

2007-2013 7'' CHEVY / GMC, TAHOE, SUBURBAN AVALANCHE 4WD BASIC KIT

C8500-4 COMPONENT BOX 1

1) 8508 Front X Member
 1) 8509 Rear X Member
 1) 8550 Left Compression Strut
 1) 8551 Right Compression Strut
 1) 8504L Left Sway Bar Drop Bkt
 1) 8504R Right Sway Bar Drop Bkt
 2) T538 Tie Rods
 2) 8507 Sway Bar Extensions
 1) 8502 Driver Diff Drop
 1) 8503 Passenger Diff Drop
 2) 8501 6 Bolt Axle Spacers
 2) 8510 Strut Extensions (Large Bore)
 1) Hardware

C8500 LH/RH STEERING KNUCKLE

1) 8500L Left Hand Knuckle 1) 8500R Right Hand Knuckle C8500-3B REAR TAHOE KIT 2) 6.25'' Rear Coil Spacers

2) Shock Brackets
 2) Shock Brackets
 1) Track Bar Bracket
 2) 15" Sway Bar End Links
 3) 9/16" X 3 ½" Bolts
 3) 9/16" Nylocks Nuts
 1) 1/2" X 1 ½" Bolts
 1) 1/2" Nylocks Nuts
 2) 1/2" Washers
 6) 9/16" Washers
 6) 7/16" X 1 ¼" Bolts
 6) 7/16" Nylock Nuts
 6) 7/16" Nylock Nuts

HARDWARE BAG 1

2) 5/8 X 5" Bolts
2) 5/8 X 6" Bolts
2) 5/8 X 2" Bolts
6) 5/8 Nylock Nuts
12) 5/8 Washers
2) 7/16 X 1 ¼" Bolts
2) 7/16 Nylock Nuts
4) 7/16 Washers
6) 3/8 X 1 1/2 Bolts
6) 3/8 Nylocks
16) 3/8 Washers
4) 10mm Nylock Nuts

HARDWARE BAG 2

2) 1/2 X 2 Bolts
 2) 1/2 Nylocks
 4) 1/2 Washers
 2) 5/8 X 2" Bolts
 2) 5/8 Nylock Nuts
 4) 5/8 Washers
 12) 10mm X 50mm Axle Bolts

HARDWARE BAG 3

5) 5/16 X 1" Bolts
5) 5/16 Nylocks
10) 5/16 Washers
2) 8511 Front Brake Line Bkts
1) 8512 Rear Brake Line Bkt

Rear Sway Bar End Link Hardware

2) 1/2 X 3" Bolts 2) 1/2 Nylock Nut

4) 1/2 Washers

- 4) Sway Bar End Link Bushings
- 4) Sway Bar End Link Sleeves



ALTERING THE FINISH OF THESE COMPONENTS FOR EXAMPLE; CHROMING, ZINC PLATING OR PAINTING. CHANGING THE FINISH CAN CAUSE STRUCTURAL FATIGUE OF COMPONENTS AND IS NOT RECOMMENDED.

VEHICLES THAT RECEIVE OVERSIZED TIRES SHOULD CHECK BALL JOINTS, TIE RODS ENDS AND IDLER ARM EVERY 2500-5000 MILES FOR WEAR AND REPLACE AS NEEDED

CHECK ALL PARTS INCLUDED IN THIS KIT TO THE PARTS LIST ABOVE BEFORE BEGINNING INSTALLATION OF THE KIT. IF ANY PIECES ARE MISSING, CONTACT UR DEALER 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 THE FRONT END ALIGNMENT MUST BE 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.

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

THIS LIFT RECOMMEND'S 17X8 WHEEL WITH A 5" OR LESS BACK SPACING WITH A 35x12.50r17 TIRE

BE SURE TO USE THREAD LOCKING COMPOUND ON ALL HARDWARE.

FRONT SUSPENSION INSTRUCTIONS:

1. Disconnect the negative terminal on the battery. With the vehicle on level ground and the emergency brake set, block the rear tires. Jack up the front end of the truck and support the frame rails with jack stands. Remove the front tires. **NEVER WORK UNDER AN UNSUPPORTED VEHICLE**

2) Disconnect the tie rod ends from the steering knuckle by striking the knuckle to dislodge the tie rod end. Use care not to damage the tie rod end when removing.

3) Unplug the ABS brake connection from the frame and control arm. Remove the brake hose bracket from the steering knuckle. Remove the brake hose bracket from the coil bucket and save hardware. Remove the caliper from the rotor and secure the brake caliper to the frame out of the way. **DO NOT ALLOW THE BRAKE CALIPER TO HANG FROM THE BRAKE LINE HOSE**.

4) Remove the wheel stud clips and discard. Remove bearing cover, axle nut, washer, and rotor with hub bearing. (DO NOT REMOVE THE HUB FROM THE ROTOR). Retain parts and hardware for reinstallation.

5) Remove the upper and lower ball joint nuts. Disconnect the upper and lower ball joints from the steering knuckle by striking the knuckle with a large hammer next to each ball joint on the knuckle to dislodge the ball joints. Use care not to hit the ball joints when removing. Save nuts and discard knuckle.

6) Remove and discard the factory brake line bracket from the brake hose that attached the hose to the upper control arm.

7) Disconnect and remove CV axles from differential housing and remove the sway bar end-links and sway bar (note the direction the sway bar came off the vehicle as it will need to be flipped over when it is re-installed) Also remove the lower control arms from the frame and retain with the hardware for reinstallation.

8) Remove front factory differential skid plate and discard.

9) Disconnect front driveshaft from differential housing and retain bolts and u joint clamps for reinstallation. Locate, remove, and discard the factory rear cross member with hardware.

10) Disconnect the electrical connection including the two retaining clamps and the vacuum line from differential housing. Remove differential housing assembly from vehicle. Retain hardware for reinstallation.

11) Locate the rear driver lower control arm mount on the frame. Measure $3\frac{1}{4}$ from the inside edge of the mount toward the frame and mark with a paint pen. Use a sawzall and cut the mount from the frame as shown in picture below.

12) Locate the rear passenger lower control arm mount on the frame. Using a sawzall. trim frame as shown in picture below.

13) Locate the front differential. The diff will need to be trimmed for proper clearance as shown in picture below.

14) Locate 8502 (Driver) & 8503 (Passenger) side Diff. brackets and the factory diff hardware. Install the brackets to the factory mounts with the taller part of the brackets to the front of the truck with the factory hardware. Using the supplied $\frac{1}{2}x^2$ And $\frac{5}{8x^2}$ hardware. Install the diff onto the new drop brackets using $\frac{1}{2}$ " hardware on the driver side & $\frac{5}{8}$ on the passenger side as shown in picture below. Torque the stock & $\frac{1}{2}$ hardware to 75 ft lbs & the $\frac{5}{8}$ to 95 ft lbs. re-connect the electrical and vacuum connections back onto the diff. **Check the clearance of the diff to the frame in sanded spots for adequate clearance to the frame and cross member.** And reattach the driveshaft to the differential yoke using the stock hardware and torque to 19 ft lb

15) Locate front cross member 8508 & rear crossmember 8509 and install into the factory lower control arm pockets using the stock hardware leave loose at this time. Check the clearance of the diff to crossmember where it was sanded for adequate clearance to the frame and crossmember.

16) Using a Die grinder with Cutoff wheel. Cut the Stock Bushing off the lower shock body RIGHT ON THE WELDED. As shown in picture below. DO NOT DISGAURD BUSHING IT WILL BE NEEDED FOR INSTALATION

17) Install lower control arms into the new crossmembers using the 5/8"x5" hardware in the front pocket and 5/8"x6" into the rear pocket. Install 8550 and 8551 compression struts to the back side of the lower control arm 5/8 bolt and connect to the bottom of the transmission crossmember with 7/16" hardware. Leave loose at this time.

18) Torque the cross member frame pocket bolts to 125 ft lbs

19) Locate the FTS strut extensions 8510 and hardware kit 8525. Using a belt sander, clean up the stock lower bushing that was cut off in step 16. Slide the stock bushing into the FTS strut extension as show in pic below

20) Slide shock extensions over body of factory shocks with the clamping tabs towards the inside of the truck using supplied $3/8 \times 1$ ¹/₄ hardware install into clamping tabs do not tighten at this time. Using the stock hardware connect shock extensions to lower control arms and tighten. Using a jack or stand under the lower control arm load the coil over and Torque 3/8 Hardware to 30 ft lbs as shown in picture below.

21) Connect CV axles to front differential using the 8501 CV spacers between the CV axle and the differential housing with supplied 10mm x 50mm hardware and torque to 45 ft lbs. in a cross pattern as shown in picture below.

22) Locate the steering knuckle 8500R & 8500L. Attach the lower control arm to the knuckle using the stock hardware and torque to 70 ft lbs. Attach the upper control arm to the new knuckle using the factory hardware and torque to 35 ft lbs as shown in picture below. Then Torque the 5/8 lower control arm bolts to 110 ft lbs.

23) Reinstall the rotor and hub bearing assembly using the stock hardware and torque flange bolts to 125 ft lbs. and the axle nuts to 150 ft lbs. then install bearing cover .Reinstall brake caliper.

24) Locate T538 outer tie rods. Loosen the jam nut and remove the factory outer tie rods and discard, leaving the factory jam nut on the inner tie rod. Install the new outer tie rod onto the inner tie rod until it makes contact with the jam nut. Attach new tie rod end to the knuckle with the supplied nut and torque to 40 lbs. (A final alignment must be performed upon completion of suspension system)

25) Locate 8504L(Driver),8504R (Pass) Sway Bar Frame Bracket, and four 10mm stock CV axle bolts with supplies washers. Position the frame bracket on the frame so that sway bar will be farther back from the suspension and attach with

the 10mm hardware. Locate the factory sway bar with the factory mounts and attach to the new brackets using the Stock bolts and supplied nuts (sway bar must be flipped over) and torque to 35ft lbs. as shown in picture below.

26) Locate 8507 Sway Bar Extension Mounts and the supplied $5/8 \times 2^{\circ}$ hardware. Position the Sway Bar Mount so that it is on the bottom of the sway bar with the SHORTER side of the mount against the stop plate end of the mount. Attach with the 5/8 hardware and torque to 135 ft lbs. Locate the factory sway bar end links and attach to the new mount and the lower control arm. As shown in picture below.

27) Locate 8511 Brake Line Bracket and 5/16"x 1" hardware. Position the new bracket into the factory brake line bracket location and attach with the factory hardware and the 5/16" hardware. Attach the factory brake line bracket to the new bracket. **Carefully** bend the hard brake line and attach with the supplied 5/16" hardware. Torque to 15 ft-lbs.

28) Re-route the brake hose and the ABS Line to the steering knuckle using the adel clamp to the back of the steering knuckle and attach with stock hardware Torque to 10 ft lbs. Route the ABS line next to the brake hose. Re-connect the ABS line to the harness in the wheel well. Using plastic ties secure line to the hose and away from the tire and wheel.

REAR SUV SUSPENSION INSTRUCTIONS:

1.) 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, u bolts and blocks. Disconnect the brake line bracket at the differential and save the hardware. Remove the ABS line clip from the top of the frame and at the axle. Remove the e-brake cable bracket on the driver's side of the frame and save the hardware. Lower axle down slowly. Use care not to over extend the brake hose.

2.) Disconnect the sway bar end links from the frame and sway bar; discard the end links, save the hardware. Remove the Bolt securing the brake line support tab to the differential housing and save. Remove the ABS wiring from the frame mounts on both sides. Save all the hardware.

3) Using a floor jack, raise the differential just enough to slightly compress the rear shocks. Remove the bolts securing the top of the shocks to the frame (if equipped with the Auto Ride System, unplug the electric and air line connections). Remove the lower pivot bolt that attaches the track bar to the axle bracket and save.

4) Lower the floor jack to release the coil springs. Remove the coil springs from the vehicle and save the rubber upper and lower coil insulators.

5) Install the rear coil spacer to the frame using the $7/16 \times 1\frac{1}{4}$ " hardware.

6) Position the trac bar bracket into the factory mount on the axle and install with the factory bolt and hardware. Leave loose. Using a drill with a $\frac{1}{2}$ " bit, drill the holes in the factory track bar mount that lines up with the hole in the track bar bracket. Install the $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " hardware. Insert the 9/16" x 3 $\frac{1}{2}$ " bolt into the trac bar bracket. Torque the 9/16" hardware to 95 ft-lbs and the $\frac{1}{2}$ " hardware to 70 ft-lbs.

7) Place a floor jack under the rear axle. Set the upper coil insulator on top of the coil spring and position the top of the coil into the frame pocket. Push the bottom of the coil spring onto the axle pad and raise the floor jack under the axle to hold the coil spring in position. Repeat this with the opposite coil spring.

USE CAUTION WHEN WORKING WITH COIL SPRING COMPRESSORS, THEY CAN BE UNDER EXTREME LOAD

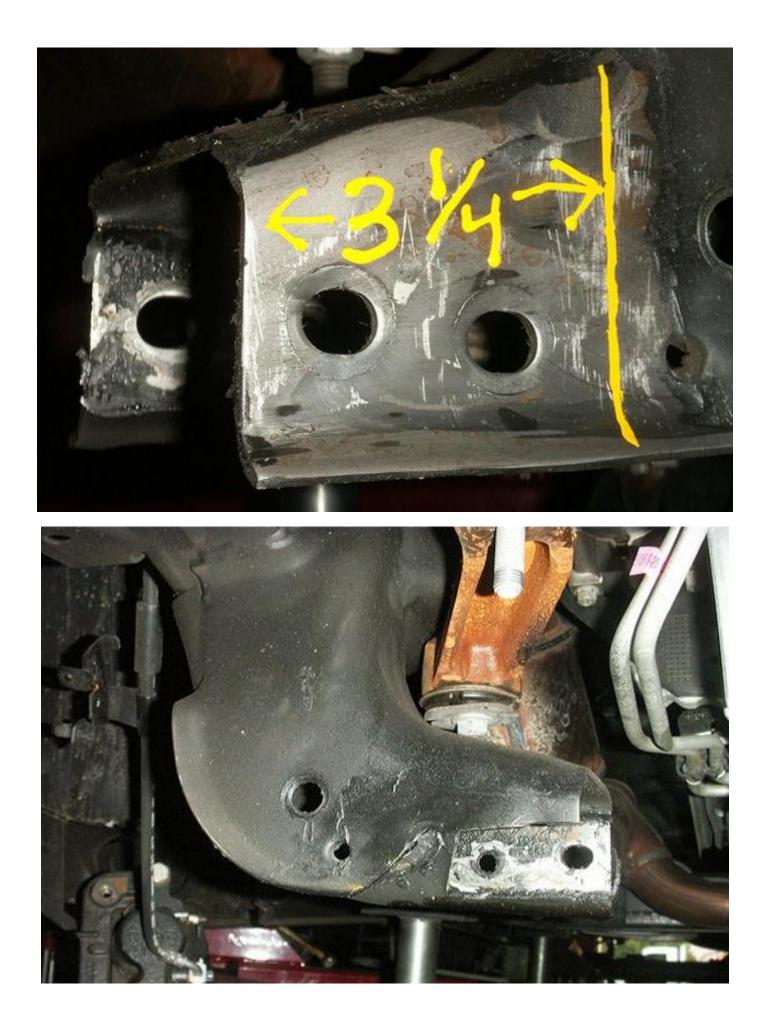
8) Install lower shock bracket as show in picture below using 9/16" x 3 ¹/₂" hardware

9) Connect the top sway bar end link using the factory hardware and the bottom of the sway bar end link onto the sway bar using the supplied $\frac{1}{2}$ " x 3 bolts, $\frac{1}{2}$ " flat washers and nylock nuts. Install the brake line extension tab using the original bolt and the supplied $\frac{5}{16}$ " hardware.

10) Recheck all bolts for proper torque. Recheck brake hoses and lines for proper clearances.

11) 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 tires may require trimming of the front plastic bumper valance.

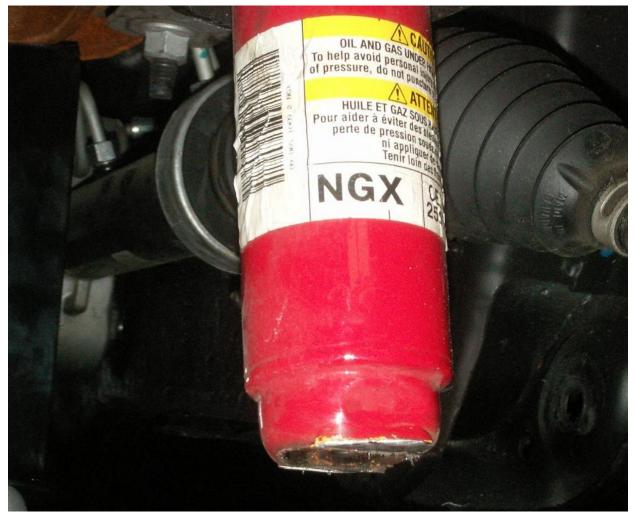
9.) Check front end alignment and set to factory specifications. Re-adjust headlights.













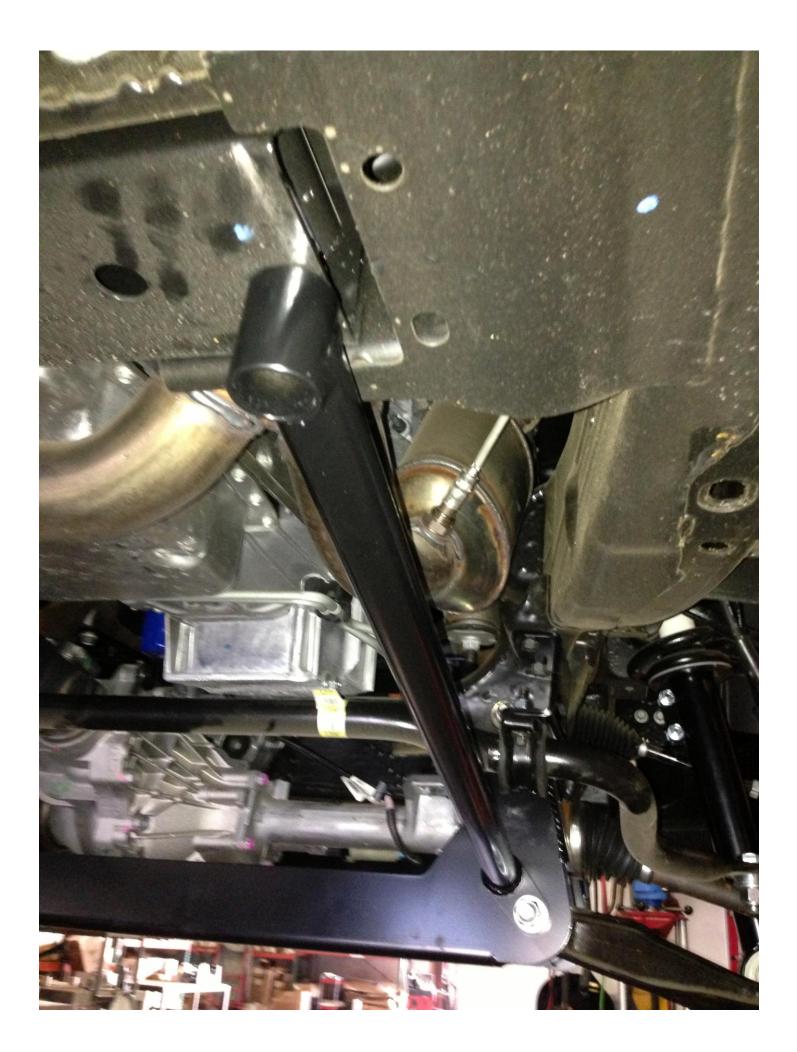








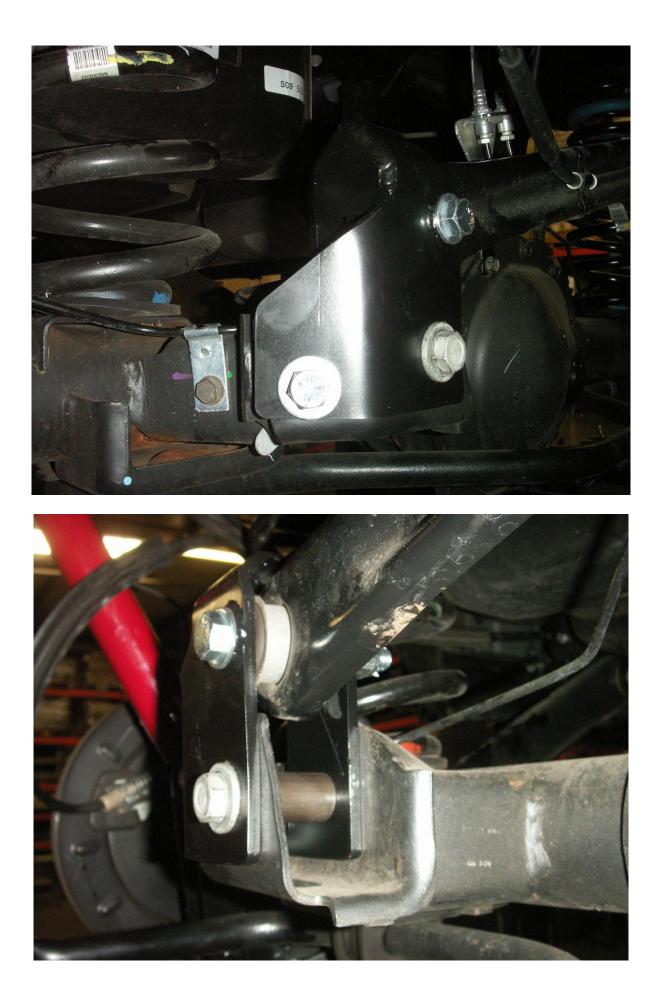














Product Warranty and Warnings-

FTS 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 FTS 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.

Reservoir 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.

FTS does not warrant any product for finish, alterations, modifications and/or installation contrary to FTS 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.

FTS 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.

FTS 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,

FTS cannot be responsible for 100% compatibility, including the fitment of tire and wheel sizes listed. The Tire and Wheel sizes listed in FTS's catalog are only a guideline for street driving with noted fender trimming. FTS is not responsible for damages to the vehicle's body or tires.

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It is the responsibility of the distributor and/or the retailer to review all warranties and warnings of FTS products with the consumer prior to purchase.

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Full Throttle Suspension has a no refund return policy. Under special circumstances, returns might be accepted with prior written approval. All returned product will be shipped freight prepaid. Product returned is subject to a 40% restocking fee. No returns will be accepted after 30 days upon receipt of product.

Thank You for choosing Full Throttle Suspension Tech support 559-271-8685 or send email to <u>fts.dwgs@gmail.com</u>