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INSTALLATION INSTRUCTIONS



7.5" PERFORMANCE SUSPENSION SYSTEM 1997-2003 2WD F-150 EXT CAB & SUPER CREW

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
1997-2003 FORD F150 EXT CAB 2WD
2001-2003 FORD F150 SUPERCREW 2WD
FTS22004 & FTS22005 7.5" PERFORMANCE KIT

	FTS22004	F150 2WD BX 1
Qty	Part #	Description
1	FT30034BK	Crossmember Frt.
1	FT30035BK	Crossmember RR
1	FT30038BK	Bump Stop Drv.
1	FT30039BK	Bump Stop Pass.
1	FT30351	Hdwr Sub-Assembly Kit
2	FT42000BK	Coil Springs
1	FT290	Alignment Cam Kit

	FT30351	Hdwr Sub-Assembly Kit
Qty	Part #	Description
2	FT22004i	Instruction Sheet
2	FT97159-7-101	BJ Ring
1	FTAS12	Fabtech Sticker
1	FTAS16	Driver Warning
1	FTREGCARD	Registration Card

	FTS22005	F150 2WD BX 2
Qty	Part #	Description
1	FT30037D	Spindle Drv.
1	FT30037P	Spindle Pass
2	FTBK5	5" Lift Block
4	FT724U	U-Bolt

	FT30824	Hardware Subassembly
Qty	Part #	Description
1	FT916H	U-Bolt Hardware
1	FT30042	Rear Brake Line Bracket
1	FT30043	E-Brake Cable Bracket
1	FT30040	Hardware Kit

	FT30040 Hardware Kit
Qty	Description
4	5/8"-11x5 1/2" Bolt
4	5/8"-11 Crimp Lock Nut
8	5/8" SAE Flat Washer
1	1/2"-13x1 1/2" Bolt
1	3/8"-16x1 3/4" Bolt
6	3/8"-16x1 1/4" Bolt
2	1/4"-20x3/4" Bolt
4	1/4"-20x1" Bolt
5	1/2"-13 Nylok Nut
10	1/2" SAE Flat Washer
5	3/8"-16 Nylok Nut
12	3/8" SAE Flat Washer
4	1/4"-20 Nylok Nut
6	1/4" SAE Flat Washer
8	1/8" Cotter Pin
4	1/2"-13x1 1/4" Bolt
2	Adel Clamp
1	Lock Tight

TOOL LIST: (NOT INCLUDED)
FLOOR JACK AND JACK STANDS
ASSORTED METRIC AND S.A.E SOCKETS
SNAP RING PLIERS
TORQUE WRENCH

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.

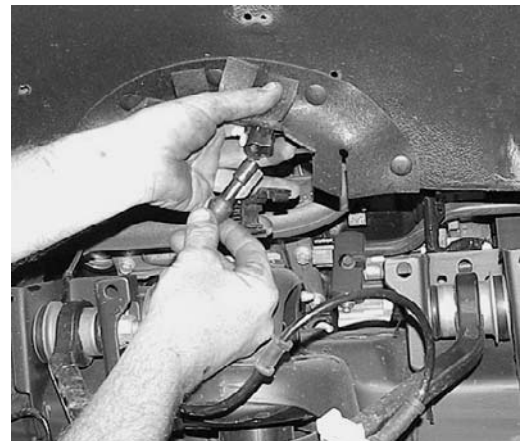
VEHICLES THAT WILL RECEIVE OVERSIZED TIRES SHOULD CHECK BALL JOINTS, TIE RODS ENDS AND IDLER ARM EVERY 2500-5000 MILES FOR WEAR AND REPLACE AS NEEDED.

SUSPENSION SYSTEM MUST BE INSTALLED WITH FABTECH SHOCK ASBORBERS

FABTECH RECOMMENDS A 315/75/16 TIRE ON A 16X8 RIM WITH A 3.75" BACK SPACING BE USED WITH THIS KIT.

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 HANG FROM THE BRAKE LINE HOSE!**
3. Remove the dust cap from the brake rotor, the cotter pin and spindle nut. Slide the rotor off of the spindle. Keep the outer bearing inside the rotor.
4. Remove and discard the front shocks. Save lower hardware.
5. Remove the sway bar end link and save.
6. Locate the Antilock Brake System (ABS) sensor wire inside the inner fender and separate the 2 connectors. Separate the wire from the keepers on the shock and upper control arm (UCA). Remove the bolt securing the ABS sensor to the spindle. Set the sensor aside. SEE PHOTOS NEXT COLUMN.

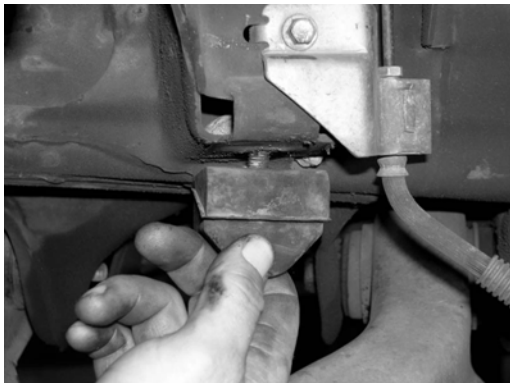


7. Remove the cotter pin and castle nut securing the tie rod end to the spindle. Using a large hammer strike the spindle to break loose the tie rod end. **USE CARE TO NOT HIT THE THREADS OF THE TIE ROD END.**

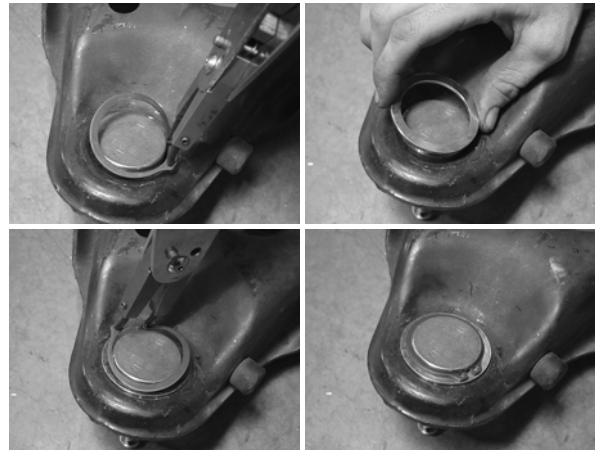
8. Support the lower control arm (LCA) with a floor jack. Raise the lower control arm enough to compress the coil spring $\frac{1}{2}$ ". Remove the cotter pins from the upper and lower ball joints. Loosen the castle nuts securing the upper and lower ball joints to the spindle, do not remove at this time. With a large hammer strike the spindle next to the upper ball joint first than the lower ball joint to break the ball joints loose from the spindle. Once loose remove upper and lower ball joint castle nuts and remove spindle from truck. Save hardware. SEE PHOTO BELOW.



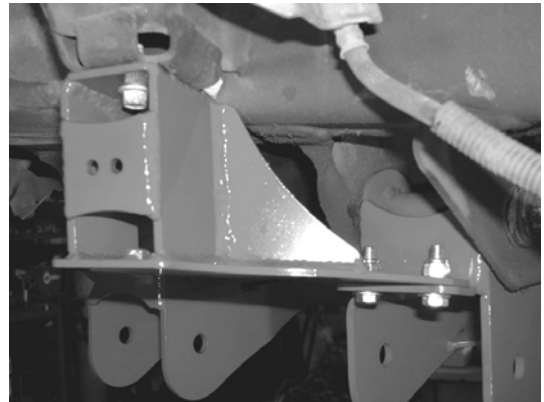
9. Lower the floor jack supporting the lower control arm to relieve the tension on the coil spring. **EXERCISE EXTREME CAUTION WHEN WORKING WITH COIL SPRINGS UNDER LOAD!** Set the coil spring aside and make sure to remove the upper coil spring insulator. **DO NOT DISCARD THE COIL INSULATOR, IT WILL BE REINSTALLED ON THE NEW COIL.**
10. Remove the lower control arm from the truck. Save the hardware as you will reuse it during installation
11. Locate the lower control arm bump stop on the frame. Remove and save bump stop and factory hardware. Locate the brake line tab above the bump stop. Remove the tab from the frame and discard hardware. SEE PHOTO BELOW.



12. Remove the snap ring from the top of the lower ball joint. Place one FT97159-7-101 shim over the ball joint and replace the snap ring on the lower ball joint, making sure the snap ring is fully seated in the groove. SEE PHOTO BELOW.



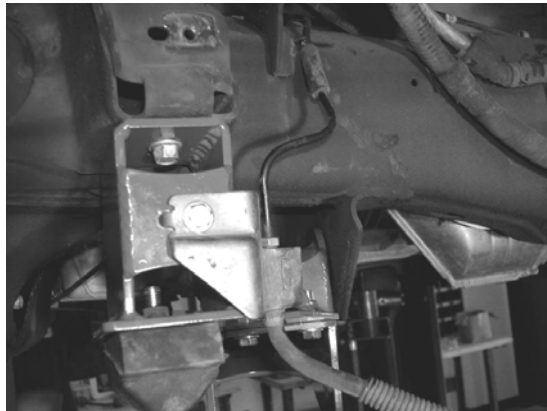
13. Repeat steps two through twelve on the passenger side of the truck.
14. Locate the Fabtech rear crossmember FT30035. Install into the factory rear lower control arm pockets and attach using the supplied $\frac{5}{8}$ " x $5\frac{1}{2}$ " bolt, nut, and washers. Leave loose at this time.
15. Locate the Fabtech front crossmember FT30034. Install into the factory front lower control arm pockets and attach using the supplied $\frac{5}{8}$ " x $5\frac{1}{2}$ " bolt, nut, and washers. Leave loose at this time.
16. Working from the driver side of the truck, locate the supplied FT30038 driver side bump stop bracket. Attach first to the factory lower bump stop mount using the factory hardware, then attach the tab on the rear crossmember using the supplied $\frac{3}{8}$ " x $1\frac{1}{4}$ " bolts, nuts, and washers. Torque the two bolt connecting to the crossmember to 30 FT LBS and the factory bump stop bolt to 25 Ft LBS. SEE PHOTO BELOW.



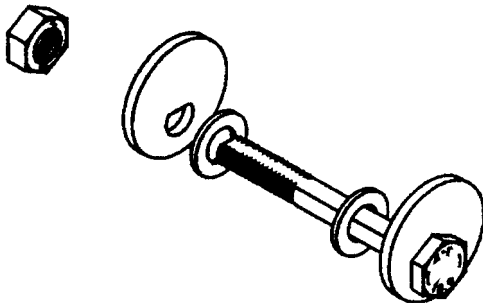
17. Locate the factory lower bump stop previously removed. Attach to the new bump stop bracket previously installed using the supplied $\frac{3}{8}$ " X $1\frac{1}{4}$ " bolt and washer. SEE PHOTO NEXT PAGE.



18. Locate the previously remove brake line tab from the frame. You will need to carefully pull the hard line 4" down the frame to the new mounting bracket. Using the supplied 1/4" bolt, nut, and washer attach the brake line tab to the Fabtech bump stop mount. SEE PHOTO BELOW



19. Locate the factory lower control arm previously removed from the truck. Install into the new fabtech crossmembers using the factory hardware. Leave loose at this time.
20. Locate and install the upper control arm eccentric cam washers and bolts on each side of the upper control arm pocket. Place the center of new cams in the middle of the eccentric pocket. SEE DRAWING BELOW.



21. Locate the Fabtech lift coil spring FTS42000BK. Place the factory upper coil insulator onto the new lift coil spring, use electrical tape to secure the factory insulator in place. Place the top of the coil spring into

the upper coil pocket first than seat the lower end of the coil spring into the lower control arm. Rotate the coil spring aligning the bottom of the coil spring with the timing pocket in the LCA. Once coil is seated, raise the lower control arm with a floor jack.

EXERCISE EXTREME CAUTION WHEN WORKING WITH COIL SPRINGS UNDER LOAD!

22. Locate the new Fabtech spindle FT30037D. Attach the new Fabtech spindle onto the lower ball joint using the original nut. Torque to 95 FT LBS. Holding the top of the spindle inboard slowly raise the floor jack to set the upper ball joint into the spindle. Attach the upper ball joint to the spindle using the factory nut. Torque to 60 FT LBS. You may have to move the floor jack as far out as possible on the LCA to raise the LCA high enough. **DO NOT RAISE THE JACK HIGH ENOUGH TO LIFT THE TRUCK OFF THE JACK STANDS. USE EXTREME CAUTION WHEN WORKING WITH COIL SPRINGS TO AVOID ANY POSSIBILITY OF INJURY. MAKE SURE THE BRAKE CALIPER IS TO THE REAR OF THE FENDER WELL AT THIS TIME, AS IT WILL BE REINSTALLED LATER.**

23. Torque the lower control arm pivot bolts to 145 ft lbs. Torque the crossmember to control arm pocket bolts to 130 ft lbs.

24. Locate the factory ABS sensor. Using the supplied 1/4" x 1" bolt, nut, and one washer, attach the ABS sensor to the spindle. The one washer will be placed on the side with the ABS sensor itself. SEE PHOTO BELOW.



25. Route the ABS line from the sensor up the backside of the spindle. Using the supplied Adel Clap and 1/4" x 3/4" bolt and washer attach the line to the spindle. SEE PHOTO NEXT PAGE.



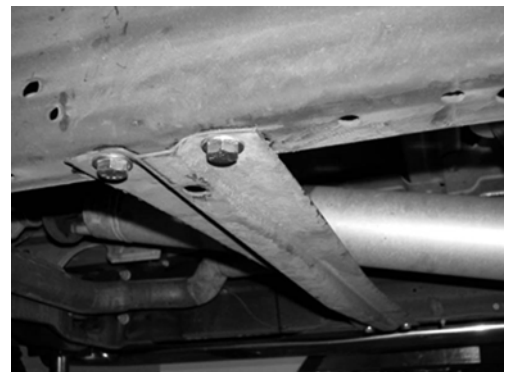
26. Lubricate the end of the spindle with high temp disc brake grease and slide the rotor back onto the spindle end. If the front wheel bearings need to be repacked, do it at this time. Reinstall the spindle nut and tighten it enough to remove all bearing play. The spindle should still rotate freely. Once you have set the proper tension, install one of the new cotter pins and reinstall the dust cap.
27. Using the stock hardware along with the supplied loc tight reinstall the brake caliper onto spindle. Torque the bolts to 80 ft lbs.
28. Slide the tie rod end into the spindle and torque the castle nut to 70 FT LBS. Install a new cotter pin.
29. Locate Fabtech Frt. Shocks (not included in kit) and install onto truck. Use the supplied upper hardware and factory lower hardware.
30. Route the ABS sensor wire onto the UCA the same way it was removed. Reattach the wire to the UCA and shock keepers. Reconnect the wire behind the inner fender. You may have to slide the rubber insulators on the sensor wire to relocate them in the clamps. You may have to use some light oil to aid in moving the insulators.
31. Repeat steps sixteen through thirty on the passenger side of the truck.
32. Locate the factory sway bar mounts attaching the sway bar to the frame, remove the sway bar from the truck. Flip the sway bar upside down and reattach to the truck using the factory hardware. Reinstall the factory sway bar end links using the original hardware. SEE PHOTO NEXT COLUMN.



33. 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.
34. 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

35. Jack up the rear end of the vehicle and support the frame rails with jack stands. Support the rear differential with a floor jack.
36. Locate the factory crossmember below the drive shaft. You will need to grind the rivets off the frame to remove crossmember from the truck. Once removed relocate the crossmember to the bottom side of the frame. Using the supplied ½" bolts, nuts, and washer reattach to the frame. SEE PHOTO BELOW.



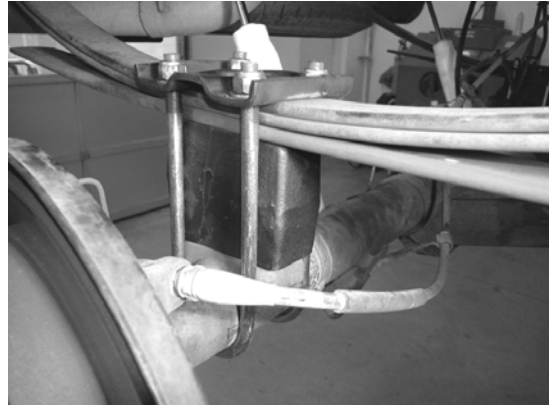
37. Locate the factory brake line mount on the driver side of the axel. Remove the vent line from the bolt and remove bolt, save hardware. Locate the supplied brake line bracket FT30042, attach the side with the sleeve to the axel using the factory hardware. Using the supplied 3/8" x 1 ¾" bolt, nut, and washer attach the brake line to the other end. Reattach vent line. SEE PHOTO BELOW.



38. Locate the factory E-Brake Cable on the driver side rear hub and remove the e-brake cable from the hub bracket. Locate the supplied FT30043 E-brake cable extension, using the supplied ½"x 1 ½" bolt, nut and washer, attach to the factory bracket on the hub. Attach the E-Brake cable to the new bracket the same way it was attached to the factory hub. SEE PHOTO BELOW.



39. Remove and discard the rear shocks and u-bolts. Lower the axle down slowly. Use care, not to over extend the brake hose.
40. Locate and install the rear lift blocks with the provided short center pin on the bottom of the block, to the axle. The short end of the block should face to the front of the vehicle. Using the provided U bolts, nuts and washers align axle, lift blocks, and springs and torque U Bolts to 90lbs. SEE PHOTO BELOW.



41. Install the new Fabtech shocks and Torque to 65 lbs using factory hardware on both upper and lower mounts.
42. 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.

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.