



## ***Installation Instructions***



### ***6" Performance Suspension System 04-08 Ford F 150 4WD***

**Fabtech Motorsports 4331 Eucalyptus Ave. Chino, CA 91710  
Tech Line 909-597-7800 Fax 909-597-7185 Web [www.fabtechmotorsports.com](http://www.fabtechmotorsports.com)**



[www.fabtechmotorsports.com](http://www.fabtechmotorsports.com)

*6" 04-08 Ford F150 4WD*  
*FTS22016BK / FTS22017BK / FTS22135BK*  
*FTS22016 / FTS22017 / FTS22018*

**TOOL LIST: (NOT INCLUDED)**

- FLOOR JACK & JACK STANDS
- ASSORTED METRIC AND S.A.E SOCKETS & WRENCHES
- TORQUE WRENCH
- DIE GRINDER WITH CUT OFF WHEEL AND GRINDING WHEEL

**THE FACTORY FRONT DRIVE SHAFT WILL NEED TO BE REBALANCED WITH THE INSTALLATION OF THIS KIT.**

**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.**

**CHECK ALL PARTS INCLUDED IN THIS KIT TO THE PARTS LIST ABOVE BEFORE BEGINNING INSTALLATION OF THIS KIT. IF ANY PARTS ARE MISSING, CONTACT FABTECH AT 909-597-7800.**

**NOTE- PRIOR TO THE INSTALLATION OF THIS SUSPENSION SYSTEM, A FRONT END ALIGNMENT MUST BE PERFORMED AND RECORDED. DO NOT INSTALL THIS SYSTEM IF THE VEHICLE ALIGNMENT IS NOT WITHIN FACTORY SPECIFICATIONS. CHECK FOR FRAME AND SUSPENSION DAMAGE PRIOR TO INSTALLATION. THIS SUSPENSION SYSTEM DOES NOT REQUIRE WELDING FOR INSTALLATION. DO NOT WELD ANY OF THESE COMPONENTS.**

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

**DO NOT ALTER THE FINISH OF THESE COMPONENTS, EXAMPLE- CHROMING, ZINC PLATING OR PAINTING. CHANGING THE FINISH CAN CAUSE STRUCTURAL FATIGUE OF COMPONENTS.**

**THIS SYSTEM MUST BE INSTALLED WITH FABTECH SHOCK ASBORBERS TO PREVENT POSSIBLE BALL JOINT & CV DAMAGE.**

**THE INSTALLATION OF THIS SUSPENSION SYSTEM SHOULD BE PERFORMED BY TWO PROFESSIONAL MECHANICS.**

**O.E.M. WHEELS & TIRES CAN BE REINSTALLED WITH THIS KIT. A LARGER TIRE CANNOT BE INSTALLED ON THE O.E.M WHEEL. FABTECH RECOMMEND'S A 17X8 WHEEL WITH A 5" BACK SPACING WITH A 315/70R17 TIRE.**

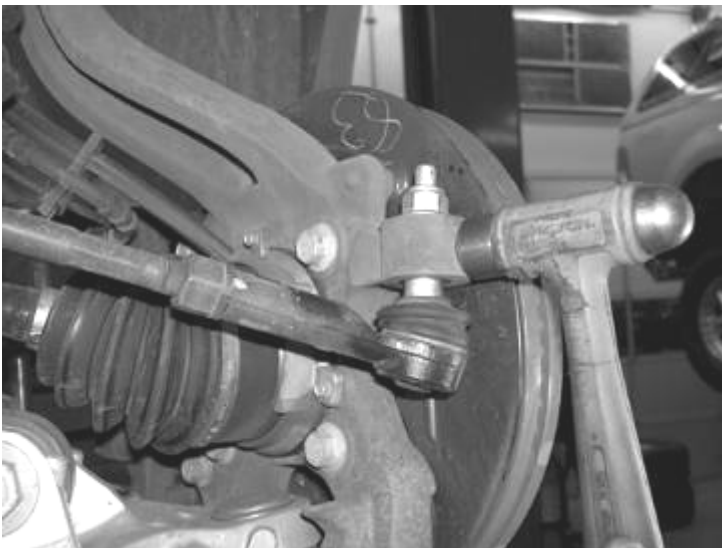
**VERIFY DIFFERENTIAL FLUID IS AT MANUFACTURES RECOMMENDED LEVEL PRIOR TO KIT INSTALLATION. INSTALLATION OF THE KIT WILL RE-POSITION THE DIFFERENTIAL AND THE FILL PLUG HOLE MAY BE IN A DIFFERENT POSITION. (FOR EXAMPLE, IF THE MANUFACTURE RECOMMENDS 3 QUARTS OF FLUID, MAKE SURE THE DIFF HAS 3 QUARTS OF FLUID). CHECK YOUR SPECIFIC MANUAL FOR CORRECT AMOUNT OF FLUID.**

## 6" 04-08 Ford F-150 4wd Parts List / Hardware

<b>FTS22016BK</b>			<b>Box Kit 1</b>			<b>FT30057</b>			<b>Hardware Kit</b>					
<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>		
1	FTS30100D	Driver Side Knuckle	6	7/16"-14 x 3 1/2" Bolt	6	7/16"-14 x 3 1/2" Bolt	1	7/16"-14 x 4" Bolt	6	Impact Tube / Diff Mount				
1	FTS30100P	Passenger Side Knuckle	1	7/16"-14 x 4" Bolt	1	7/16"-14 x 4" Bolt	8	7/16"-14 x 1 1/4" Bolt	1	Diff Bolts Pass Side Mnt				
2	FT30060BK	Drv./ Pass. Diff Mount	8	7/16"-14 x 1 1/4" Bolt	3	7/16"-14 x 1 1/2" Bolt	3	7/16"-14 x 1 1/2" Bolt	8	Sway Bar Bracket				
1	FT30058BK	Diff Center Support Tube	3	7/16"-14 x 1 1/2" Bolt	17	7/16"-14 C-lock Nut	36	7/16" SAE Flat Washer	17	Skid Plate				
1	FT30068BK	Diff. Support	4	1/2"-13 x 1 1/2" Bolt	4	1/2"-13 x 1 1/2" Bolt	4	1/2"-13 Nylock Nut	4	Impact Mnt / Diff Support				
1	FT30062	Sway Bar Drop Pass.	4	1/2"-13 Nylock Nut	8	1/2" SAE Flat Washer	4	5/16"-18 x 1 1/4" Bolt	4	Cross Tube				
1	FT30063	Sway Bar Drop Drv.	4	5/16"-18 x 1 1/4" Bolt	4	5/16" Split Washer	4	5/16" SAE Flat Washer						
1	FT30310	Hdwr Sub-Assembly Kit	4	5/16" SAE Flat Washer	1	Thread Locking Compound								
2	FT30018	C.V. Spacer												
<b>FT30310</b>			<b>Hdwr Sub-Assembly Kit</b>			<b>FT30061</b>			<b>Hardware Kit</b>					
<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>		
1	FT30073	Diff Nut Tab	2	1/4"-20 x 1" Bolt	2	1/4"-20 x 3/4" Bolt	4	1/4"-20 Nylock Nut	8	1/4" SAE Flat Washer	4	Adel Clamp	1	3/8"-16 x 2" Bolt
2	FT30070	Rack Bracket	2	1/4"-20 x 3/4" Bolt	4	1/4"-20 Nylock Nut	8	1/4" SAE Flat Washer	4	Adel Clamp	1	3/8"-16 x 2" Bolt	1	3/8"-16 Nylock Nut
1	FT1044	Bushing Kit	4	1/4"-20 Nylock Nut	2	5/16"-18 x 1"	2	5/16"-18 Nylock Nut	4	5/16" SAE Washer	16	12mm- 1.75 x 45mm Bolt	16	12 mm Flat Washer
2	37162751081	3/8"-16 x 2 /34" Hex Bolt	2	5/16"-18 x 1" Hex Bolt	4	5/16" SAE Washer	16	12mm- 1.75 x 45mm Bolt	6	Zip Ties	1	Thread Locking Compound	4	5/16"-18 x 1" Hex Bolt
4	37000005081	3/8" SAE Flat Washer	8	5/16" SAE Flat Washer	16	12 mm Flat Washer	6	Zip Ties	1	Thread Locking Compound	4	5/16"-18 x 1" Hex Bolt	4	5/16"-18 C-Lock Nut
2	37160003052	3/8"-16 C-Lock Nut			6	Zip Ties	1	Thread Locking Compound	4	5/16"-18 x 1" Hex Bolt	4	5/16"-18 C-Lock Nut	8	5/16" SAE Flat Washer
<b>FTS22017BK</b>			<b>Box Kit 2</b>			<b>FTS22135</b>			<b>Box Kit 3</b>					
<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>		
1	FT30054	Frt. Crossmember	2	5/16"-18 x 1"	2	FT20049BK	Impact Tubes	2	FT20049BK	Impact Tubes	2	FT20049BK	Impact Tubes	
1	FT30288	RR. Crossmember	2	5/16"-18 Nylock Nut	2	FTBK52	Lift Block With Bump Stop	2	FTBK52	Lift Block With Bump Stop	4	FT737U	U-Bolt	
2	FT30064BK	Impact Tubes Mount	2	3/8" SAE Flat Washer	1	FT30069BK	Skid Plate	1	FT30069BK	Skid Plate	1	FT292	Pivot Bolts/ Align. Cams	
1	FT30071	Rear E-Brake Cable Brkt	2	5/16"-18 x 1"	2	FT292	Pivot Bolts/ Align. Cams	1	FT20454	Hdwr Sub-Assembly	2	FT30416BK	Shock Extension Upper	
1	FT30320	Hdwr Sub-Assembly	2	5/16"-18 Nylock Nut	1	FT20454	Hdwr Sub-Assembly	2	FT30416BK	Shock Extension Upper	2	FT30417BK	Shock Extension Upper	
1	FT30072	Rear Drive Shaft Spacer	4	5/16" SAE Washer	16	12mm- 1.75 x 45mm Bolt	6	Zip Ties	1	FT20454	Hdwr Sub-Assembly	2	FT30418BK	Shock Extension Lower
1	FT30072	Rear Drive Shaft Spacer	4	5/16" SAE Washer	16	12 mm Flat Washer	6	Zip Ties	1	FT20454	Hdwr Sub-Assembly	2	FT30418BK	Shock Extension Lower
1	FT30057	Hardware	16	12mm- 1.75 x 45mm Bolt	6	Zip Ties	1	Thread Locking Compound	4	5/16"-18 x 1" Hex Bolt	4	5/16"-18 C-Lock Nut	8	5/16" SAE Flat Washer
1	FT30061	Hardware	16	12 mm Flat Washer	6	Zip Ties	1	Thread Locking Compound	8	5/16" SAE Flat Washer				
<b>FT30320</b>			<b>Hdwr Sub-Assembly Kit</b>			<b>FTS22135</b>			<b>Box Kit 3</b>					
<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>		
1	FT30289	Crsmmbr Pocket Sleeve	2	5/16"-18 x 1" Hex Bolt	4	5/16"-18 x 1" Hex Bolt	4	5/16"-18 C-Lock Nut	8	5/16" SAE Flat Washer				
1	FT30290	Diff. Spacer	4	5/16"-18 C-Lock Nut	8	5/16" SAE Flat Washer								
1	18251401080	Crsmmbr Blt 18-2.5 X 140												
1	18250003080	18-2.5 Nylock Nut												
1	FT30074	Shk Bushing & Sleeve Kit												
1	FT30075	Diff Vent Hose												
1	FT30076	Drive Shaft Boot Clamp												
1	FT916H	U-Bolt Hardware												
2	FT30065	Frt Brake Line Bracket.												
1	FT30249	05-up Frt Drv. Brake Line Brkt												
1	FT30251	05-up Frt Pass Brake Line Brkt												
1	FT30059	Rear Diff Brake Line Tab												
2	62000005081	5/8" SAE Flat Washer												
1	43144001081	Diff Bolt 7/16"-14 x 4"												
8	31000005052	5/16" Washer												
4	31180003352	5/16"-18 Washer												
4	31181001081	5/16"-18 x 1 Hex Bolt												
2	37000005081	3/8" Washer												
1	37160003052	3/8"-16 Nylock Nut												
1	37161251081	3/8"-16 x 1 1/4" Hex Bolt												
<b>FT30320</b>			<b>Hdwr Sub-Assembly Kit</b>			<b>FTS22135</b>			<b>Box Kit 3</b>					
<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>	<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Part #</b>	<b>Description</b>	<b>Qua</b>	<b>Description</b>		
1	FT50089	Sleeve Rear Shocks	1	FT50089	Sleeve Rear Shocks	1	FT50089	Sleeve Rear Shocks	1	FT50089	Sleeve Rear Shocks	1	FT50089	Sleeve Rear Shocks
2	FT22135i	Instruction Sheet	2	FT22135i	Instruction Sheet	2	FT22135i	Instruction Sheet	2	FT22135i	Instruction Sheet	2	FT22135i	Instruction Sheet
1	FTAS12	Fabtech Sticker	1	FTAS12	Fabtech Sticker	1	FTAS12	Fabtech Sticker	1	FTAS12	Fabtech Sticker	1	FTAS12	Fabtech Sticker
1	FTAS16	Driver Warning	1	FTAS16	Driver Warning	1	FTAS16	Driver Warning	1	FTAS16	Driver Warning	1	FTAS16	Driver Warning
1	FTREGCARD	Reg. Card	1	FTREGCARD	Reg. Card	1	FTREGCARD	Reg. Card	1	FTREGCARD	Reg. Card	1	FTREGCARD	Reg. Card
1	FT LOCK	Thread lock	1	FT LOCK	Thread lock	1	FT LOCK	Thread lock	1	FT LOCK	Thread lock	1	FT LOCK	Thread lock
1	FT30427	Hardware Kit	1	FT30427	Hardware Kit	1	FT30427	Hardware Kit	1	FT30427	Hardware Kit	1	FT30427	Hardware Kit
4	FT30386	Aluminum Shock Bushing	4	FT30386	Aluminum Shock Bushing	4	FT30386	Aluminum Shock Bushing	4	FT30386	Aluminum Shock Bushing	4	FT30386	Aluminum Shock Bushing

## ***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. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE!** Remove the front tires.
2. Remove and discard the factory splash guard under the differential. Remove and save the optional factory transfer case skid plate.
3. Locate the sway bar end links and disconnect from the factory lower control arms, save the hardware. Locate the sway bar frame mounts and disconnect them from the frame, remove the sway bar from the truck. Save the hardware and sway bar.
4. Working from the driver side of the vehicle, disconnect the tie rod ends from the steering knuckle by striking the knuckle to dislodge the tie rod end. Use care not to damage the tie rod end when removing. Save the hardware. SEE PHOTO BELOW.



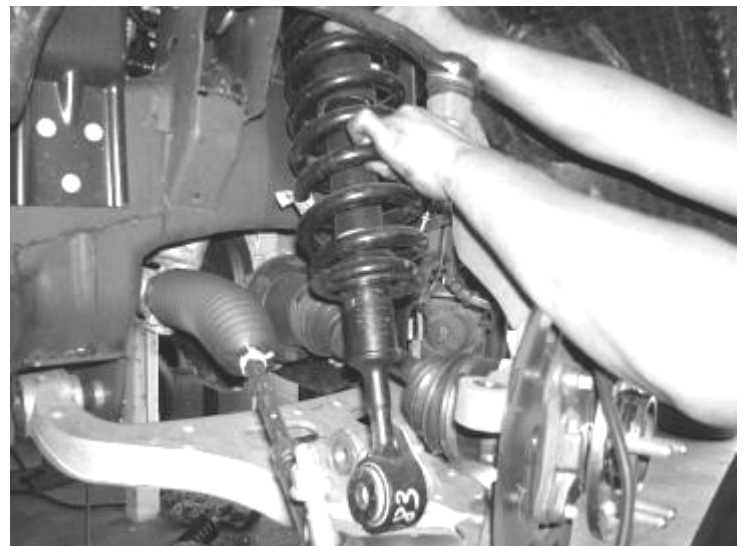
5. Remove the brake caliper and place it next to the frame. Do not overstretch the brake hose when doing so. Retain the hardware for reinstallation. Remove the brake rotor and save. Disconnect the vacuum lines attached to the rear of

the hub assembly. Allow the vacuum lines to hang freely. Unplug the ABS wire at the plug behind the inner fender well and remove all the ABS line clamps. SEE PHOTO IN NEXT COLUMN.

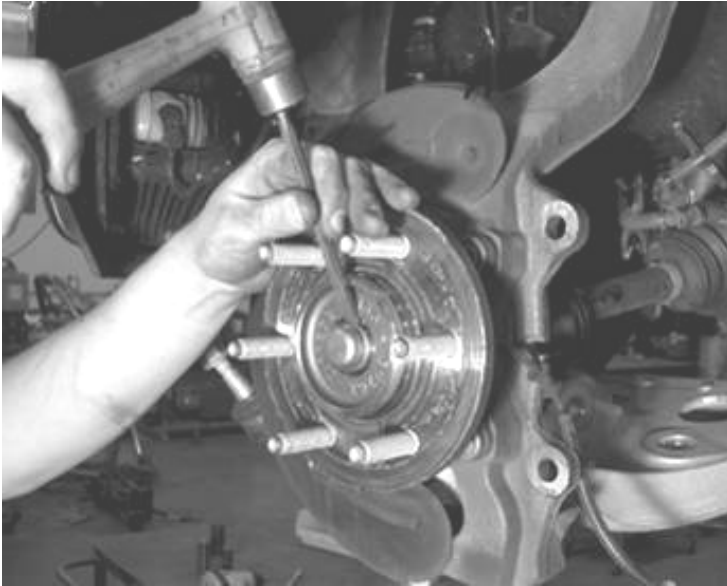


**Brake Caliper Shown Hung from Frame**

6. Locate the lower shock mount bolt and remove. Save the hardware. Locate the three upper nuts and remove. Save the hardware. Remove the shock assembly from the truck and set aside for assembly later. SEE PHOTO BELOW.



7. Carefully remove the dust cap covering the hub assembly nut. Remove the C.V. bearing nut and save the nut and dust cap. Remove the bolts attaching the C.V. half shaft to the front differential, then remove the C.V. shaft from the truck. Save C.V. shaft and discard the C.V. bolts. SEE PHOTO ON NEXT PAGE.



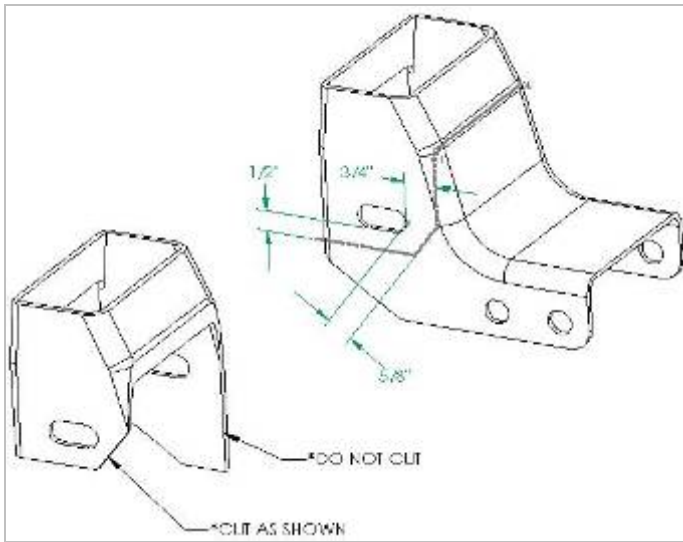
8. Remove the factory C.V. flange from the rear of the steering knuckle and save all the hardware. Remove the hub assembly from the steering knuckle along with the ABS sensor still attached and save all of the hardware. **USE CARE NOT TO DAMAGE THE RUBBER O-RING ON THE HUB ASSEMBLY. DO NOT DISCONNECT THE ABS SENSOR FROM THE HUB BEARING.**
9. 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 discard knuckle with the dust shield. SEE PHOTO BELOW.



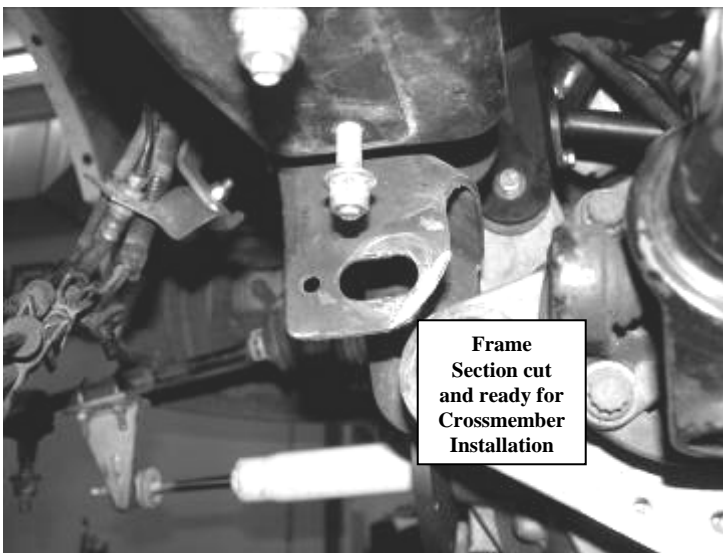
10. Remove the lower control arm bolts from the frame pivots and remove the lower control arm from the truck. Save hardware and lower control arm.
11. Repeat steps four through ten on the passenger side of the truck.
12. Remove the heat shield from around the front drive shaft at the transfer case and save the hardware and shield. Remove the front drive shaft from the truck and save drive shaft and the hardware. **Set the drive shaft aside, you will need to re-index it later in the install.**
13. Remove the factory rear crossmember from the truck and discard the crossmember and hardware. SEE PHOTO BELOW.



14. Remove the driver side rear differential mount hardware and discard. While supporting the differential, remove the two upper differential mount bolts and remove the differential from the truck. Save the hardware.
15. Locate the driver side rear lower control arm pocket. Following the diagram below mark and cut the frame using a die grinder with a cut off wheel. **NOTE- YOU WILL ONLY BE CUTTING THE REAR AND TOP PORTIONS OF THE POCKET, DO NOT CUT THE FRONT SIDE OF THE POCKET.** SEE DRAWING BELOW AND EXPLODED VIEW ON LAST PAGE.

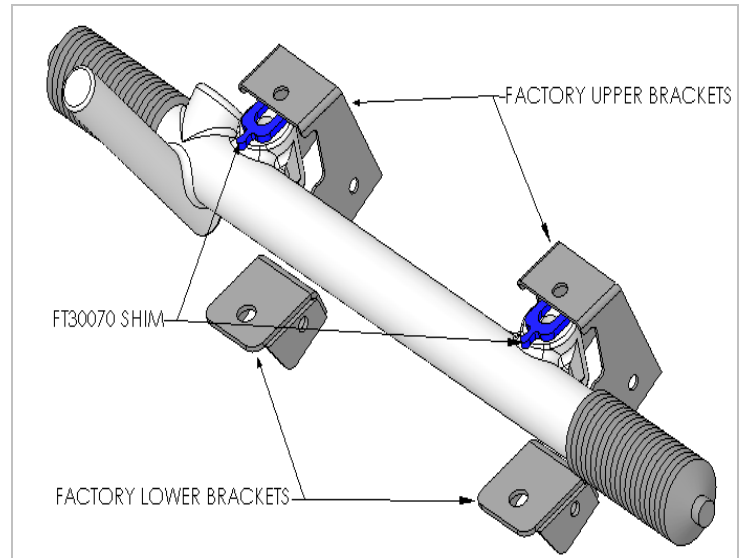


View from Driver Rear



Frame Section cut and ready for Crossmember Installation

16. Locate the 4 bolts attaching the Rack and Pinion assembly to the frame. Loosen all four bolts, DO NOT REMOVE THEM. Locate FT30070 rack shim and install between the Rack and Pinion assembly and the frame as shown below. Torque the four factory bolts to 75 ft. lbs. SEE DRAWING BELOW.

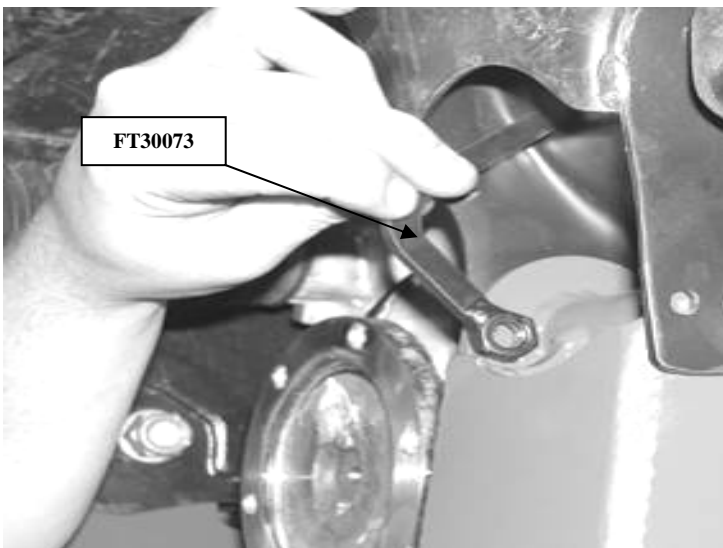
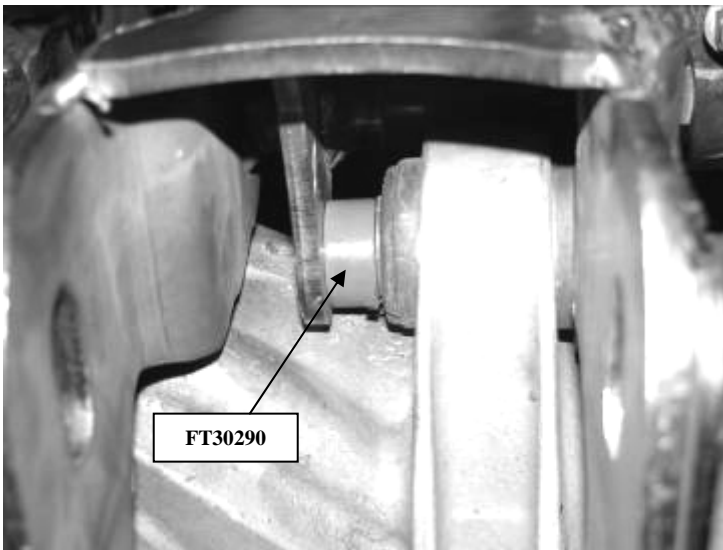
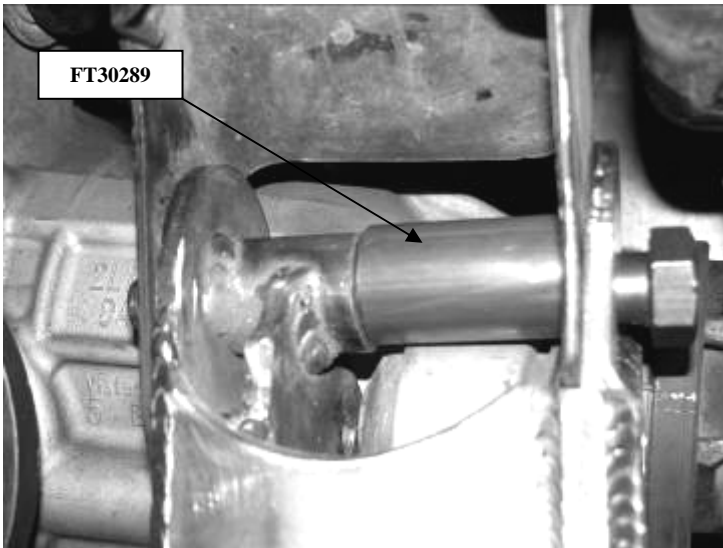


17. Locate the differential brackets FT30060 (both passenger and driver side brackets are the same). Attach the differential brackets to the frame using the original hardware, leave loose. When installing both differential brackets make sure the two welded nuts on each bracket are facing inboard of the truck. If using FTS92000 C V. drive shaft kit use the parts included in that kit at this time. SEE PHOTO IN NEXT COLUMN

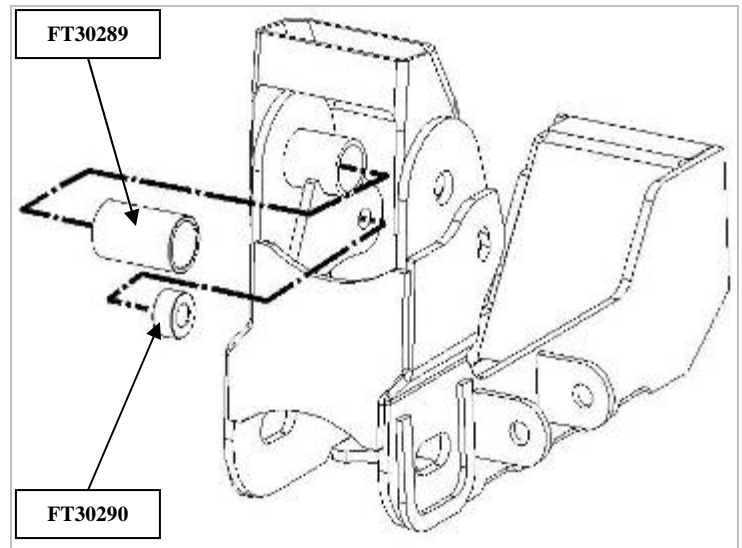


18. Reinstall the differential into the truck attaching the upper mounts using the supplied 7/16" x 4" bolt, c-lock, and washers on the passenger side and the supplied 7/16" x 3 1/2" bolt, c-lock, and washers on the driver side mount. Allow the differential to hang from the brackets. **NOTE: When installing the 7/16" bolts, make sure they are installed from the front to the rear of the truck.**
19. Locate the rear Fabtech crossmember FT30288 with the four tabs facing rearward and place the front of the crossmember inside of the stock lower control arm pocket with rear of the crossmember on the backside of the pocket. Locate FT30289 Rear Sleeve and attach using the supplied 18mm hardware on the driver's side. Use the factory crossmember bolt on the passenger side to attach the new crossmember to the lower control arm pocket. Leave loose.

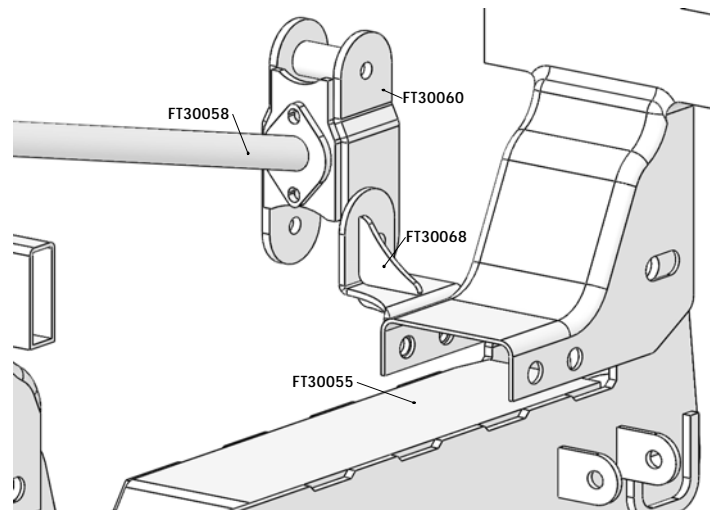
Locate and install FT30290 Diff. Spacer and use the supplied 7/16" x 4" bolt and flat washer along with the FT30073 differential nut tab, align the driver side rear differential mount to the crossmember and attach. Apply a small amount of the supplied thread lock compound to the differential nut tab before installing. Leave loose. SEE PHOTOS BELOW.



**FT30073 Diff Nut Tab**

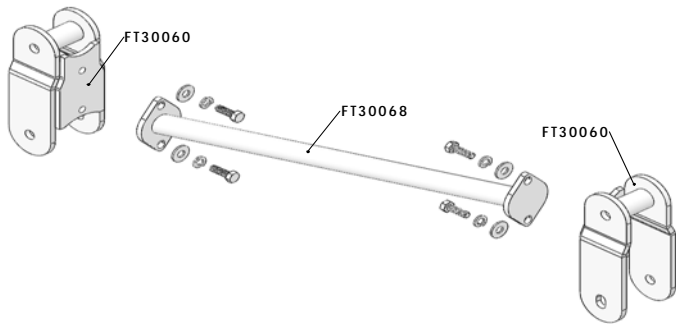


20. Locate FT30068 Passenger side differential support bracket. Attach the bracket first to the Fabtech differential bracket using the already installed 7/16 x 4" bolt. Then attach the lower two holes (where the factory rear crossmember was bolted) to the frame using the supplied 1/2" x 1 1/2" bolts, nuts, and washers. SEE DRAWING BELOW AND EXPLODED VIEW ON LAST PAGE

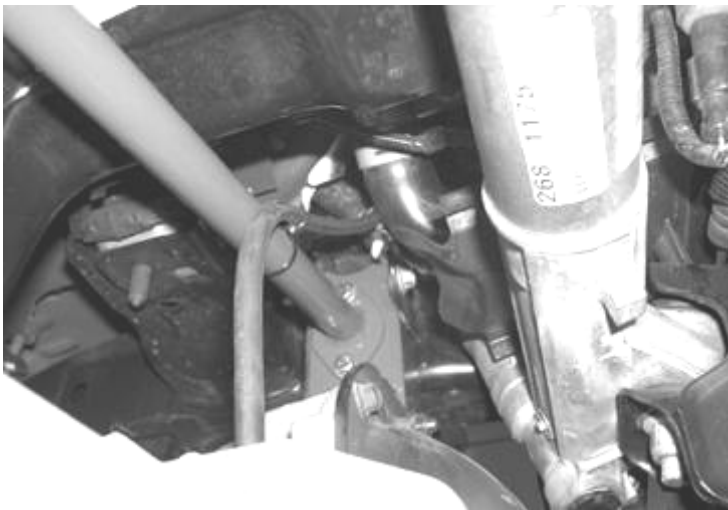


**View from Passenger Side Rear Forward**

21. Locate FT30058 Differential Bracket Cross Tube. Using the supplied 5/16" x 1 1/4" bolt, flat washer, and split washer attach the cross tube to the two upper differential brackets. Use the supplied thread lock compound on all cross tube hardware. Torque to 15 FT LBS. SEE DRAWING BELOW.



22. Locate the differential vent line. Remove the lower half of the differential vent line and discard. Using the supplied FT30075 diff vent line reattach to the upper half of the factory vent line, then connect to the differential itself. Using one of the supplied zip ties, secure the vent line to the differential cross tube. SEE PHOTO ON NEXT PAGE



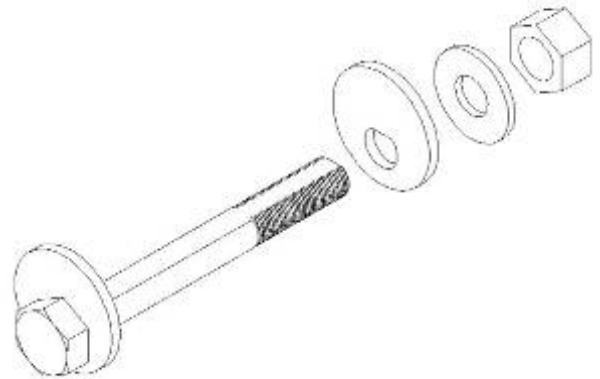
23. Locate the tabs on the rack and pinion frame mounts. Using a die grinder with a sanding disc, sand down both tabs 1/4". SEE PHOTO BELOW.



24. Locate the front Fabtech crossmember FT30054. With the one tab facing rearward, install the crossmember into the

stock front lower control arm pockets, and attach using the original hardware. Leave loose.

25. Locate the supplied FT292 Alignment cam kits supplied with the kit. Using the supplied alignment cams, attach the lower control arms to the Fabtech crossmembers. SEE DRAWING IN NEXT COLUMN FOR ALIGNMENT CAM INSTALLATION. WHEN INSTALLING THE ALIGNMENT CAMS THE NUTS SHOULD BE ON THE INSIDE OF THE CROSSMEMBERS.



26. Locate FT30069 Skid Plate. Using the supplied 7/16" X 1 1/2" bolts, nuts, and washers attach the skid plate to the crossmembers.

27. Torque all differential bolts to 85 FT LBS. Torque the factory lower control arm bolts to 150 FT LBS. Torque Skid Plate bolts to 55 FT LBS.

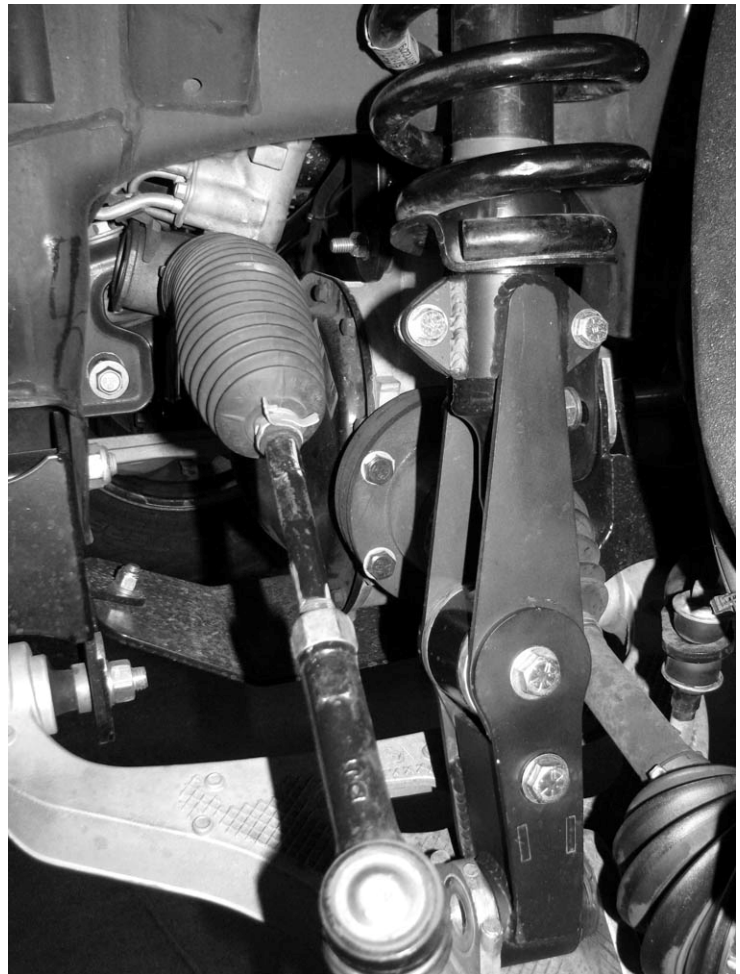
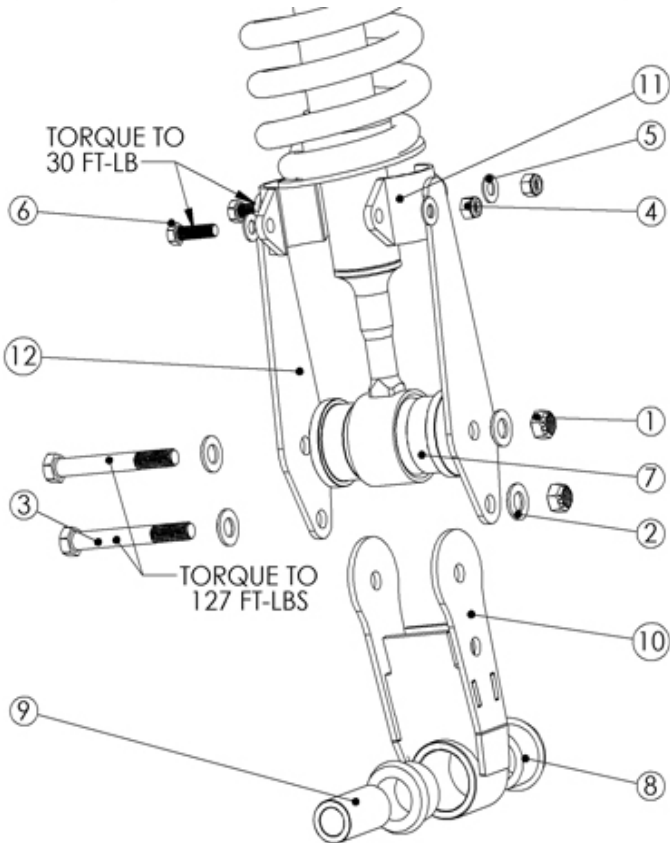
28. Locate the previously removed factory front shock assembly. Locate the Fabtech shock extensions and hardware - (FT30416BK) upper, (FT30417BK) upper, (FT30418BK) lower, (FT30386) Aluminum Bushing, (FT1036) Busing Half, and (FT99) Sleeve. Install all these parts using the drawing below. All quantities shown below are per shock. SEE TEXT AND DRAWING BELOW.



ITEM NO.	DESCRIPTION	QTY.
1	NUT 1/2-13 CRIMP LOCK	2
2	WASHER 1/2 SAE	4
3	BOLT 1/2-13 X 4	2
4	NUT 3/8-16 NYLOK	2
5	WASHER 3/8 SAE	4
6	BOLT 3/8-16 x 1 1/4	2
7	FT30386 ALUMINUM BUSHING	2
8	FT1036 BUSHING HALF	2
9	FT99 SLEEVE 1.250 X .813 X 2.350	1
10	FT30418BK EXT. LOWER	1
11	FT30416BK EXT UPPER	1
12	FT30417BK EXT UPPER	1



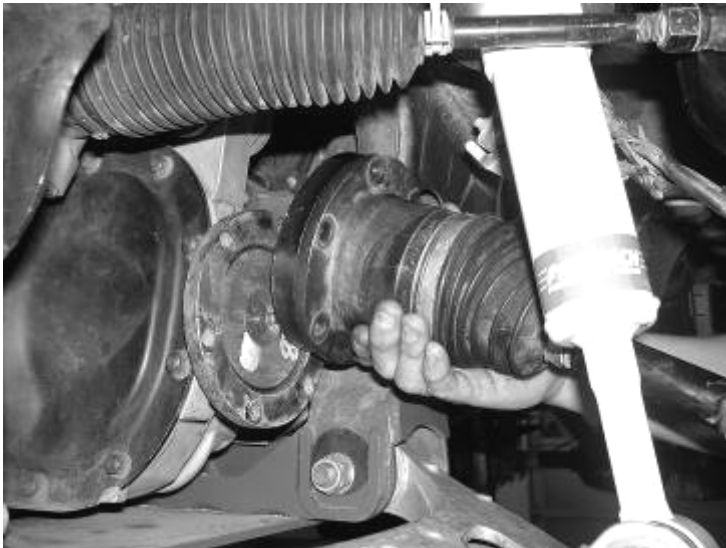
29. Working from the driver side of the truck, locate the previously assembled shock assembly and install it into the truck using the original factory hardware. Install the lower bolt first, then the upper three bolts. Torque the 3 upper nuts to 35 FT LBS. and the one lower bolt to 110 FT LBS. SEE PHOTO BELOW



30. Locate the FTS30100D steering knuckle. Attach the steering knuckle to the lower ball joint first, then attach the upper ball joint to the steering knuckle. Torque lower ball

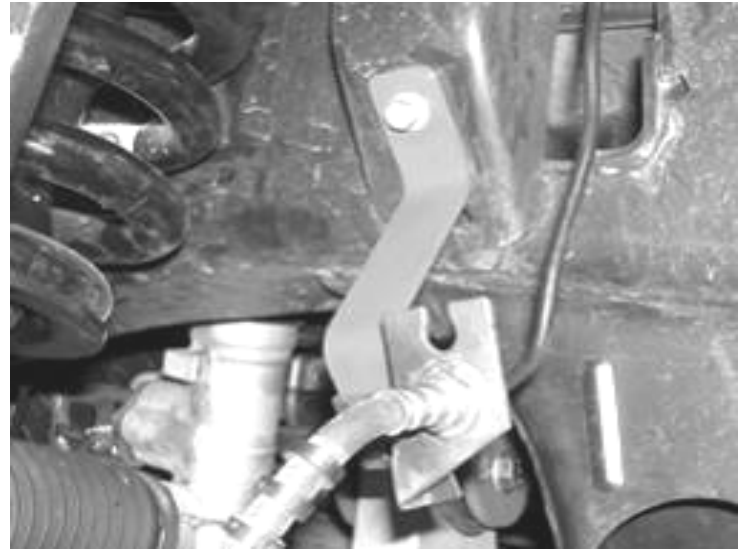
joint nut to 110 FT LBS. Torque upper ball joint to 85 FT LBS.

31. Reinstall the factory hub assembly and C.V. flange into the new Fabtech spindle. Torque the 4 hub bolts to 60 FT. LBS. and the 3 C.V. flange bolts to 11 FT. LBS. Use the supplied thread lock compound on all the hub assembly bolts. Route the ABS wire through the slot cut in the steering knuckle, making sure the grommet on the ABS wire is pressed firmly into the slot.
  
32. Locate the factory CV half shaft and slide it into the factory hub assembly from the backside of the steering knuckle. Attach the CV shaft to the hub assembly using the original factory nut, torque to 20 ft lbs. Reinstall the factory dust cap over the CV bearing nut. Locate the supplied FT30018 CV spacer. Place the CV spacer between the differential housing drive flange and the CV axle assembly. Using 12mm x 1.75 x 45mm bolts, washers, and thread lock compound attach CV axle and spacer to flange and torque to 60 ft lbs in a cross pattern.



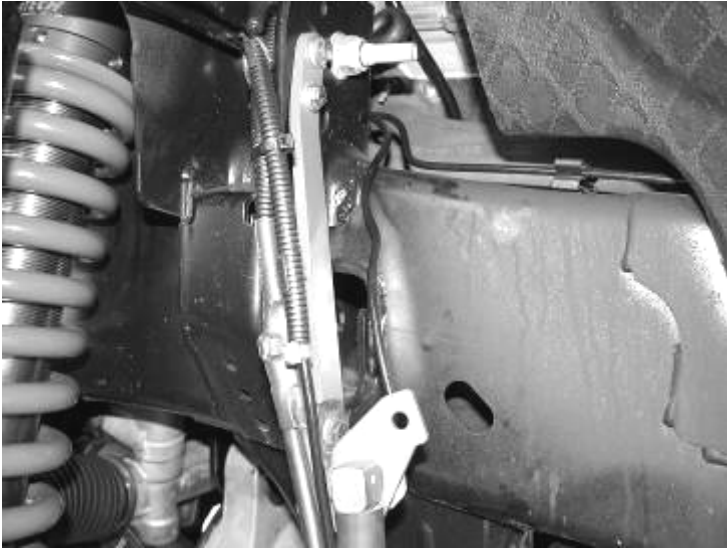
**There are two possible brake line bracket set up's on the F150's, determine which your model has and follow the proper step below 34 or 35.**

33. Locate the factory brake line bracket on the frame. Disconnect the bracket from the frame and save the hardware. Carefully pull the brake line down from the frame approximately 4". Locate the new FT30065 brake line bracket and attach to the frame using the original factory bolt, attach the factory brake line bracket to the new Fabtech bracket using the supplied 5/16" x 1" nut, bolt, and washers. SEE PHOTO BELOW.

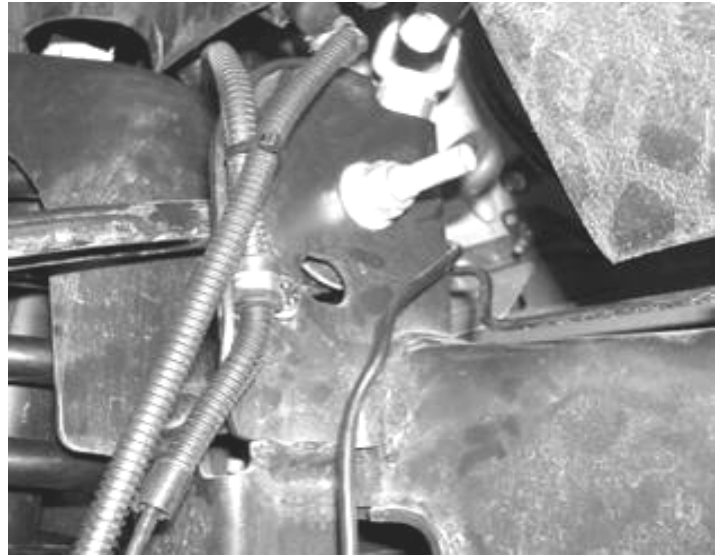


33. Locate the factory brake line bracket on the frame. Disconnect the bracket from the frame and discard the hardware. Carefully pull the brake line down from the frame approximately 5". Locate the new FT30249 brake line bracket and attach to the frame using the supplied 5/16" x 1" bolts, attach the factory brake line bracket to the new Fabtech bracket using the supplied 5/16" x 1" nut, bolt, and washers. SEE PHOTO BELOW AND IN NEXT COLUMN



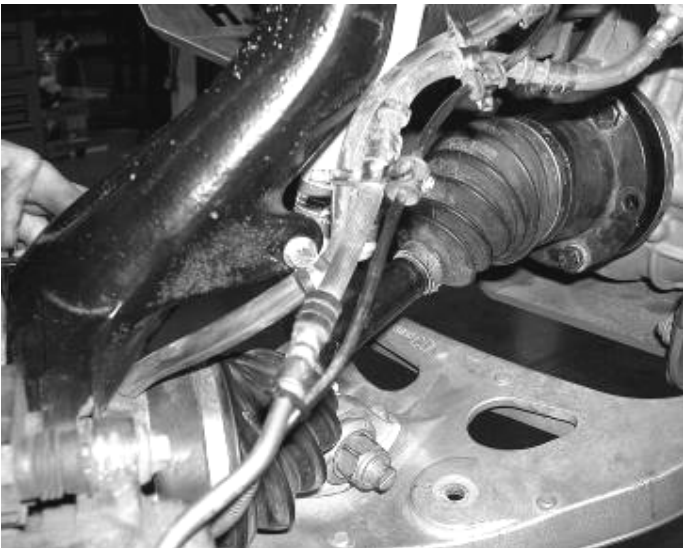


34. Reinstall the original brake rotor, followed by the brake caliper. Use a small amount of the supplied thread lock compound on the caliper bolts and torque to 145 ft. lbs.
35. Locate the hub assembly vacuum line, remove the factory vacuum line clamp on the rear upper control arm pocket and the two line clamps on top of the coil mount. Carefully pull some slack from the frame and reconnect the vacuum line to the hub assembly. Using the supplied Adel clamps and  $\frac{1}{4}$ " x 1" bolt, nut, and washer secure the vacuum line first to the tab on the rear of the knuckle then to the factory hole on the side of the rear upper control arm pocket using the supplied  $\frac{1}{4}$ " x  $\frac{3}{4}$ " bolt, nut, and washers. Attach the ABS line to the brake line using the factory line clamps on the brake line. Using the supplied zip ties, secure the ABS wire to the vacuum line. SEE PHOTOS BELOW AND ON NEXT PAGE.

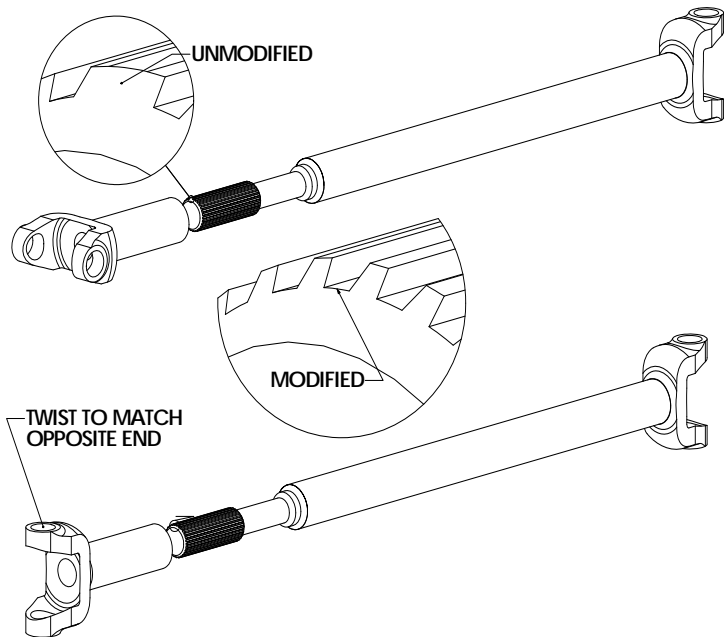


Rear Upper Control Arm Pocket View

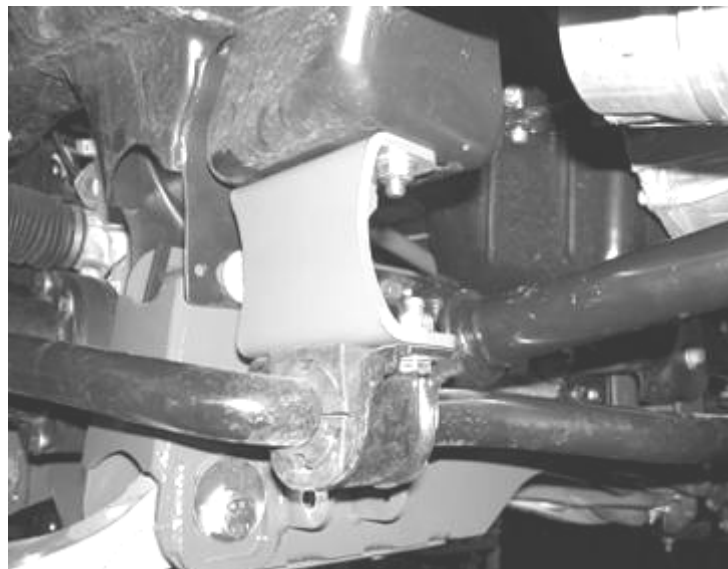
36. Reconnect the tie rod end to the steering knuckle and torque to 110 ft. lbs.
37. Repeat steps thirty through thirty-eight on the passenger side of the truck.
38. Locate the previously removed front drive shaft. Carefully remove the metal tie strap from the drive shaft boot. Discard the tie strap. Pull the slip yoke free from the drive shaft. On the splines of the drive shaft locate the master key spline. Using a die grinder, carefully grind the master key completely away. Clean all metal shavings and debris from drive shaft splines and grease with heavy-duty chasse grease. Reattach the slip yoke to the drive shaft carefully aligning both ends so the yokes are in the same position. Using the supplied FT30076 drive shaft boot clamp, reattach the drive shaft boot to the drive shaft. **THE DRIVESHAFT WILL NOW NEED TO BE REBALANCED BY A PROFESSIONAL DRIVE LINE SHOP. SEE DRAWING IN NEXT COLUMN AND EXPLODED VIEW ON LAST PAGE**



Vacuum Line & ABS & Brake Line Routing



39. Reinstall the drive shaft back into the truck in the factory position **with the slip yoke at the transfer case** and torque all drive shaft bolts to 83 ft lbs. Reinstall the factory dust shield using the original factory hardware. Reinstall the factory transfer case skid plate using the original hardware.
40. Locate the impact struts FT20049 and install the provided FT1044 bushings. Attach the struts to the rear crossmember tabs and to the rear mounts FT30064BK using 7/16" x 3-1/2" bolts, nuts, and washers. Leave loose.
41. Swing the strut tube with the rear mount bracket attached up to meet the transmission crossmember. The rear bracket will be placed on the bottom side of the transmission crossmember. With a center punch mark the hole and drill out to 1/2". Using the supplied 1/2" x 1 1/2" bolt, nut, and washers attach the bracket to the transmission crossmember. Torque the rear mount bracket to 40 ft lbs, and the 7/16" impact tube bolts to 45 ft lbs.
42. Locate the FT30062 (passenger) and FT30063 (driver) sway bar brackets. Using the factory bolts, nuts, and washers attach the sway bar brackets to the frame. Leave loose. Locate the factory sway bar and attach the factory sway bar to the new bracket using the supplied 7/16" x 1 1/4" bolts, nuts, and washer. Attach the sway bar end links to the factory lower control arm. Torque sway bar end link bolts to 60 ft lbs. and bracket bolts to 50 ft lbs. SEE PHOTO ON NEXT PAGE

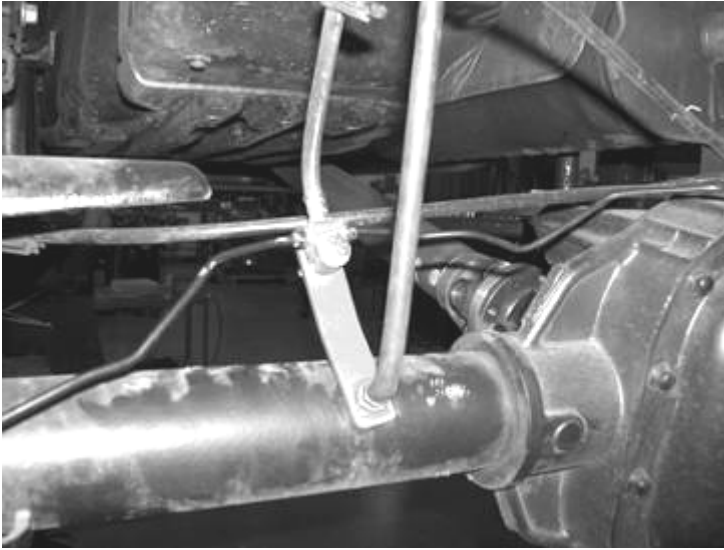


43. Repeat step forty-four on passenger side of vehicle.
44. Install the front tires and wheels. Torque lug nuts to wheel manufacturer's specifications.
45. Steer the truck left to right to make sure that the steering knuckle stops against the stop and factory control arm. **(This should be done with the truck on the ground)**

## **Double Check All Nuts And Bolts Are Now Tight Before Proceeding To The Rear.**

### **REAR SUSPENSION INSTRUCTIONS:**

46. Jack up the rear end of the vehicle and support the frame rails with jack stands. Release the parking brake at this time. Supporting the rear differential remove the rear shocks, u-bolts, blocks and lower axle down. Use care not to over extend the brake hose.
47. Locate the factory brake line mount on the driver side of the axle. Remove the vent line from the bolt and remove the bolt, save hardware. Locate the supplied brake line bracket FT30059 and attach the side with the sleeve to the axle using the factory hardware. Using the supplied 3/8" x 2" bolt, nut, and washer, attach the brake line to the other end of the bracket. Reattach vent line. SEE PHOTO IN NEXT COLUMN.



48. Remove the four bolts attaching the rear drive shaft to the rear axle. Locate and install the supplied drive shaft spacer FT30072 between the drive shaft and the rear axle using the supplied 12mm bolts and washer. Torque bolts to 83 ft lbs. SEE PHOTO BELOW.



49. Locate and install the rear lift blocks FTBK52. The extended bump stop perch will be facing inboard of the truck. Using the provided U bolts, nuts, and washers align the axle, lift blocks, and springs and torque U Bolts to 90 ft lbs. SEE PHOTO ON NEXT PAGE.



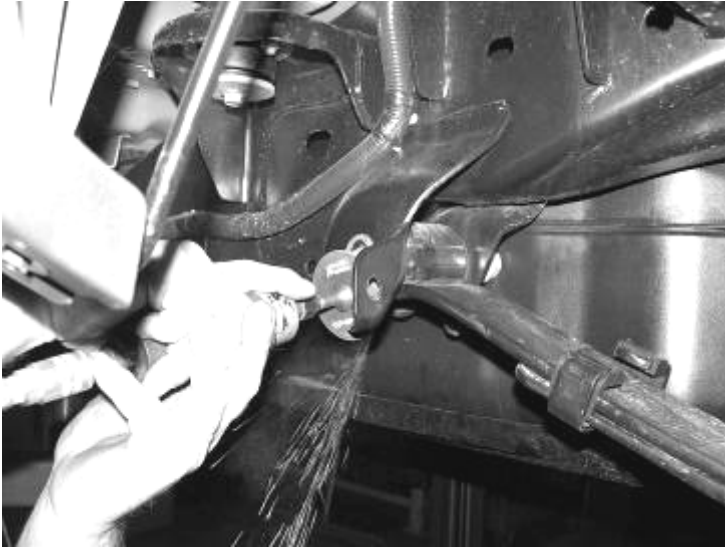
50. Locate FTS7266 rear shocks (not included with kit). Install the supplied shock sleeves from bag 143002 into each end of the shocks. Install the shocks using the factory hardware and torque upper and lower bolts to 45 ft lbs.

There are two possible emergency brake line bracket set up's on the F150's, determine which your model has and follow the proper step below 53 or 54 - 56.

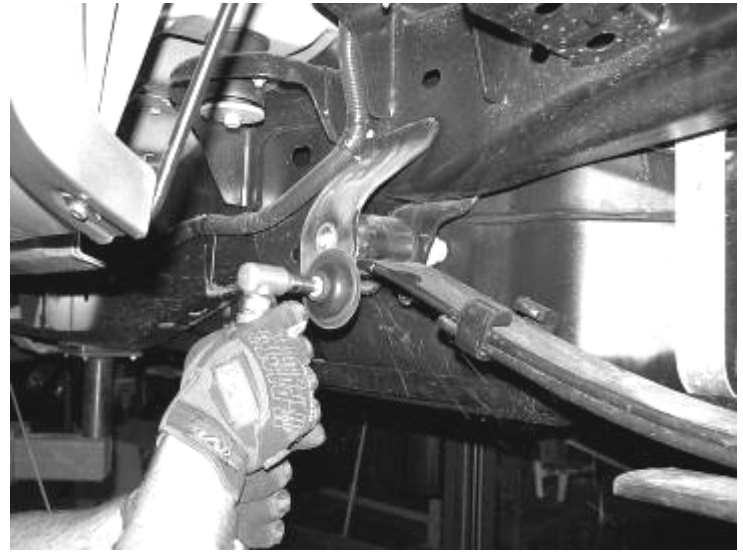
51. If your truck has a factory bolt on E-Brake Cable bracket on the driver side leaf spring hanger, remove the E-brake cable from the bracket and remove the bracket from the hanger. Discard the bracket and save the hardware. Locate FT30071 E-brake bracket and attach to the frame in the original location using the stock hardware. SEE PHOTO BELOW.



52. If your truck has the E-Brake bracket as one piece with the front leaf hanger, it will need to be marked and cut with a die grinder with a cut off wheel, from the hanger. Remove the E-brake cable from the bracket prior to cutting the hanger. SEE PHOTO BELOW.

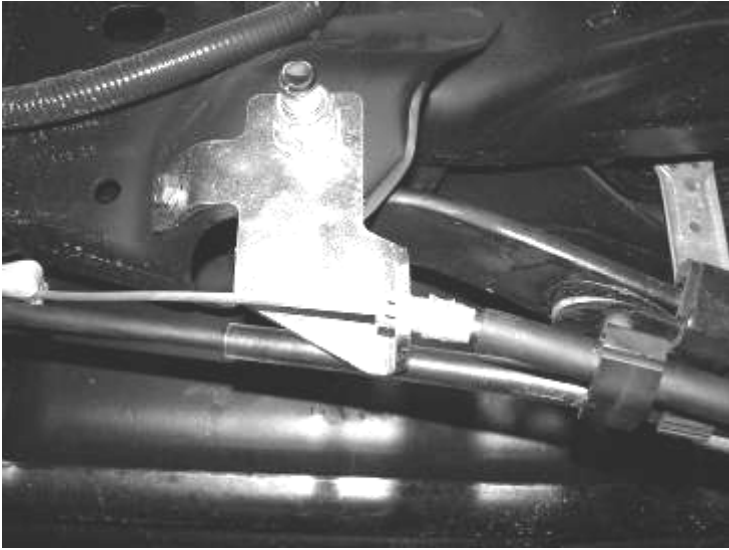


53. Remove the front spring bolt nut and save. Next, using a die grinder with a sanding disc, sand down the hanger and paint all bare metal. SEE PHOTO ON NEXT PAGE

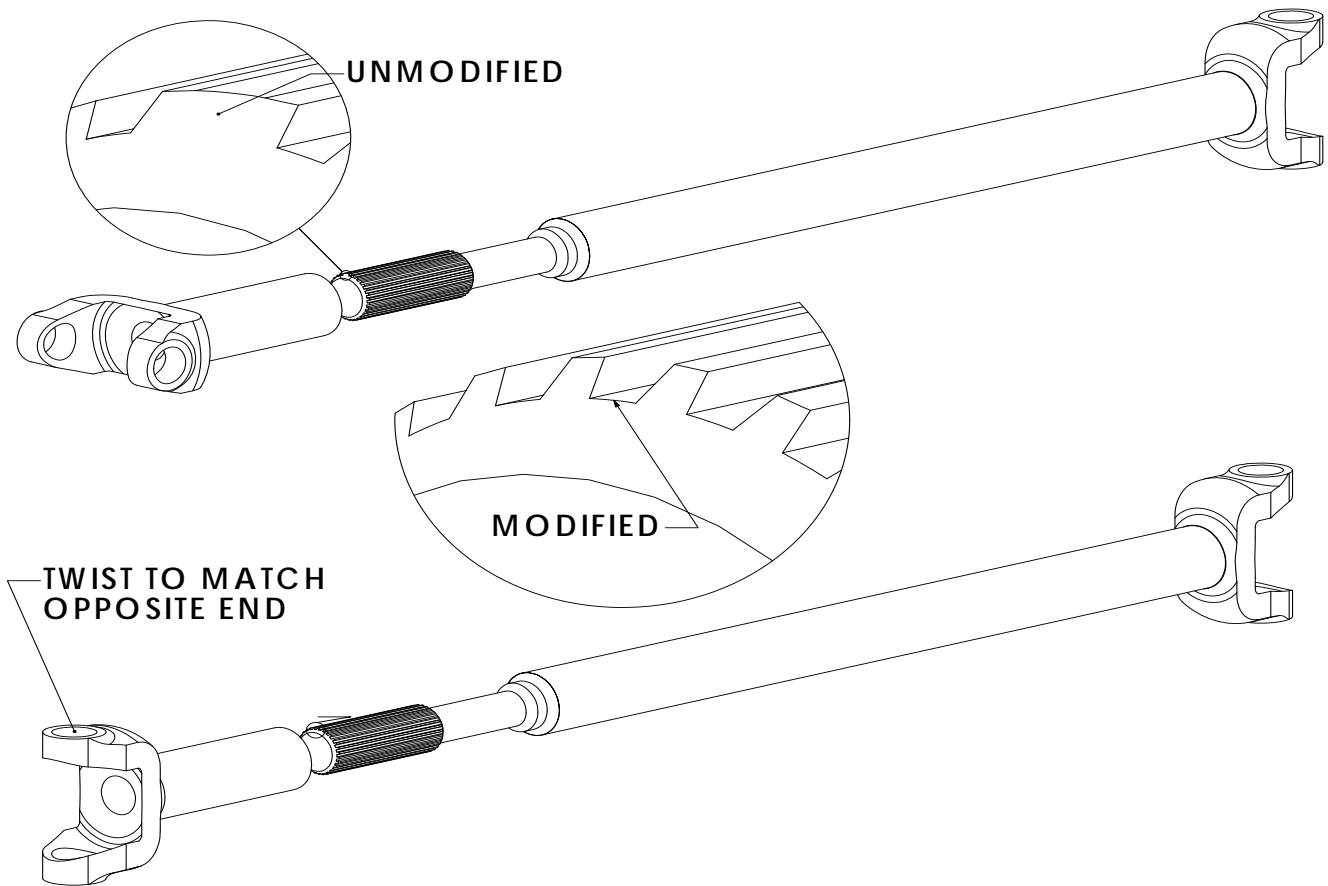


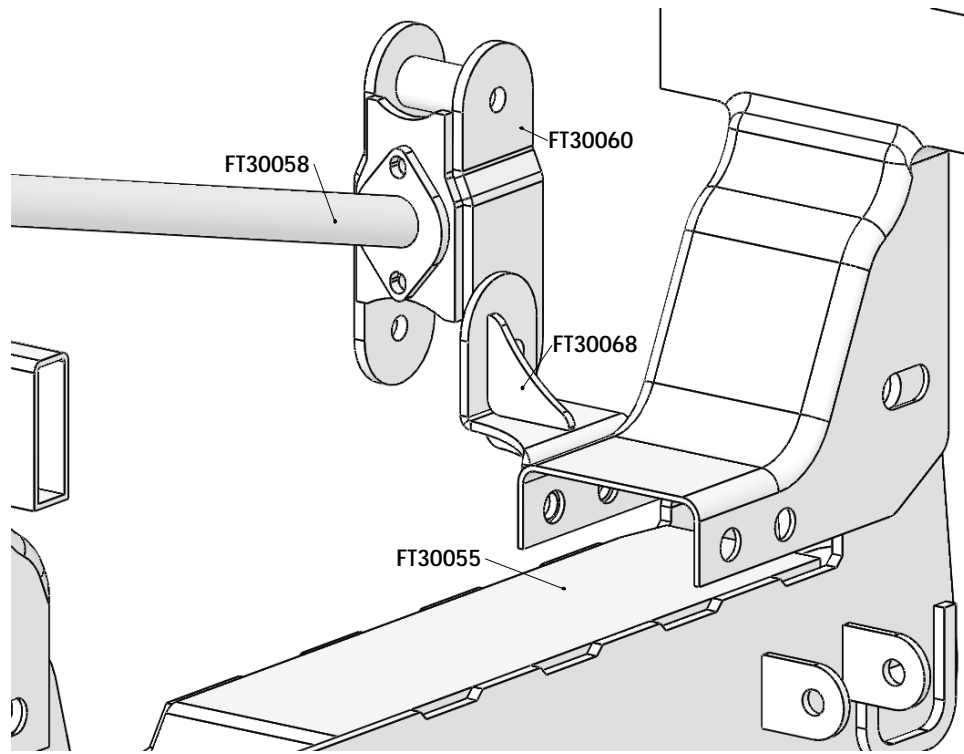
54. Locate FT30071 E-brake bracket and place it on the spring bolt and attach it the factory spring bolt nut. Using a drill with a 3/8" drill bit, drill a hole in the hanger to attach the front of the e-brake bracket. Using the supplied 3/18"x1 1/4" bolt, nut, and washer, bolt the front of the bracket to the hanger and torque to 30 ft. lbs. Re-install the e-brake cable into the new e-brake cable bracket. SEE PHOTOS BELOW AND IN NEXT COLUMN.



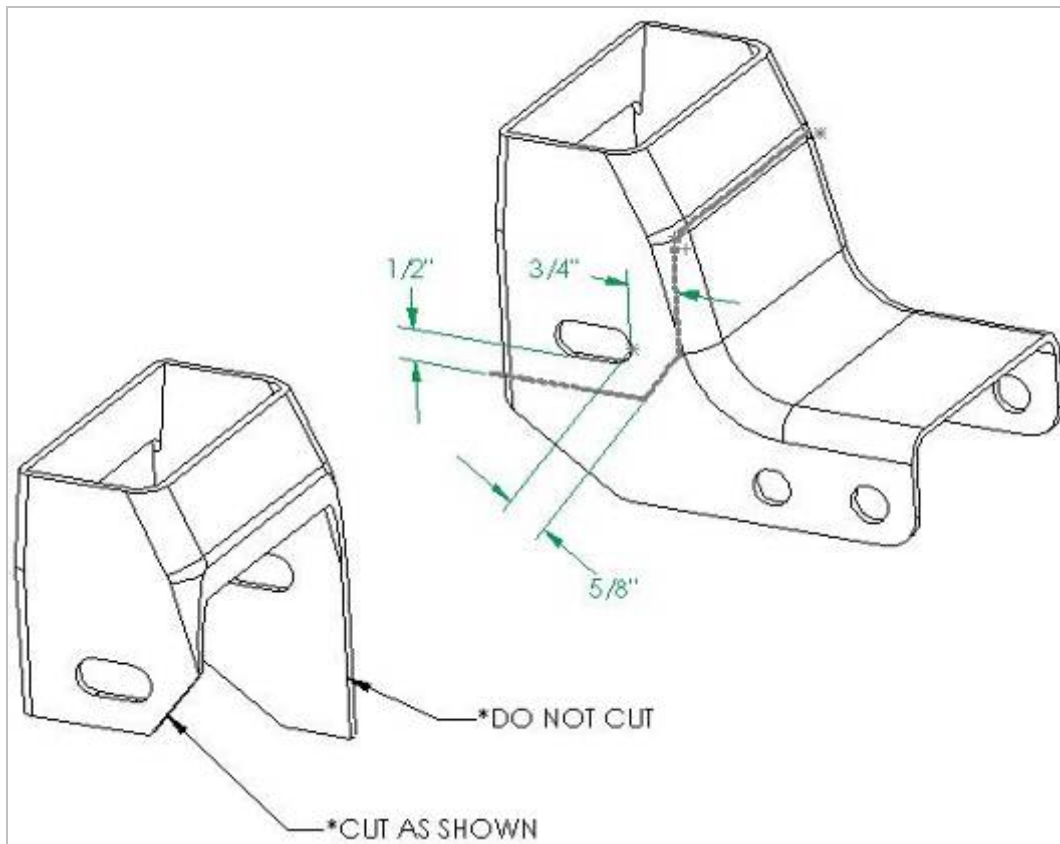


55. Recheck all bolts for proper torque. Recheck the front and rear brake hoses and ABS lines for proper clearances.
56. Install tires and wheels and torque lug nuts to wheel manufacturer's specifications. Turn front tires left to right and check for appropriate tire clearance. Note-Some oversized tires may require trimming of the bumper and valance.
57. Check the front-end alignment and set to the factory specifications. Re-adjust vehicles headlights.



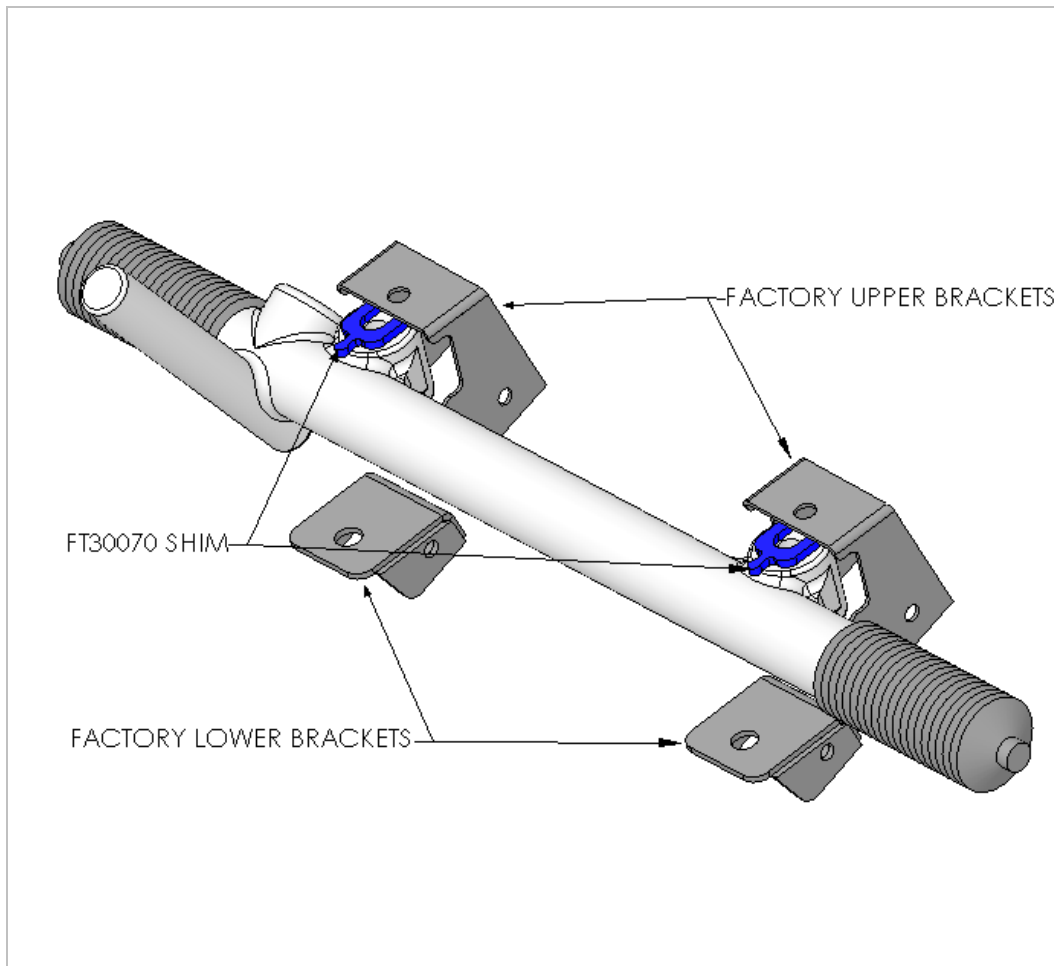


**View from Passenger Side Rear Forward**



**VIEW FROM DRIVER REAR**





**RETORQUE ALL NUTS, BOLTS AND LUGS AFTER 50 MILES AND PERIODICALLY THEREAFTER.**

For technical assistance call: 909-597-7800

### **Product Warranty and Warnings-**

Fabtech 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 Fabtech 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.

Take apart 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.

Fabtech does not warrant any product for finish, alterations, modifications and/or installation contrary to Fabtech's instructions. Alterations to the finish of the parts including but not limited to painting, powdercoating, 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.

Fabtech 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. Fabtech front end Desert Guards may impair the deployment or operation of vehicles equipped with supplemental restraining systems/air bag systems and should not be installed if the vehicle is equipped as so.

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

Fabtech's obligation under this warranty is limited to the repair or replacement, at Fabtech 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. Fabtech is not responsible for damages and/or warranty of other vehicle parts related or non related to the installed Fabtech 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 Fabtech.

Fabtech suspension components must be installed as a complete system including shocks as shown in our current catalog. All warranties will become void if Fabtech 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. Fabtech does not warrant products not manufactured by Fabtech.

Installation of Fabtech 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 Fabtech products with the consumer prior to purchase.

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