

63220

FULL THROTTLE SUSPENSION

2009-2013 DODGE 2500 10" DIESEL KIT 4WD
2009-2012 DODGE 3500 10" DIESEL KIT 4WD



63210-2 Component Box 1

- 2) Lower Trailing Arm Brackets
- 2) 18" Upper Trailing Arms
- 1) Track Bar Bkts
- 1) Left Sway Bar Bkts
- 1) Right Sway Bar Bkts
- 1) Pitman Arm Tapered
- 2) Flat Shock Plate

Hardware Bag 1

- 8) 1/2 X 1 1/2 Bolts
- 8) 1/2 X 7" Bolts
- 2) 1/2 Nylock Nuts
- 12) 1/2 Washers
- 6) 1/2" Nut Serts
- 2) 1/2" Nut Wedge Plates

Hardware Bag 2

- 8) Bushings Mo2918 W/1" Hole

- 2) Trailing Arm Sleeves 1.0"OD X .630"Id X 2.630"
- 2) Trailing Arm Sleeves 1.0"OD X .730"Id X 2.630"

Hardware Bag 3

- 8) Bushings MO2918 W/1" Hole
- 2) Trailing Arm Sleeves 1.0 X .580 X 2.350
- 2) Trailing Arm Sleeves 1.0 X .630 X 2.630
- 63200 40" Lower Trailing Arms

- 2) 40" Lower Trailing Arms

63210-4 10" Diesel Front Coils

- 2) Coil Springs

63210-6 7" Rear Block Kit W/ Traction Bar Brackets

- 2) 3" X 5" X 7" Tapered Lift Blocks
- 4) 3/4" X 3 1/4" X 18" SQ U Bolts
- 8) 3/4" Fine Nuts
- 8) 3/4" Washers

- 2) Axle Brackets

- 2) Frame Brackets
- 2) Leaf Spring Upper Plate
- 8) Bushings Mo2918 W/1" Hole
- 4) Sleeves 1.0"OD X .580"ID X 2.730"
- 4) 9/16 X 4 1/2" Bolts
- 4) 9/16 Nylock Nuts
- 8) 9/16 Washers

29063 63" Bolt On Traction Bar Kit

- 2) 63" Angled Traction Bars
- 63500 Dual Cv Front Drive Line 38"
- 64000-17 Dodge Front Axle Flange

Choose 1 Of The Following Brake Line Sets

- 63813 2003-2011 Front / Rear Steel Braided Brake Lines (Single Rear)
- 63814 2011-2012 Front / Rear Steel Braided Brake Lines (Dual Rear)

1) Disconnect the negative terminal on the battery. Jack up the front end of the truck and support the frame rails with jack stands. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE!** Remove the front tires.

2) Support the front axle with 2 floor jacks.

3) Remove the bolts attaching the brake line tabs to the front axle.



4) Remove the front sway bar end links from the axle mount. Remove the bolts securing the sway bar mounts to the frame and set the sway bar aside, save all sway bar hardware. **NOTE** sway bar will need to be flip when reinstalling.



5) Flip sway bar over and install supplied left and right sway bar drop brackets with supplied bolts. When I stall the FTS sway bar brackets the should look as if they were pushing the sway bar toward the front of the vehicle

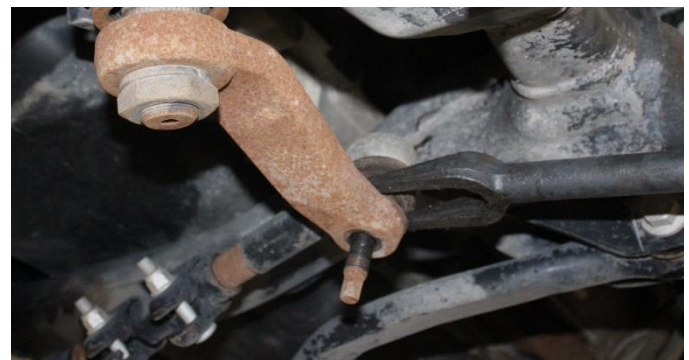


6) Remove front drive line.



7) Disconnect the ABS wiring.

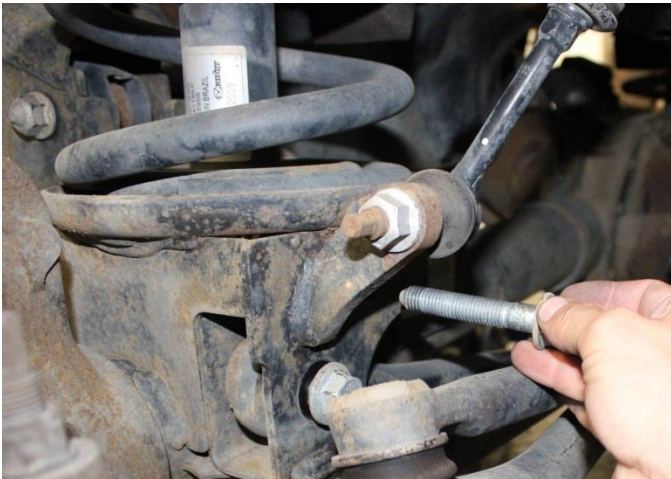
8) Remove the hardware attaching the drag link to the pitman arm and separate the tie rod end from the pitman arm. Save the hardware.



9) Remove the nut securing the track bar to the frame and separate. Save the track bar hardware.



10) Remove the top nuts on the front shocks and the lower bolts securing the shock to the axle. Leave the shock loose inside the factory coil spring at this time. Save the lower Hardware and discard the upper.



11) Leaving the front axle supported on the 2 jacks raise the truck enough to remove the coil springs and shocks. Save the upper rubber insulator and discard the coil springs and shocks. **USE EXTREME CARE WHEN WORKING WITH COILS THAT ARE UNDER LOAD!**



12) Loosen the bolts securing the link arms to the frame and front axle, **DO NOT REMOVE THE BOLTS.**



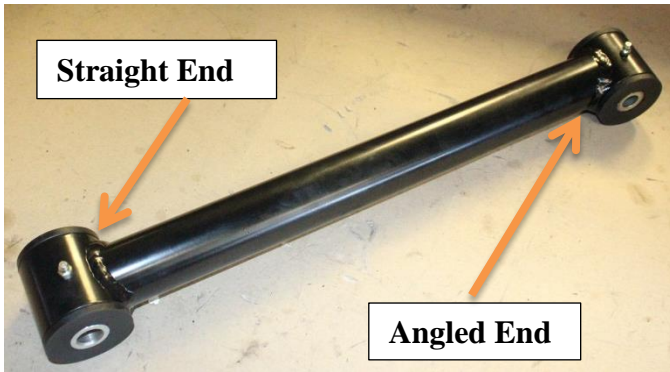
13) Use a floor jack to hold the pinion up and start removing the lower links



14) Remove the bolts attaching the upper and lower link arms to the front axle and then the frame. Save the factory bolts and discard the links.



15) Now install the bushing into the upper control arms. The arms will have one end of the sleeve welded at a slight angle this will be the axle end of the bar. Starting from the angled end of the bar Install the .565 x 1.0 x 2.350 sleeve into the narrow end and the .630 x 1.0 x 2.625 in the other end.



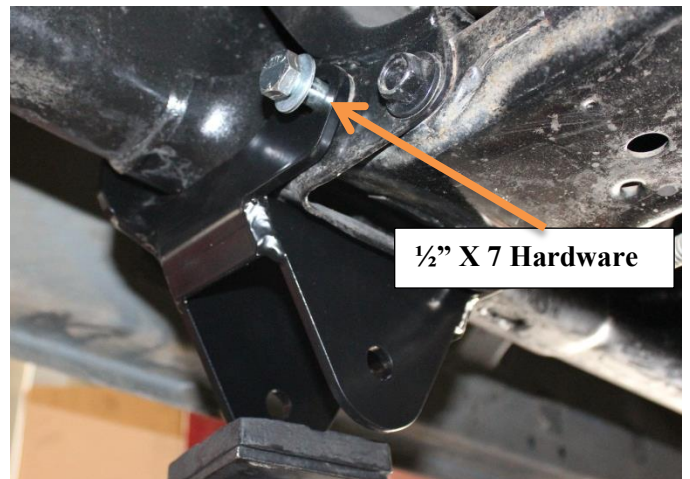
16) Install the straight end of the upper arm into the factory lower pocket reuse factory hardware, then install the angled end into the upper mount on the front axle, re-use factory hardware.



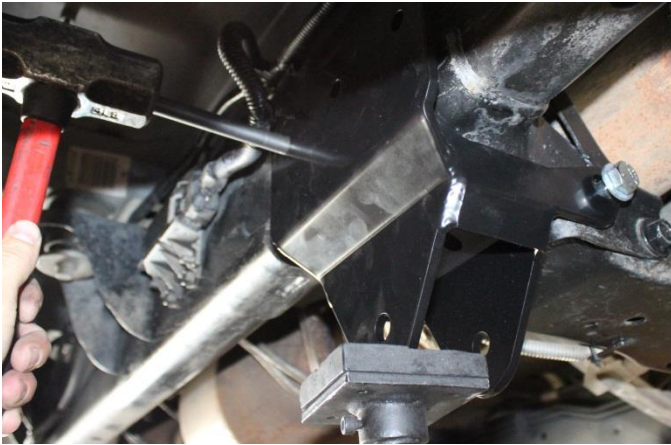
17) Remove outer transmission cross member bolt.



18) Install the FTS control arm frame mount using the outer transmission cross member bolt to locate and hold bracket as you mark and drill the mounting holes to 1/2". Next remove the bracket and enlarge holes to 11/16" for installation of nut inserts. With holes enlarged install nut inserts using supplied spacer and tighten bolt till each nut insert crimps itself tight into the frame. Once all nut inserts are installed, re-install the bracket using supplied 1/2 x 1-1/2 & 1/2 x 7" bolts. A tab nut is supplied for the bolt going from the bottom of the bracket up through the transmission cross member mount



19) Center punch the 3 outside hole as shown.



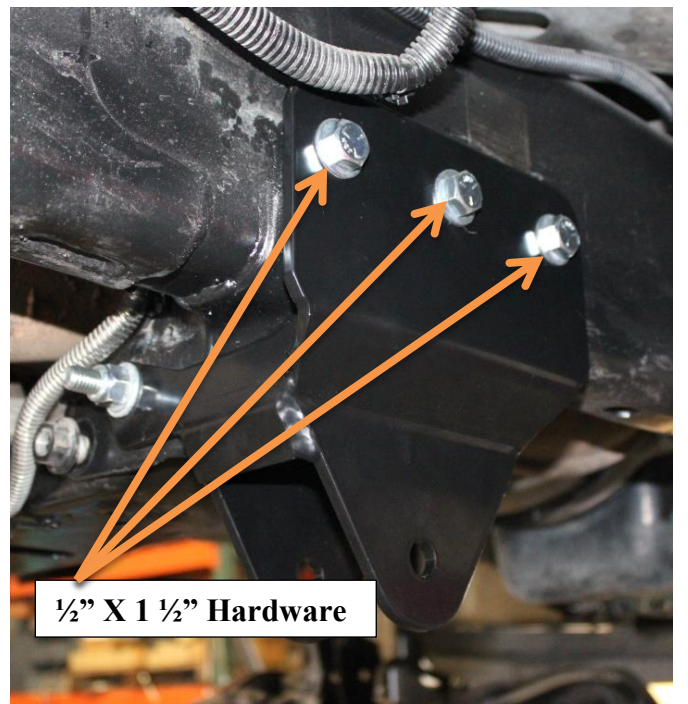
20) After drilling the hole out to 11/16". Install rivet nuts with serrated edge washer as shown. Pic1 shows collapsed rivet nut as a reference. The 1/2" bolt goes through the 5/8" nut with a serrated edge washer that will bite into the rivet nut to keep it from spinning. Tighten until the backside of the rivet nut has been deformed INSIDE THE FRAME RAIL and is set into place (rivet nut will lock itself in place).



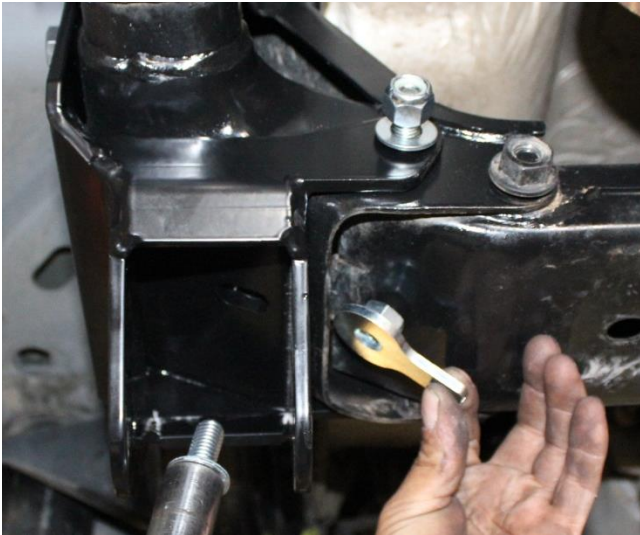
21) Install the 3 nut sert as shown below.



22) Install the 1/2" x 1 1/2" bolts on the outside of the frame as shown. Install the 1/2" x 7" thru the inside hole thru the transmission cross member.



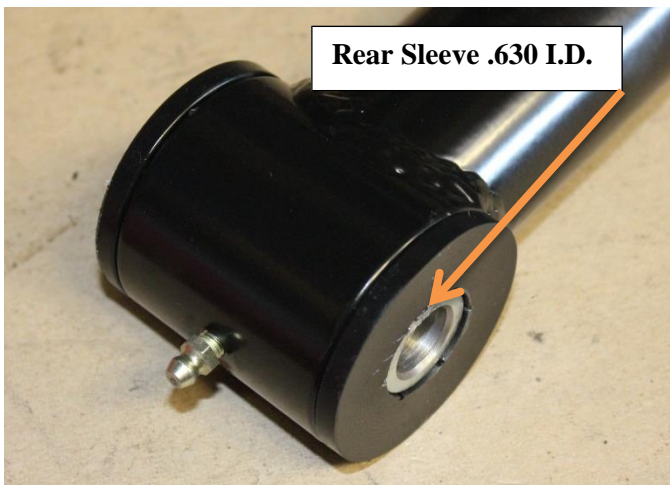
23) Install the wedge nut as shown using the 1/2" x 1 1/2" bolt.



24) Locate the FTS lower link arms. (This link is 38 1/2" from the center of the barrel to the center of the barrel). Press the supplied MO2918 bushing into the arm at both ends, Install the sleeve with the .730 hole on the end that mounts to the axle, Install the sleeve with the .630 hole on the end that mounts to the frame. NOTE use grease on the surfaces of the bushings and sleeves before installing.



25) Install the bushings and grease fitting as shown.



26) Attach the FTS lower link arms to the lower axle mounts first using the factory hardware then to the FTS bracket using the factory hardware. NOTE: Also when reinstalling the alignment cam bolts in the lower axle pivot; make sure they are set in the center of their adjustment.



If Installing Double Shock skip 26

27) Take one of the FTS coil springs and locate the top of the coil spring (smaller diameter end). Front shocks (not supplied with this kit) and place one shock inside each coil spring BEFORE INSTALLING ON THE TRUCK. The shocks must be placed inside the coil spring before it is installed. Place the original coil spring insulator on top of the coil spring and place the coil spring onto the front axle. Align the coil spring in the upper and lower pockets and raise the jacks supporting the front axle. Raise the axle just enough to compress the coil spring 1/4". USE CARE TO NOT LIFT THE TRUCK OFF OF THE SUPPORT STANDS.

Double Shock Instructions

28) Install upper double shock bracket using the 7/16" x 1 1/4" Hardware on the back 2 bolt holes. Use the 7/16" x 3 1/4" on the front hole attaching the shock hoop bracket.

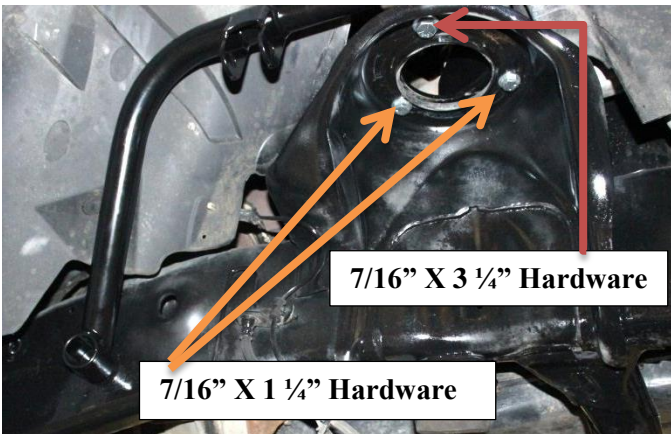




29) Mount the shock hoop to the upper bracket using the $\frac{1}{2}$ " x $1\frac{1}{2}$ " bolt,



30) With the shock hoop mounted against the frame, Center punch the lower hole.



31) Drill the lower hole 1 " thru the outside of the frame and $\frac{1}{2}$ " thru the inside. Install the supplied frame sleeve



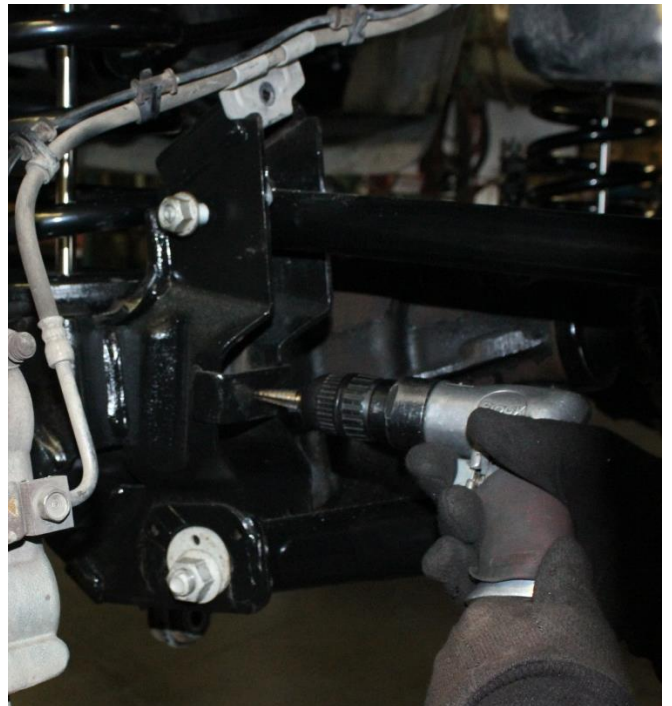
32) After drilling the 1 " hole thru the outer portion of the frame insert the sleeve into the frame



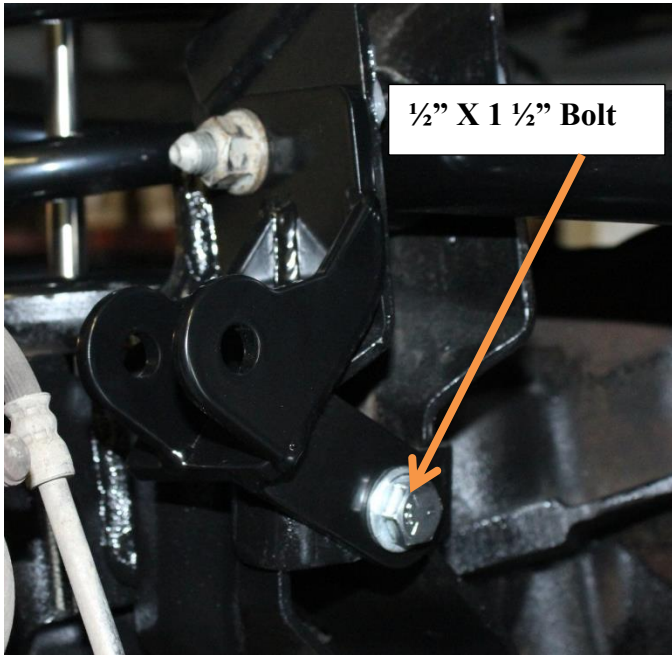
33) Install the shock hoop using the $\frac{1}{2}$ " x $4\frac{1}{2}$ " hardware thru the lower hole and the $\frac{1}{2}$ " x $1\frac{1}{2}$ " thru the upper hole.



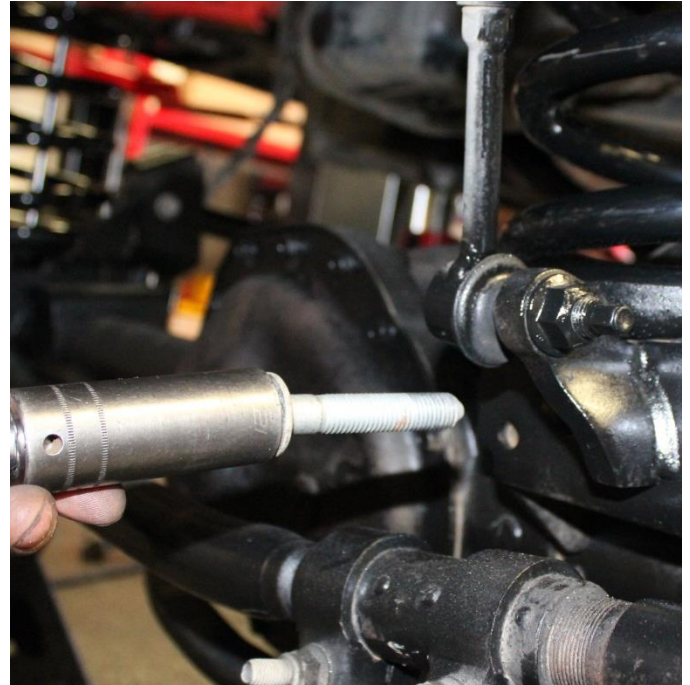
34) Drill out the rear hole to $\frac{1}{2}$ " or slightly larger.



35) Install the lower shock brackets using the factory hardware on the upper hole, Use the 1 ½" thru the lower back hole. Torque the ½" hardware to 70ft.-lbs.



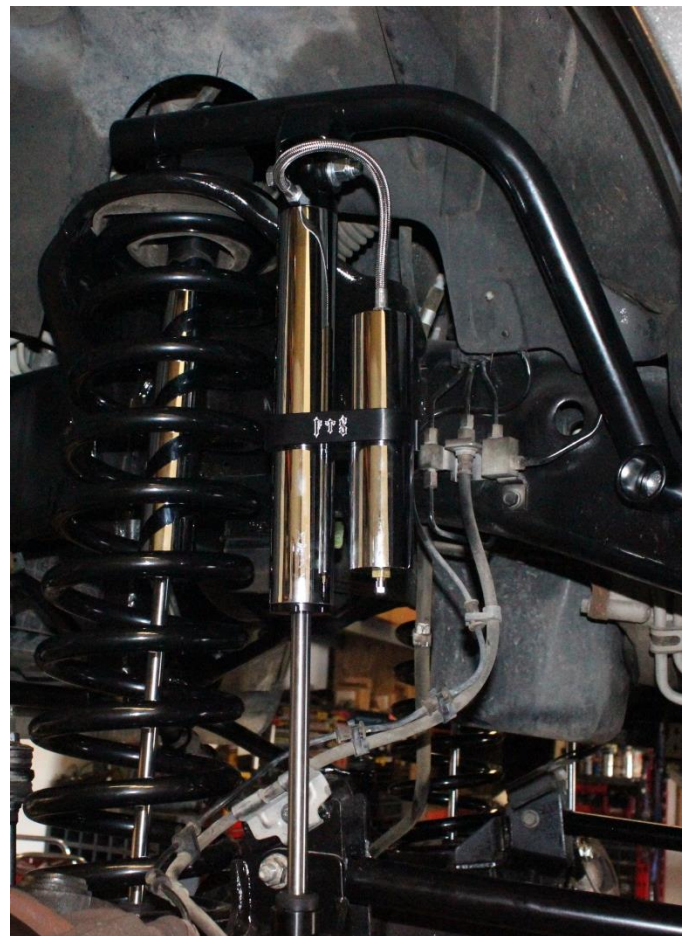
37) Jack up the axle to compress the coil spring enough to get the lower shock bolt in.



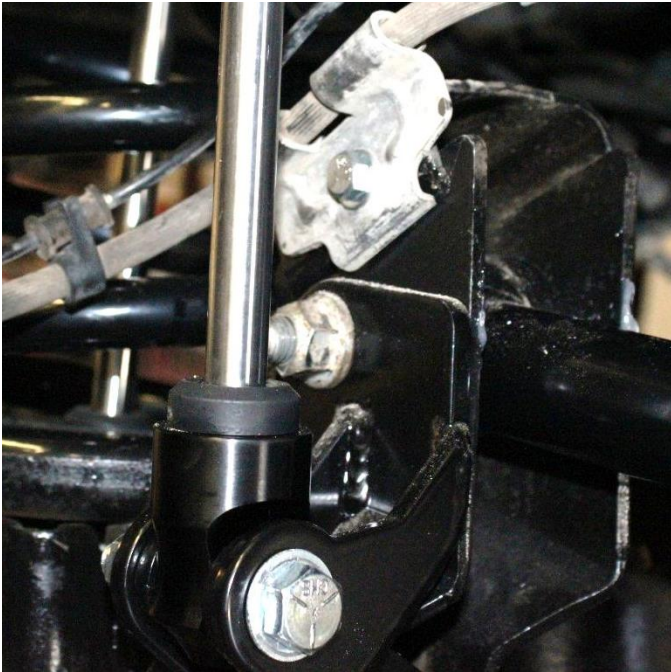
36) Install the front coil springs, put the shock inside the coil spring and then slide the coil and shock into position. Attach the top of the shock using the supplied aluminum spacers and the ½" 4 ½" hardware.



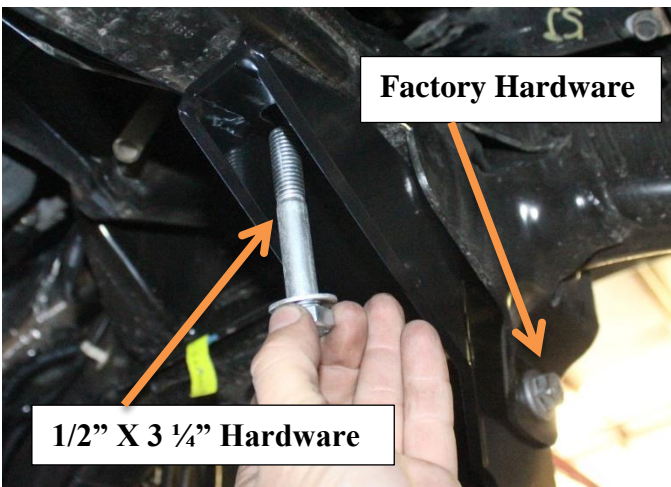
38) Attach the front shocks to the upper and lower mounts. You will use the supplied hardware for the upper mount and factory lower hardware. Torque the upper hardware to 35 ft. lbs. and the lower hardware to 60 ft.- lbs.



39) Install the lower shock mount using the $\frac{1}{2}$ " x $3 \frac{1}{4}$ " hardware.



40) Install the supplied track bar drop bracket using the factory hardware through the frame and bracket, and then install the $\frac{1}{2}$ " x $3 \frac{1}{4}$ " bolt through the other hole at the other end of the bracket.



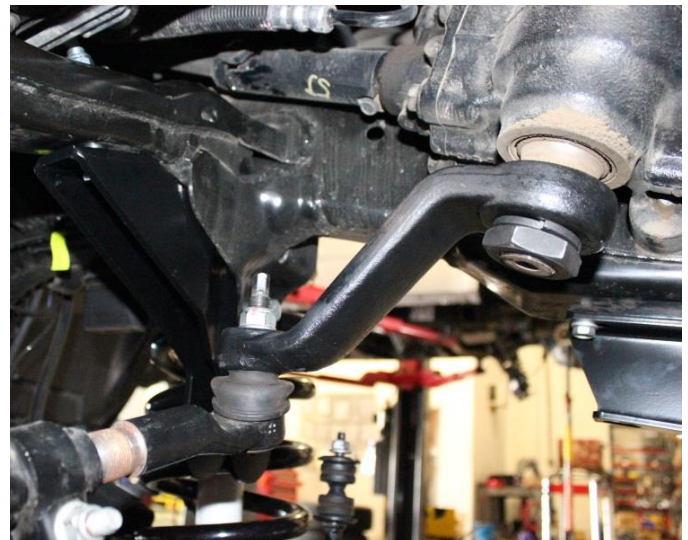
41) Remove the factory pitman arm.



42) Install the supplied pitman arm and torque to factory specs.



43) Connect the drag link to the pitman arm.



44) Connect the sway bar to the sway bar end links using all factory bushings and hardware.



45) Minor trimming required around the lower track bar mount.

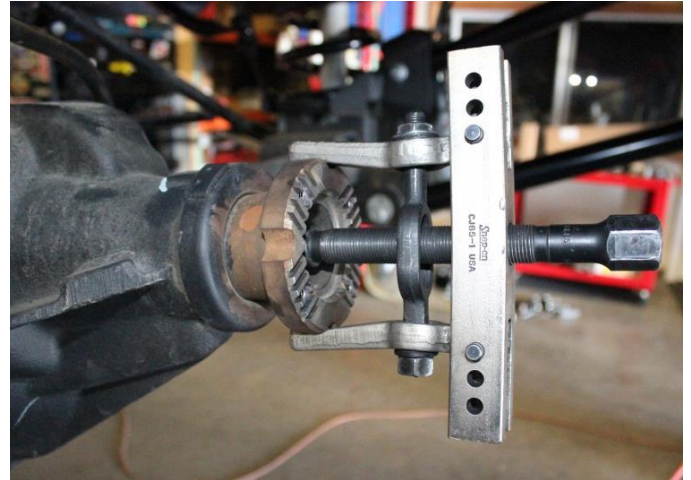


46) Connect the track bar to the new drop bracket using the supplied 5/8" x 3" bolt, nut, and washers torque to 125 ft- lbs.



47) Remove the pinion nut. Save for reassembly.

48) Remove the front pinion yoke using a 2 or 3 jaw puller.



49) Using a rubber mallet, tap the pinion yoke on to the pinion as show below.



50) Install the factory washers on to the pinion as shown below.



51) Install the factory pinion nut on to the pinion and torque to factory specs. Use some Loctite on the threads.



52) Install the supplied double cv front drive shaft using the supplied 12mm x 25mm torque to 60ft.-lbs. and the pinion side and the factory hardware at the transfer case side, torque to factory specs. Use lock tight on threads.

53) You will need to check to see if the front drive line binds at full droop

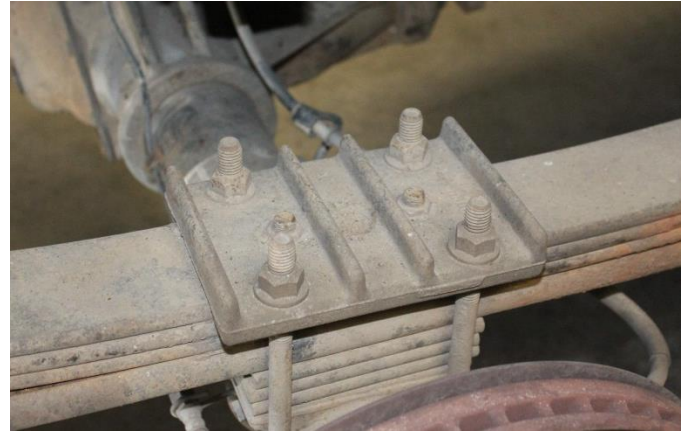
- 1) With the axle hanging spin the front drive shaft 3 full revolution in both directions
- 2) If the drive line has no tight spots you are good to go
- 3) If you have a tight spot in the drive shaft, you might need to purchase a relocking ring FTS part # 64000-9

REAR INSTRUCTIONS

1) Jack up the rear end of the vehicle and support the frame rails with jack stands.

2) Supporting the rear differential remove and discard the rear shocks.

3) Remove the U Bolt nuts and discard u bolts. Lower the axle down slowly



4) Install the new FTS supplied block, jack the axle back up to where the blocks are touching the leaf springs. Use the 9/16" X 4" X 16" u bolts, slide the over the axle from the bottom up and thru the factory upper plates torque to 100 ft.- lbs.



IF YOU ARE INSTALLING TRACTION BARS FOLLOW STEPS 5 THRU 16 IF NOT SKIP THIS PART

4) Install the new upper plate on top of the spring over leaf spring center pins



5) Using the supplied $\frac{3}{4}$ x 3 $\frac{1}{4}$ " x 18" u bolts Install them front the top side down.

6) Install the new FTS lower traction bar axle saddle using the $\frac{3}{4}$ washers and high nuts supplied and torque to 150ft.-lbs.



7) Now you are ready to set the truck on the ground, you will need to bounce the rear of the truck to settle the leaf spring before installing the traction bars

8) Install the supplied bushing into the traction bars

9) Install the supplied sleeve in both ends of the traction bar. NOTE use grease on the surfaces of the bushings and sleeves before installing.

10) Mount the frame bracket to the other end of the traction bar and push it up as a guide of where to drill the holes

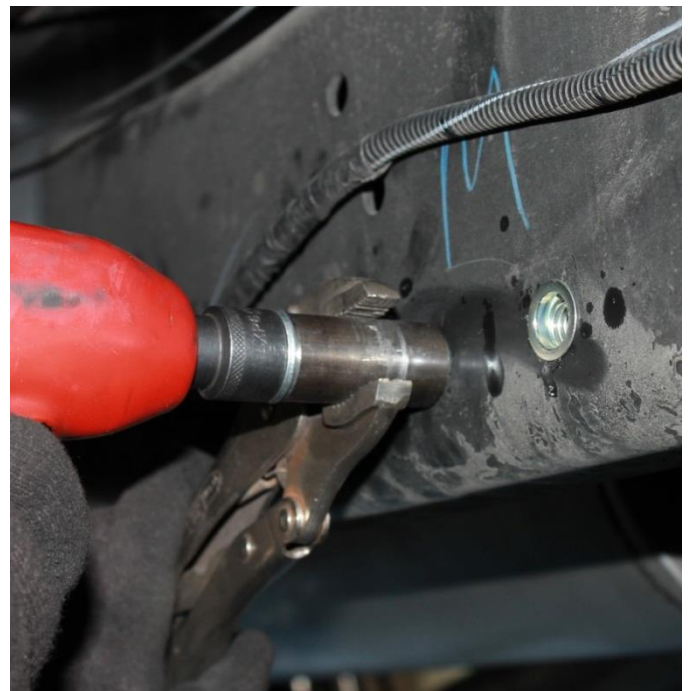


11) Mark all 4 of the holes in the frame with a scribe.

12) Using a $\frac{1}{4}$ drill bit as a pilot hole. Then drill the holes to 11/16 only through the front side and the bottom side of the frame.

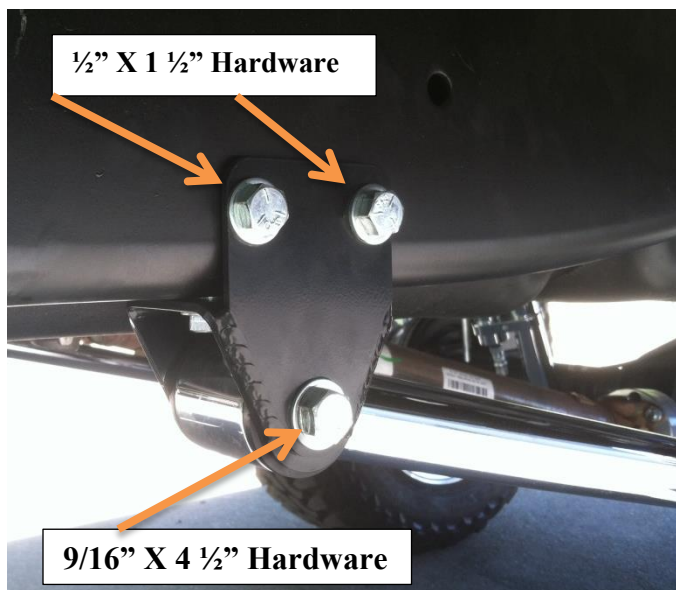
13) Using the supplied nutserts press them into all 4 holes

14) Using a $\frac{1}{2}$ x 3 bolt and a sleeve with a $\frac{1}{2}$ hole in it you will grab the sleeve with vise grips or channel locks, insert the $\frac{1}{2}$ bolt through the sleeve and tighten the bolt with a impact gun till it collapse the nutsert. Be sure you are holding the vise grips tightly



15) Install the traction bar frame bracket with the ½ x 1 ½ bolts and washers and tighten to 65 ft.- lbs.

16) Install the FTS traction bars with the 9/16" x 4 ½" bolts supplied and tight to 95 ft.-lbs.



17) Install shocks

Product Warranty and Warnings-

FTS provides a Limited Lifetime Warranty to the original retail purchaser who owns the vehicle, on which the product was originally installed, for defects in workmanship and materials.

The Limited Lifetime Warranty excludes the following FTS items; bushings, bump stops, ball joints, tie rod ends, limiting straps, cross shafts, heim joints. These parts are subject to wear and are not considered defective when worn. They are warranted for 60 days from the date of purchase for defects in workmanship.

Reservoir shocks are considered a serviceable shock with a one year warranty on leakage only. Service seal kits are available separately for future maintenance. All other shocks are covered under our Limited Lifetime Warranty. FTS does not warrant any product for finish, alterations, modifications and/or installation contrary to FTS instructions. Alterations to the finish of the parts including but not limited to painting, powder coating, plating and/or welding will void all warranties. Some finish damage may occur to parts during shipping which is considered normal and is not covered under warranty.

FTS products are not designed nor intended to be installed on vehicles used in race applications or for racing purposes or for similar activities. (A "RACE" is defined as any contest between two or more vehicles, or any contest of one or more vehicle against the clock, whether or not such contest is for a prize). This warranty does not include coverage for police or taxi vehicles, race vehicles, or vehicles used for government or commercial purposes. Also excluded from this warranty are sales outside of the

United States of America.

Installation of most suspension products will raise the center of gravity of the vehicle and will cause the vehicle to handle differently than stock. It may increase the vehicle's susceptibility to a rollover, on road and off road, at all speeds. Extreme care should be taken to operate the vehicle safely at all times to prevent rollover or loss of control resulting in serious injury or death.

FTS makes every effort to ensure suspension product compatibility with all vehicles listed in the catalog, but due to unknown auto manufacturer's production changes and/or inconsistencies by the auto manufacturer,

FTS cannot be responsible for 100% compatibility, including the fitment of tire and wheel sizes listed. The Tire and Wheel sizes listed in FTS's catalog are only a guideline for street driving with noted fender trimming. FTS is not responsible for damages to the vehicle's body or tires.

FTS's obligation under this warranty is limited to the repair or replacement, at FTS option, of the defective product only. All costs of removal, installation or re-installation, freight charges, incidental or consequential damages are expressly excluded from this warranty. FTS is not

responsible for damages and/or warranty of other vehicle parts related or non related to the installed FTS product. This warranty is expressly in lieu of all other warranties expressed or implied. This warranty shall not apply to any product that has been subject to accident, negligence, alteration, abuse or misuse as determined by FTS.

FTS suspension components must be installed as a complete system including shocks as shown on our current website. All warranties will become void if FTS parts are combined and/or substituted with other aftermarket suspension products. Combination and/or substitution of other aftermarket suspension parts may cause premature wear and/or product failure resulting in an accident causing injury or death. FTS does not warrant products not manufactured by FTS.

Installation of FTS product may void the vehicles factory warranty; it is the consumer's responsibility to check with their local vehicle's dealer for warranty disposition before the installation of the product. It is the responsibility of the distributor and/or the retailer to review all warranties and warnings of FTS products with the consumer prior to purchase.

FTS reserves the right to supersede, discontinue, change the design, finish, part number and, or application of parts when deemed necessary without written notice. FTS is not responsible for misprints or typographical errors within the catalog or price sheet.

FTS reserves the right to supersede, discontinue, change the design, finish, part number and, or application of parts when deemed necessary without written notice. FTS is not responsible for misprints or typographical errors within the catalog or price sheet.

FTS reserves the right to supersede, discontinue, change the design, finish, part number and, or application of parts when deemed necessary without written notice. FTS is not responsible for misprints or typographical errors within the catalog or price sheet.

**Thank You for choosing
Full Throttle Suspension**
Tech support 559-271-8685 or send email to
fts.dwgs@gmail.com