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INSTALLATION INSTRUCTIONS



6" BASIC CROSSMEMBER SUSPENSION SYSTEM **2004-2008 2WD F-150**

Fabtech Motorsports 4331 Eucalyptus Ave. Chino, CA 91710
Tech Line 909-597-7800 Fax 909-597-7800 Web www.fabtechmotorsports.com



4331 EUCALYPTUS AVE. ~ CHINO, CA 91710
909-597-7800 FAX 909-597-7185
2004-2008 FORD F150 2WD
FTS22013 & FTS22014 6" BASIC CROSSMEMBER SYSTEM

PARTS LIST:

FTS22013			FTS22014		
Qty	Part #	Description	Qty	Part #	Description
		6" Kit box 1			6" Kit Box 2
1	FT30081D	Driver Side Spindle	1	FT30079BK	Front Crossmember
1	FT30081P	Passenger Side Spindle	1	FT30080BK	Rear Crossmember
1	FT30339	Hdwr Sub-Assembly Kit	2	FTS30431	Front Shock
1	FT30062BK	Driver Sway Bar Bracket	2	FT292	Alignment Cam Kit
1	FT30063BK	Pass. Sway Bar Bracket	2	FTBK22	Lift Block
1	FTAS16	Driver Warning	4	FT350U	U-Bolt
1	FTAS12	Sticker	1	FT30317	Hdwr Sub-Assembly Kit
1	FTAREGCARD	Registration Card			
1	FT22013i	Instruction Sheet			
				FT30317	Hdwr Sub-Assembly Kit
			Qty	Part #	Description
	FT30339	Hdwr Sub-Assembly Kit	2	FT30065	Frnt. Brake Line Bracket
Qty	Part #	Description	1	FT30249	Drv Frnt. Brake Bracket 05-UP
4	43141251052	7/16"-14 x 1 1/4" Bolt	1	FT30251	Pass Frnt. Brake Bracket 05-UP
4	43140003052	7/16"-14 Nylok Nut	4	31181001081	5/16"-18 x 1" Bolt
8	43000005081	7/16" SAE Flat Washer	4	31180003352	5/16"-1`8 Nyloc Nut
2	31181001052	5/16"-18 x 1"	8	31000005052	5/16" SAE Flat Washer
2	31180003052	5/16"-18 Nylok Nut	1	FT30120	Carrier Bearing Spacer
4	31000005052	5/16" SAE Washer	1	FT916H	U-Bolt Hardware
2	12002007000	1/8"Cotter Pin			
2	12008007100	Black Zip Tie			
1	FTLOCK	Thread Locking Compound			
2	FT30070	Rack Shim			
2	FT30083	Axle Nut			

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FTS22013 & FTS22014 6" BASIC CROSSMEMBER SYSTEM

READ THE FOLLOWING BEFORE BEGINNING INSTALLATION

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

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

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

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

SUSPENSION SYSTEM MUST BE INSTALLED WITH FABTECH SHOCK ASBORBERS

FABTECH RECOMMENDS A 315/70/17 TIRE ON A 17X8 RIM WITH A 5" BACK SPACING BE USED WITH THIS KIT.

Tool List: (NOT INCLUDED)

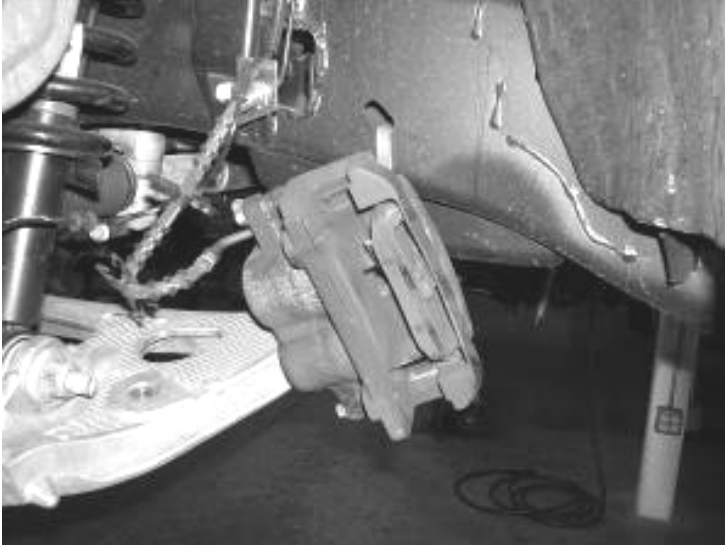
- Floor Jack & Jack Stands
- Assorted Metric & S.A.E Sockets
- Sanding Wheel
- Torque Wrench
- HEAVY DUTY Coil Spring Compressor

Available Options For The 2004 Ford F-150 2wd-

- FTS8009 Dual Steering Stabilizer
- FTT10033 & BK & RW Front Guard

INSTALLATION INSTRUCTIONS

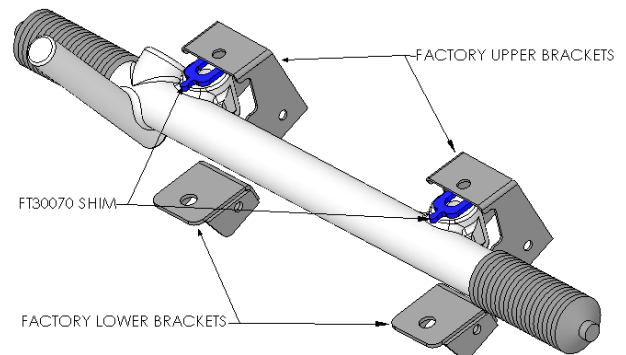
1. Disconnect the negative terminal on the battery. Jack up the front end of the truck and support the frame rails with jack stands. Remove the front tires. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE!**
2. Starting on the driver's side. Remove the 2 bolts securing the brake caliper assembly to the spindle. Tie the brake caliper to the frame. **DO NOT ALLOW THE BRAKE CALIPER TO HANG FROM THE BRAKE LINE HOSE!**



3. Remove the cotter pin, nut locker, and axle nut from the brake rotor. Slide the rotor off of the spindle. Save the nut locker and rotor, discard the cotter pin and axle nut. **DO NOT RE-USE THE FACTORY AXLE NUT.**
4. Remove the sway bar and sway bar end links and save along with the factory hardware.
5. Locate the Antilock Brake System (ABS) sensor attached to back side of the spindle, remove the bolt attaching the sensor to the spindle. Save the bolt, and hang the sensor aside.
6. Remove the nut securing the tie rod end to the spindle. Using a large hammer strike the spindle to break loose the tie rod end. Save the factory hardware. **USE CARE TO NOT HIT THE THREADS OF THE TIE ROD END.**
7. 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 the hardware and discard the knuckle with the dust shield. The factory dust shield will not be reused. SEE PHOTO IN NEXT COLUMN.



8. 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 it aside for disassembly later. **DO NOT REMOVE THE CENTER NUT FROM THE TOP OF THE SHOCK ASSEMBLY.**
9. Remove the lower control arm bolts from the frame pivots and remove the lower control arm from the truck. Save the hardware and lower control arm.
10. Repeat steps two through nine on the passenger side of the truck.
11. 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.



12. Locate the factory rear crossmember, remove the four bolt attaching it to the frame and discard the crossmember and hardware. SEE PHOTO BELOW.



13. Locate the Fabtech rear crossmember FT30079. Install the crossmember into the factory rear lower control arm pockets and attach using the original hardware. Leave loose at this time. **NOTE: WHEN INSTALLING THE CROSSMEMBERS MAKE SURE THE BEND IN THE FABTECH CROSSMEMBER IS TOWARDS THE FRONT OF THE TRUCK. SEE PHOTO BELOW.**

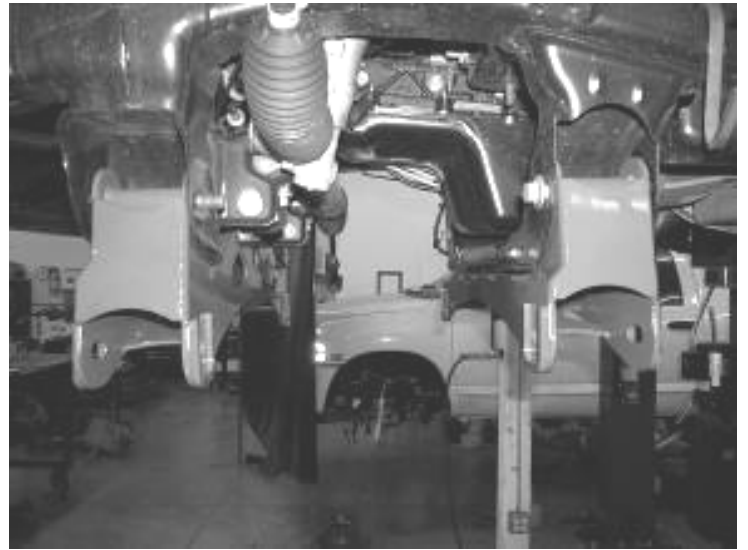


View From Driver Side Of Truck

14. 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 IN NEXT COLUMN.



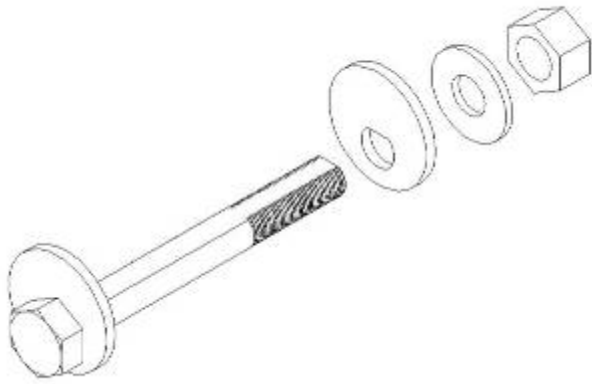
15. Locate the Fabtech front crossmember FT30079. Install into the factory front lower control arm pockets and attach using the original hardware. Leave loose at this time. **NOTE: WHEN INSTALLING THE CROSSMEMBER MAKE SURE THE BEND IN THE FABTECH CROSSMEMBER IS TOWARDS THE FRONT OF THE TRUCK. SEE PHOTO BELOW.**



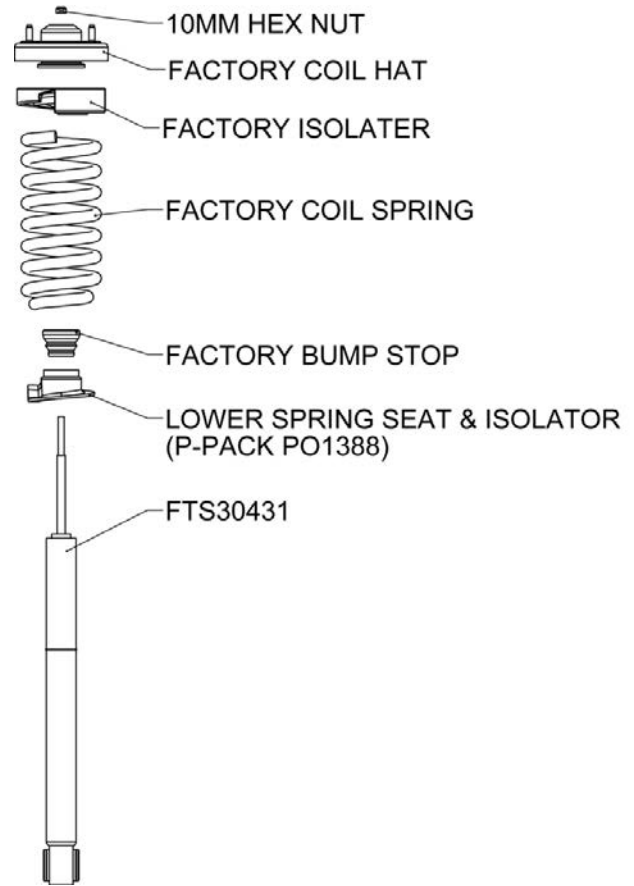
View From Driver Side Of The Truck

Note: The Position Of The Bends In The Fabtech Crossmembers

16. Locate the factory lower control arms previously removed from the truck. Install into the new Fabtech crossmembers using the supplied FT292 alignment cams. Leave loose at this time. SEE DRAWING AND PHOTO ON NEXT PAGE.



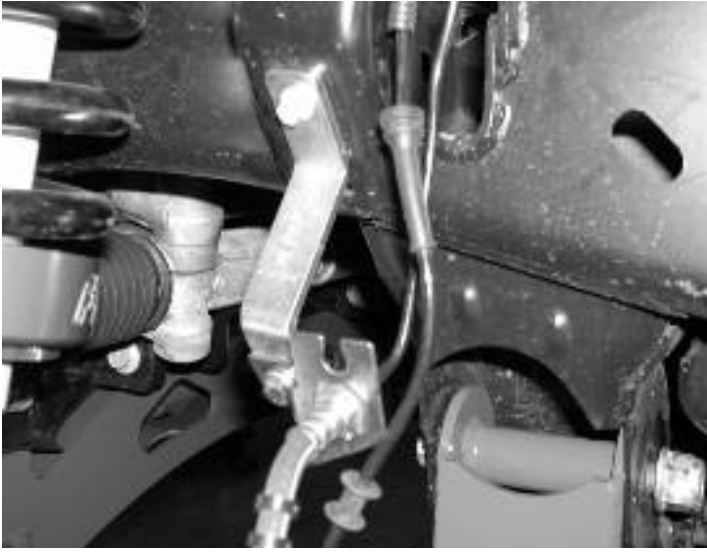
17. Locate the previously removed front shock assemblies. Using a **HEAVY DUTY** spring compressor, compress the coil spring and remove the coil from the shock assembly. Save the coil, coil hat, bump stop. Discard all other parts. **EXERCISE EXTREME CAUTION WHEN WORKING WITH COIL SPRINGS UNDER LOAD!**
18. Locate FTS30431 new front shocks. Place the factory bump stop and coil spring, followed by the factory coil hat with the original stem bushing. Using the supplied nyloc nut, attach the coil hat to the shock. Torque the nyloc nut to 25 ft lbs. **DO NOT USE THE NYLOC NUT TO COMPRESS THE COIL SPRING, YOU MUST COMPRESS THE COIL SPRING WITH A HEAVY DUTY COIL SPRING COMPRESSOR TO ASSEMBLE THE SHOCK.** Do not reinstall the factory shock boot or any aftermarket shock boot onto the shock. SEE DRAWING IN NEXT COLUMN.
19. Working from the driver side of the truck, locate the previously assembled shock assembly and install it into the truck using original factory hardware. Torque the three upper nuts to 5 ft-lbs and the one lower bolt to 110 ft-lbs. SEE PHOTO BELOW.



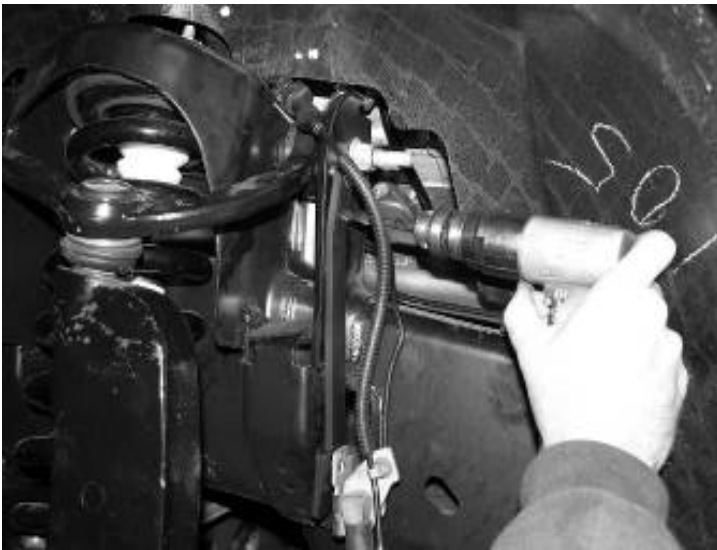
20. Locate the new Fabtech spindle FT30081D. Attach the new Fabtech spindle onto the lower ball joint using the original nut. Torque to 85 FT LBS. Holding the top of the spindle inboard set the upper ball joint into the spindle. Attach the upper ball joint to the spindle using the factory nut. Torque to 110 FT LBS.

There are two possible brake line bracket variations on the F150's, determine *which* your model has and follow the proper step below 21 or 22-23.

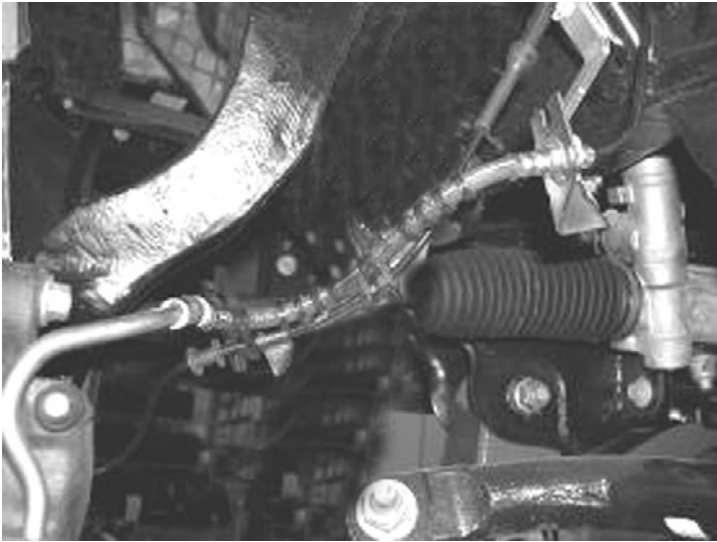
21. Locate the factory brake line bracket on the frame. Disconnect the bracket from the frame and save the hardware. Carefully pull the brake line down from the frame approximately 4" (**use care to not damage the hard line**) **Once the hard line is pulled down check clearance between the line and the steering column on the driver side.** Locate the new FT30065 brake line bracket and attach it 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.



22. 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". **Once the hard line is pulled down check clearance between the line and the steering column on the driver side.** Locate the new FT30249 brake line bracket and attach it to the original hole in the frame using the supplied 5/16" x 1" bolt. Using a drill with a 5/16" drill bit, the second hole in the frame out. Attach the drilled hole using another 5/16" bolt, nut and washers. Using a die grinder with a cut off wheel trim the residual of the bolt that stick out past the nut so it does not contact the control arm. 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.



23. On the passenger ABS line you will need to pull the ABS line free from the plastic clip on the fender well and zip tie it to the new brake line bracket. This will only be done on the passenger side.
24. Locate the previously remove ABS sensor, cut the factory zip tie attaching it to the rearward upper control arm pocket. Now attach the ABS sensor to the new spindle using the original bolt. Torque to 13 ft. lbs.
25. Reinstall the brake rotor using the new supplied axle nut followed by the original nut locker than the new supplied cotter pin. Torque the axle nut to 202 ft. lbs.
26. Torque the factory lower control arm cam bolts to 145 ft lbs. Before torquing the cam bolts place the cam so it is in the center of its adjustment. Torque the crossmember to control arm pocket bolts to 130 ft lbs.
27. Using the stock hardware along with the supplied thread locking compound reinstall the brake caliper onto spindle. Torque the bolts to 80 ft lbs.
28. Reattach the ABS line to the brake line using the original line claps. Using the supplied zip tie reattach the ABS wire to the rearward upper control arm pocket. SEE PHOTO ON NEXT PAGE.



29. Slide the tie rod end into the spindle and torque the nut to 70 FT LBS. The tie rod end will be facing the opposite direct from factory, the tie rod end will now be installed from the top of the steering knuckle down. SEE PHOTO BELOW.



30. Repeat steps nineteen through twenty-seven on the passenger side of the truck.

31. Locate the FT30062 (driver) and FT30063 (passenger) 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 it 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 BELOW.



32. With both sides of the truck completely finished and the truck still off the ground, cycle the steering left to right from stop to stop. Make sure there is plenty of clearance between the ABS line and all other components.

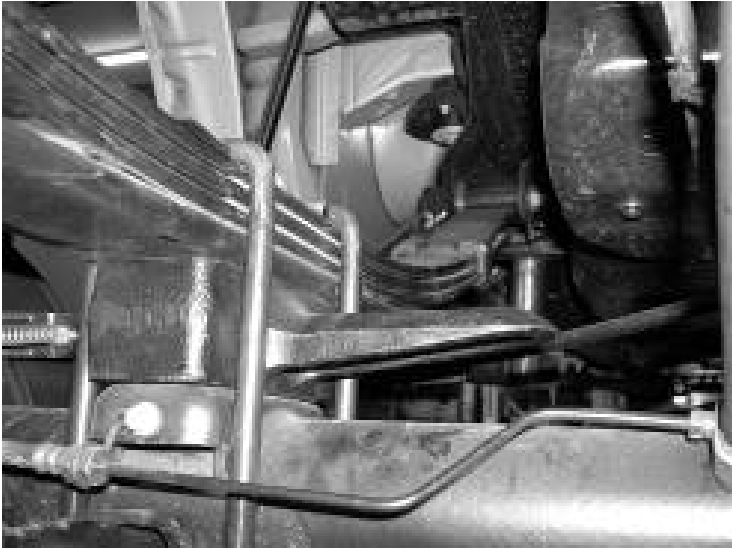
33. Reinstall the tires onto the truck and torque the lugs to factory specifications, which can be found in the owner's manual. Set the truck back on the ground and cycle the steering left to right from stop to stop. Make sure there is plenty of clearance between the ABS line and all other components.

REAR SUSPENSION

34. Jack up the rear end of the vehicle and support the frame rails with jack stands. Support the rear differential with a floor jack.

35. Supporting the rear differential remove the rear shocks, u-bolts, blocks and lower axle the down. Use care not to over extend the brake hose.

36. Locate and install the rear lift blocks FTBK22. 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 BELOW.



37. Locate the new Fabtech shocks and press one sleeve from the supplied shock hardware kit into each end of the shock. Torque to 65 lbs using factory hardware on both upper and lower mounts.

TWO PIECE DRIVE SHAFT MODEL TRUCKS ONLY

38. Locate the two bolts connecting the carrier bearing to the frame crossmember, remove both bolts and save. Locate the supplied FT30120 carrier bearing spacer and insert it between the frame crossmember and the carrier bearing assembly. Reattach using the factory hardware and torque bolts to 70 ft lbs.
39. Recheck all nuts and bolts for proper torque tightness before driving. Drive the truck for 50 miles and have it aligned to factory specifications. Re-adjust headlights.

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 manufacturers 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.

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