INSTALLATION INSTRUCTIONS

2021 GM SUV 4WD

3” UNIBALL UCA SUSPENSION KIT

FTS21289

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

	FTS21289	3” GM SUV UNIBALL UCA SYSTEM
1	FT20868	UPPER CONTROL ARM (DRIVER)
1	FT20869	UPPER CONTROL ARM (PASSENGER)
1	FT20965	REAR LINK (DRIVER)
1	FT20966	REAR LINK (PASSENGER)
1	FT20971	HARDWARE SUBASSEMBLY

	FT20971	HARDWARE SUBASSEMBLY
4	FT1037	CONTROL ARM BUSHING
4	FT1038	CONTROL ARM BUSHING
8	FT20836	WASHER
1	FT20900	HARDWARE KIT
2	FT20962	REAR LINK SPACER (FLAT)
2	FT20963	REAR LINK SPACER (CONICAL)
4	FT20964	REAR LINK MISALIGNMENT
1	FT21289i	INSTRUCTIONS
4	FT626	SLEEVE
2	FT90152	MISALIGNMENT (UPPER)
2	FT90153	MISALIGNMENT (LOWER)
1	FT90154	BEARING CAP KIT
2	FT94531	UNIBALL PIN
1	FTAS12	STICKER
1	FTAS16	DRIVER WARNING DECAL
1	FTLUBE	URETHANE GREASE PACKET
1	FTREGCARD	REGISTRATION CARD

	FT20900 - HARDWARE KIT	LOCATION
4	M14-2.0 X 100MM HEX BOLT	
8	M14 WASHER	
4	M14-2.0 C-LOCK NUT	
2	1/2” SAE WASHER	
2	1/2-20 C-LOCK NUT	
2	1/2-20 X 1” 12PT CAP SCREW	
4	1/4-28 GREASE FITTING	
1	THREAD LOCKING COMPOUND 1 MIL	

- 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

- 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.

This suspension and shocks have been designed to be installed on a stock vehicle.

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.

Installation of all fasteners requires the use of provided thread locking compound with proper torque values as indicated throughout the installation. Apply thread locking compound upon the final torque of the fastener.

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

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.

Read all warnings and warranties on the last page of these instructions before starting installation.

FOOTNOTES -

- Will not fit models with factory magneride shocks.
- Will not fit models equipped with adaptive air ride suspension.
- Will not fit vehicles equipped with super cruise

- 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. Starting with the passenger side. Disconnect the ABS wire bracket from the upper control arm and the brake line bracket from the knuckle. Save hardware. **SEE FIGURES 1-2**

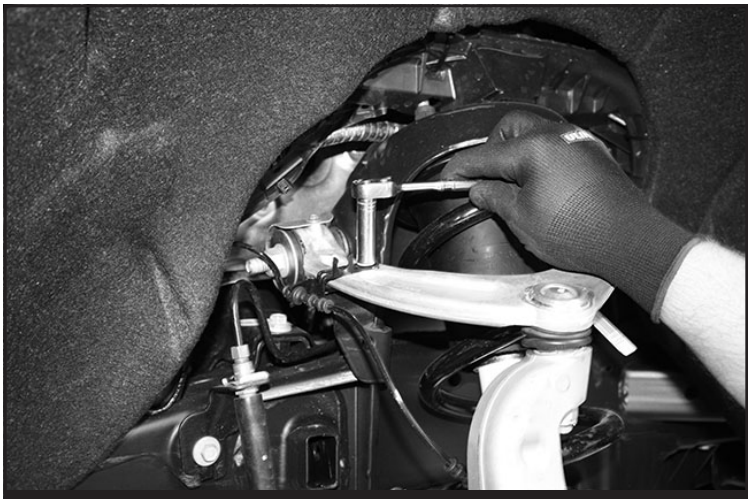

FIGURE 1 - STEP 2

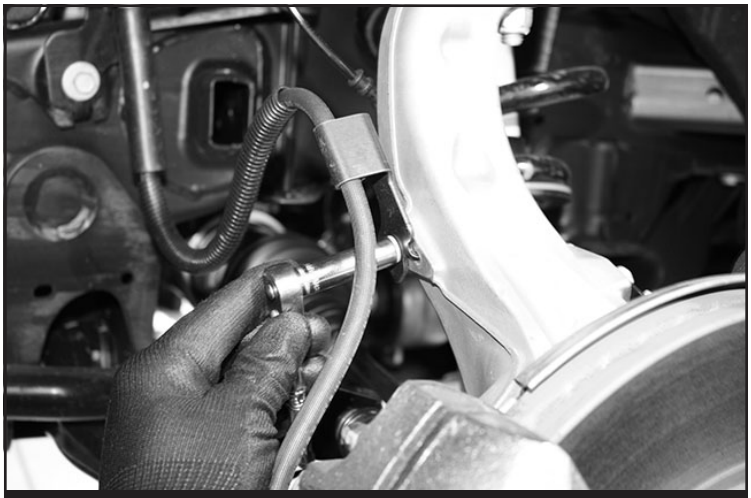

FIGURE 2 - STEP 2

3. Remove the factory tie rod end nut and strike the knuckle with a hammer till the tie rod end comes loose. Save all hardware. Use care not to hit any other parts. **SEE FIGURES 3-4**

FIGURE 3 - STEP 3

FIGURE 4 - STEP 3

4. Using a 36mm socket, remove and save the axle hub nut. **SEE FIGURE 5**

FIGURE 5 - STEP 4

5. Remove and save the sway bar link nut from the bottom side of the lower control arm. **SEE FIGURE 6**

FIGURE 6 - STEP 5

6. Loosen the upper ball joint nut and strike the knuckle with a hammer until it comes loose from the upper control arm. Next, remove the factory nut. Then, detach the knuckle from the upper control arm. Push the knuckle to the side and secure if possible. **SEE FIGURE 7**

FIGURE 7 - STEP 6

7. Locate the plastic wire harness channel on the top of the passenger side coilover mount. Push it up and back to allow access to the three coilover nuts. Remove the upper coilover nuts. **SEE FIGURE 8**

FIGURE 8 - STEP 7

8. Remove the two lower coilover bolts. Then remove the coilover assembly from the vehicle. **SEE FIGURES 9-10**

FIGURE 9 - STEP 8

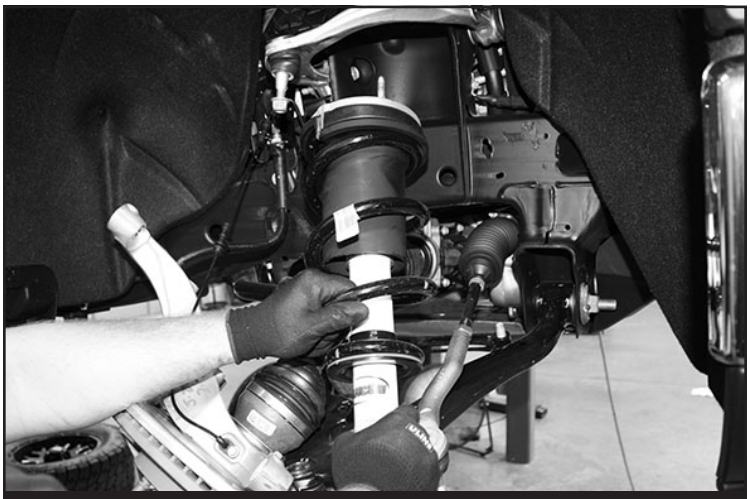

FIGURE 10 - STEP 8

9. Remove the factory upper control arm from the vehicle and save the hardware. Repeat steps 1-9 on the driver side.

10. Locate the new Fabtech control arms, two FT1038 bushings, two FT1037 bushings, two FT84 grease zerks, and two FT626 sleeves. Using the supplied grease packet, grease the bushings and sleeves before installing into the control arm. **SEE FIGURE 11**

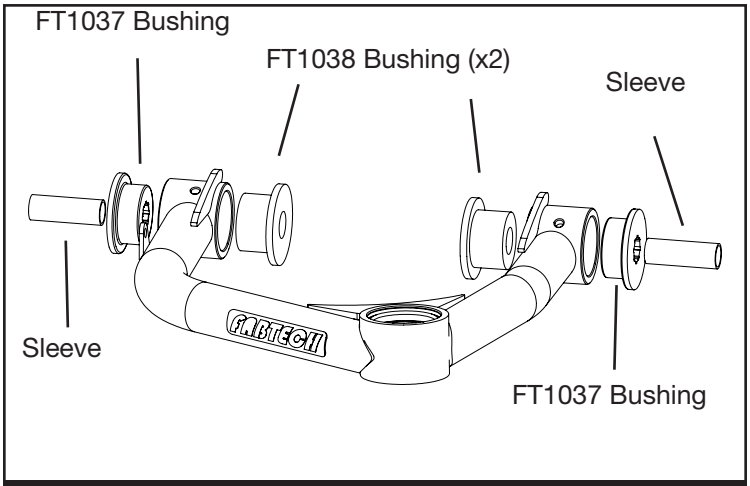

FIGURE 11 - STEP 10

11. Locate the factory bumpstop tabs on the frame mount. Using a cutoff wheel remove this tab completely off the mount and sand to a smooth finish. **SEE FIGURES 12-13**

FIGURE 12 - STEP 11

FIGURE 13 - STEP 11

12. Install the FT20868 (Driver) & FT20869 (Pass) upper control arms using the supplied M14 hardware. Install the bolts with the bolt head inside the tower and the threaded end outside. **NOTE: When installing the arms, install a FT20836 (washer) on both sides of the bushings. Do not tighten at this time. Final locktite/ torque procedure will be done at step 16. SEE FIGURE 14**

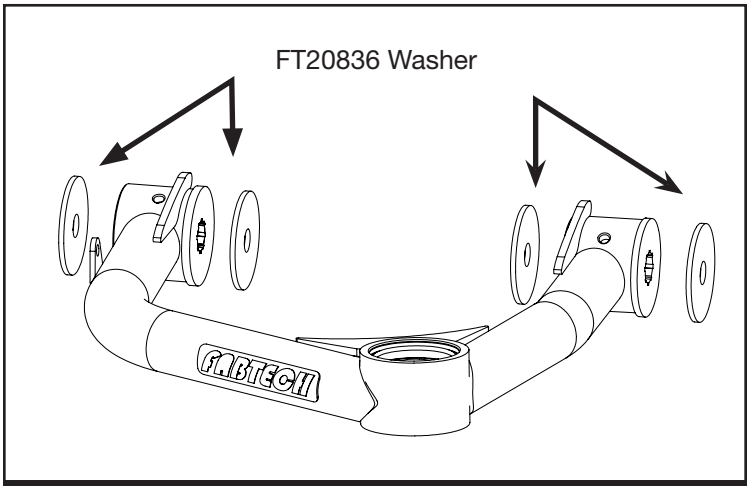

FIGURE 14 - STEP 12

- Use instructions supplied in the coilover box for installation of the Dirt Logic coilovers.

13. Install FT90153 (Lower misalignment) onto FT94531 (Uniball Pin). Then, install into the factory control arm using the supplied 1/2" nut and washer. Torque the nut to 120 ft-lbs. using a 15/16" open end wrench on the pin end. **SEE FIGURE 15**

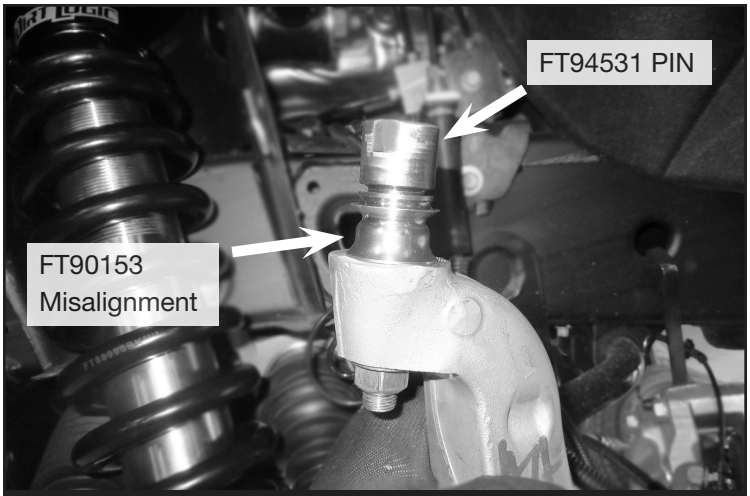

FIGURE 15 - STEP 13

14. Attach the new upper control arm to the knuckle by inserting the FT90152 (Upper misalignment) into the uniball bearing then the 1/2-20 - 12 point bolt. Torque to 120 ft-lbs. Install FT90154 (Bearing cap). **SEE FIGURE 16**

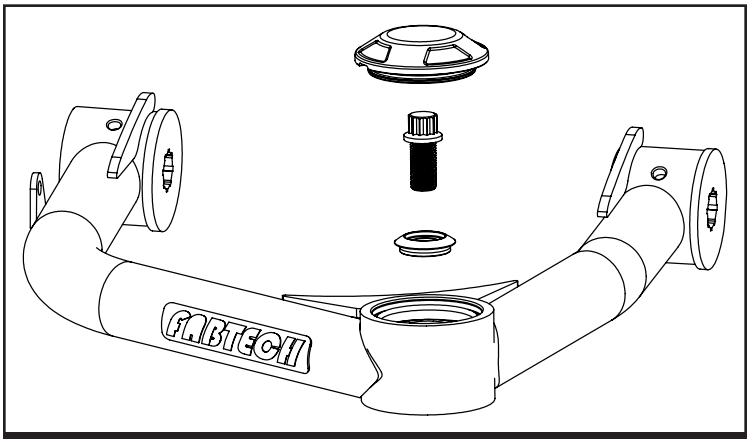

FIGURE 16 - STEP 14

15. Repeat steps on the opposite side.

16. Using the supplied thread lock torque the upper control arm frame pocket hardware to 148 ft-lbs. **NOTE: Removal of the nut may be necessary to install the thread lock compound.**

REAR SUSPENSION

17. Remove the factory rear link from the frame and the knuckle. Save hardware. **SEE FIGURE 17**

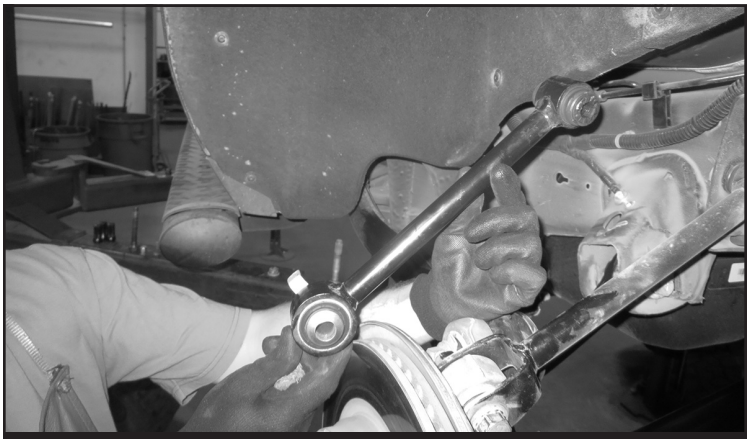

FIGURE 17 - STEP 15

18. On the new FT20965 (Driver link arm). Install two FT20964 (misalignments) into the most angled side of the new link. Then install one FT20962 (flat misalignment) & one FT20963 (conical misalignment into the other end. Install the new link using the factory hardware. Torque to 153 ft lbs. **NOTE: The conical side will be installed to the knuckle. SEE FIGURES 18-19**

FIGURE 18 - STEP 16

FIGURE 19 - STEP 16

19. With the lower control arm supported remove the lower strut hardware and save. Then remove and save the hardware attaching the lower control arm to the knuckle. **SEE FIGURE 20**

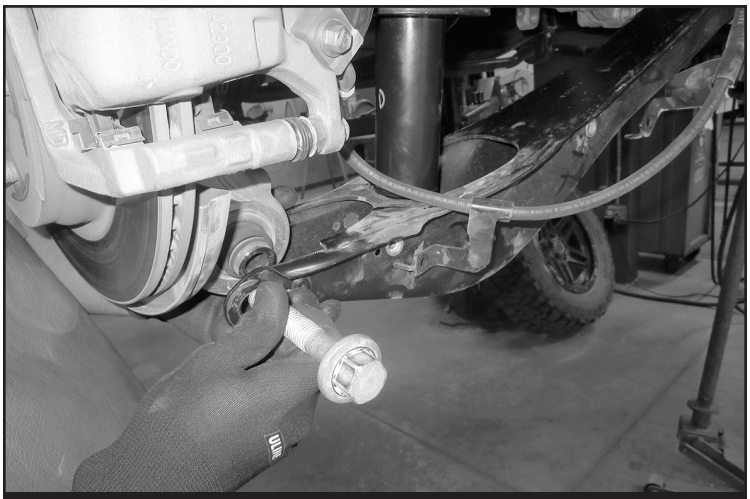

FIGURE 20 - STEP 17

20. Remove and save the upper strut hardware then remove the strut from the vehicle. **SEE FIGURE 21**

FIGURE 21 - STEP 18

21. Use instructions provided in the FTS21291 box for installation of the strut spacers or FTS21293 for the Dirt Logic Coilovers.

22. Re install the strut using the supplied 7/16” hardware for the upper mount and the factory hardware for the lower. Torque the upper hardware to 62 ft-lbs and the lower to 106 ft-lbs.

23. Reinstall the lower control arm to knuckle hardware and torque to 160 ft-lbs.

24. Repeat steps for the passenger side.

25. 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.

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

27. Recheck all bolts for proper torque. **RE-TORQUE ALL NUTS, BOLTS AND LUGS AFTER 50 MILES AND PERIODICALLY THEREAFTER UNTIL TORQUE VALUES ARE RETAINED.**

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

29. 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.**

30. Check ball joints, uniballs bearings, bushings and all steering components every 2500-5000 miles for wear and replace as required.

31. Install Driver Warning Decal. Complete product registration card and mail to Fabtech in order to receive future safety and technical bulletins on this suspension.

32. Review all included warnings and warranties with consumer

For technical assistance call: **909-597-7800**

- Product Warranty & 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, Uniball bearings, 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 take apart shocks are considered a serviceable shock with a 1-year warranty against any manufacturer's defects. If a shock fails within the initial year of ownership, the owner must ship the shock to Fabtech for inspection and service. If after examination the shock is determined to have failed due to neglect, damage caused by improper installation, or any reason other than "normal wear and tear," the owner of the shock will be responsible for all service costs. Costs include labor, parts, and shipping. 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. This warranty does not include coverage for police, taxi, first responder vehicles, race vehicles, or vehicles used for government, commercial or fleet 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.

Oversized tires and wheels may decrease the vehicle's braking capacity. Drivers should always brake early and be aware of the increased the stopping distance of the vehicle. Drivers should adjust their driving habits to the effectiveness of the braking. Adjust your driving habits to these changes.

Failure to drive safely may result in serious injury or death to driver and passengers. Driver and passengers must ALWAYS wear your seat belts, avoid quick sharp turns and other sudden maneuvers