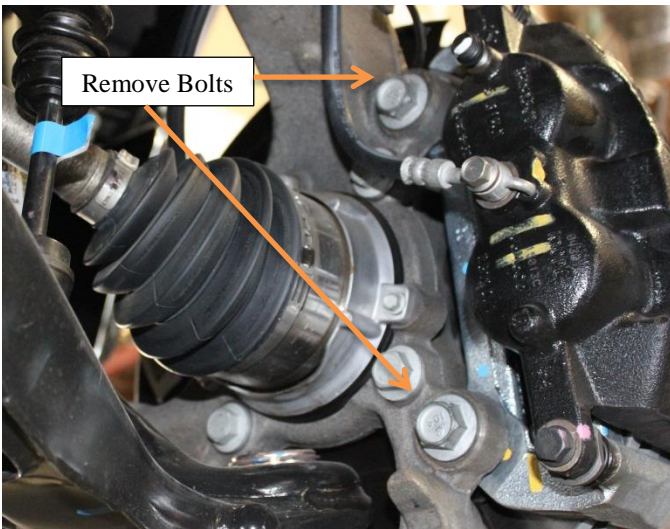
4) Remove factory Tie Rod nut, using a hammer strike the steering knuckle to dislodge the tie rod from the knuckle, as shown below. Remove factory Tie Rod end and discard



5) Remove the bolts holding the Brake line, ABS and Vacuum line to the steering knuckle.



6) Remove the bolts holding the brake caliper to the steering knuckle.



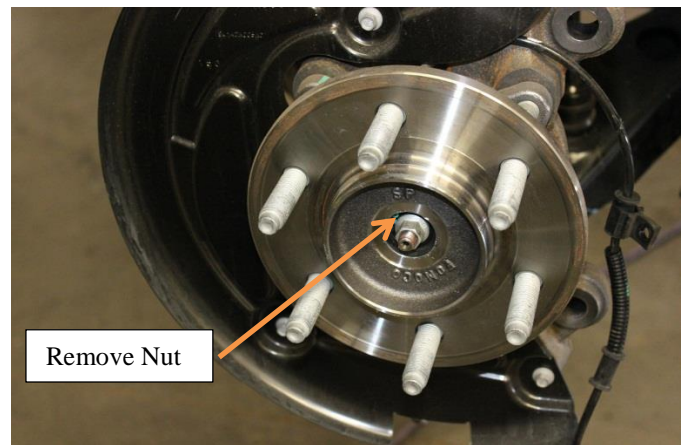
7) Disconnect the vacuum lines attached to the rear of the hub assembly. Allow the vacuum lines to hang freely. Remove the electronic stability control (ESC) sensor from the top of the hub. Cover the sensor to keep it free from dirt and debris.



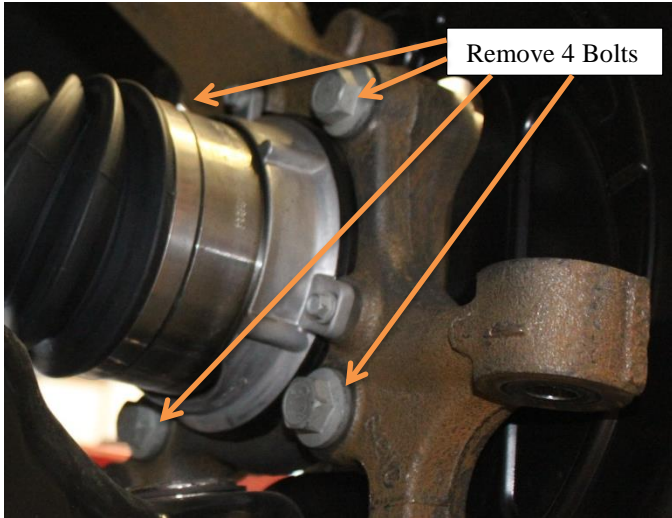
8) Place the brake caliper next to the frame. Do not overstretch the brake hose when doing so. Retain the hardware for reinstallation. Remove the brake rotor and save



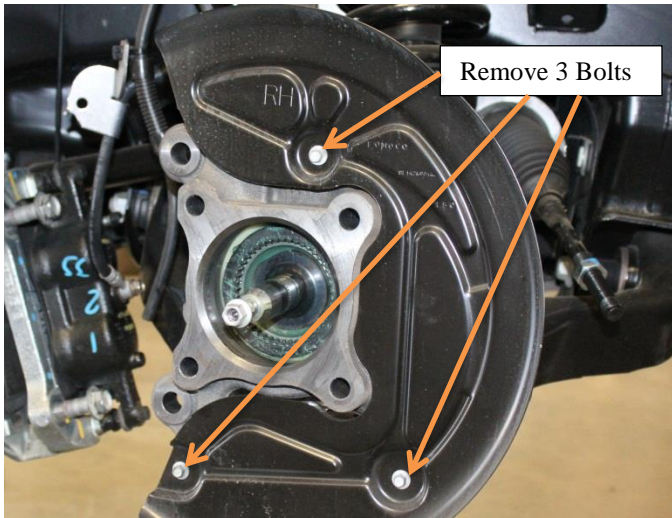
9) Remove the C.V. bearing nut and save the nut and dust cap.



10) Remove the four hub bolts on the back side of the knuckle. Retain hardware for Installation.



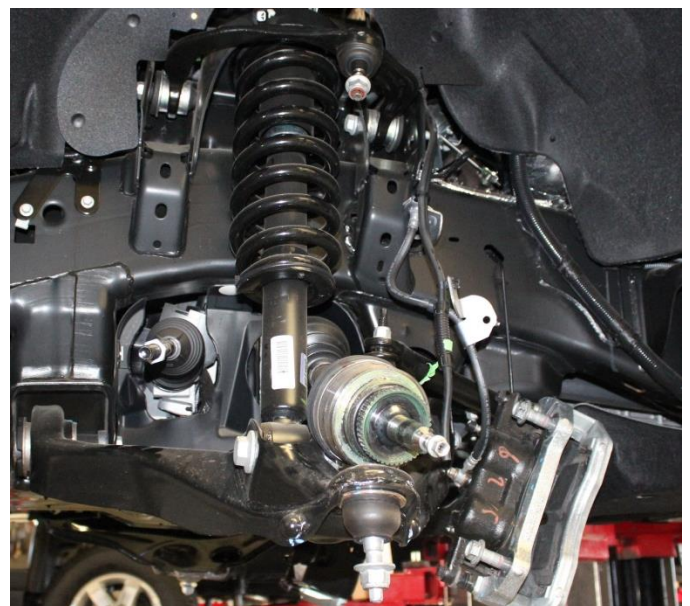
11) Remove the backing plate bolts from the knuckle. Save hardware for install in the FTS knuckle.



12) Remove backing plate from steering knuckle. Save hardware for install in the FTS knuckle.



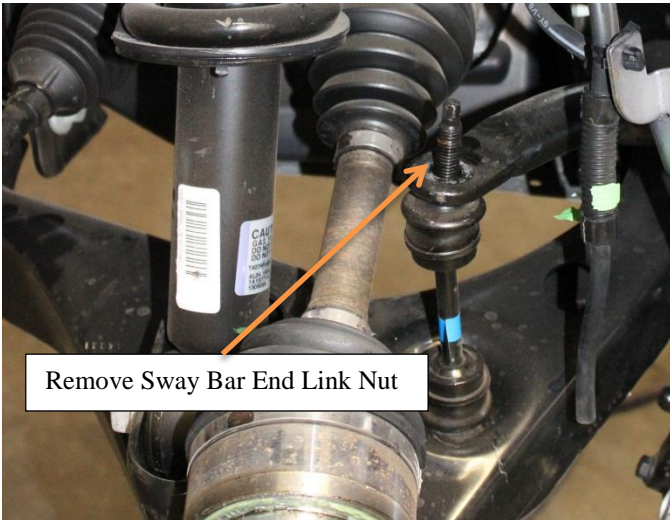
13) Remove the upper and lower ball joint nuts. Disconnect the upper and lower ball joints from the steering knuckle by striking the knuckle with a large hammer next to each ball joint on the knuckle to dislodge the ball joints. Use care not to hit the ball joints when removing. Retain hardware and remove the knuckle and actuator. Use extra care not to over extend the C.V. axle shaft when removing the knuckle.



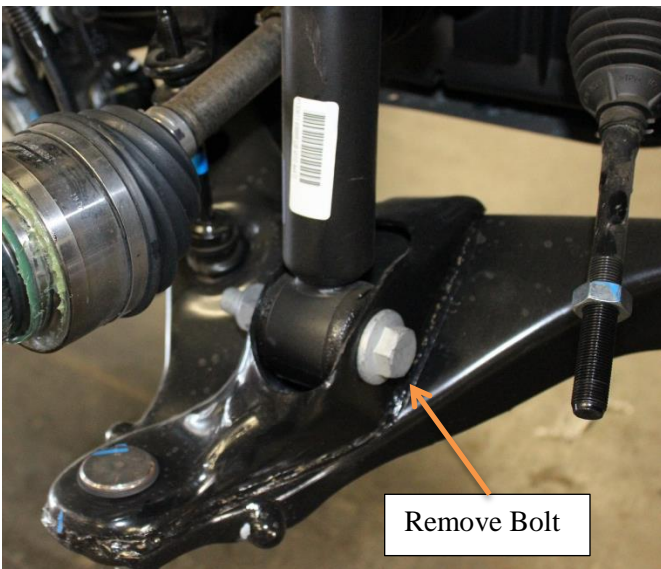
14) Remove the actuator from the knuckle. Save hardware for install in the FTS knuckle. Discard the steering knuckle.



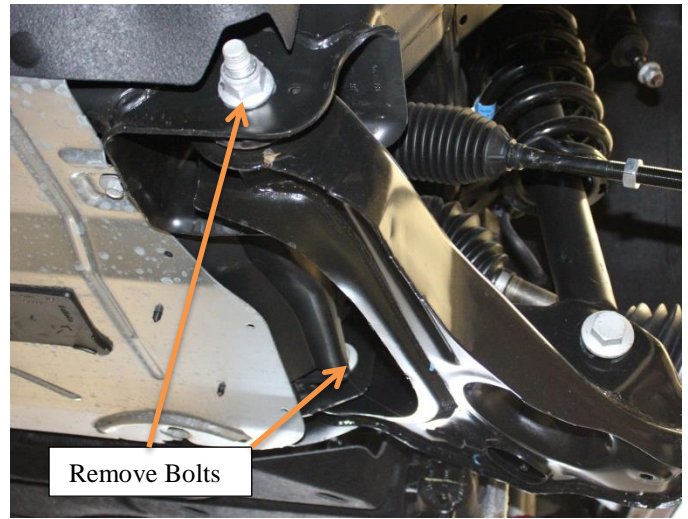
15) Remove the factory sway bar end links from the factory lower control arms, save the hardware.



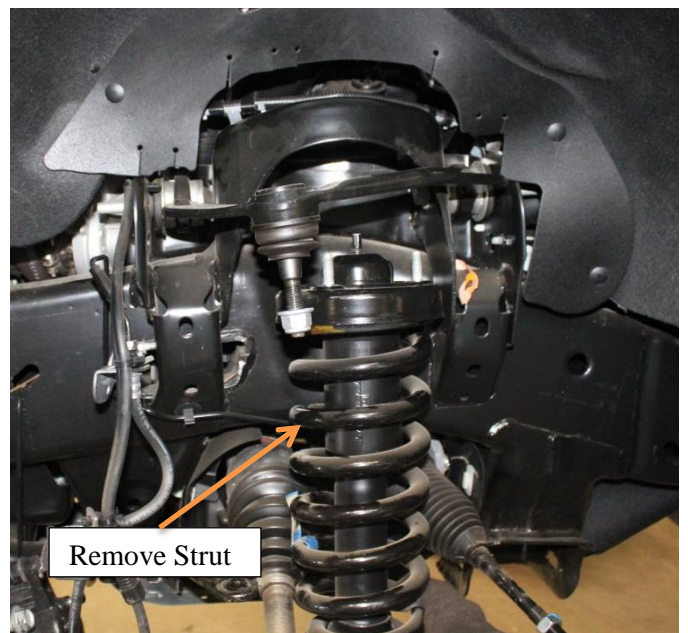
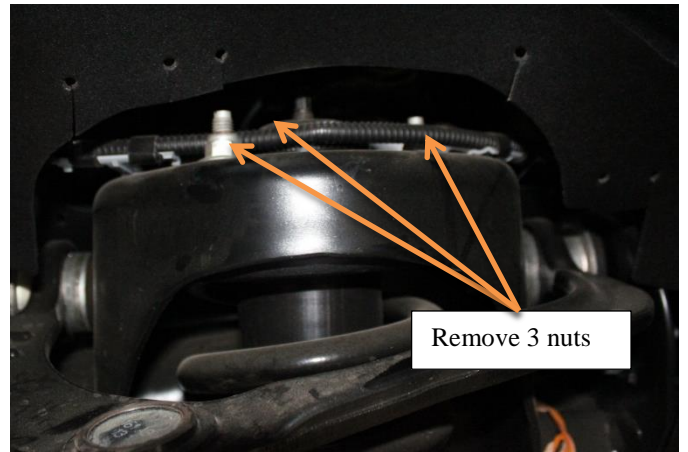
16) Remove the lower strut mount bolt and Save the hardware.



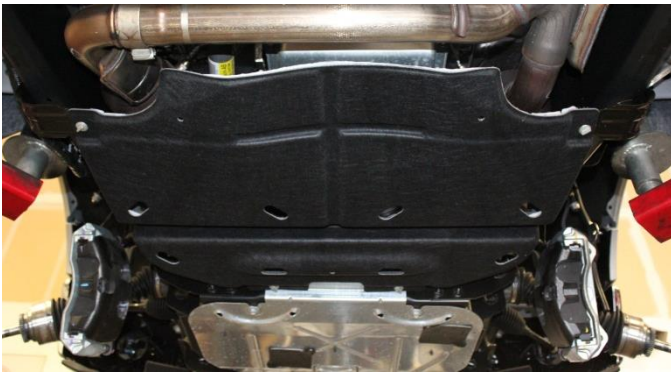
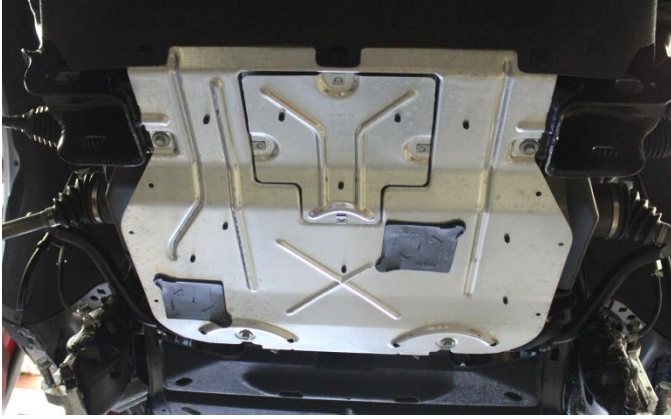
17) Remove the lower control arm bolts from the frame pivots and remove the lower control arm from the truck. Save hardware and lower control arm.



18) Remove the three upper nuts and Save the hardware. Remove the strut assembly from the vehicle and mark "Driver" for assembly to install later with upper strut spacer.



19) Remove and discard the factory splash guard under the differential. On 2013 and up models

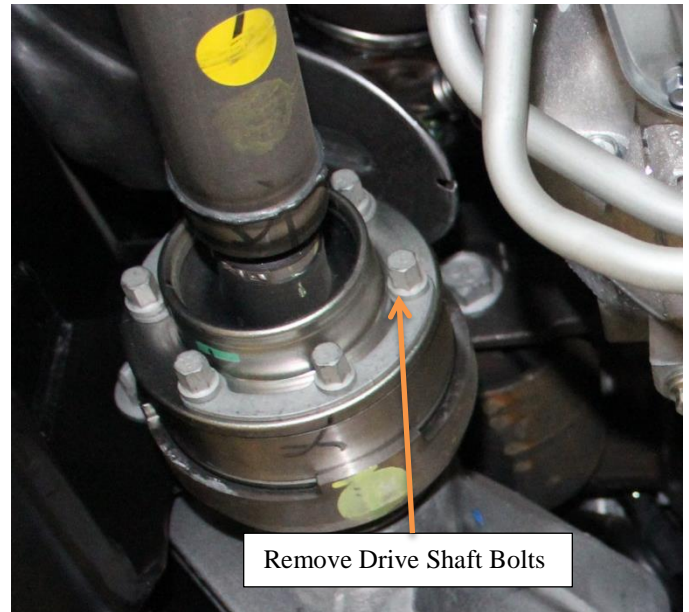


20) Remove the sway bar frame mounts from the frame, Remove the sway bar. Save the hardware and sway bar.



21) Repeat steps 2 through 20 on the passenger side of the truck.

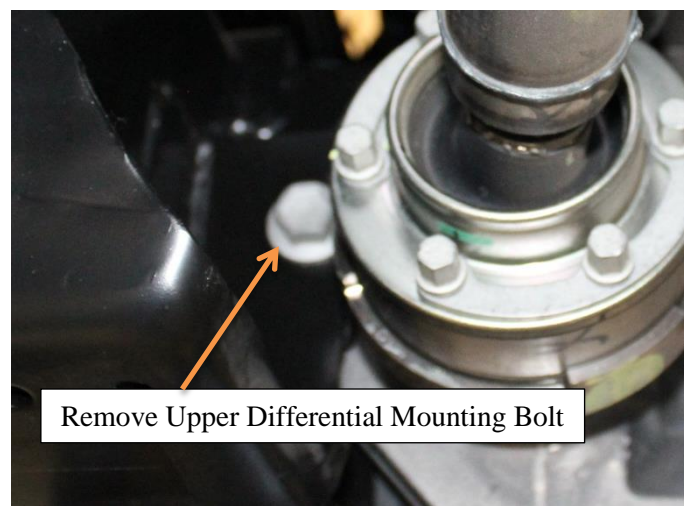
22) Remove the front drive shaft bolts where they attach to the front differential. Support the end of the drive shaft before removing the front differential. Retain hardware.



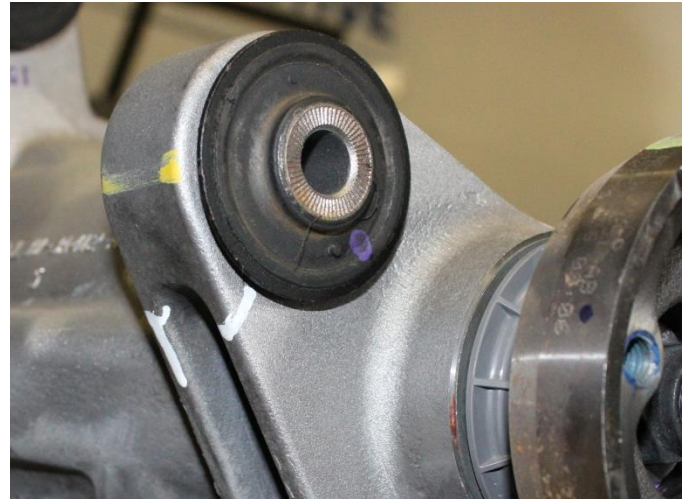
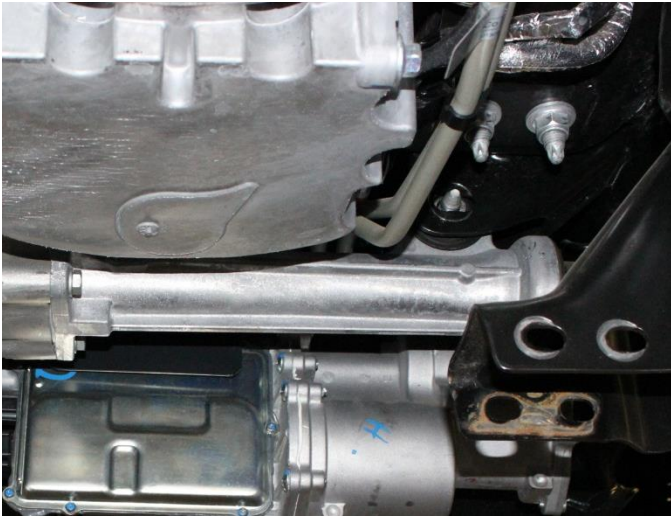
23) Remove the factory rear cross member from the vehicle and discard the cross member and hardware.



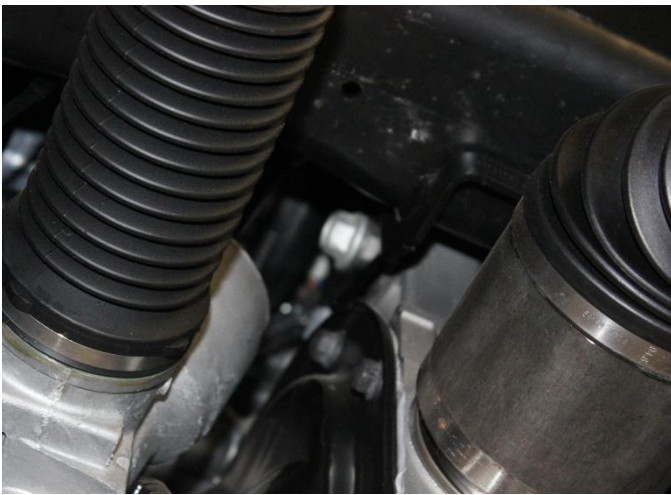
24) Remove the driver side rear differential mount hardware and discard.



25) While supporting the differential, remove the two upper differential mount bolts and remove the differential and axles from the vehicle. Save the hardware.



27) Use a sander and remove all sharp edges and burrs after the cut.



26) Locate rear differential mount closest to the pinion shaft. Mark the mount behind the bushing. Use a die grinder. Remove the mount and discard.



28) Locate the driver side rear lower control arm pocket. Mark the frame 1-3/8" from the control arm pivot hole and 90 degrees to the bottom of the pocket where the cross member was mounted. Use a die grinder, cut all the way around the pocket. Discard removed portion of the pocket.

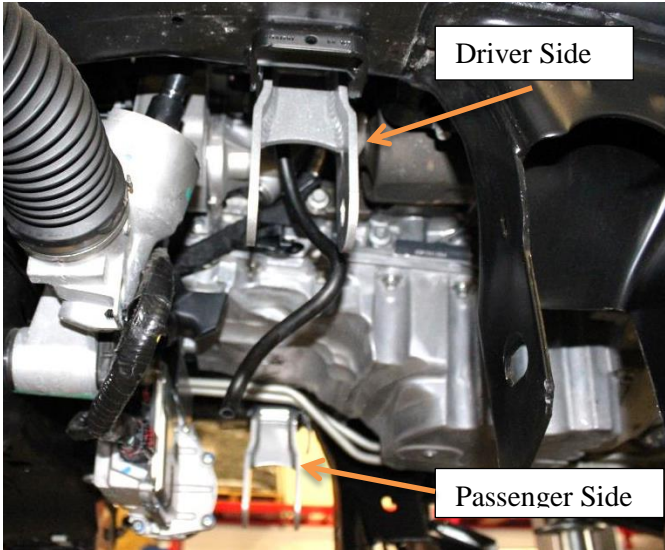




29) Still working on the driver side rear lower control arm pocket, locate the tab on the pocket closest to the front of the vehicle. You will need to sand a radius in the front side of the pocket in order to clear the differential housing.



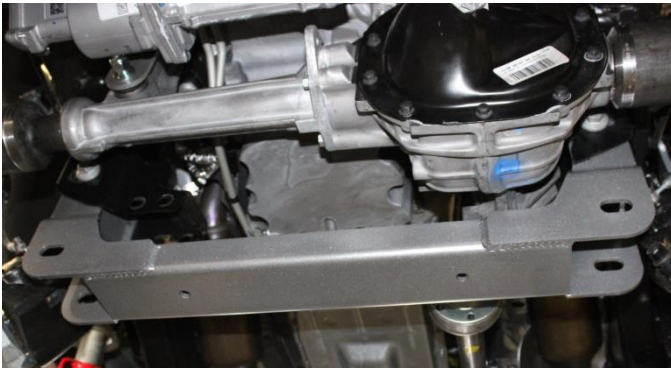
30) Install the two upper differential mounts. These upper differential mounts will be placed into the factory upper differential mounts using the factory upper differential mount hardware. Leave the hardware loose in preparation for the differential installation.



31) Install the factory front differential and install into the FTS upper differential mounts using two 9/16" x 4" hex cap bolts, washer and lock nuts. Leave all hardware loose in preparation of the installation of the remaining differential mounts.



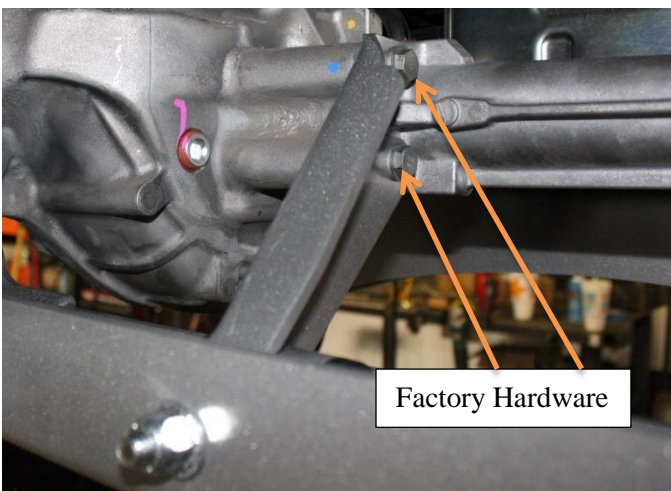
32) Install the FTS rear cross member in the factory rear lower control arm pockets. With the open portion to the front of the vehicle. Mount the cross member using the factory control arm pivot hardware. Leave all hardware loose.



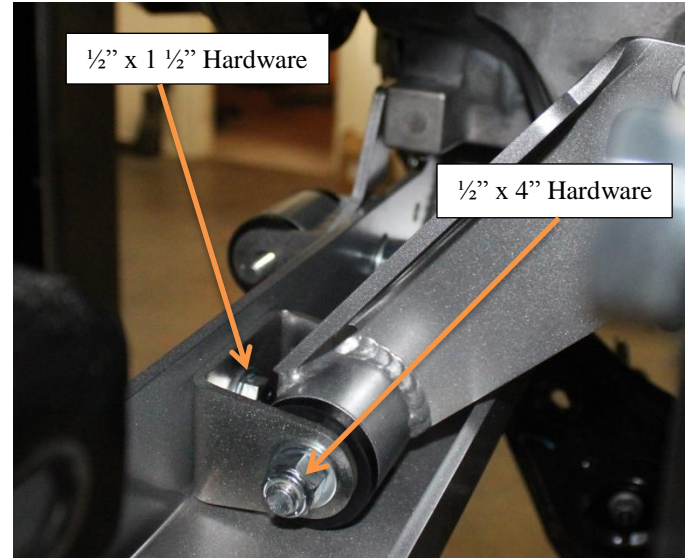
33) Assemble the center diff drop as shown in picture below. Install two of the FTS bushings and one sleeve into the barrel on the differential bracket. Mount the differential bracket to the center of the differential and reinstall the factory bolts. Torque the factory hardware to 35 ft.-lbs. The barrel and the bushing section of the bracket will install in to the U bracket mounted inside the rear cross member with a 1/2" x 4" bolt washers and lock nut. Leave loose.



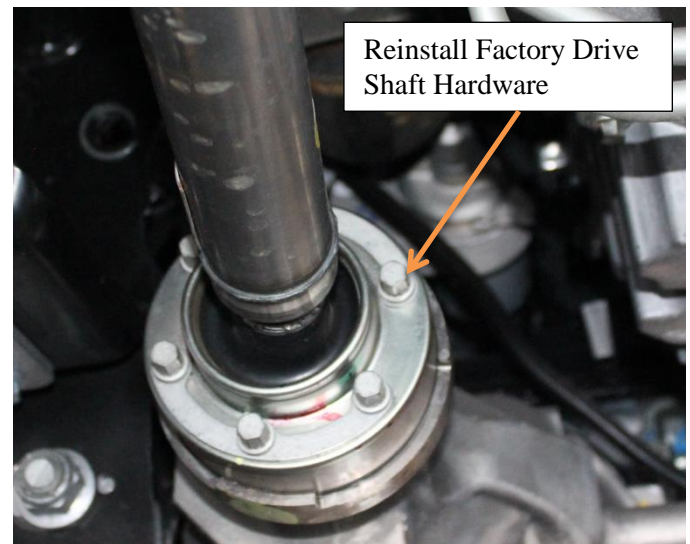
33) Remove the center differential housing bolts on the back side of the differential.



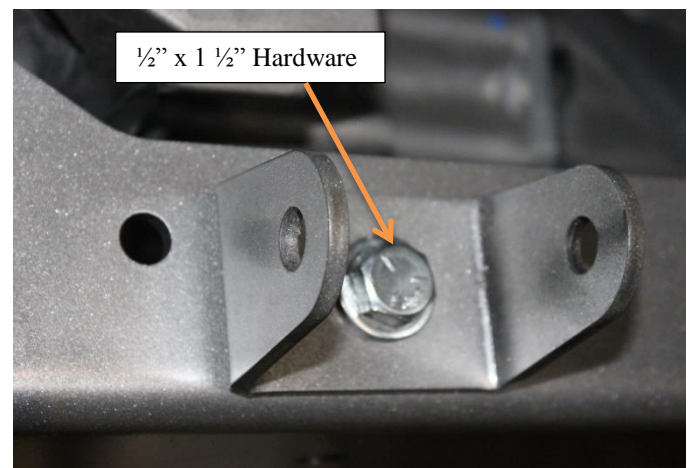
34) Install the supplied U bracket using the 1/2" x 1 1/2" bolt threw rear cross member. Use the 1/2" x 4" bolt threw the U bracket



35) Reinstall the front drive shaft with the factory hardware and torque to 35 ft.-lbs.

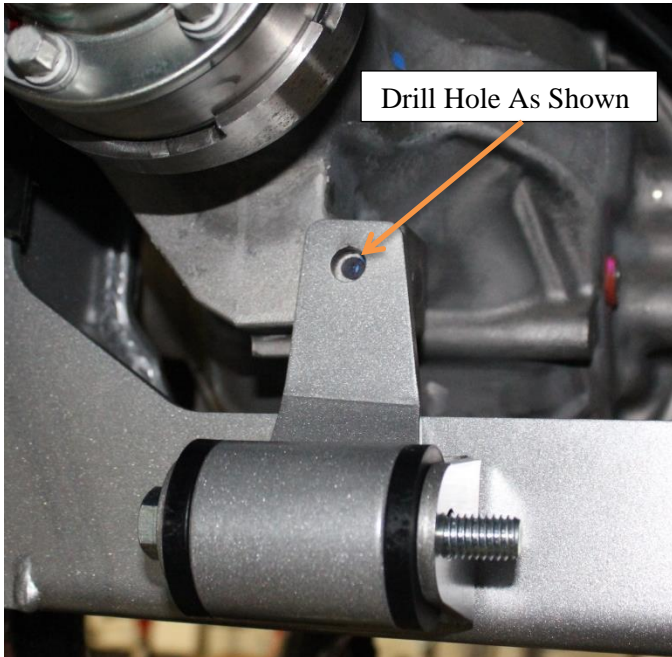


36) Install the U bracket to the rear cross member using the 1/2" x 1 1/2" hardware. As shown below.

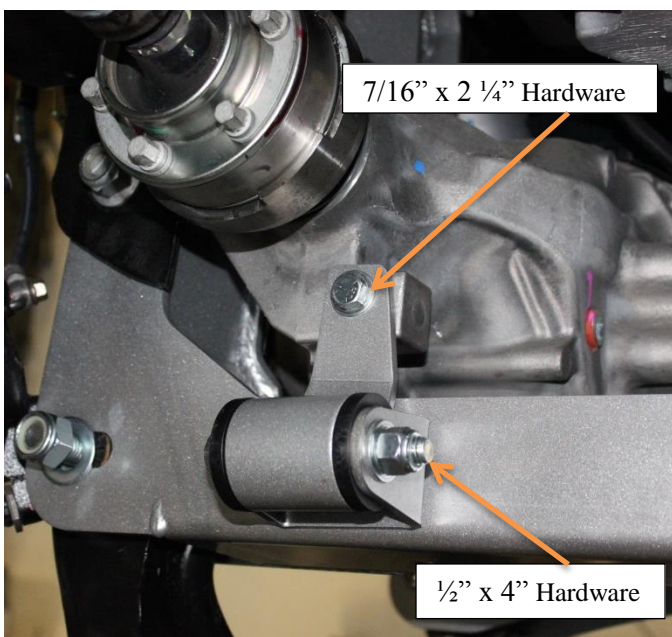


37) Install two of the bushings and one sleeve into the barrel on the differential bracket. Install the diff mount into the U BKT on the rear cross member using the ½" x 4" hardware. Leave all hardware loose.

38) Rotate the rear diff mount up against the housing. Using the diff mount as a drill guide drill the housing to 7/16". NOTE – DEPENDING ON THE BUILD TIME OF THE VEHICLE THE HOUSING MAY HAVE A MACHINED SURFACE AND A THREADED HOLE ON THE SECTION OF THE HOUSING YOU ARE WORKING WITH. THE REAR DIFF MOUNT WILL WORK WITH EITHER VERSION.

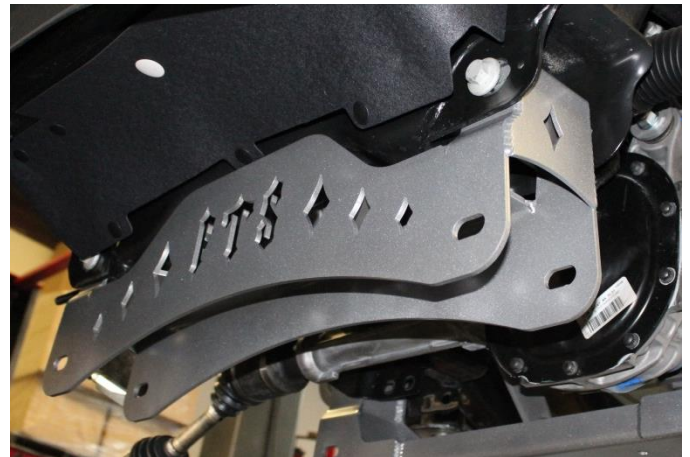


39) Locate the supplied 7/16" x 2 ¼" and install in to the rear Diff Mount to the differential housing. Torque to 37 ft.-lbs.

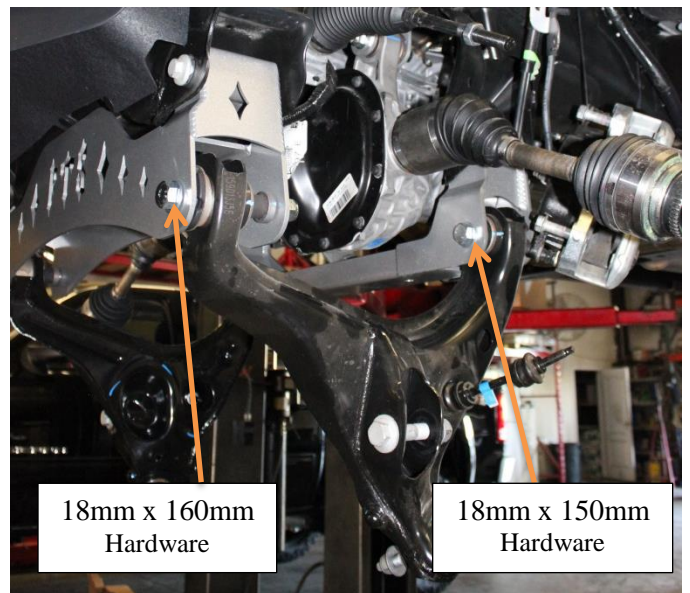


40) Reinstall the factory vent hose back on to the differential.

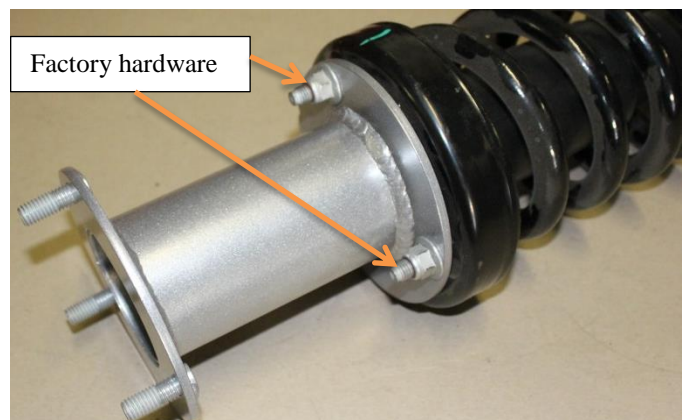
41) Install the FTS front cross member into the factory front control arm pockets using the factory hardware. Leave the hardware loose at this time.



42) Install the lower control arms into the cross members using 18mm x 160mm bolts in the front and the 18mm x 150mm in the rear. Leave hardware loose. Torque lowers A arms bolts to 180 ft.-lbs.



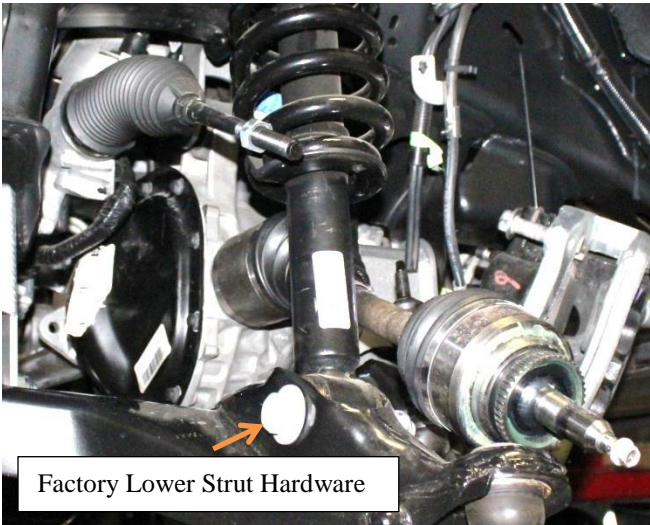
43) Install the FTS upper strut spacer to the factory strut using all factory hardware. Torque 45 ft.-lbs.



44) Using 7/16" nylock nuts supplied install the strut assembly back in factory location. Torque bolts to 45 ft.-lbs.



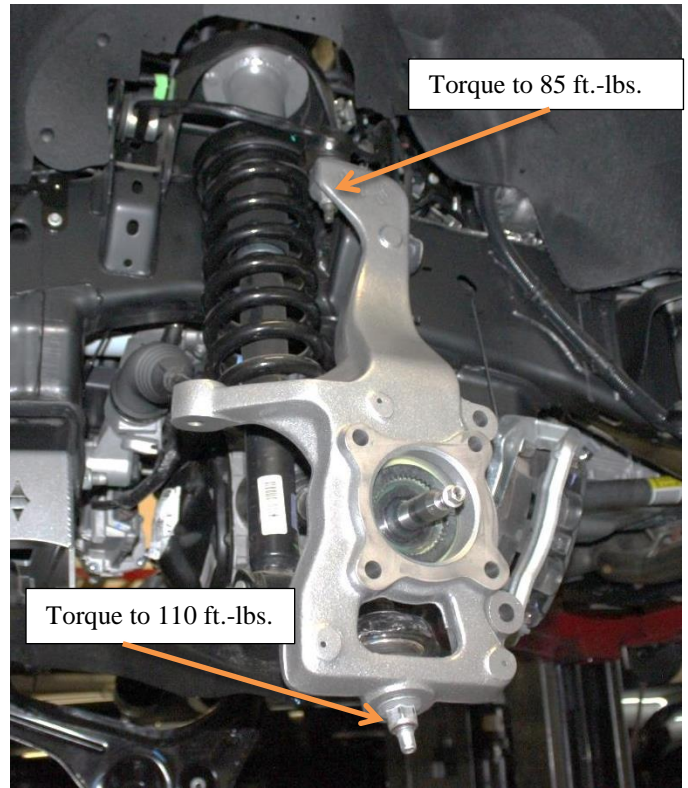
45) Reinstall factory lower strut bolt and torque to factory lower bolt to 110 ft.-lbs.



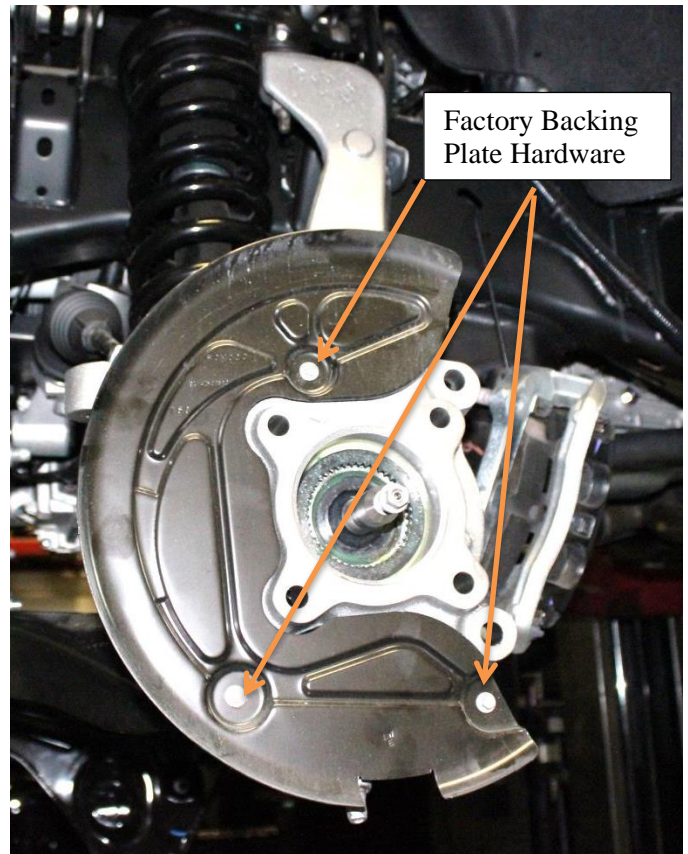
46) Install the factory 4WD actuator into the spindle. Torque the factory 8mm bolts to 17 ft.-lbs.



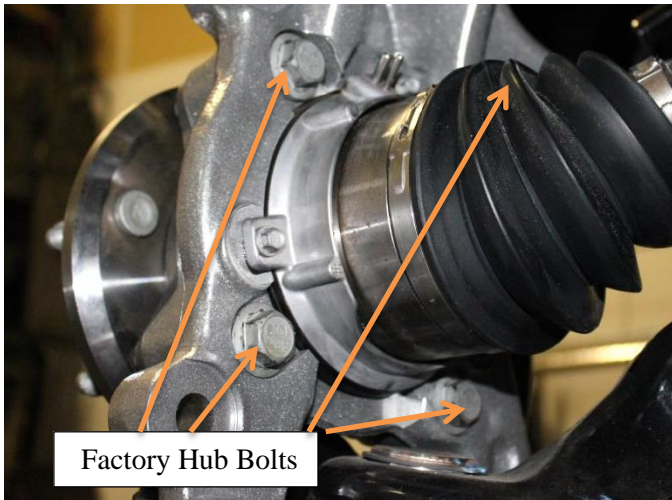
48) Install the spindle onto the upper and lower control arms. Torque the upper ball joint to 85 ft.-lbs. and the lower ball joint to 110 ft.-lbs.



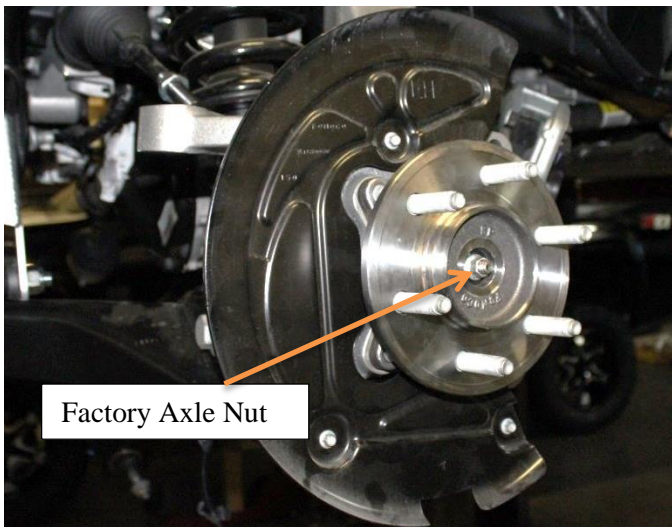
49) Install the dust shield using the factory hardware and torque to 14 ft.-lbs.



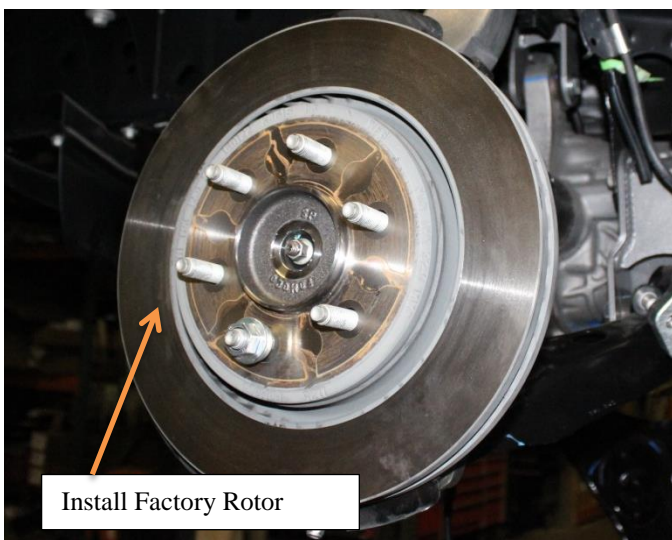
50) Install the factory hub. Torque the four 14mm bolts to 160 ft.- lbs. Install the ABS wheel speed sensor. Make sure the end of the sensor is clean. Apply Loctite to the threads.



51) Install CV shaft nut and torque to 35 ft.-lbs. Install the factory dust cover.

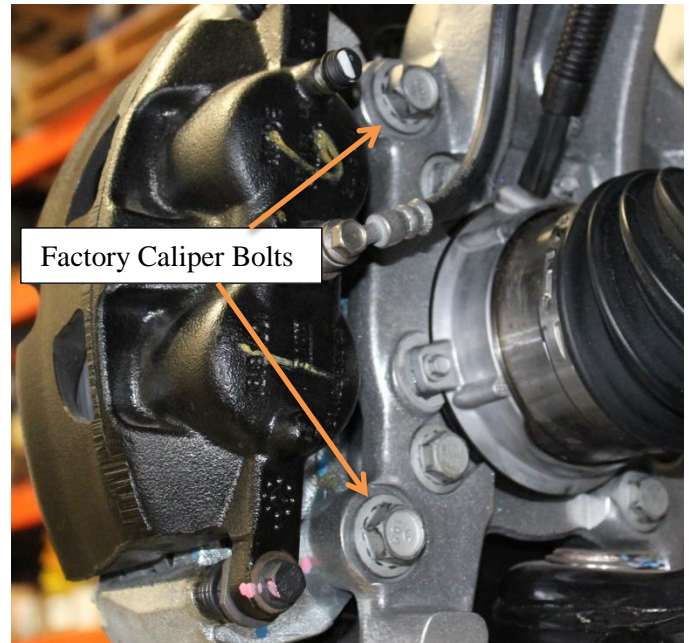


52) Install front brake rotors.



53) Carefully pull some slack from the frame side and reconnect the vacuum line to the hub assembly.

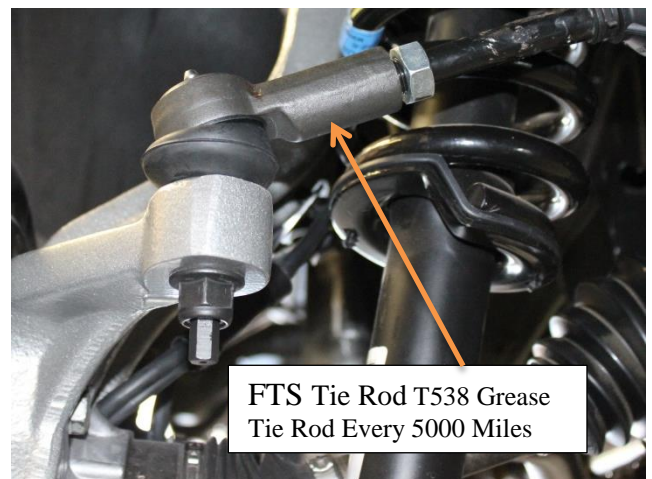
54) Reinstall the brake caliper. Use a small amount of Loctite to the threads on the caliper bolts and torque to 145 ft.-lbs.



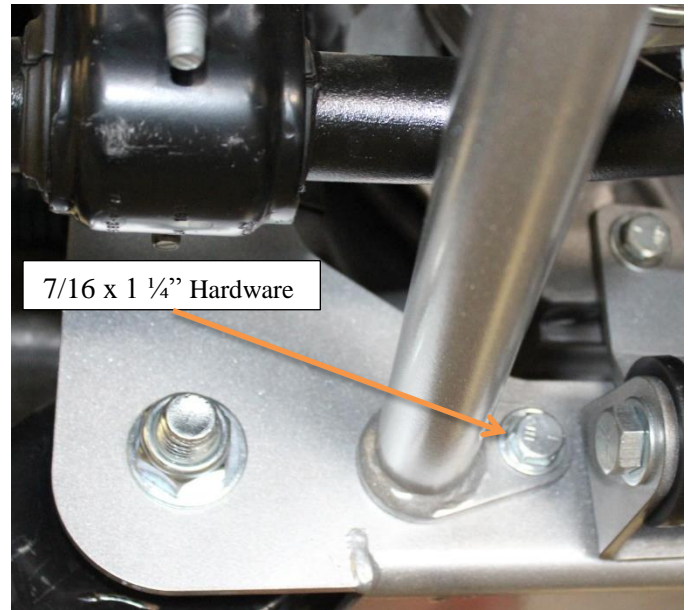
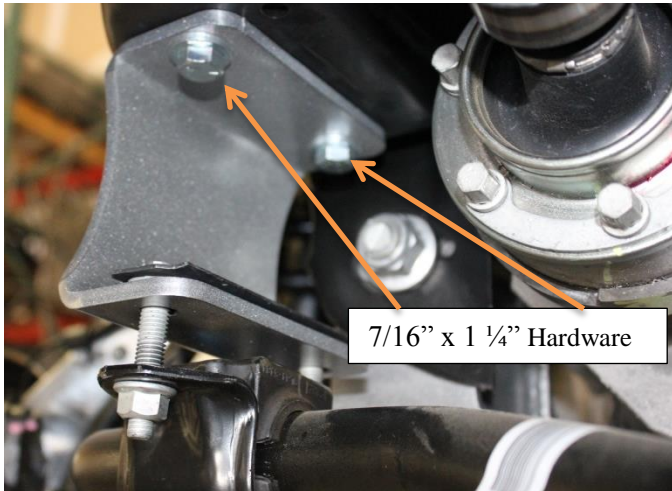
55) Locate the factory inner tie rod. Trim 1" off the end.



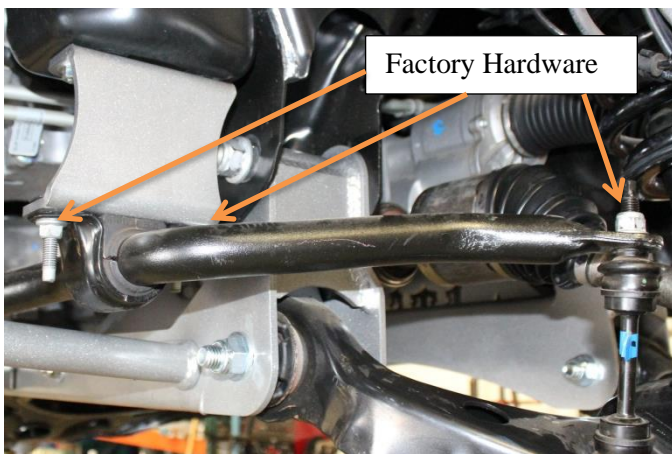
56) Install the new FTS tie rod end. Torque to 60 ft.-lb.



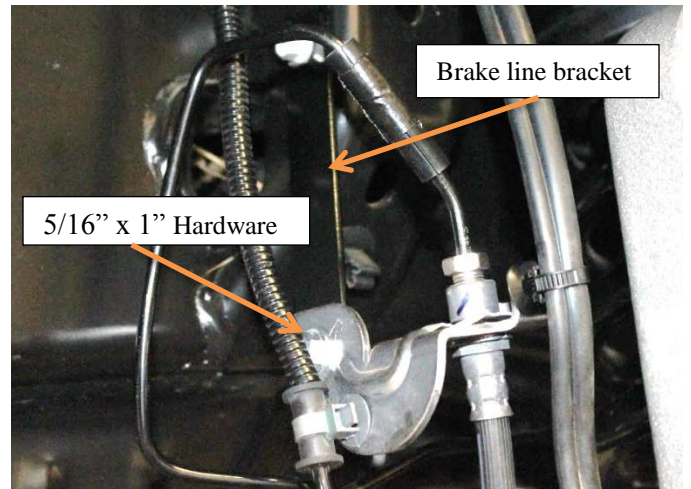
57) Install the FTS driver and passenger sway bar drop brackets so the sway bar is pushed towards the rear of the vehicle using the supplied 7/16" x 1 1/4" hardware as shown below.



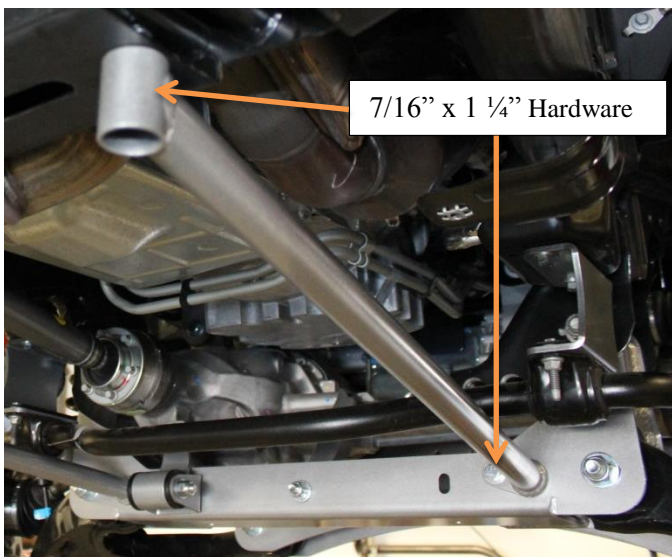
57) Install the factory sway bar to the FTS driver and pass brackets using the factory hardware.



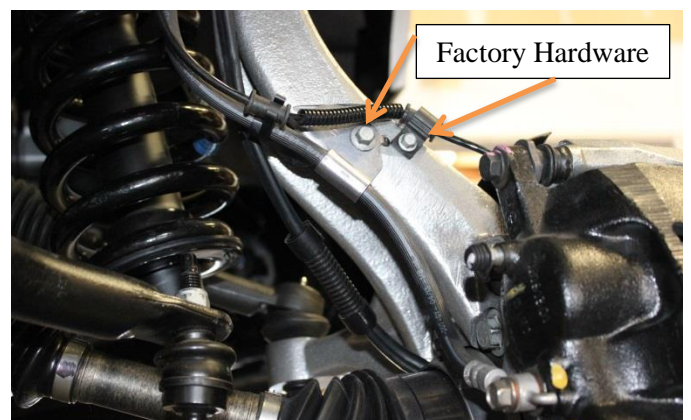
59) Install the front brake line bracket using the factory hardware at the top and the 5/16" x 1" hardware at the bottom. After installing the factory brake line bracket, check to insure full movement by steering the knuckle back and forth, and make sure none of the ABS lines, brake lines, or vacuum lines is interfering during full test Movement of the knuckle.



58) Install the FTS impact tubes using the 7/16 x 1 1/4 bolts supplied



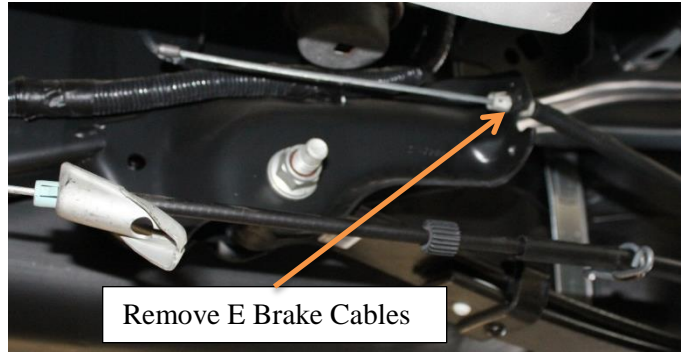
60) Mount factory brake line bracket to the side of the knuckle.



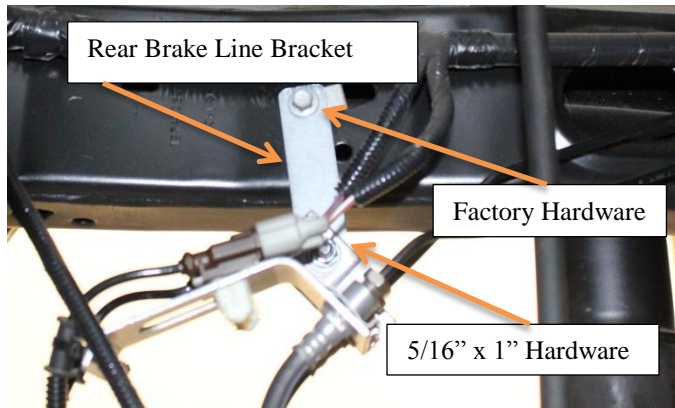
REAR SUSPENSION INSTRUCTIONS

1. Jack up the rear end of the vehicle and support the frame rails with jack stands, Block the front wheels for safety. Release the parking brake at this time.

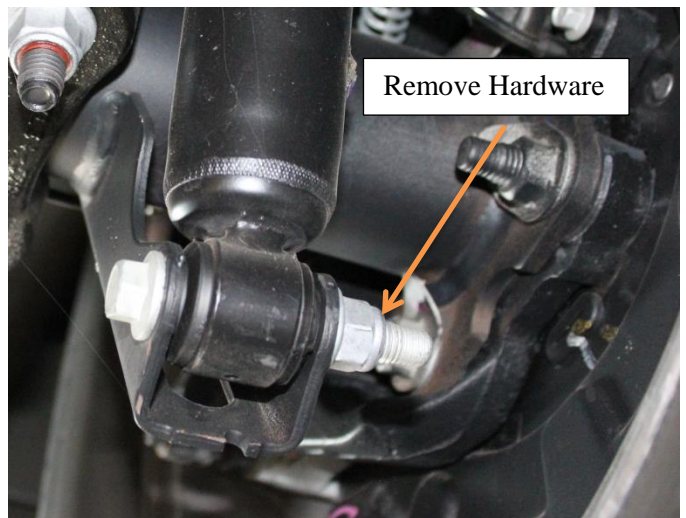
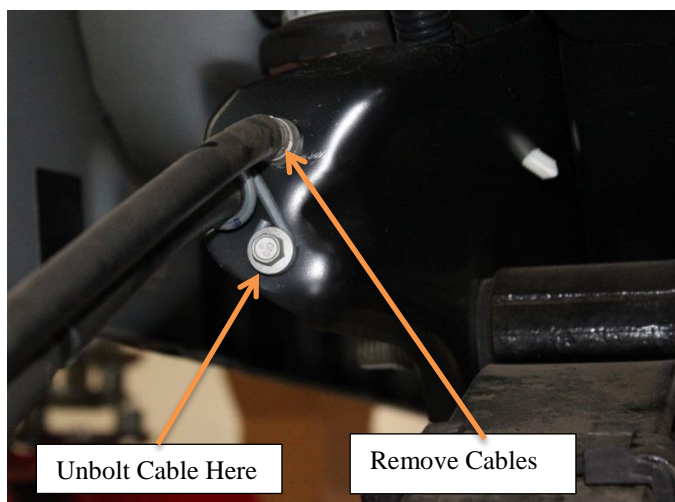
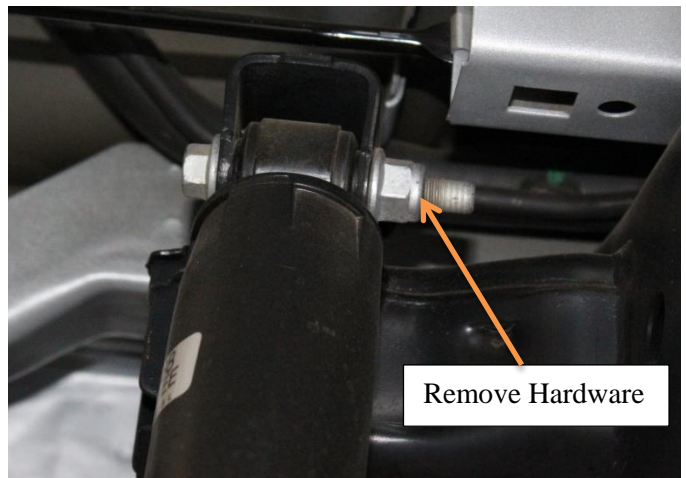
2. Install the factory brake line mount on the driver side of the frame using factory hardware at the top and supplied 5/16" x 1 hardware at the bottom. Using the Supplied brake line bracket and attach the bracket between the factory frame mount and the factory brake line.



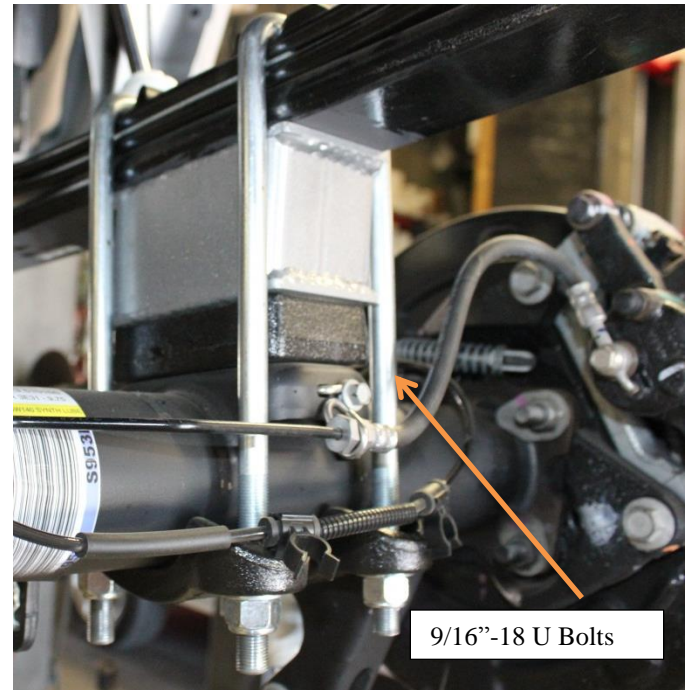
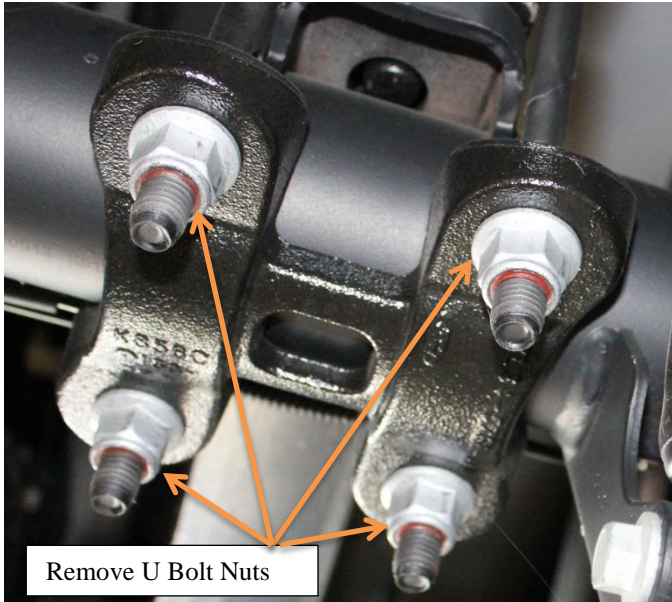
4) Remove upper and lower shock hardware.



3) Remove the E Brake cables from the frame.

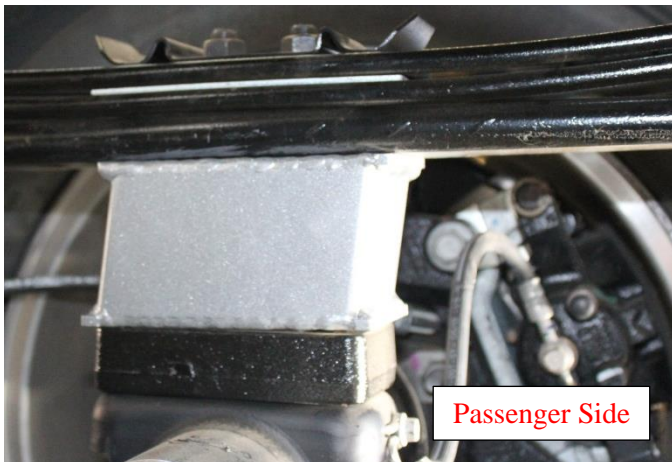


5) Supporting the rear differential, remove the U-bolts, lower axle down. Use care not to over extend the brake hose.

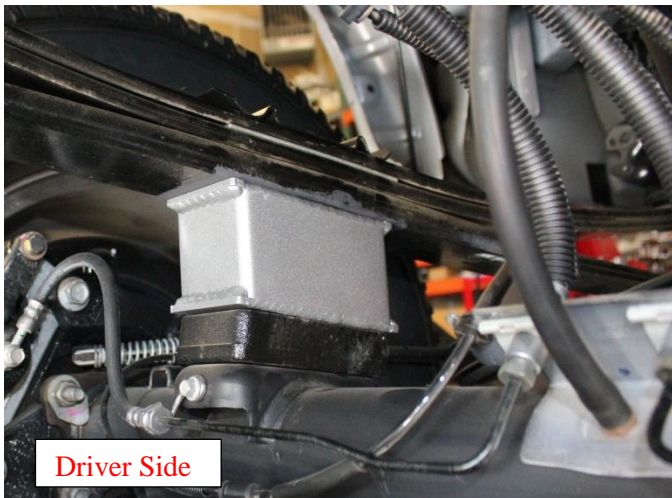


6) Install the rear lift blocks .Using the provided U-bolts, nuts and washers, align the axle, lift blocks, and springs and torque U-bolts to 90 ft.-lbs.

← **Front of truck**

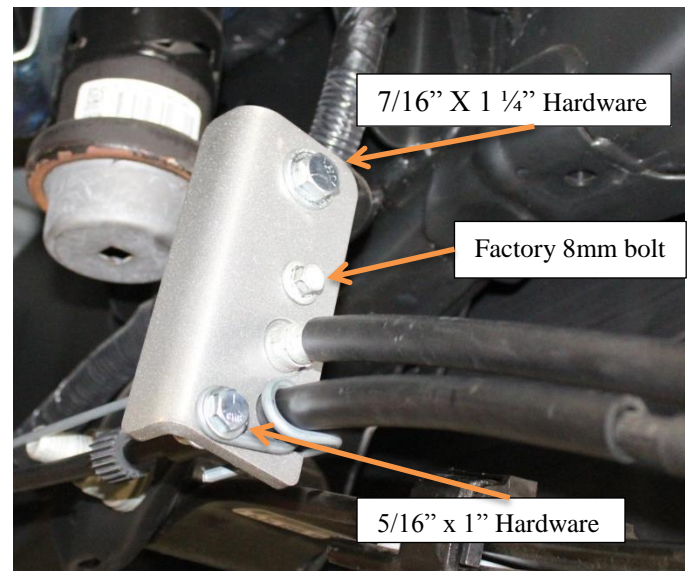


Install Rear Block So It Pushes the Axle Forward



7) Install the rear shocks using the factory hardware and torque upper and lower bolts to 45 ft.-lbs.

8) Install the E Brake bracket using the 7/16" x 1 1/4" and factory 8mm hardware as shown below.



8) Recheck all bolts for proper torque. Recheck the front and rear brake hoses and ABS lines for proper clearances.

9) Install tires and wheels and torque lug nuts to wheel manufacturer's specifications. Turn front tires left to right and check for appropriate tire clearance. Note -Some oversized tires may require trimming of the bumper and valance.

10) Check the front-end alignment and set to the factory specifications. Re-adjust vehicles headlights.