

# Installation Instructions



## **3.5" Performance Suspension System** 1987-1996 JEEP YJ 4WD

Fabtech Motorsports 4331 Eucalyptus Ave. Chino, CA 91710 Tech Line 909-597-7800 Fax 909-597-7185 Web www.fabtechmotorsports.com



www.fabtechmotorsports.com

## 3.5" 1987-1996 JEEP YJ 4WD FTS24004

### **Parts List:**

| 2 | FT50037BK | Front Sway Bar End Link            |
|---|-----------|------------------------------------|
| 1 | FT50073   | Frt. Track Bar Relocation Bracket  |
| 1 | FT55-1    | Frt. Track Bar Washer              |
| 1 | FT50075   | Frt. Track Bar Reinforcement Brace |
| 1 | FT50076   | Rear Track Bar Relocation Bracket  |
| 1 | FT50077   | Rear Track Bar Support Brace       |
| 1 | FT50078   | Rear Brake line Bracket            |
| 2 | FT50081   | Bump stop Bracket (front)          |
| 2 | FT50082   | Bump stop Bracket (rear)           |
| 6 | FT50024   | Transfer Case Drop Spacer          |
| 1 | FT50015   | Pitman Arm                         |
| 2 | FT12H     | 1/2" U-Bolt Hardware               |
| 1 | FT50084   | Hardware Kit                       |
| 1 | FT50085   | Bushing Kit                        |
| 1 | FT50089   | Sleeve Kit                         |
| 1 | FT50048   | Sway Bar Bushing Kit               |
| 2 | FT729U    | Frt. U-bolt Inner                  |
| 6 | FT730U    | U-bolt                             |
|   |           |                                    |

### Hardware:

| 12mm-1.75mm X 80mm Bolt           |
|-----------------------------------|
| 12mm-1.75mm X 60mm Bolt           |
| 1/2" -13 x 3" Bolt                |
| 1/2" -13 x 3" Bolt                |
| 3/8"-16 x 1" Bolt                 |
| 1/2"-13 x 3 1/2" Bolt             |
| 1/2"-13 1 1/2" Bolt               |
| 1/4" -20 x 1" Thread Forming Bolt |
| 1/2"-13 Nyloc Nut                 |
| 3/8"-16 Nyloc Nut                 |
| 12mm-1.75mm C-Lock Nut            |
| 1/2" USS Washer                   |
| 1/2" SAE Flat Washer              |
| 3/8" SAE Flat Washer              |
| 12mm Flat Washer                  |
| 1/2" Star Washers                 |
|                                   |

#### \*\* THIS KIT WILL ONLY WORK ON VEHICLES WITH POWER STEERING \*\*

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

#### SUSPENSION SYSTEM MUST BE INSTALLED WITH FABTECH SHOCK ASBORBERS

#### TOOL LIST: (NOT INCLUDED)

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

## 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

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.

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.

JEEPS EQUIPPED W/ 13" REAR DRIVESHAFT MAY REQUIRE LENGTHENING.

SOME JEEP MODLES MAY REQUIRE REAR AXLE SHIMS.

#### 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 THE INSTALLATION OF THIS SUSPENSION SYSTEM SHOULD BE PERFORMED BY ONE PROFESSIONAL MECHANIC.

## FRONT SUSPENSION INSTRUCTIONS:

- 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. <u>NEVER</u> <u>WORK UNDER AN UNSUPPORTED VEHICLE!</u> Remove the front tires. Support the front axle with a floor jack just enough so that axle does not hang freely.
- 2. Working from both sides of the truck, remove the front lower trac bar bolt and save. Pull the trac bar free from factory mount.
- 3. Remove the sway bar link ends from the truck and discard, save hardware.
- 4. Remove the front shocks and discard. Save factory hardware.
- Remove the brake caliper and support properly from frame. DO NOT ALLOW BRAKE CALIPER TO HANG FROM BRAKE LINE.
- 6. Working from the driver side of the truck, remove and discard the leaf spring. Discard factory u-bolts and save pivot bolts.
- Locate the new Fabtech front leaf spring FTS44005 (5 leaf pack). Install two bushings and one sleeve from the supplied bushing kit into each end of the leaf spring. Note: you will install the smaller <sup>1</sup>/<sub>2</sub>" id sleeve into the front of the leaf spring. Attach the leaf spring to the shackle and hanger using the factory hardware. Locate FT50081 bump stop bracket, place on top of the axle. Locate one FT729U and one FT730U u-bolt, (the larger u-bolt will be used on the inner mount and outer will use the smaller u-bolt). Align the small u-bolt on top of the new bump stop bracket. Attach both u-bolt using the supplied <sup>1</sup>/<sub>2</sub>" nuts and washers. SEE PHOTO BELOW.



8. Repeat steps six and seven on the passenger side of the truck.

9. Working from the driver side of the truck, locate the factory brake line tab on top of the frame in front of the shock tower. Disconnect bracket and discard hardware. Carefully without kinking the brake line, move the hard line to the backside of the shock tower. Using a drill, drill a guide hole in the frame, and attach the brake line bracket to the frame using the supplied 1/4" x 1" thread forming screw. SEE PHOTO BELOW.



10. Working from the Passenger side of the truck, locate the factory brake line tab on the top of the frame, in front of the shock tower. Disconnect bracket and discard hardware. Carefully, without kinking the hard line pull the hard line out from the frame approximately 2", the factory bracket will be relocated 2" lower on the outside of the frame. Using a drill, drill a guide hole in the frame, and attach the brake line bracket to the frame using the supplied 1/4" x 1" thread forming screw. SEE PHOTO BELOW.



11. Locate FT50073 Frt. Trac Bar Bracket, FT50075 Frt. Trac Bar Support Bracket, and FT55-1 Frt. Trac Bar Washer. Using the supplied 12mm X 60mm bolt, nut, and washer attach the FT55-1 washer, FT50073 Trac bar bracket to the front of the factory trac bar mount and attach the FT50075 Trac bar support bracket to the back side of the axle. Using the supplied 12mm X 80mm bolt, nut and washer attach the factory trac bar to the new trac bar bracket and support bracket. Torque bolts to 80 ft lbs. SEE PHOTOS NEXT PAGE.



- 12. Locate FT50037 Front Sway Bar End Links. Install one bushing into each end of the end link and one sleeve into ONE end of the sway bar from the supplied bushing kit and sleeve kit (Note, you will have two extra sway bar sleeve in the kit that will not be used). Install the end links onto the truck placing the sway bar end link end with the sleeve to the upper mount using the supplied <sup>1</sup>/<sub>2</sub>" X 3" bolt, nut, and washer and the factory hardware on the lower mount. Torque both upper and lower mounts to 65 ft lbs.
- 13. Locate the new Fabtech front shocks FT7181 (not included in kit) and install using factory lower hardware and the supplied upper hardware from shock kit.
- 14. Locate the factory pitman arm, remove and discard, save hardware. Locate the new Fabtech drop pitman arm FT50015. Install back onto the truck in the same clock position as when removed, use the factory hardware and the supplied cotter pin to attach, torque to 185 ft lbs.
- 15. With a transmission jack support the transmission and transfer case and remove the factory transmission crossmember, discard factory hardware.
- 16. Locate the Fabtech transmission crossmember spacers FT50024. Using the supplied hardware <sup>1</sup>/<sub>2</sub>" X 3 <sup>1</sup>/<sub>2</sub>" bolts and USS washers reattach factory crossmember to the truck with the Fabtech spacer between the frame and the crossmember. Torque bolts to 85 ft lbs. SEE PHOTO NEXT COLUMN.



17. Install front tires and wheels. Torque lug nuts to wheel manufacturers specifications.

#### **REAR SUSPENSION INSTRUCTIONS:**

- 18. Jack up the rear end of the vehicle and support the frame rails just in front of the rear bumper with jack stands.
- 19. Working on both sides of the truck and supporting the rear differential with a jack remove and discard the rear shocks, save shock hardware. Use care not to over extend the brake hose.
- 20. Locate the lower track bar mount on the axel. Disconnect the track bar from the axel and save hardware. Pull track bar free from the factory mount.
- 21. Locate the factory driver side brake line mount on the frame. Disconnect from the frame and save the factory spring clip. Locate the FT50078 brake line bracket attach to the frame using the supplied 3/8"X 1" bolt, nut, and washer. Attach the brake line to the Fabtech bracket using the factory brake line spring clip. SEE PHOTO BELOW.



- 22. Working from the driver side of the truck. Remove the leaf spring from the truck and discard leaf spring and u-bolts, save the pivot bolts.
- 23. Locate the new leaf spring FTS44006 (4 leaf pack) and install two bushings and one sleeve into each end of the spring. Note: you will install the smaller <sup>1</sup>/<sub>2</sub>" id sleeve into the front of the leaf spring. Attach the leaf spring to the shackle and hanger using the factory hardware, leave loose. When installing the rear leaf make sure the thicker part of the axle shim is facing forward. Locate

FT50082 driver side rear bump stop bracket, place on top of axle (**NOTE: make sure the shorter end of the bracket is on the inboard side of the axle**). Locate FT730U u-bolts, using the supplied <sup>1</sup>/<sub>2</sub>" nuts and washer attach the bump stop to the top of the axle and the leaf spring to the bottom of the axle. Torque u-bolt 90 ft. lbs.

- 24. Repeat steps twenty two and twenty three on passenger side of truck
- 25. Locate FT50076 Trac Bar Bracket. Using the supplied <sup>1</sup>/<sub>2</sub>" X 3" and 3/8" X 1" hardware attach the bracket to the stock trac bar mount on the axle, leave loose. Insert the factory trac bar to the new trac bar mount. Using the factory hardware and the supplied <sup>1</sup>/<sub>2</sub>" star washers attach the supplied support brace FT50077 to the new Fabtech trac bar bracket along with the factory trac bar, leave loose. Locate the support brace from the trac bar to the new bump stop extension, center the brace on the bump stop extension mark spot and drill a <sup>1</sup>/<sub>2</sub>" hole. Attach using the supplied <sup>1</sup>/<sub>2</sub>" x 1" bolt, nut, and washer. SEE PHOTO NEXT COLUMN.



- 26. Locate the new Fabtech shocks FTS7182 (not included in kit). Install on truck using factory hardware.
- 27. Install rear tires and wheels and torque lug nuts to wheel manufacturers specifications. Turn front tires left to right and check for appropriate tire clearance.
- 28. Recheck all nuts and bolts for proper torque tightness before driving. Drive the truck for 50 miles and have it aligned to factory specifications.

#### **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.

Coil over 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 inconstancies 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.

Instruction Sheet Part #- FT24004i

04/20/04jj