

# **INSTALLATION INSTRUCTIONS**



# 2013-2016 DODGE 3500 4WD 7" RADIUS ARM KIT W/ 4.0 COILOVERS

FTS23189

## - PARTS LIST -

	FTS23190	7" RADIUS ARM W/ 4.0 COILOVERS
1	FT44043	SWAY BAR DROP (DRIVER)
1	FT44044	SWAY BAR DROP (PASSENEGER)
1	FT44172	DODGE PITMAN ARM
1	FT44311BK	UPPER COIL OVER MOUNT (DRIVER)
1	FT44312BK	UPPER COIL OVER MOUNT (PASSENGER)
1	FT44314	ABS RELOCATION BRACKET (DRIVER)
1	FT44315BK	TRACK BAR BRACKET
1	FT44390BK	RESI MOUNT (DRIVER)
1	FT44391BK	RESI MOUNT (PASSENGER)
1	FT44394BK	UPPER BACKING PLATE (DRIVER)
1	FT44395BK	UPPER BACKING PLATE (PASSENGER)
1	FT44402BK	BUMP STOP MOUNT (DRIVER)
1	FT44403BK	BUMP STOP MOUNT (PASS)
2	FT44412BK	REAR BUMP STOP SPACER
1	FT44424	HARDWARE SUBASSEMBLY
2	FT811192	2.25 DLSS N/R
1	FTS419	DRIVESHAFT SHIM KIT

	FTS23189	COMPONENT BOX 2
1	FT44449	RADIUS ARM (DRIVER)
1	FT444450	RADIUS ARM (PASSENGER)
2	FT44232BK	RADIUS ARM DROP
1	FT44437	HARDWARE KIT
1	FT44436	HARDWARE SUBASSEMBLY
4	FT748U	UBOLT RD 9/16-18 X 15.00 X 4.00
2	FTBK4	BLOCK 4.0

	FT44424	HARDWARE SUBASSEMBLY
1	FT44381	LOWER SHOCK MOUNT TAB DRIVER OUTER
1	FT44382	LOWER SHOCK MOUNT TAB DRIVER INNER
1	FT44383	LOWER SHOCK MOUNT TAB PASS OUTER
1	FT44384	LOWER SHOCK MOUNT TAB PASS INNER
1	FT44385	LOWER SHOCK MOUNT SPACER TOOL
1	FT44386	LOWER SHOCK GUSSET TOP DRIVER
1	FT44387	LOWER SHOCK GUSSET TOP PASS

	FT44436	HARDWARE SUBASSEMBLY		
4	FT1006	BUSHING C1500 LOWER		
2	FT102	SLEEVE 1.000 X .732 X 3.280		
2	FT160	SLEEVE .750 X .594 X .500		
1	FT23119i	INSTRUCTIONS		
1	FT23189i	INSTRUCTIONS		
1	FT30496	FRONT BRAKE LINE BRACKET		
2	FT44045	NUT TAB		
2	FT44135	BUMP STOP MOUNT TAB		
2	FT44245	BRAKE LINE EXT		
1	FT44246	TRACK BAR SUPPORT SPACER		
2	FT44253	RADIUS ARM DROP NUT TAB		
2	FT44258	1/4 NUT TAB		
1	FT44388	NUT TAB		
2	FT44389	NUT TAB		
1	FT44408	SLEEVE 1.00 X .625 X 2.035		
4	FT86021	HARDWARE & BUSHING KIT 21		
4	FT89016	#64 HOSE CLAMP		
1	FTAS12	STICKER FT BLUE 10X4		
1	FTAS16	DRIVER WARNING DECAL		
1	FTREGCARD	REGISTRATION CARD		
2	FTS88	BUMPSTOP 1 IN TALL LOW RND		

## - PARTS LIST -

	FT44437 - HARDWARE KIT	LOCATION
		LUGATION
1	M10 2 E V COMM HEV DOLT	TDACK DAD DDOD DDACKET
-	M18-2.5 X 90MM HEX BOLT	TRACK BAR DROP BRACKET
2	M18 WASHERS	
1	NUT C-LOCK 18MM G10.9 ZINC	TDAOL/ DAD DDAOL/FT
2	1/2-13 X 1-1/2 HEX BOLT G8 ZINC	TRACK BAR BRACKET
4	1/2" WASHERS	
2	1/2 -13 C-LOCK NUT ZINC	
2	1/2-13 X 1-1/4" HEX BOLT G8	
2	1/2 SAE WASHER G8 ZINC	
2	5/16-18 X 2-1/2 HEX BOLT ZINC	BUMP STOP
4	5/16 SAE WASHER G8 ZINC	
2	5/16-18 C-LOCK NUT ZINC	
4	1/4-20 X 1 HEX BOLT G5 ZINC	BRAKE LINE EXTENSION
2	1/4 SAE WASHER G5 ZINC	
2	1/4-20 C-LOCK NUT ZINC	
2	GREASE FITTING 1/4-28	
	BAG 2	
18	1/2 SAE WASHER ZINC	RADIUS ARM/ BUMP STOP
10	1/2-13 C-LOCK NUT ZINC	
10	1/2-13 1-1/4 HEX BOLT ZINC	
2	M18-2.5 X 120 MM HEX BOLT	RADIUS ARM POCKET
4	M18 WASHERS	
2	M18 C-LOCK NUT ZINC	
4	7/16-14 X 1-1/4 HEX BOLT G8	SWAY BAR DROP
8	7/16" SAE WAHSER	
4	7/16-14 C-LOCK NUT	
	BAG 3	
10	7/16-14 X 1-1/2 HEX BOLT ZINC	
2	7/16" SPLIT LOCK WASHER	
1	7/16-14 X 1-1/4" HEX BOLT	
2	7/16 USS WASHER	
20	7/16 SAE WASHER G8 ZINC	
9	7/16-14 C-LOCK NUT ZINC	
2	5/8-11 X 3-1/4" HEX BOLT	
6	5/8 SAE WASHER	
2	5/8-11 X 4" SOCKET HEAD BOLT	
2	5/8-11 C-LOCK NUT	
2	3/8-16 X 1-1/4 HEX BOLT	
2	3/8-16 C-LOCK NUT	
4	3/8" SAE WASHER	
2	1/4-20 X 1" HEX BOLT	
2	1/4-20 NYLOCK NUT	
4	1/4 SAE WASHER	
<u> </u>		

	FT44437 - HARDWARE KIT - CONT.	LOCATION
	BAG 4	
4	7/16-14 X 1-1/4 HEX BOLT G8 ZC	REAR TRACK BAR BRACKET
8	7/16 SAE WASHER G8 ZINC	
4	7/16-14 C-LOCK NUT ZINC	
8	9/16 SAE WASHER G8 ZINC	
8	9/16" -18 NYLOCK NUT	
1	5/16-18 X 1" HEX BOLT	
2	5/16 SAE WASHER	
1	5/16-18 C-LOCK NUT	
2	M10-1.5 X 60MM HEX	
2	10MM FLAT WASHER	
2	10MM SPLIT LOCK WASHER	
2	THREAD LOCKING COMPOUND	



#### Required Tools (Not Included)

Basic Hand Tools
Floor Jack
Jack Stands
Assorted Metric and S.A.E sockets, and Allen wrenches
Torque Wrench
Die Grinder w/ Cutoff Wheel or Sawzall

#### - 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 diff has 3 quarts of fluid). Check your specific manual for correct amount of fluid.

NOTE: This kit will not fit gas engine vehicles.

#### RECOMMENDED TIRE/WHEEL SIZES -

Use 37x12.50/R17 tire w/ 17x9 wheels w/ 5" BS w/ minor trimming

Use 37x12.50/R18 tire w/ 18x9 wheels w/ 5" BS w/ minor trimming

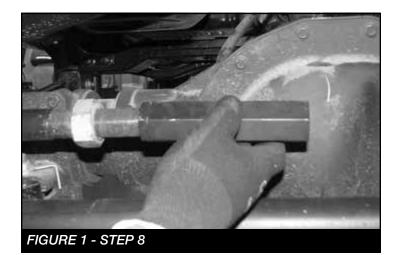
Use 37x13.50/R20 tire w/ 20x9.5 wheels w/ 5" BS w/ minor trimming

Use 37x13.50/R22 tire w/ 22x11 wheels w/ 5" BS w/ minor trimming

#### - INSTRUCTIONS -

#### FRONT SUSPENSION

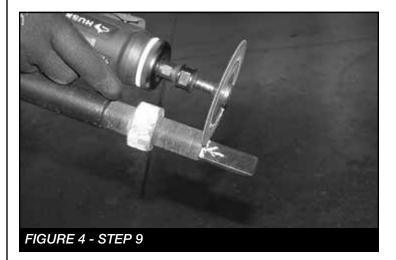
- 1. Disconnect the negative terminal on the battery. Jack up the front end of the truck and support the frame rails with jack stands. NEVER WORK UNDER AN **UNSUPPORTED VEHICLE!** Remove the front tires.
- 2. DRIVER SIDE ONLY Starting on the driver side, remove the driver side fender liner.
- 3. Remove the factory shock and discard. Retain factory lower hardware.
- 4. Disconnect factory sway bar links.
- 5. Remove factory coil spring and rubber isolator.
- 6. Remove the factory pitman arm and discard. Keep hardware.
- 7. Locate the new FT44172 Fabtech pitman arm and install. Do not reconnect the factory drag link at this time. Reinstall the factory lock washer plus thread locker. Torque to 220ft-lbs.
- 8. Unthread the factory drag link at the adjuster sleeve and remove adjuster sleeve. SEE FIGURE 1



9. Using a die grinder remove the flat nonthreaded section from both ends of the drag link. This will allow you to rotate the drag link and line it up with the pitman arm. **SEE FIGURES 2-4** 

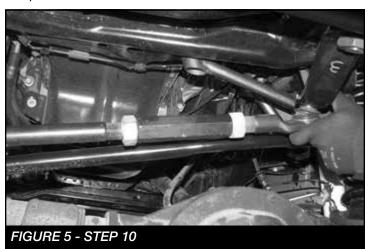






5 of 19

10. Reassemble the drag link and connect it to the new pitman arm. **SEE FIGURE 5** 

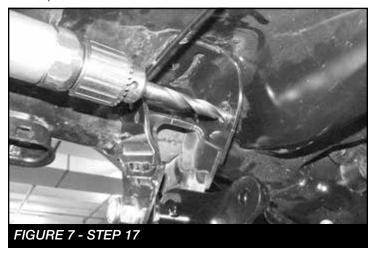


- 11. Torque the drag link to 83 ft-lbs.
- 12. Remove the track bar from the frame side of the vehicle.
- 13. Locate the FT44315BK track bar bracket and M18–2.5 x 90mm bolt.
- Slide the track bar bracket into the factory mount and insert the M18 bolt into the factory pivot hole.
   SEE FIGURE 6



- 15. Rotate the bracket up until the end of the bracket is flush with the crossmember under the motor.
- 16. Using the Fabtech bracket as a guide, mark the factory mount for the upper driver side mounting hole.

17. Swing the bracket back out of the way. Using a ½" drill bit, drill out the marked hole. **SEE FIGURE 7** 



- 18. Locate one FT44246 sleeve and two 1/2"-13 x 1-1/2" bolts, nuts and washers.
- 19. Rotate the track bar bracket back into place and bolt together using 1/2"-13 x 1-1/2" bolt and the sleeve. **SEE FIGURES 8-9**

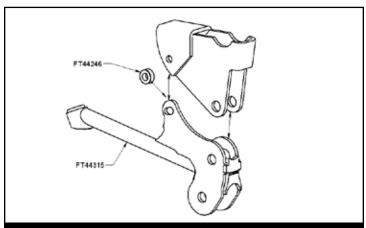
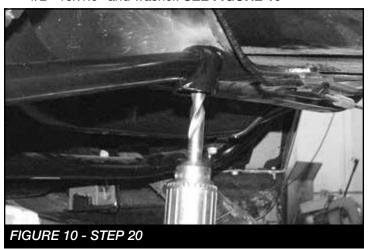


FIGURE 8 - STEP 19



FIGURE 9 - STEP 19

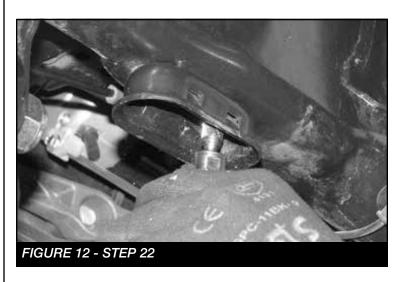
20. Using the Fabtech bracket as a guide, drill a 1/2" hole in the cross member under the motor. Next, mount using 1/2"-13x1.5" and washer. **SEE FIGURE 10** 



- IF INSTALLING DIRT LOGIC 4.0 COILOVERS REFER TO THE COILOVER CONVERSION INSTRUCTIONS AT THIS TIME.
- 21. Locate and remove the factory rubber bump stop. **SEE FIGURE 11**



22. Using a die grinder, grind out the stamped in tabs on the inside of the bump stop housing. **SEE FIGURES 12-13** 

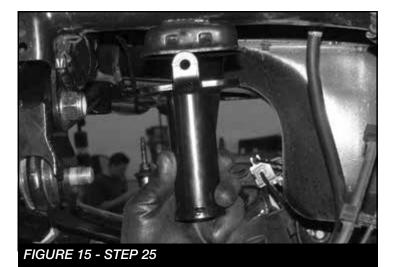


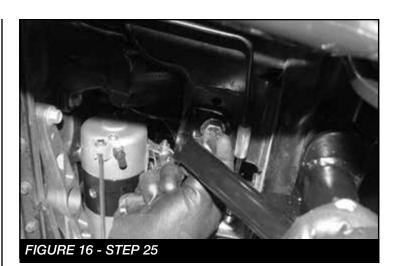


- 23. Locate the FT44402BK driver front bump stop and the FT44135 nut tab.
- 24. Using a 1/2" drill bit, drill out the hole in the factory crossmember inline with the factory bump stop mount. **SEE FIGURE 14**



25. Slide the bump stop into the factory bump stop mount. Using a 1/2"-13 x 1-1/4" bolt and the FT44135 (nut tab), bolt the bump stop to the crossmember. Torque the 1/2" bolt to 90 ft-lbs. **SEE FIGURES 15-17** 





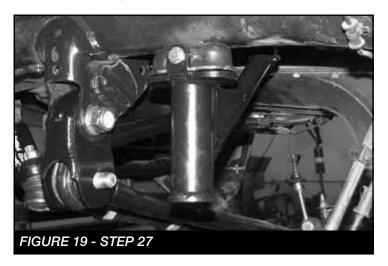


26. Using the outer tab on the bump stop as a drill guide, drill a 5/16" hole all the way through the factory bump stop mount. **SEE FIGURE 18** 

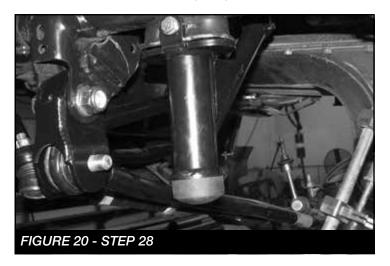


FIGURE 18 - STEP 26

27. Locate a 5/16"-18 x 2-1/2" bolt, nut and washers. Using this bolt, secure the bump stop to the factory bump stop mount and torque to 29 ft-lbs. **SEE FIGURE 19** 



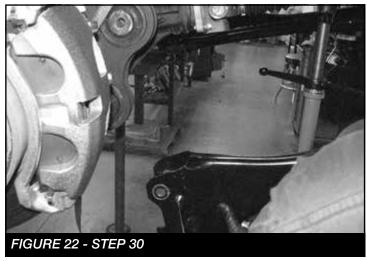
28. Locate the FTS88 bump stop pad and thread it into the bottom of the Fabtech bump stop. **SEE FIGURE 20** 



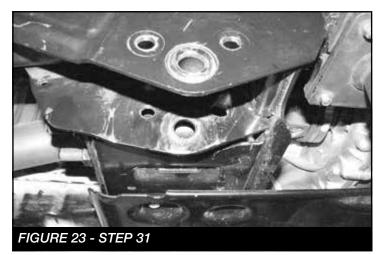
- 29. Repeat steps 21-28 on the passenger side.
- 30. Secure the front diff. Remove the factory driver and passenger side Radius arm. Retain Hardware.

**SEE FIGURES 21-22** 





31. Remove the factory crossmember and skid plate that is mounted between the factory radius arm pockets. Retain Hardware. **SEE FIGURE 23** 



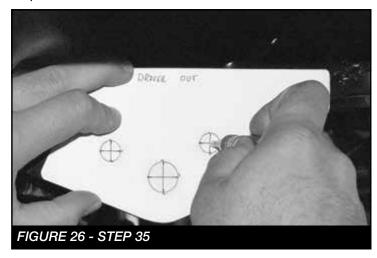
32. Trim 1/2" off both driver and passenger ends of the crossmember leaving a ¼" border perpendicular to the bolt holes. This will be done to add clearance for the Fabtech radius arm brackets. **SEE FIGURES 24-25** 





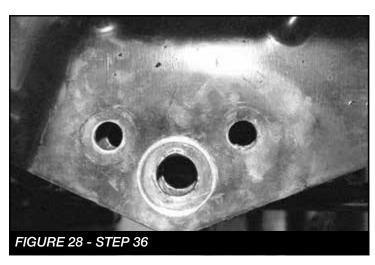
33. Reinstall the factory crossmember and torque to 200 ft-lbs.

- 34. Locate the Fabtech FT44232BK Radius arm drop bracket and the drill template in the instructions (Page 19). Cut out the template.
- 35. Line up the drill template with the factory Radius arm bracket and mark the two holes around the radius arm pivot bolt. **SEE FIGURE 26**



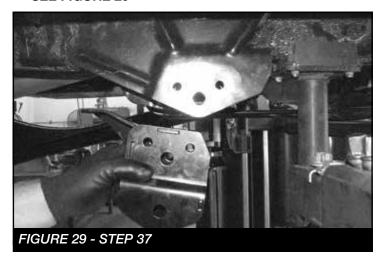
36. Using a ½" drill bit, drill all the way through both sides of the factory radius arm mount. **SEE FIGURES 27-28** 



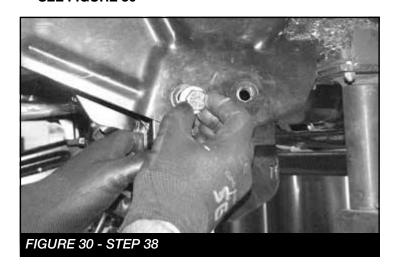


Repeat steps 35-36 on the passenger side.

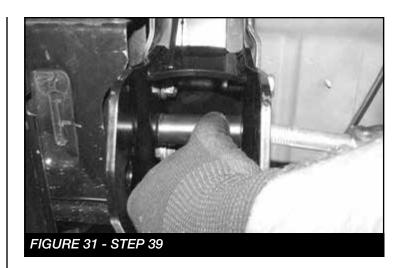
37. Slide the Fabtech radius arm mount into the factory pocket with the frame tab facing the front of the truck. **SEE FIGURE 29** 

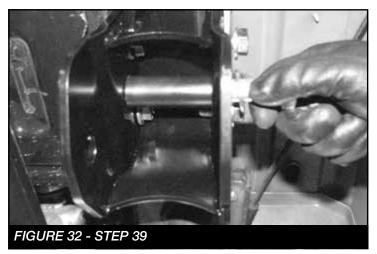


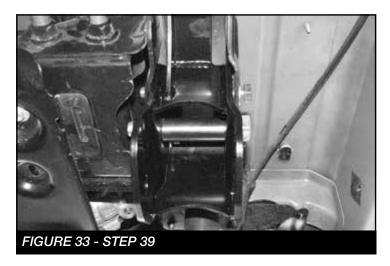
38. Locate four 1/2"-13 x 1-1/4" bolts, nuts and washers. Use these bolts to mount the radius arm drop bracket to the factory bracket. Leave loose at this time. **SEE FIGURE 30** 



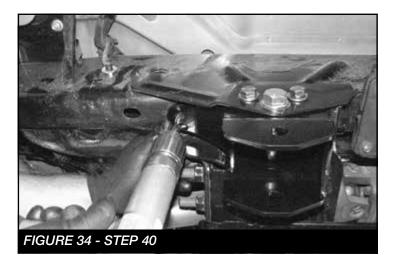
39. Locate the M18-2.5 x 120MM bolt, nut and washers. Pass the 18mm bolt through the factory pivot hole into the FT604 sleeve. Torque the 18mm bolt to 200 ft-lbs and the four ½" bolts to 127 ft-lbs. **SEE FIGURES 31-33** 



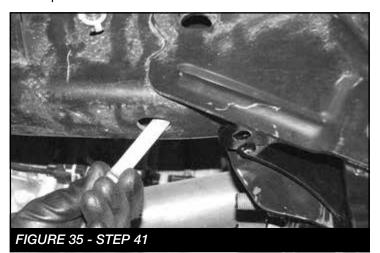


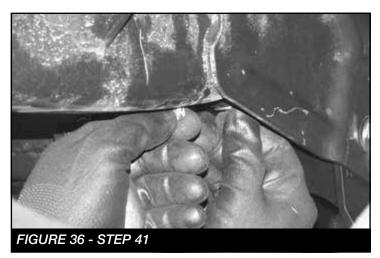


40. Using the Fabtech the radius arm drop bracket as a drill guide, drill a ½ hole through the bottom of the frame. **SEE FIGURE 34** 



41. Locate a 1/2"-13 x 1-1/4" bolt and the FT44253 nut tab. Pass the nut tab through the hole in the frame forward of the radius arm drop bracket. Connect the bolt and the nut tab through the radius arm drop bracket and the frame. Torque to 127 ft-lbs. **SEE FIGURES 35-37** 







**REPEAT STEPS 37-41 ON THE PASSENGER SIDE** 

- 42. Locate the FT44449 Driver side radius arm, FT1006 bushing, FT102 sleeve, and zerk fitting.
- 43. Install two bushings, one sleeve, and the zerk fitting into the barrel of the radius arm. **SEE FIGURES 38-40**



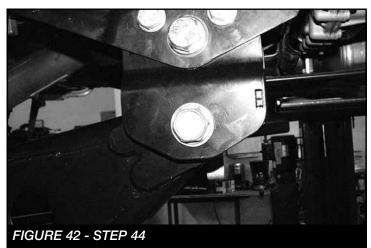
FIGURE 38 - STEP 43

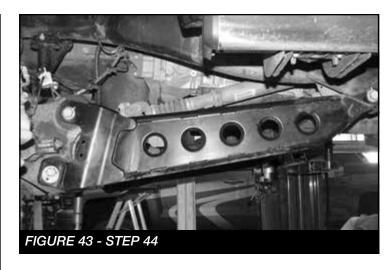




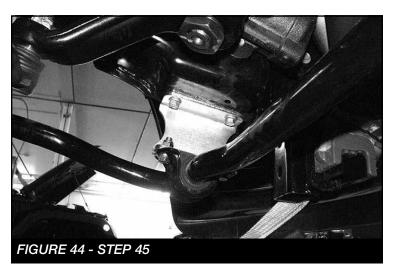
44. Install the new Fabtech radius arms into the factory frame pocket and onto the axle bushings using the factory hardware. Torque the factory bolts to 200 ft-lbs. **SEE FIGURES 41-43** 







45. Locate the new sway bar drop brackets FT44043 (Driver) and FT44044 (Passenger). Install the new brackets on the frame using the factory hardware. Install the sway bar onto the new brackets using the supplied 7/16" hardware. Torque to 80 ft-lbs. **SEE FIGURE 44** 



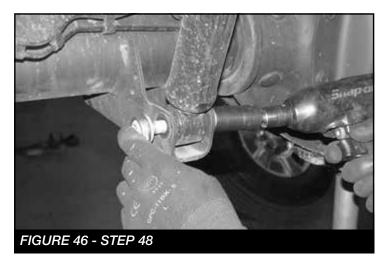
46. Locate the FT44245 Brake line extension, FT44258 nut tab and two 1/4"-20 x 1" bolts. Attach the brake line extension to the axle using one bolt and the nut tab. Attach the factory brake line bracket to the Fabtech extension. Torque to 10 ft-lbs. Repeat this step on the passenger side. **SEE FIGURES 45** 



47. Reconnect the factory sway bar. Torque to 58 ft-lbs.

#### **REAR SUSPENSION**

48. Jack up the rear end of the vehicle and support the frame rails with jack stands. Supporting the rear differential, remove and discard the rear shocks and u-bolts. Lower the axle down slowly. Use care not to over extend the brake hoses. **SEE FIGURES 46-47** 





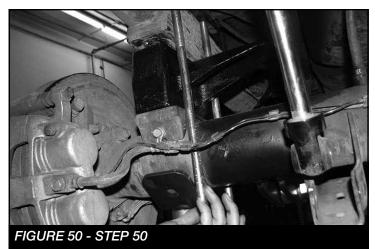
49. Locate FTBK4 (4" Block) and FT160 (Block pin sleeve). Using a drill and 3/4" bit. Drill out the centering pin hole on the block. Next, install the FT160 Sleeve onto the centering pin.SEE FIGURES 48-49



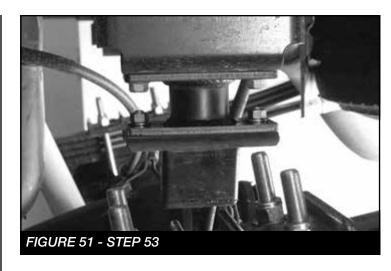


50. Install the new blocks onto the axle with the small end of the taper to the front of the truck. Using the supplied u-bolts, nuts and washers, align axle, lift block and springs and torque to u-bolts to 184 ft-lbs.

#### **SEE FIGURE 50**



- 51. Install FT811192 Dirt Logic 2.25" with the factory hardware and torque upper and lower bolts to 83 ft-lbs.
- 52. Locate the FT44412BK bump stop extension. Remove driver and passenger factory bump stop. Retain Hardware.
- 53. Install the bump stop extension to the factory mount using the factory hardware and torque to 65 ft-lbs. Using 7/16"-14 x 1-1/4" bolt, nuts and washers, mount the factory bump stop to the extension. Torque to 59 ft-lbs. **SEE FIGURE 51**



54. Locate FT30496 (Rear Brake Line bracket) Remove the hardware off the factory bracket and install the FT30496 using the factory and supplied 5/16" hardware. Torque to 21 ft-lbs. **SEE FIGURE 52** 



55. 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.

- 56. Check front end alignment and set to factory specifications. Readjust headlights.
- 57. Recheck all bolts for proper torque.
- 58. Recheck brake hoses, ABS wires and suspension parts for proper tire clearance while turning tires fully left to right.
- 59. 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.
- 60. 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.

## 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 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 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 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

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