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**Heavy Duty Reduced Offset Spindle Kit
FTS22110
2004 - 2007 FORD F-150 4WD**

PARTS LIST:

Qua	Part #	Description
1	FTS30100D	Driver Spindle
1	FTS30100P	Pass. Spindle
2	FT30070	Rack Shim
2	FT22110i	Instruction Sheet

TOOL LIST: (NOT INCLUDED)

- FLOOR JACK
- JACK STANDS
- ASSORTED METRIC AND S.A.E SOCKETS, & ALLEN WRENCHES

REPLACE THESE SPINDLES IN PAIRS, DO NOT REPLACE A SINGLE SIDE ALONE.

INSTALLATION OF THIS SUSPENSION SYSTEM WILL ALLOW THE USE OF THE FACTORY WHEELS OR SPARE TIRE ON THE FRONT SUSPENSION WITH STOCK SIZE TIRES

READ ALL INSTRUCTIONS THOROUGHLY FROM START TO FINISH BEFORE BEGINNING INSTALLATION! IF THESE INSTRUCTIONS ARE NOT PROPERLY FOLLOWED, SEVERE FRAME OR UPPER CONTROL ARM DAMAGE MAY RESULT TO THE VEHICLE.

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.

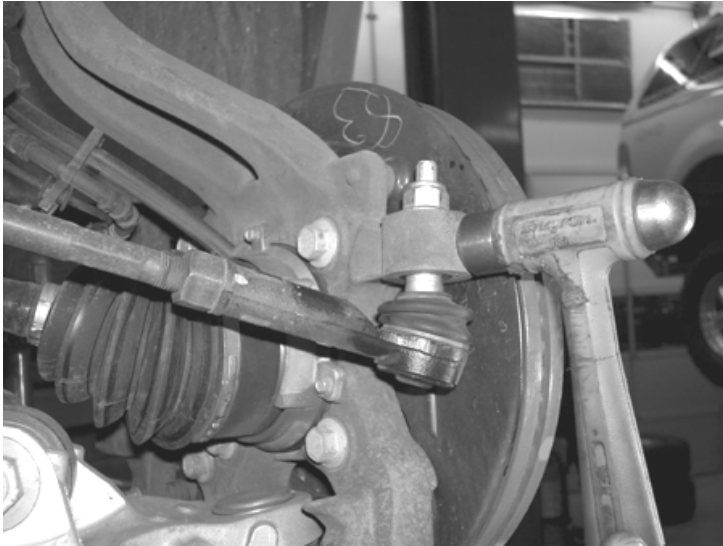
FABTECH RECOMMENDS 17x8 AFTER MARKET WHEELS WITH A MAXIMUM BACKSPACING OF 5" AND A 315/70r17 TIRE.

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

IF YOU ARE INSTALLING THIS REPLACEMENT SPINDLE KIT TO A TRUCK THAT HAS BEEN PREVIOUSLY LIFTED WITH A FABTECH LIFT, YOU WILL HAVE TO ACQUIRE THE FACTORY LOWER RACK & PINION BRACKETS AND HARDWARE. THESE ITEMS CAN BE PURCHASED FROM YOUR LOCAL FORD DEALER. THE FORD PART NUMBER FOR THE RACK BRACKETS IS 4L3Z-3E552-AA, BOLT PART # IS W709498-S439, AND THE NUT PART # IS W5R0216-S427.

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. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE!** Remove the front tires.
2. Working from the Driver's side, disconnect the tie rod end 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. SEE PHOTO BELOW.

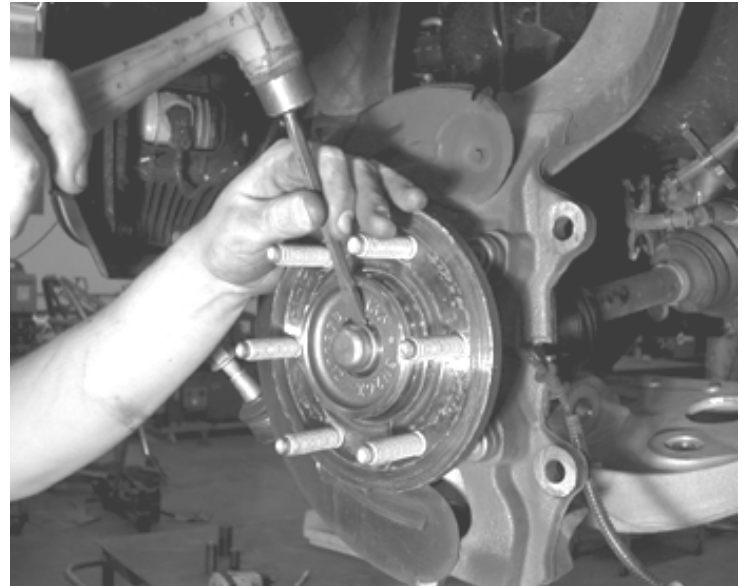


3. Remove the brake caliper and place it next to the frame. Do not overstretch the brake hose when doing so. Retain the hardware for reinstallation. Remove the brake rotor and save. Disconnect the vacuum lines attached to the rear of the hub assembly. Allow the vacuum lines to hang freely. Unplug the ABS wire at the plug behind the inner fender well and remove all the ABS line clamps



Brake Caliper Shown Hung from Frame

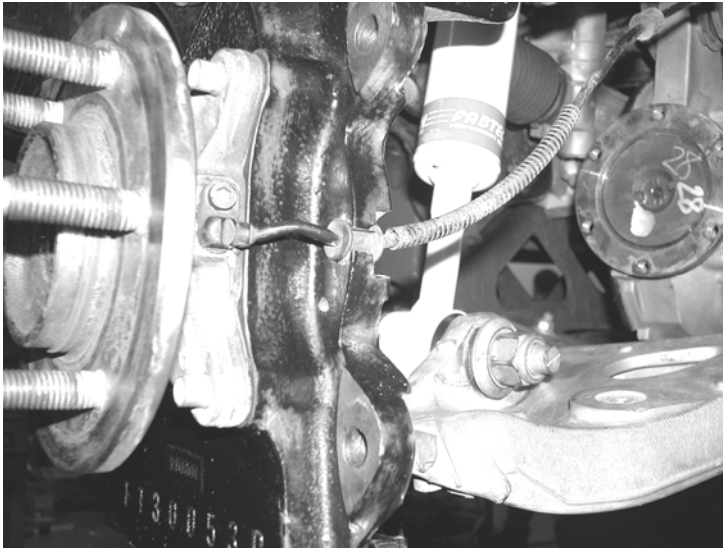
4. Carefully remove the dust cap covering the hub assembly nut. Remove the C.V. bearing nut and save the nut and dust cap. Remove the bolts attaching the C.V. half shaft to the front differential, then remove the C.V. shaft from the truck and save with the C.V. bolts. SEE PHOTO BELOW.



5. 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.**
6. Use a floor jack to support the lower control arm and loosen (Do Not 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. Remove and retain hardware, and discard knuckle. SEE PHOTO BELOW



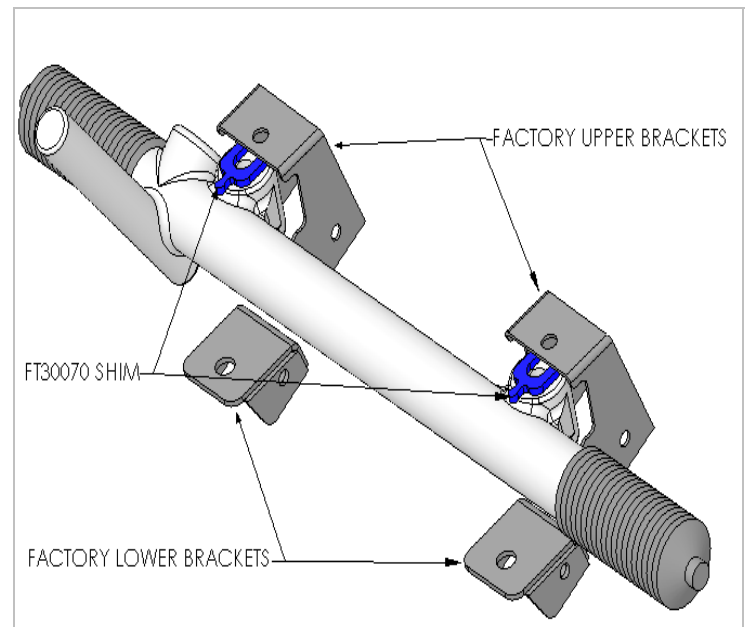
7. Attach the steering knuckle FT30100D for the driver side to the upper control arm and to the lower control arm using the stock hardware. Torque the upper ball joint to 35LBS and lower to 70 lbs. Reattach the tie rod and torque to 30LBS
8. Reinstall the factory hub assembly and C.V. flange into the new Fabtech spindle. Torque the 4 hub bolts to 60 FT. LBS. and the three 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. SEE PHOTO ON NEXT PAGE



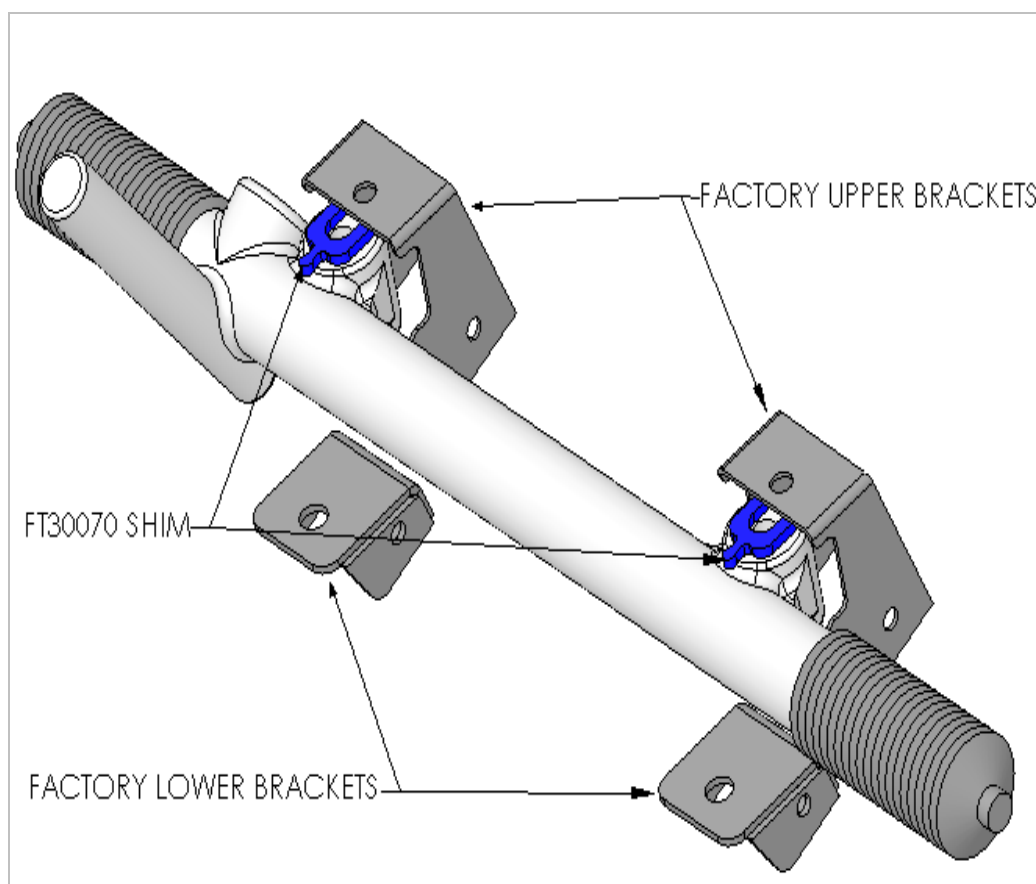
9. Position the C.V. axle through the spindle and install the stock hub bearing assembly taking care to place O ring in the proper position. (apply thread lock compound to the four hub bolts). Attach nut and washer. **USE CARE NOT TO OVER EXTEND THE CV BOOTS ON THE AXLES.** Locate and install the Fabtech CV spacers between the CV axle and the differential housing using previously removed bolts and washers with the provided thread lock compound and torque to 60 lbs. in a cross pattern. Torque axle nut to 20 lbs SEE PHOTO BELOW



10. Route the A.B.S. wire with the brake line and re-connect it to the loose end in the wheel well. Check to make sure that the brake hose and ABS line is routed as to allow full turning radius to the steering without tire or suspension component contact. Use provided plastic zip ties to secure line and hose to the upper control arm and knuckle away from the tire and wheel.
11. Repeat steps two through ten on the driver side of the truck.
12. Locate the 4 bolts attaching the Rack and Pinion assembly to the frame. Remove the two vertical bolts and discard. Remove the two horizontal bolts and save. Remove the Fabtech rack bracket and original Fabtech rack spacer and discard. Locate FT30070 Rack Spacer and install between the Rack and Pinion assembly and the frame as shown below. Locate the factory rack bracket using the factory bolts, nuts, and washers in the vertical mounting hole and the factory hardware back into the horizontal mounting hole. Torque the four bolts to 75 FT. LBS. SEE DRAWING BELOW AND EXPLODED VIEW ON LAST PAGE



13. Reinstall the front tires and torque the wheel lugs to factory specifications, located in the owners manual. Set the truck back on the ground. **WHILE TURNING THE STEERING WHEEL FULLY IN EACH DIRECTION, MAKE SURE THERE IS AMPLE CLEARANCE BETWEEN THE WHEELS, TIRES, CONTROL ARMS, BRAKE LINES AND ABS WIRES.**
14. Check front-end alignment and set 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.