INSTALLATION INSTRUCTIONS

	FTS22293	FORD RANGER 3.5” KIT
1	FT30847	UPPER CONTROL ARM (DRIVER)
1	FT30848	UPPER CONTROL ARM (PASS)
2	FT30846	SHOCK SPACER
2	FT20154	BALL JOINT
4	FT1500U	UBOLT 9/16-18 X 10.00 X 2.63
1	FT30849	HARDWARE SUBASSEMBLY
2	FTBK15	BLOCK 1.5”

	FT30849	HARDWARE SUBASSEMBLY
4	FT1037	UPPER CONTROL ARM BUSHING
4	FT1038	UPPER CONTROL ARM BUSHING
2	FT20836	WASHER
1	FT22293i	INSTRUCTIONS
1	FT30850	HARDWARE KIT
4	FT30870	CONTROL ARM BUSHING WASHER
4	FT30871	SLEEVE
2	FT30872	COIL SPRING SPACER
2	FT30881	SLEEVE
1	FTAS12	STICKER FT BLUE 10X4
1	FTAS16	DRIVER WARNING DECAL
1	FTLUBE	URETHANE PACKET
1	FTREGCARD	REGISTRATION CARD
4	FT622	REAR SHOCK SLEEVE

	FT30850 - HARDWARE KIT	LOCATION
4	GREASE FITTING 1/4-28	
2	M14-2.0 NYLOCK NUT	
6	3/8” SAE WASHER	
6	3/8-16 C-LOCK NUT	
4	1/2-13 X 2-3/4” HEX BOLT	
8	1/2” SAE WASHER	
4	1/2-13 C-LOCK NUT	
8	9/16” SAE WASHER	
8	9/16-18 NYLOCK NUT	
8	5/16-18 X 1” HEX BOLT	
16	5/16” SAE WASHER	
8	5/16-18 C-LOCK NUT	
1	THREAD LOCKING COMPOUND	

2019-2023 FORD RANGER 4WD

3.5” BALL JOINT UCA LIFT SYSTEM

FTS22293

NOTE: TO ORDER WEARABLE REPLACEMENT COMPONENTS DO NOT USE PART NUMBERS SHOWN ON THIS INSTRUCTION SHEET. GO TO FABTECH WEBSITE AND LOOK UP WEARABLE REPLACEMENT PARTS TO FIND THE PROPER PART NUMBER TO ORDER.

Fabtech Motorsports | 2213 Industrial Park Rd. Lancaster, SC 29720

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

- TOOL LIST -

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
- Coil Compressor

- 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.

USING FOUR-WHEEL DRIVE PER FORD MOTOR CO.

- Do not use 4H or 4L mode on dry, hard surfaced roads. Doing so can produce excessive noise, increase tire wear and may damage drive components. 4H or 4L mode is only intended for consistently slippery or loose surfaces. Use of 4L mode on these surfaces may produce some noise, such as occasional clunks, but should not damage drive components.

FOOTNOTES -

- Fits SuperCrew models only

TIRE & WHEEL SIZES -

- 275/65R17 tires w/18x9 wheels w/5” BS w/minor trimming
- 265/70R17 tires w/Factory Wheels w/minor trimming
- 255/75R17 tires w/Factory Wheels w/minor trimming
- 265/65R18 tires w/Factory Wheels w/minor trimming
- 285/55R20 tires w/20x9 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. Using an 8mm & 10mm socket, remove the ABS line and brake line brackets from the knuckle. Save hardware. **SEE FIGURES 1-2**

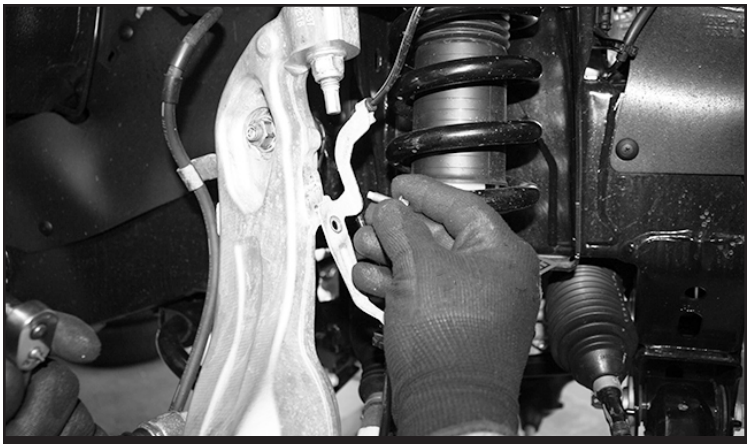


FIGURE 1 - STEP 2



FIGURE 2 - STEP 2

3. Remove the ABS sensor from the knuckle using an 8mm socket. Secure the sensor in the wheel well so it does not get damaged. **SEE FIGURES 3-4**

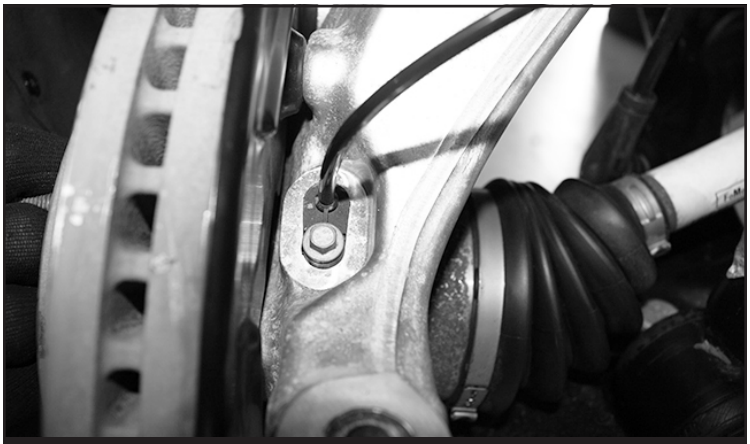


FIGURE 3 - STEP 3



FIGURE 4 - STEP 3

4. Use a 15mm socket to loosen the tie rod nut. Using a hammer strike the knuckle to unseat the tie rod, then remove the tie rod from the knuckle. Save hardware. **SEE FIGURES 3-4**



FIGURE 5 - STEP 4

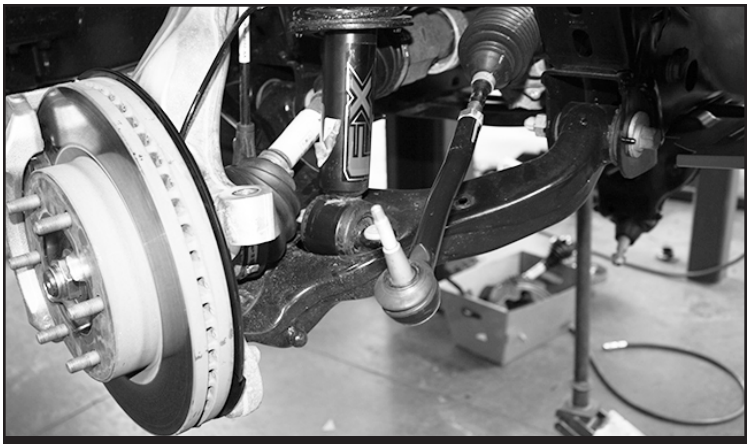


FIGURE 6 - STEP 4

5. Using an 18mm socket, remove the sway bar end link nut attaching the link to the knuckle. Then, detach the link from the back side of the knuckle. Save hardware. **SEE FIGURES 7-8**



FIGURE 7 - STEP 5



FIGURE 8 - STEP 5

6. Unbolt the caliper from the knuckle and remove. **NOTE:** Secure it to the frame so it does not hang from the hose. Then, remove the brake rotor and set aside. **SEE FIGURES 9-10**



FIGURE 9 - STEP 6



FIGURE 10 - STEP 6

7. Use a 35mm socket to remove the axle nut from the hub assembly. Save hardware. **SEE FIGURE 11**



FIGURE 11 - STEP 7

8. Using a soft metal brass punch and hammer. Tap the axle shaft untill its unseated from the hub assembly. **SEE FIGURE 12**



FIGURE 12 - STEP 8

9. Use an 18mm wrench to loosen the upper control arm ball joint nut. Strike the top of the knuckle to unseat the ball joint from the knuckle. Remove and save the nut. Make sure the CV axle is dislodged from the knuckle and let the knuckle rest to the side. **SEE FIGURES 13-15**



FIGURE 13 - STEP 9

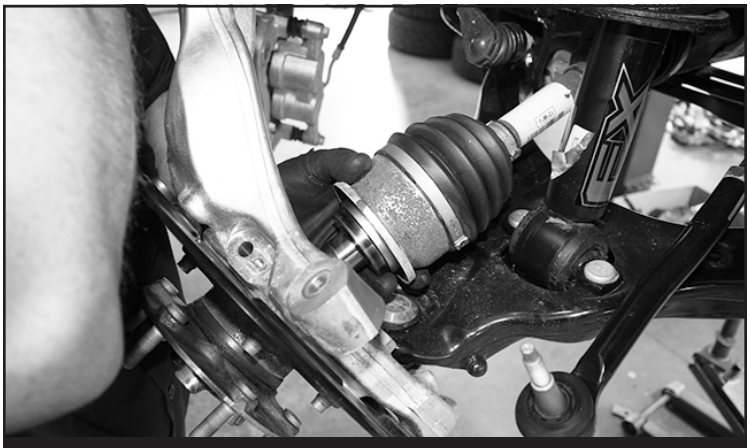


FIGURE 14 - STEP 9



FIGURE 15 - STEP 9

10. With a jack supporting the lower control arm. Use an 18mm socket to remove the two lower strut nuts on the bottom of the lower control arm. Save hardware. **SEE FIGURE 16**



FIGURE 16 - STEP 10

11. Loosen the lower control arm alignment cam bolts so the control arm can swing down freely. **SEE FIGURE 17**



FIGURE 17 - STEP 11

12. Mark a straight line down the strut top cap, spring plate and body to note correct orientation. **SEE FIGURE 18**

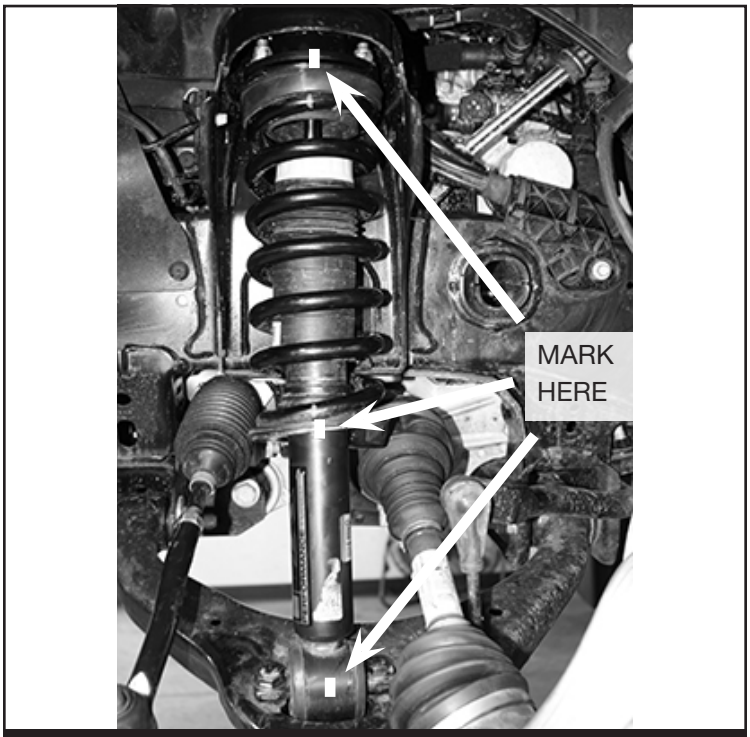


FIGURE 18 - STEP 12

13. Remove the three strut nuts from the top mount and remove the strut assembly from the vehicle. Save hardware. **SEE FIGURES 19-20**



FIGURE 19 - STEP 13



FIGURE 20 - STEP 13

14. Remove the inner fender rubber liners and save. **SEE FIGURE 21**



FIGURE 21 - STEP 14

15. Remove the factory upper control arm and save the factory bolt. Discard arm. **SEE FIGURES 22-23**

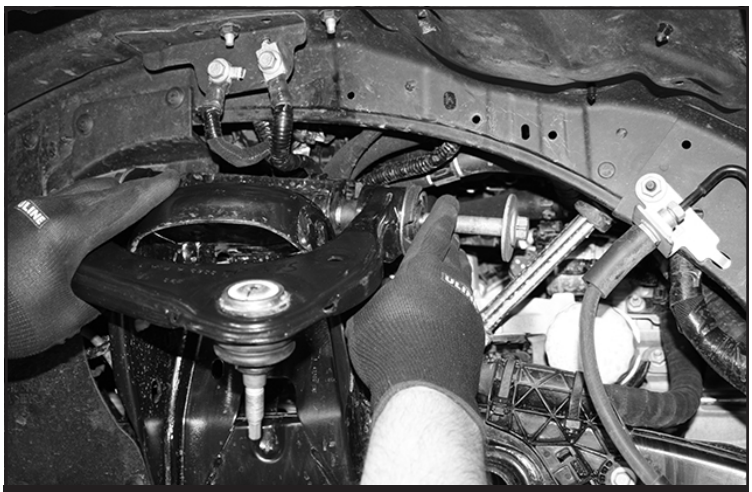


FIGURE 22 - STEP 15

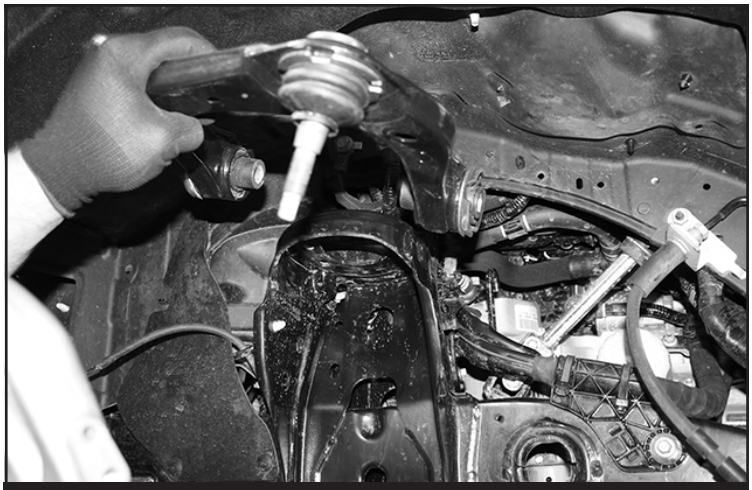


FIGURE 23 - STEP 15

16. **NOTE:** On the passenger side remove and save the upper control arm heat shield to remove the upper control arm. **SEE FIGURE 24**



FIGURE 24 - STEP 16

17. Remove the factory studs from both lower strut mounts. **SEE FIGURE 25**

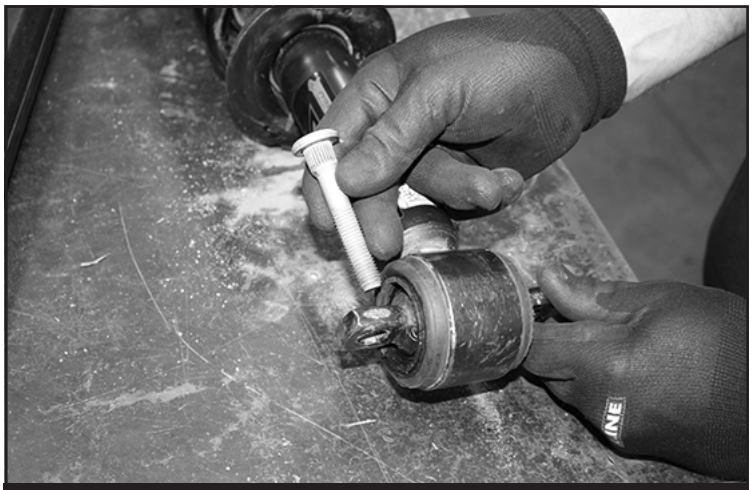


FIGURE 25 - STEP 17

18. Using a coil spring compressor. Compress the coil spring enough to release the tension off the top cap. Next, remove the top cap and set aside. **SEE FIGURES 26-28**



FIGURE 26 - STEP 18



FIGURE 27 - STEP 18



FIGURE 28 - STEP 18

19. Remove the coil spring from the strut. Next, remove the foam bumpstop. Then, remove the plastic dust cover. **SEE FIGURES 29-31**

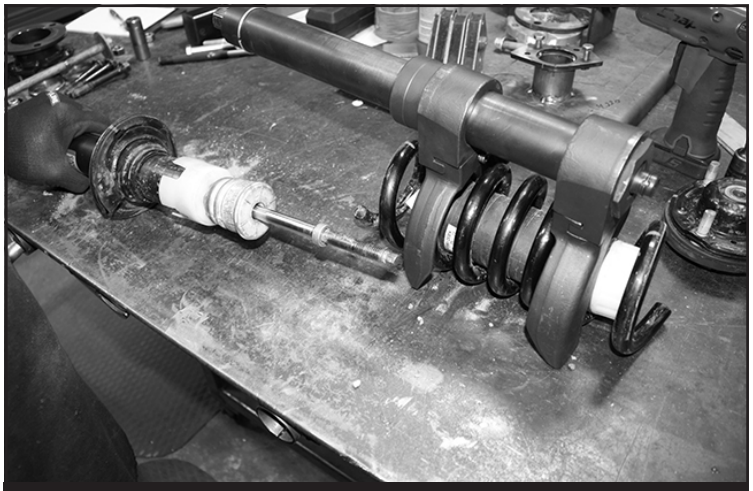


FIGURE 29 - STEP 19



FIGURE 30 - STEP 19



FIGURE 31 - STEP 19

20. Using a hammer, tap the lower spring perch untill it comes loose from the strut assembly. Remove and save. **SEE FIGURE 32**



FIGURE 32 - STEP 20

21. Install FT30872 (Spring Spacer) onto the strut with the groved end seating onto the lip on the factory strut. **SEE FIGURE 33**



FIGURE 33 - STEP 21

22. Reinstall the Lower spring perch, plastic dust cap, foam bumpstop, coil spring and upper top cap. Torque the top nut to 35 ft-lbs. Once the setup is aligned using the marks from Step 12. Rotate the top cap 60 degress in either direction then remove the spring compressor.

23. Remove the factory locator pin on the top cap and discard. **SEE FIGURE 34**



FIGURE 34 - STEP 23

24. Remove 1/4” from the end of the strut top cap studs using a cut off wheel. **SEE FIGURE 35**

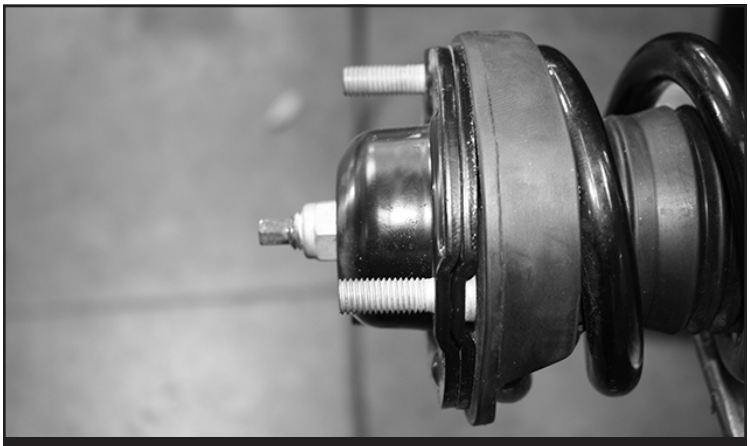


FIGURE 35 - STEP 24

25. Install FT30846 (Strut Spacer) onto the upper strut mount using the factory hardware. Torque to 53 ft-lbs. **SEE FIGURES 36-37**

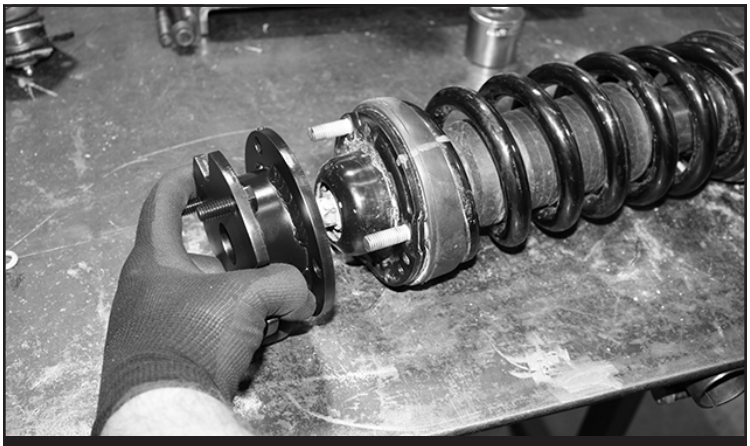


FIGURE 36 - STEP 25



FIGURE 37 - STEP 25

26. Install the strut assembly into the vehicle using the supplied 3/8” nuts and washers at the upper mount and 1/2” x 2-3/4” bolts, washers and nuts at the lower mount. Torque 3/8” hardware to 44 ft-lbs and 1/2” to 120 ft-lbs. **SEE FIGURES 38-39**



FIGURE 38 - STEP 26



FIGURE 39 - STEP 26

27. Repeat steps 17-26 on the opposite side.

28. Install the FT1037, FT1038 (Bushings), FT30871 (Sleeves) and zerk fittings into the FT30847 & FT30848 (Upper Control Arms). The excess of the sleeve will stick out on the inside. Then, Install FT20154 (Ball loints) onto the using the supplied 5/16 X 1” bolts, washers and nuts. Torque to 25 ft-lbs. **SEE FIGURES 40-42**

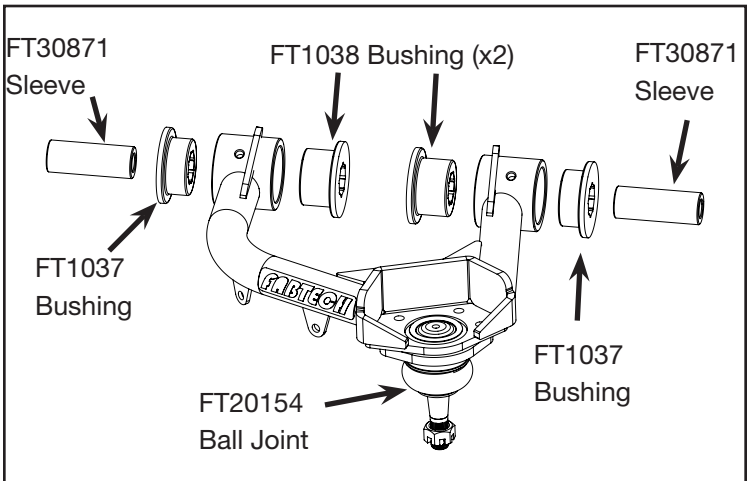


FIGURE 40 - STEP 28



FIGURE 41 - STEP 26



FIGURE 42 - STEP 26

29. Install two FT30870 (Bushing hat washer) onto each inside part of the sleeve. **SEE FIGURES 43-44**



FIGURE 43 - STEP 29



FIGURE 44 - STEP 29

30. Install the new Fabtech upper control arm using the factory bolt. **NOTE: The bolt will be installed from rear to front.** Install FT20836 (washer) on the threaded end. Hand tighten the new supplied M14 nut. Do not torque at this time. **SEE FIGURE 45**

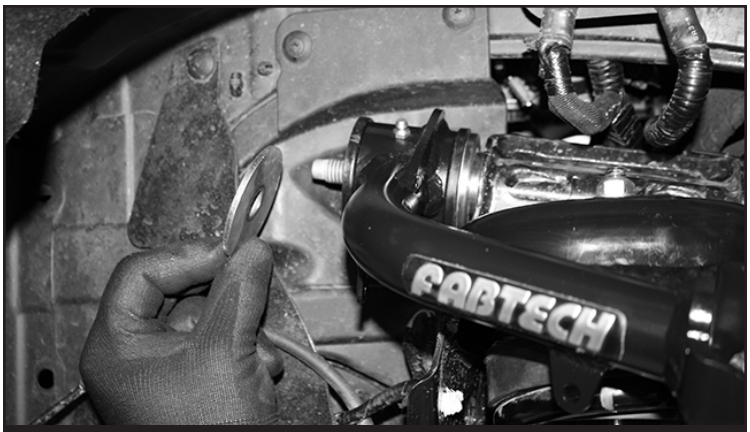


FIGURE 45 - STEP 30

31. Install the new Fabtech arm to the factory knuckle using the FT30881 (spacer), castle nut and cotter pin. Torque to 37 ft-lbs. **SEE FIGURES 46-48**



FIGURE 46 - STEP 31

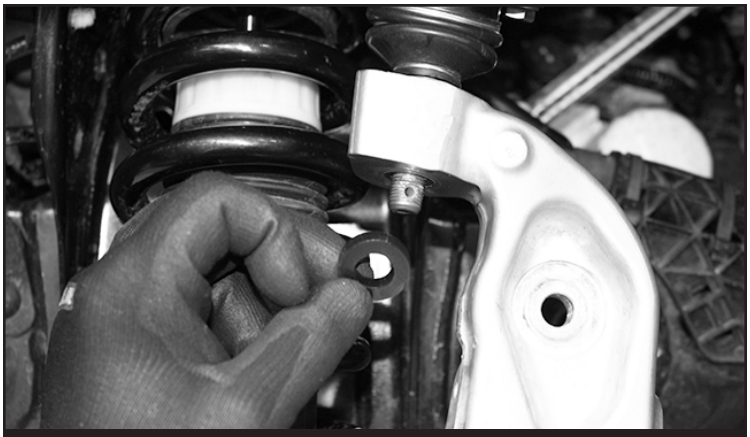


FIGURE 47 - STEP 31

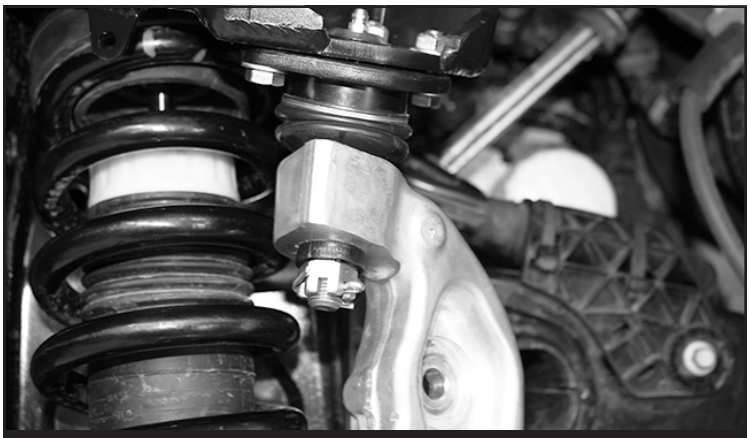


FIGURE 48 - STEP 31

32. Using thread locking compound torque the upper control arm bolt and nut to 120 ft-lbs. **SEE FIGURE 49**



FIGURE 49 - STEP 32

33. Using the supplied clamps and 1/4" hardware. Attach the ABS line to the new upper control arm at both tabs. Reattach the brake line bracket to the knuckle using the factory hardware. Torque to 12 ft-lbs **SEE FIGURES 50-51.**



FIGURE 50 - STEP 33



FIGURE 51 - STEP 33

34. Repeat steps 28-33 on the opposite side.

- REAR SUSPENSION -

35. Jack up the rear end of the truck and support the frame rails with jack stands. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE!** Remove the rear wheels/tires.

36. With the rear axle supported. Remove the rear shocks and discard. Save hardware.

37. Remove and discard the factory ubolts.

38. Lower the rear axle enough to install FTBK15 (1.5" Block) **DRIVER SIDE: The factory shim plate between the axle and factory leaf will remain installed under the new block. NOTE: The smaller taper of the block will face to the front of the vehicle. SEE FIGURES 52-53**



FIGURE 52 - STEP 38



FIGURE 53 - STEP 38

39. Install the supplied ubolts with the factory axle bracket plate and supplied 9/16" nuts and washers. Torque to 90 ft-lbs in a cross pattern sequence. **SEE FIGURE 54**



FIGURE 54 - STEP 39

40. Install the new rear shocks FT7265 (Performance) or FTS811482 (Dirt Logic) using the supplied sleeves from the FT30849 Hardware Subassembly and the factory bolts and nuts. Torque to 70 ft-lbs.

41. 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.**

42. Check front end alignment and set to factory specifications. Readjust headlights.

43. Recheck all bolts for proper torque.

44. Recheck brake hoses, ABS wires and suspension parts for proper tire clearance while turning tires fully left to right.

45. 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.**

46. 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