



INSTALLATION INSTRUCTIONS

**1997-2006 JEEP TJ & 2004-2006 JEEP LJ
4" TRAIL II KIT**

FTS24187

Fabtech Motorsports | 4331 Eucalyptus Ave. Chino, CA 91710

Tech Line: 909-597-7800 | **Fax:** 909-597-7185 | **Web:** www.fabtechmotorsports.com

K4091 4" TRAIL II W/ PERFORMANCE SHOCKS		
1	FTS24187	COMPONENT BOX 1
1	FTS44001BK	COMPONENT BOX 2
2	FTS7172	PERFORMANCE SHOCK (FRONT)
2	FTS7182	PERFORMANCE SHOCK (REAR)

K4091M 4" TRAIL II W/ STEALTH SHOCKS		
1	FTS24187	COMPONENT BOX 1
1	FTS44001BK	COMPONENT BOX 2
2	FTS6172	STEALTH SHOCK (FRONT)
2	FTS6182	STEALTH SHOCK (REAR)

K4091DL 4" TRAIL II W/ DIRT LOGIC SHOCKS		
1	FTS24187	COMPONENT BOX 1
1	FTS44001BK	COMPONENT BOX 2
2	FTS811232	2.25 DLSS N/R SHOCK (FRONT)
2	FTS811242	2.25 DLSS N/R SHOCK (REAR)

FT50563 HARDWARE SUBASSEMBLY		
2	FT42	SWAY BAR PIN
2	FT45	KEY RING
2	FT90036	LYNCH PIN 1/4"
1	FT46	SLEEVE .750 X .510 X 1.600
2	FT50048	BUSHING 5/8 HOURGLASS 4-PACK
8	FT50415	MISALIGNMENT 1"
1	FT50565	HARDWARE KIT
1	FT50089	SLEEVE .625 X .507 X 1.480 4-PACK
1	FT83216	SLEEVE REAR SWAY BAR 4-PACK
6	FT50205	TAPERED WASHER
1	FT95010	UPPER BALL JOINT HAT
1	FT95243	3/4" ROD END
2	FT95066	9/16" MISALIGNMENT
1	75160003252	3/4-16 JAM NUT
4	FT97150-6-101	SLEEVE .750 X .560 X 2.620
1	FT24187i	INSTRUCTIONS
1	FTAS12	STICKER FT BLUE 10X4
1	FTAS16	DRIVER WARNING DECAL
1	FTREGCARD	REGISTRATION CARD
8	FTS1001	BUSHING
2	31181001152	5/16-18 X 1" SELF TAPPING BOLT
1	FT50135	NUT TAB (BUMPSTOP)
1	FT90038	NUT TAB (TRACK BAR)
2	FT50023	FRONT BRAKE HOSE BRACKET
1	FT50063	TC SHIFT BRACKET
2	FT50067	SWAY BAR LINK FRAME BRACKET

FTS24187 COMPONENT BOX 1		
2	FT50013	UPPER FRONT SWAY BAR BRACKET
1	FT50068BK	4" FRONT SWAY BAR LINK (DRIVER)
1	FT50069BK	4" FRONT SWAY BAR LINK (PASS)
1	FT50036	FRONT LOWER SWAY BAR BRACKET (DRIVER)
1	FT50066	FRONT LOWER SWAY BAR BRACKET (PASS)
6	FT50024	SPACER 2.00 X 1.775
2	FT50026BK	REAR SWAY BAR LINKS
2	FT50027	BUMP STOP
1	FT50568	SWAY BAR AXLE MOUNT (DRIVER)
1	FT50569	SWAY BAR AXLE MOUNT (PASS)
1	FT50053BK	REAR TRACK BAR BRACKET
4	FT50559	LOWER LINK
2	FT50492	FRONT BUMP STOP SPACER
1	FT50560	FRONT ADJUSTABLE TRACK BAR
1	FT50563	HARDWARE SUBASSEMBLY

FTS44001BK COMPONENT BOX 2		
2	FT50004BK	4" FRONT COIL SPRING
2	FT50005BK	4" REAR COIL SPRING

FT50565 - HARDWARE KIT		LOCATION
6	M12 FLAT WASHER	
6	M12-1.75 X 80MM HEX BOLT	03-06 Trans. Spacer
4	1/4 SAE WASHER	
2	1/4-20 NYLOCK NUT	
6	1/4-20 X 1" HEX BOLT G5 ZINC	
6	5/16 SAE WASHER	
4	5/16-18 NYLOCK NUT	
2	5/16-18 X 1" HEX BOLT	Front Brakeline Bracket
2	3/8 SAE WASHER	End Link Bracket
2	3/8-16 NYLOCK NUT	
20	1/2 SAE WASHER	
8	1/2-13 C-LOCK NUT	
1	1/2-13 X 1-1/4 HEX BOLT	Rear Track Bar
2	1/2-13 X 1-1/2 HEX BOLT	End Link Axle Side
2	1/2-13 X 2-3/4 HEX BOLT	End Link to Bracket
1	1/2-13 X 3" HEX BOLT	Rear Track Bar
6	1/2-13 X 3-1/4 HEX BOLT	97-02 Trans. Spacer
2	5/16-18 X 3/4 SELF TAP BOLT	End Link Disconnect
4	1/4-28 GREASE FITTING	
1	7/16-14 X 2-3/4 HEX BOLT	Front Track Bar Axle
1	7/16 SAE WASHER	
2	1/2-13 X 4 HEX BOLT	Front Bumpstop
1	9/16-18 X 3-1/2 HEX BOLT	Front Track Bar Frame
1	9/16-18 C-LOCK NUT	
2	9/16 SAE WASHER	
1	THREAD LOCKING MATERIAL	

- TOOL LIST -

Required Tools (Not Included)

- Basic Hand Tools
- Floor Jack
- Jack Stands
- Assorted Metric and S.A.E sockets, and Allen wrenches

- Welder
- Die Grinder w/ Cutoff Wheel or Sawzall
- Torque Wrench
- Drill w/ Assorted Drill Bits
- Angle Finder

- PRE-INSTALLATION NOTES -

For technical assistance call: **909-597-7800** or e-mail: **info@fabtechmotorsports.com**

READ THIS BEFORE YOU BEGIN INSTALLATION -

Check all parts to the parts list above before beginning installation. If any parts are missing contact Fabtech at 909-597-7800 and a replacement part will be sent to you immediately.

Read all instructions thoroughly from start to finish before beginning the installation. If these instructions are not properly followed severe frame, driveline and / or suspension damage may occur.

Check your local city and state laws prior to the installation of this system for legality. Do not install if not legal in your area.

Prior to the installation of this suspension system perform a front end alignment and record. Do not install this system if the vehicle alignment is not within factory specifications. Check for frame and suspension damage prior to installation.

The installation of this suspension system should be performed by two professional mechanics.

This suspension must be installed with Fabtech shock absorbers.

Use the provided thread locking compound on all hardware.

WARNING- Installation of this system will alter the center of gravity of the vehicle and may increase roll over as compared to stock.

Vehicles that receive oversized tires should check ball joints, uniballs, tie rods ends, pitman arm and idler arm every 2500-5000 miles for wear and replace as needed.

Verify differential fluid is at manufactures recommended level prior to kit installation. Installation of the kit will reposition 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 differential has 3 quarts of fluid). Check your specific manual for correct amount of fluid.

THE INSTALLATION OF THIS KIT REQUIRES WELDING, AND SHOULD BE PERFORMED BY A CERTIFIED WELDER

FOOTNOTES -

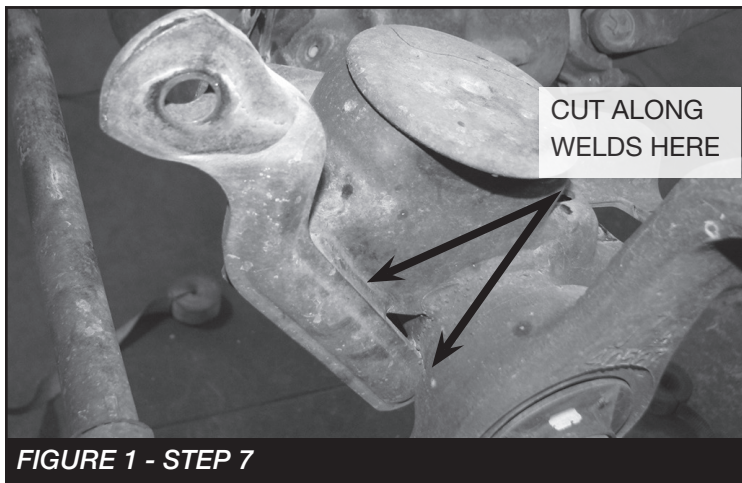
- FRONT DRIVE SHAFT WILL NEED TO BE SHORTENED ON 2003 AND UP RUBICON MODELS DUE TO INCREASED TRAVEL.

- Welding is required

- INSTRUCTIONS -

- FRONT SUSPENSION -

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!** Support the front axle with a floor jack just enough so that the front axle does not hang freely. Remove the front tires.
2. Remove the front track bar and sway bar end links from both the sway bar and axle mount.
3. If vehicle is equipped with an automatic transmission and has a transmission skid plate. Remove it now.
4. Remove the front shocks and save lower hardware.
5. Remove the front drive shaft and save all hardware. **On some 2003 & up models you will need to shorten the front driveline 1-3/4", check drive shaft for proper clearance before driving.** On 1997-2002 models the stock driveline can be reinstalled without modification.
6. Remove the front coil springs and discard, save the lower coil spring retainer (if equipped) and hardware.
7. The factory sway bar brackets welded to the axle/coil spring perch will need to be removed. Using a cut-off wheel cut along the factory welds, sand to a smooth finish. **SEE FIGURE 1.**



8. Locate the bumpstop pad on the coil spring perch. Using a 1/2" drill bit, drill out the center of the pad on both driver and passenger side. **SEE FIGURE 2.**

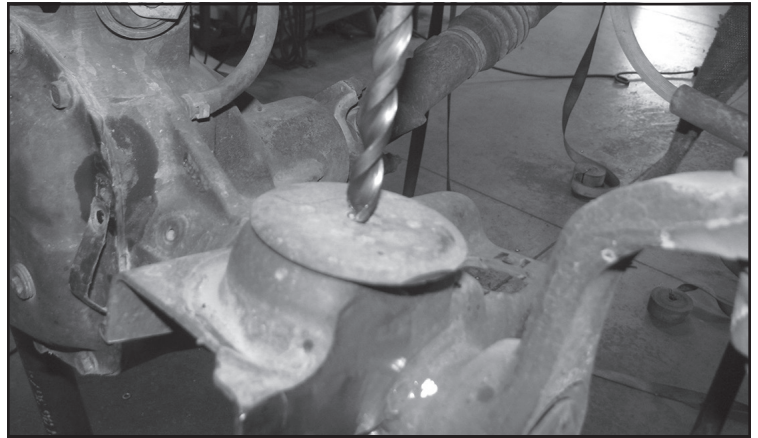


FIGURE 2 - STEP 8

9. Locate FT50568 (Driver sway bar mount). Position the bracket on the axle like shown in **FIGURE 3**. Using an angle finder measure, set the bracket so it measures 50 degrees from the bumpstop pad. Once its positioned, tack weld the bracket into place. Finish by completely welding it to the axle and bumpstop pad. Allow to cool and then paint.

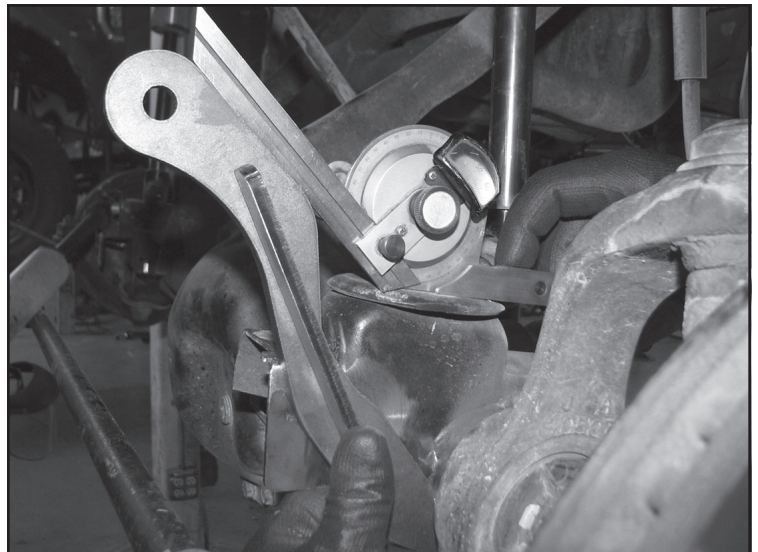


FIGURE 3 - STEP 9

10. Repeat on passenger side using FT50569 (Passenger Sway bar mount).
11. With the axle supported, remove the front lower link arms. Save factory hardware.

12. Locate FT50492 (Bump stop spacer), 1/2" X 4" bolt, and FT50004BK (Front Coil Spring). **DRIVER SIDE:** Insert the 1/2" x 4" bolt through the bumpstop and install the coil and bump top into the vehicle together by inserting the bumpstop inside the coil. **SEE FIGURE 4.** Use a supplied washer and nut to secure the bumpstop extension to the factory pad. Torque to 127 ft-lbs.

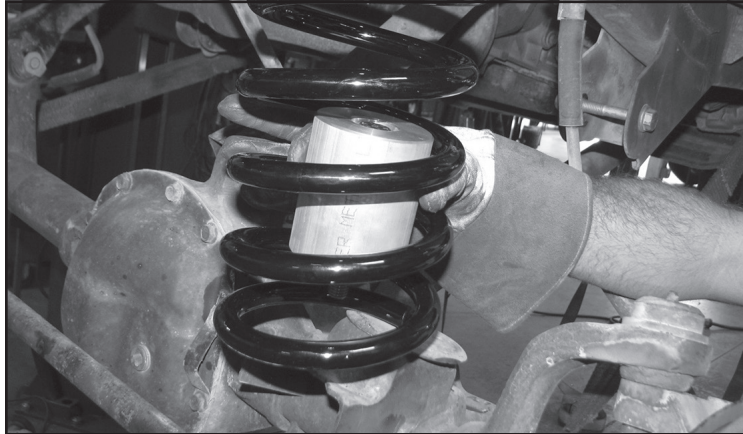


FIGURE 4 - STEP 12

13. Repeat on the passenger side. **NOTE: Use FT50135 (nut tab) to secure the passenger side bumpstop to the factory pad.**
14. Locate the front shocks and install the supplied bar pin and bushing. Install the new shocks using the lower factory hardware and supplied upper shock hardware. **SEE FIGURES 5-6**

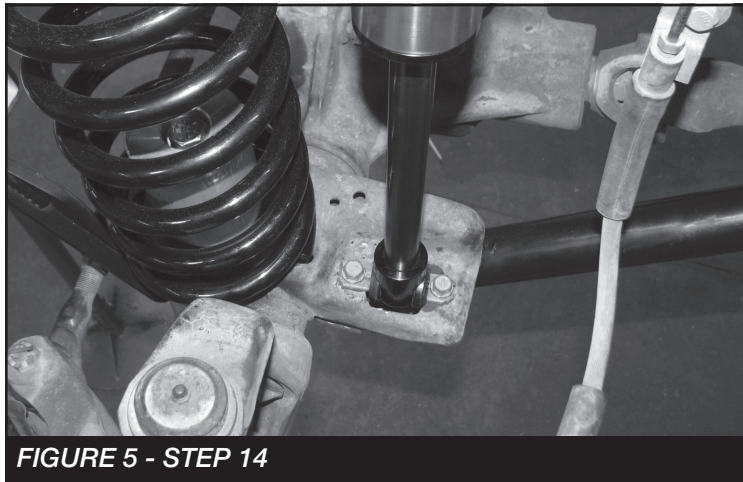


FIGURE 5 - STEP 14

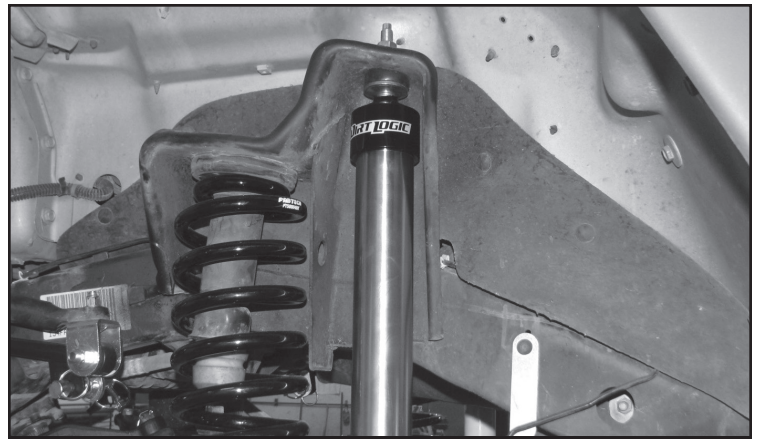


FIGURE 6 - STEP 14

15. Using a grinder, grind a half inch radius into the back corner of the lower link arm/shock mount. **SEE FIGURE 7**

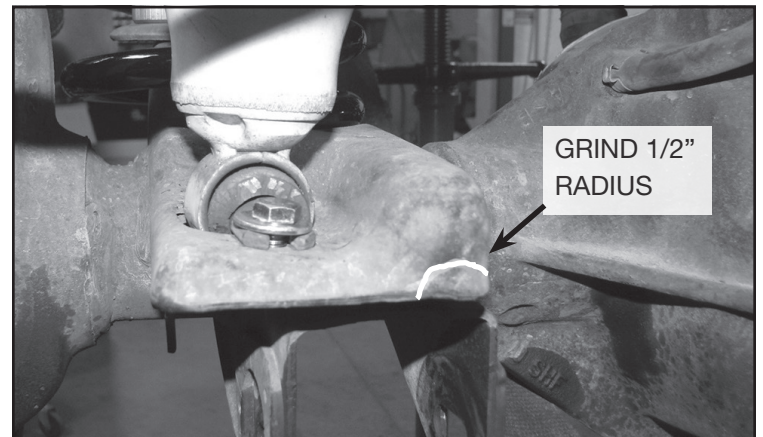


FIGURE 7 - STEP 15

16. Locate the (4) FT50559 (link arms) and install (2) FTS1001 (bushings), FT97150-6-101 (sleeve) and zerk fitting into each link arm. **NOTE: Grease when completed.**
17. Using (2) FT50415 (misalignment) per arm. Install the front lower link arms using the factory hardware on both sides. Torque to 160 ft-lbs. **SEE FIGURE 7**

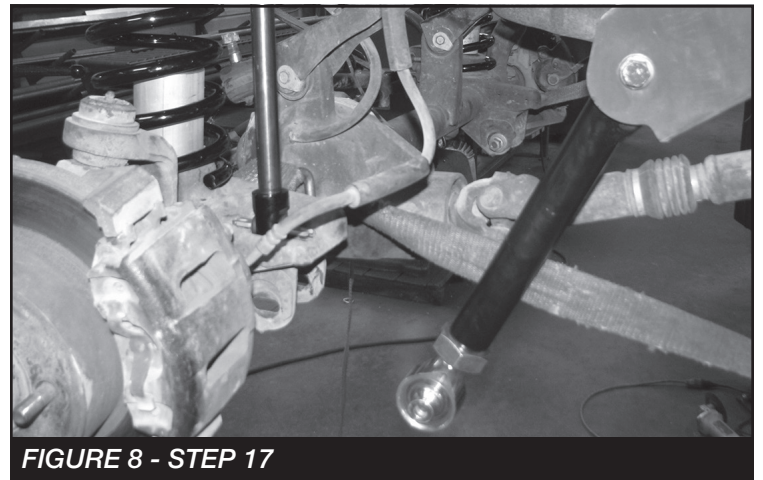


FIGURE 8 - STEP 17

18. Locate the factory track bar mount on the axle. Drill out the factory hole to 7/16". Then, drill out the tapered hole on the upper track bar bracket to 3/4" **SEE FIGURE 9**



FIGURE 9 - STEP 18

19. Install FT95243 (3/4" Rod End) and 3/4" Jam Nut into FT50560 (Front Adjustable Track Bar). Leave 1/4" of thread showing. **NOTE: This is a starting point and may need to be adjusted once installation is complete and aligned.**
20. Install the new track bar into the vehicles factory axle mount using FT90038 (nut tab) and supplied 7/16" x 2-3/4" bolt and washer. Torque to 83 ft-lbs. **SEE FIGURES 10-11**

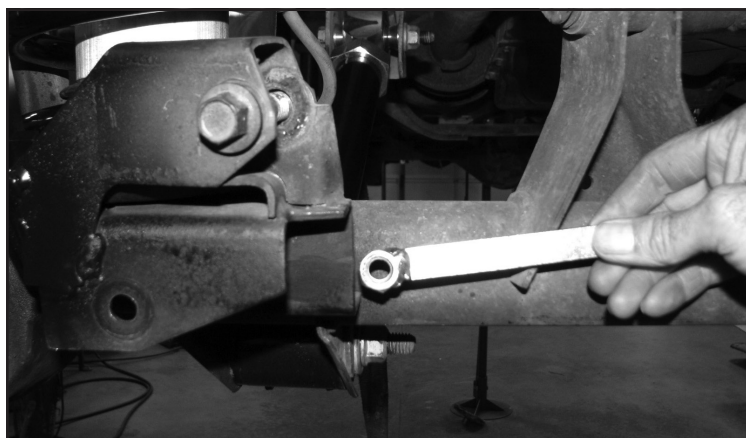


FIGURE 10 - STEP 20



FIGURE 11 - STEP 20

21. Locate FT95010 (Upper ball joint hat), (2) FT95066 (9/16" misalignments) and the supplied 9/16" x 3-1/2" bolt, washer and nut. Install the FT95010 (upper ball joint hat) into the factory bracket from the bottom side. **SEE FIGURE 12.** Next, install the misalignments into the rod end. Then Install the track bar to the bracket using the 9/16" hardware. **NOTE: The washer will need to be installed on the top side (nut end).** Torque to 184 ft-lbs. **SEE FIGURES 13-14**



FIGURE 12 - STEP 21



FIGURE 13 - STEP 21



FIGURE 14 - STEP 21

22. Install both FT50066 (Driver lower sway bar bracket) & FT50036 (Passenger lower sway bar bracket) using the supplied 1/2" X 1-1/2" bolts, washers and nuts. Torque to 127 ft-lbs. **SEE FIGURE 15**

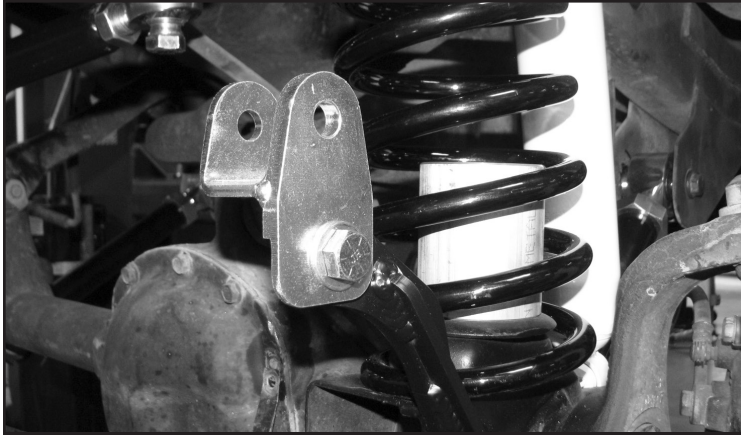


FIGURE 15 - STEP 22

23. Locate the factory upper coil bucket. The part that is weld to the frame will need to be ground flush the frame on both driver and passenger. **SEE FIGURES 16-17**



FIGURE 16 - STEP 23



FIGURE 17 - STEP 23

24. Install FT50048 (Bushings) and FT50089 (Sleeves) into FT50068BK (Driver sway bar link). Install FT50013 (sway bar stem conversion bracket) to the sway bar using the supplied 3/8" washer and nuts. Install the New end link to the conversion bracket using the supplied 1/2" X 2-3/4" bolt, washers and nuts. Torque all 1/2" hardware to 65 ft-lbs and 3/8" to 52 ft-lbs. Attach FT50067 (frame bracket) to the end link using FT42 (sway bar pin) and FT45 (ring). Rotate the end link up so the bracket sits flush on the bottom of the frame. Mark the hole. Drill a hole into the bottom side of the frame using a 9/32" drill bit. Attach the bracket to the frame using the 5/16" self tapping bolt. **SEE FIGURES 18-20.** Repeat on passenger side.



FIGURE 18 - STEP 24



FIGURE 19 - STEP 24

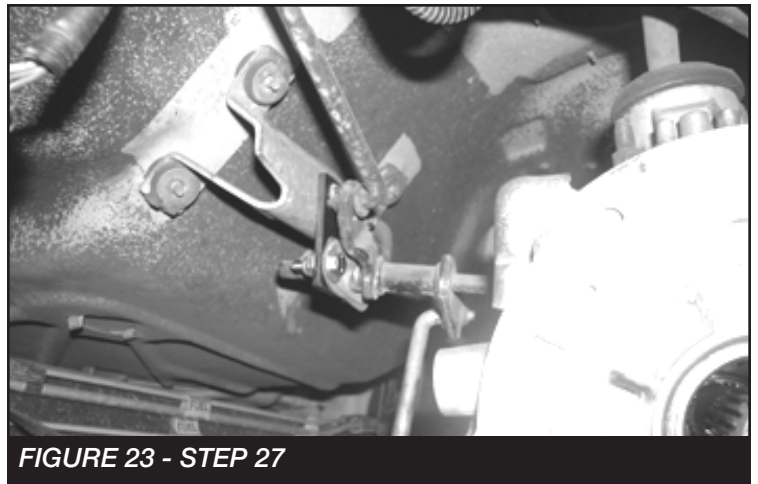


FIGURE 20 - STEP 24

25. Install FT50023 (Brake line bracket) to the frame and brake line using the factory hardware and supplied 5/16 X 1" bolt, washers and nut. Repeat on passenger side. **SEE FIGURE 21**



26. With a transmission jack support the transmission and transfer case, remove the factory transmission crossmember, discard factory hardware.
27. Locate the factory transfer case shift linkage on the driver side of the transmission. Remove the two bolts securing the linkage to the body. (On some models you may need to remove the linkage pivot arm for the truck and bend the tab connecting the linkage pivot arm to the floor shifter to clearance the new linkage drop bracket bolts. It is recommend to install the linkage drop first to check for clearance, if clearance is needed then proceed in bending tab. **SEE FIGURE 22.** Locate the new Fabtech linkage drop bracket FT50063. Using the supplied 1/4 x 1" bolts, nuts, and washers attach the factory linkage to the lower two holes in the new linkage bracket. Using the factory hardware attach the new Fabtech bracket to the body. **NOTE: WHEN INSTALLATION OF LIFT KIT IS COMPLETE YOU MAY NEED TO ADJUST LINKAGE ROD ON THE TRANSFER CASE LINKAGE FOR PROPER SHIFTING. SEE FIGURES 23**



28. On manual transmission models you will need to remove the shifter arm from the center console of the truck and make a small bend in the shift arm as shown below. **SEE FIGURES 24-25**



29. Locate the Fabtech transmission crossmember spacers FT50024 and (FT50205 Pan Bolt Taper Insert for 97-02 Models only). Using the correct supplied bolts and washers for your year Jeep, ½" x 3 1/4"(1997-2002) or M12-1.5 x 80 mm (2003) reattach factory crossmember to the truck with the Fabtech spacer between the frame and the crossmember. Torque bolts to 85 ft-lbs. On 97-02 models, place the Pan Bolt Taper Insert into the crossmember before the bolting the crossmember to the frame. **SEE FIGURES 26-28**

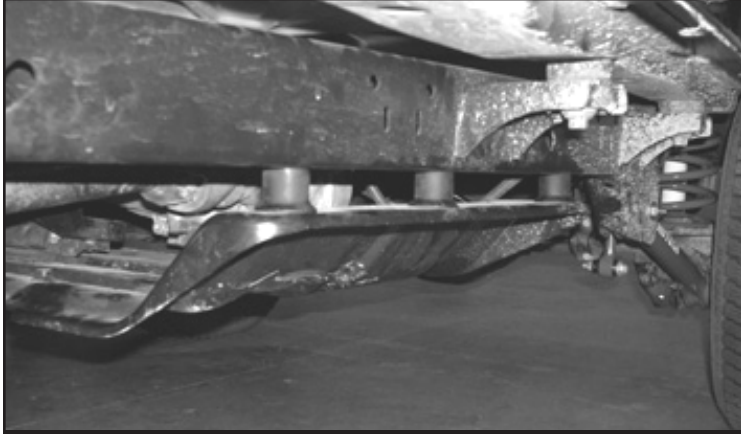


FIGURE 26 - STEP 29



FIGURE 27 - STEP 29



FIGURE 28 - STEP 29

30. Reinstall the front drive shaft using the factory hardware.

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

- REAR SUSPENSION -

32. Jack up the rear end of the vehicle and support the frame rails just in front of the rear bumper with jack stands. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE!** Remove the rear tires. Support the rear axle with a floor jack just enough so that axle does not hang freely.
33. 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.
34. Remove and discard the factory rear sway bar end links. Save hardware.
35. Locate the lower track bar mount on the axle. Disconnect the track bar from the axle and save hardware. Pull track bar free from the factory mount. Remove the factory plastic trim guard from the track bar axle mount and discard.
36. Remove the coil springs and discard.
37. Remove the factory rubber bump stop and discard.
38. Working from the driver side of the truck, locate the factory lower link arm, remove and discard link, save the factory hardware.
39. Locate the new Fabtech lower link arm FT50559. Install one of the supplied grease fitting into the end of the new Fabtech link arm. **GREASE WHEN COMPLETED.** Using factory hardware install new Fabtech link arm into the factory frame mount using (2) FT50415 (misalignments), then attach to axel mount using factory hardware. Torque to 160 ft-lbs. **SEE FIGURE 29**

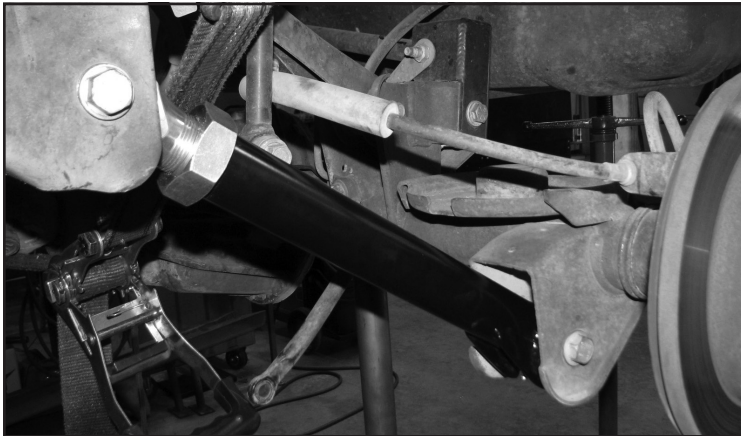


FIGURE 29 - STEP 39

40. Locate the new Fabtech bump stop FT50027. Install into factory pocket by pushing bump stop in until fully seated.
41. Repeat steps 38-40 on passenger side of truck.
42. Locate and install the new Fabtech coil springs FT50005 into truck.
43. Install the new rear shocks.
44. Locate the supplied FT50026 rear sway bar end links. Press in FT50048 (bushing) and FT83216 (sleeve) into each end of the end link. Install the end links onto truck using stock hardware. Torque to 65 ft-lbs.
45. Locate the new Fabtech rear track bar bracket FT50053BK. Place the bracket on the factory axel mount. With the supplied $\frac{1}{2}$ " x 3" bolt, nut, washers, and Fabtech FT46 (sleeve) attach the lower hole of the bracket to the factory hole in the axle bracket. (NOTE: THE SUPPLIED SLEEVE WILL BE PLACED INSIDE THE FACTORY TRACK BAR POCKET TO TAKE THE PLACE OF WHERE THE TRACK BAR WAS ORIGINALLY MOUNTED). Locate the hole in the Fabtech bracket on the outer side. Drill a $\frac{1}{2}$ " hole through the factory axle mount. Attach with the supplied $\frac{1}{2}$ " x $1\frac{1}{4}$ " bolt, nut, and washers. Reattach the track bar to the new bracket with the factory hardware. Torque all track bar bolts to 127 ft-lbs. **SEE FIGURE 30**



FIGURE 30 - STEP 45

46. 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 front bumper & valance.**
47. Check front end alignment and set to factory specifications. Readjust headlights.
48. Recheck all bolts for proper torque.
49. Recheck brake hoses, ABS wires and suspension parts for proper tire clearance while turning tires fully left to right.
50. Check the fluid in the front and rear differential and fill if needed with factory specification differential oil. **Note - some differentials may expel fluid after filling and driving. This can be normal in resetting the fluid level with the new position of the differential/s.**
51. Install Driver Warning Decal. Complete product registration card and mail to Fabtech in order to receive future safety and technical bulletins on this suspension.

Vehicles that will receive oversized tires should check ball joints, uniballs and all steering components every 2500-5000 miles for wear and replace as required.

**RE-TORQUE 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 and driveshafts. 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.

Dirt Logic and Performance Coilover 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, powder coating, 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 on the website, 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 website 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 is not responsible for premature wear of factory components due to the installation of oversized tires and wheels.

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 on our website. 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.

Depending on the condition of the factory suspension components retained after the installation of a Fabtech suspension not all vehicles may have the same ride stance front to rear as described in the website. The blue color of suspension components shown in all Fabtech photographs are for display purposes only. Majority of all Fabtech components will be black specifically where noted with part numbers ending in BK.

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. Some state laws may prohibit modification of suspension to a vehicle in whole or in part. It is the responsibility of the installer and consumer to consult local laws prior to the installation of any Fabtech suspension product to comply with such written laws.

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 super cede, 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 website or price sheet. For the most recent Product Warranty and Warnings visit our website www.fabtechmotorsports.com