



# SUPERLIFT®

## S U S P E N S I O N

### Superlift® 4" King Coilover System for 2008 - 2010 FORD F-250 / F-350 SUPER DUTY 4WD INSTALLATION INSTRUCTIONS

#### INTRODUCTION

Installation requires a professional mechanic. Prior to beginning, inspect the vehicles steering, driveline, and brake systems, paying close attention to the suspension link arms and bushings, anti-sway bars and bushings, tie rod ends, pitman arm, ball joints and wheel bearings. Also check the steering sector-to-frame and all suspension-to-frame attaching points for stress cracks. The overall vehicle must be in excellent working condition; repair or replace all worn parts.

**Read instructions several times before starting. Be sure you have all needed parts and know where they install. Read each step completely as you go.**

#### NOTES:

- Front end realignment is necessary.
- An arrow on diagrams indicates which direction is toward the front of the vehicle.
- A foot-pound torque reading is given in parenthesis ( ) after each appropriate fastener.
- Do not fabricate any components to gain additional suspension height.
- Prior to drilling or cutting, check behind the surface being worked on for any wires, lines, or hoses that could be damaged.
- After drilling, file smooth any burrs and sharp edges.
- Prior to operating a torch or saw, protect any heat-sensitive components located in the immediate area by covering them with a water-saturated cloth. Most undercoating are flammable but can be extinguished using a water-filled spray bottle. Have a spray bottle and an ABC rated fire extinguisher on hand.
- Paint or undercoat all exposed metal surfaces.
- Prior to attaching components, be sure all mating surfaces are free of grit, grease, undercoating, etc.
- A factory service manual should be on hand for reference.
- Use the check-off box "☐" found at each step to help you keep your place. Two "☐☐" denotes that one check-off box is for the driver side and one is for the passenger side. Unless otherwise noted, always start with the driver side.

**PARTS LIST ...** The part number is stamped into each part or printed on an adhesive label. Identify each part and place the appropriate mounting hardware with it.

<b>PART NO</b>	<b>DESCRIPTION</b> (Qty.- if more than one)	<b>NEW ATTACHING</b> (Qty.- if more than one)	<b>BAG #</b>
66-07-9064 .....	(2) compression stop extension, front	(2) 3/8" x 5-1/2" bolt (4) 3/8" SAE washer (2) 3/8" nyloc nut	77-9064-2
66-09-9000.....	radius arm, ..... driver side	(1) 18mm x 130mm bolt (2) 18mm washer (2) 18mm nyloc nut (1) Cam Bolts (1) Zip Tie	77-9500
66-10-9000.....	radius arm, ..... passenger side	(1) 18mm x 130mm bolt (2) 18mm washer (2) 18mm nyloc nut (1) Cam Bolt (1) Zip Tie	77-9500
55-03-9064.....	(2) anti-sway bar link .....	(4) hourglass bushing (4) 3/4" OD x 1-11/16" sleeve	77-9064-1
55-01-9062.....	front track bar bracket		
55-04-9066.....	steering stabilizer bracket		
55-05-9024.....	(2) track bar key		77-9064-2
SL5146.....	King Front Coilovers		
SL5171.....	King Rear Shocks		
00461 .....	decals, "Warning To Driver"		

## INSTALLATION PROCEDURE

### 1) PREPARE VEHICLE...

- Prior to raising the vehicle, disconnect the track bar from its attachment point on the frame and let the bar hang. Save all hardware for re-use.
- Disconnect the anti-sway bar links from their attachment points on the sway bar and the front axle. Discard the links but save all hardware for re-use.
- Place vehicle in neutral. Raise front of vehicle with a jack and secure a jack stand beneath each frame rail, behind the radius arm mounts. Ease the frame down onto the stands, place transmission in low gear or "park", and chock rear tires. Remove front tires.

### 2) CONTINUE DISASSEMBLY...

**NOTE:** Save all hardware for re-use unless noted

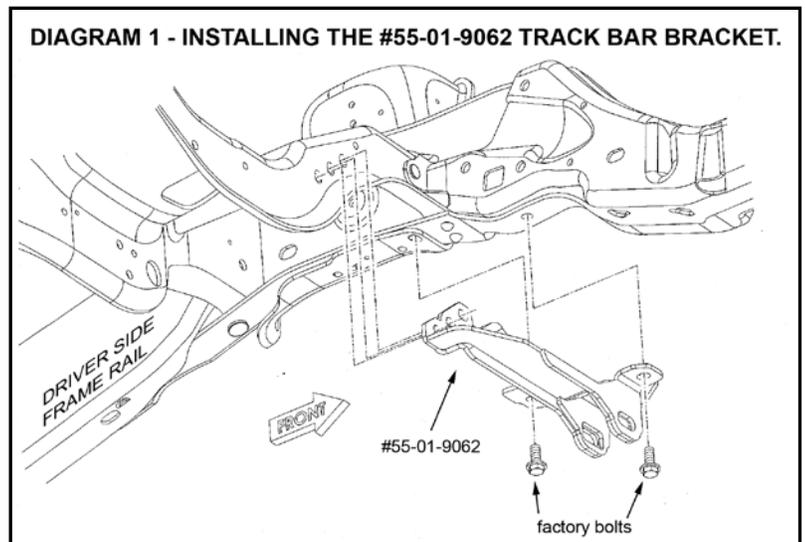
- Position a jack so that it supports, but does not raise, the front axle.

- Remove and discard the front shock absorbers.
- Unbolt the stem end of the front steering stabilizer from the frame mount.
- Unbolt the factory steering stabilizer bracket from the crossmember.
- Position the Superlift steering stabilizer bracket (#55-04-9066) on the frame in the same place as the original bracket and secure using the factory hardware. Tighten to factory specs.
- Remove the cotter pin and castellated nut from the drag link where it attaches to the pitman arm. Using the appropriate puller tool, separate the drag link from the pitman arm.
- Unbolt the bracket securing the front brake hose to the frame.
- Unbolt the lower brake hose bracket securing the hose to the axle.
- Carefully lower the front axle enough to facilitate the removal of the front coil springs.
- Unbolt the factory lower coil mount and discard.
- Unbolt the factory track bar bracket from the frame.

### 3) TRACK BAR BRACKET...

**NOTE:** Inspect the area of the frame crossmember where the track bar bracket attaches. Often there is an excessive amount of undercoating build-up on the crossmember, especially on the back (rearward facing) portion of the crossmember where the undercoating has pooled up. Scrape off any excessive undercoating to prevent the track bar bracket from loosening over time.

- [DIAGRAM 1] Position the Superlift® track bar bracket (#55-01-9062) on the frame in the same place as the original and secure using the factory hardware. There are a total of five bolts; three attached to a retaining tab plus two additional bolts. Once all the bolts are started, tighten (136).



### 4) RADIUS ARMS...

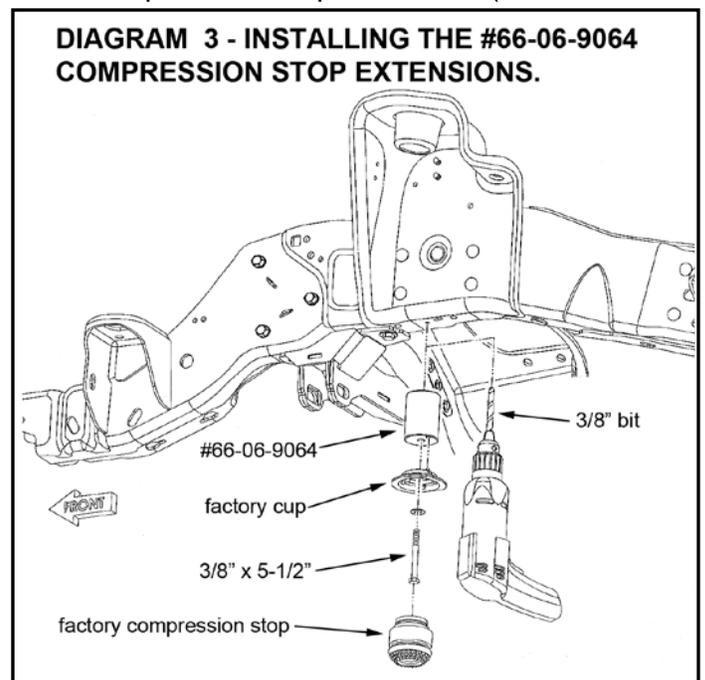
**NOTE:** Perform the following steps one side at a time. Start on the driver side.

- Unclip the ABS wire from the radius arm and secure it out of the way.
- Verify once again that the axle is supported by the jack, then unbolt the radius arm from the frame and front axle. Save frame side hardware for re-use.

- Attach the radius arm to the frame using the factory hardware. Attach the axle end using the 18 x 130MM bolt in the upper mount and the cam bolt in the lower. All hardware should be installed from the outside. Snug, but do not fully tighten at this time.
- Repeat this procedure on the passenger side. All radius arm hardware will be tightened once the vehicle is on the ground.

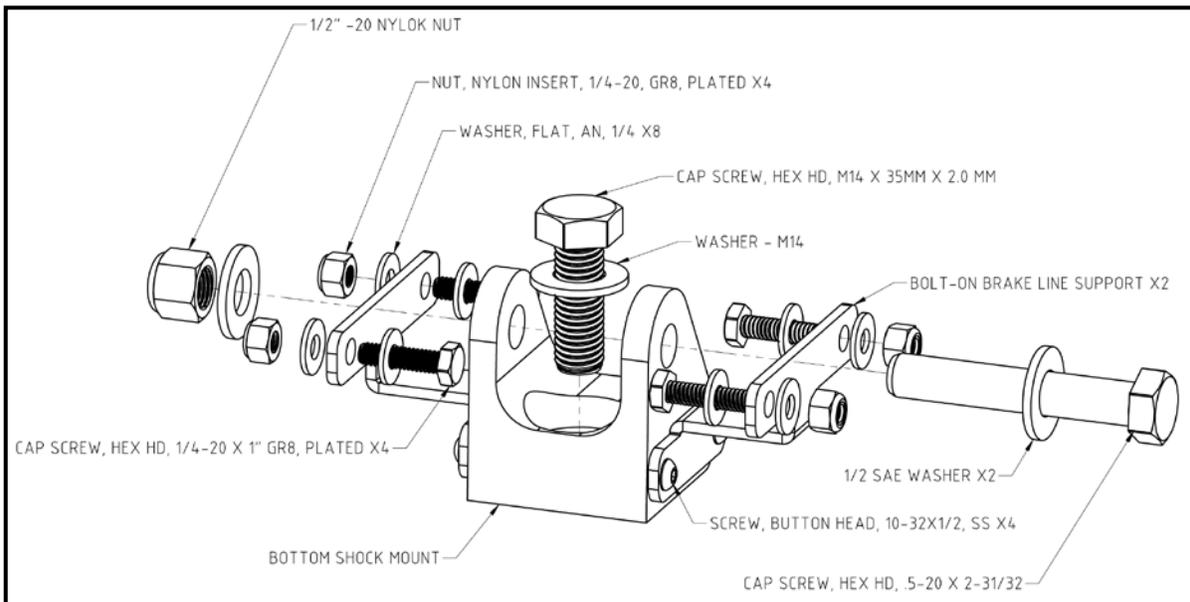
## 5) COMPRESSION TRAVEL STOP EXTENSIONS...

- Pry the front compression travel stops out of their mounting cups, then unbolt the cups from the frame.
- On each side, drill out the factory compression stop cup mounting hole in the bottom of the frame to 3/8". Also drill out the hole in the factory cups to 3/8".
- [DIAGRAM 3] Position a compression stop cup on a compression stop extension (#66-07-9064). Note there is an alignment tab present on the factory cup; place this tab in the secondary hole in the "02" extension so that the cup will sit flat on the extension. Slide the supplied 3/8" x 5-1/2" bolt with an SAE washer through the cup and extension.
- Position the compression stop assembly on the bottom of the frame and insert the 3/8" x 5-1/2" bolt through the 3/8" hole drilled earlier. Secure using the supplied 3/8" SAE washer and nyloc nut.
- Rotate the compression stop cups so that the flat edge of the cup is positioned toward the inside of the vehicle as shown in Diagram 3, then tighten the 3/8" bolt (23).
- Press the factory compression stops into the mounting cups.



## 6) COILOVER SHOCKS...

- Make sure the lower coil mount is free from any dirt or debris. Mount the lower coilover bracket on the axle as shown using the supplied hardware. (90)



- Place the reservoir mount, located in the SL5146 box, over the upper factory coil locating boss. Carefully mark the three hole locations. Remove the bracket and drill 7/16" holes in the three marked locations. **WARNING:** Take extreme caution to not drill into anything located on top of the coil towers.
- Cut the coil spring locating boss flush with the upper coil mount. Grind any remaining edges of the coil spring locating boss so there is a smooth mounting surface.
- Place the coilover into the lower mount and secure using the supplied hardware. (90)
- Insert the supplied 3/8" bolts into the holes in the coil tower. Note that the short (3/8" x 3/4") bolt goes in the outermost hole. Failure to have the bolts in the correct orientation can cause damage to the hose fitting on the coilover.
- Position the reservoir mount between the shock mount and the frame. Move the coilover into position and tighten the top mounting bolts. (35) Accessing these bolts through the engine compartment may be necessary.
- Center the reservoir in the mount and secure with the band clamps. Position the reservoir so hose is close to the inside of the wheelwell and tighten.
- Bolt the ABS line and the brake lines to the lower mount, making sure there is adequate clearance to any moving parts.



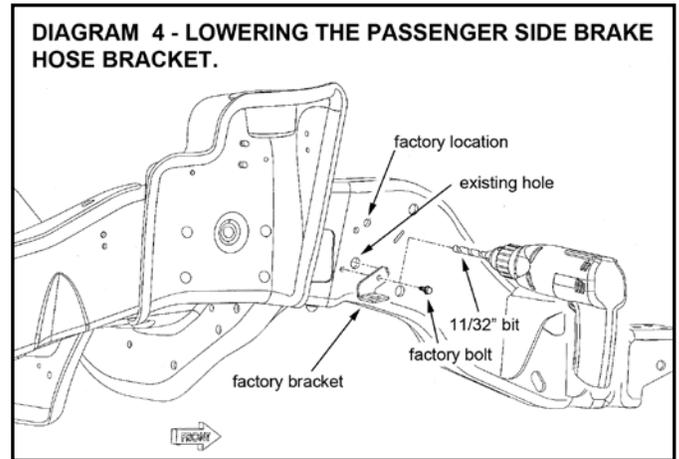
## 7) BRAKE HOSES...

**NOTE:** Perform these steps one side at a time. Start on the passenger side.

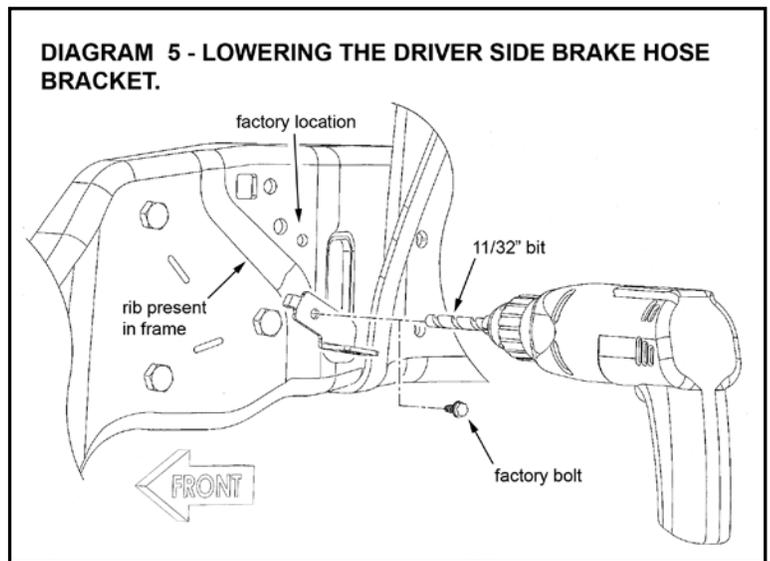
- [DIAGRAM 4] Factory brackets secure the brake hoses to the frame; these brackets were unbolted from the frame during disassembly. On the passenger side, measure down approximately 2-3/4" from the brake hose bracket's original location on the frame. There is

an existing hole in the frame at this location. Carefully reform the metal brake line so that the alignment tab in the brake hose bracket engages the existing hole in the frame as shown. Using the bracket as a template, mark the location of the second hole to be drilled.

- ❑ Carefully push the bracket aside and drill an 11/32" hole at the marked location. Put the bracket back into position as shown and attach it to the frame using the factory self-tapping bolt. Tighten to factory specifications.



- ❑ [DIAGRAM 5] There is no existing hole in the driver side frame rail as there was on the passenger side. Therefore, measure 2-3/4" down from the factory position of the brake hose bracket and mark this point. Note that there is a raised boss or rib in the frame rail; carefully reform the metal brake line so that the bracket lines up with the mark and its alignment tab rests against the frame rib as shown. Using the bracket as a template, mark the location of the mounting hole to be drilled.



- ❑ Carefully push the bracket aside and drill at the marked location using an 11/32" bit. Put the bracket back into position and secure it using the factory self-tapping bolt in the drilled hole. Tighten to factory specifications.
- ❑ Re-attach the lower brake hose brackets to the axle using the factory hardware and tighten (9).

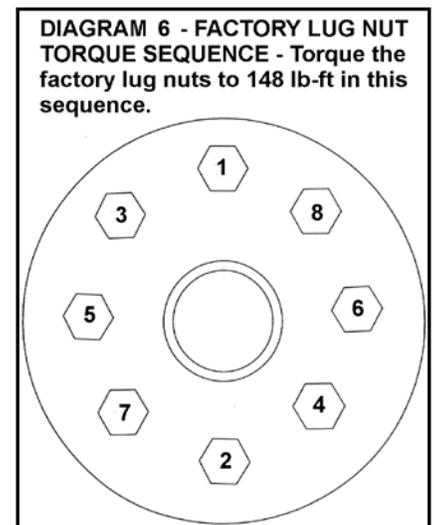
## 8) STEERING STABILIZER...

- ❑ Attach the stabilizer to the steering stabilizer bracket (#55-04-9066) and tighten until bushings swell slightly.

## 9) TIRES / WHEELS...

- ❑ [DIAGRAM 6] Tighten the lug nuts (148) in the sequence shown.

**WARNING:** When the tires / wheels are installed, always check for and remove any corrosion, dirt, or foreign material on the wheel mounting surface, or anything that contacts the wheel mounting surface (hub, rotor, etc.). Installing wheels without the proper metal-to-metal contact at the wheel



mounting surfaces can cause the lug nuts to loosen and the wheel to come off while the vehicle is in motion.

**WARNING:** Retighten lug nuts at 500 miles after any wheel change, or anytime the lug nuts are loosened. Failure to do so could cause wheels to come off while vehicle is in motion.

- Lower the vehicle to the floor.

#### 10) HARDWARE TIGHTENING SEQUENCE...

- Tighten the following hardware:
  - 18mm radius arm hardware (230)
  - factory hardware at rear of radius arm (222)

#### 11) TRACK BAR...

- Line up the track bar with the slotted hole of the new track bar bracket.
- Observe the two supplied track bar keys and note that the hole in each key is offset to one side. **Position the keys so that the holes are offset to the passenger side** and insert them into the slotted holes of the track bar bracket. Insert the factory track bar bolt through the bracket, keys, and track bar and secure using the factory hardware. Tighten (406).

**IMPORTANT:** Yes, the proper torque specification for the track bar eye bolt is 406 lb-ft; this is not a typographical error. If the appropriate torque wrench is not available, tighten the bolt as much as possible, then take the vehicle to the Ford Dealer or a heavy equipment repair shop to perform the final torque operation. Proper torque on this bolt is critical.

#### 12) ANTI-SWAY BAR LINKS...

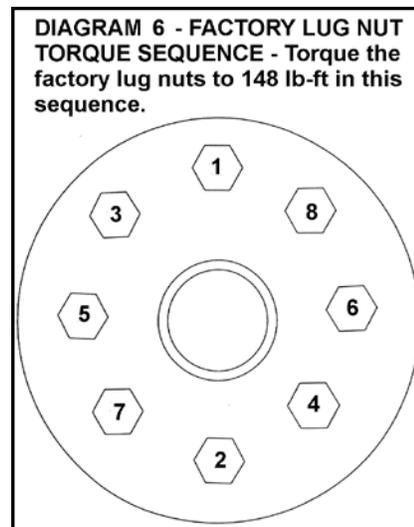
- Install the bushings and sleeves in the anti-sway bar links (55-03-9064).
- Attach the "03" sway bar link extensions to the axlehousing and anti-sway bar using the factory hardware. For verification, the links attach to the outside of the anti-sway bar. Tighten until the bushings swell slightly.

#### 13) CLEARANCE CHECK...

- Raise the vehicle and place a jack stand under each frame rail just behind the radius arm attaching points. With the suspension "hanging" at full extension travel, cycle steering lock-to-lock and check all components for proper operation and clearances. Pay special attention to the clearance between the tires / wheels and brake hoses, wiring, etc.
- Lower vehicle to the floor.

#### 14) FINAL CLEARANCE and TORQUE CHECK...

- With vehicle on floor, cycle steering lock-to-lock and inspect the tires / wheels, and the steering, suspension, and brake systems for proper operation, tightness, and adequate clearance.



**15) REAR LIFT...**

- Remove spring to axle U-bolts and move axle several inches away from springs.
- Clean spring pads of all debris.
- Position the new block on top of the factory block, then using the floor jack(s), mate the springs to the blocks, be sure that the center bolt heads seat properly. Install the new U-bolts and factory U-bolt plate. Evenly torque the U-bolts using an "X" tightening sequence (85).
- Install the rear shock absorbers. Note the body of the cylinder is mounted to the frame and the shaft to the axle using the factory hardware. (76) Make sure there is adequate clearance between the reservoir hose and the frame rail and exhaust; adjust the position of the hose or reservoir if needed.

**16) FOUR WHEEL DRIVE...**

- Activate four wheel drive system and check front hubs for engagement.

**17) HEADLIGHTS...**

- Readjust headlights to proper setting.

**18) SUPERLIFT® WARNING DECAL...**

- Install the WARNING TO DRIVER decal on the inside of the windshield, or on the dash, within driver's view. Refer to the "IMPORTANT PRODUCT USE AND SAFETY INFORMATION / WARNINGS" text found at the end of this instruction sheet.

**19) ALIGNMENT...**

Realign vehicle to factory specifications. Alignment must be performed by a qualified professional.

### **Limited Lifetime Warranty / Warnings**

Your Superlift® product is covered by the Limited Warranty explained below that gives you specific legal rights. This limited warranty is the only warranty Superlift® makes in connection with your product purchase. Superlift® neither assumes nor authorizes any retailer or other person or entity to assume for it any other obligation or liability in connection with this product or limited warranty.

**What is covered?** Subject to the terms below, Superlift® will repair or replace its products found defective in materials or workmanship for so long as the original purchaser owns the vehicle on which the product was originally installed. Your warrantor is LKI Enterprises, Inc. d/b/a Superlift® Suspension Systems ("Superlift®").

**What is not covered?** Your Superlift® Limited Warranty does not cover products, parts or vehicles Superlift® determines to have been damaged by or subjected to:

- Alteration, modification or failure to maintain.
- Normal wear and tear (bushings, tie-rod ends, etc.). Scratches or defects in product finishes (powder coating, plating, etc.),
- Damage to or resulting from vehicle's electronic stability system, related components or other vehicle systems.

- Racing or other vehicle competitions or contests. Accidents, impact by rocks, trees, obstacles or other aspects of the environment.
- Theft, vandalism or other intentional damage.

**Remedy Limited to Repair / Replacement.** The exclusive remedy provided hereunder shall, upon Superlift's inspection and at Superlift's option, be either repair or replacement of product or parts covered under this Limited Warranty. Customers requesting warranty consideration should contact Superlift® by phone (1-800-551-4955) to obtain a Returned Goods Authorization number. All removal, shipping and installation costs are customer's responsibility.

If a replacement part is needed before the Superlift® part in question can be returned, you must first purchase the replacement part. Then, if the part in question is deemed warrantable, you will be credited / refunded.

### **Other Limitations - Exclusion of Damages - Your Rights Under State Law**

- Neither Superlift® nor your independent Superlift® dealer are responsible for any time loss, rental costs, or for any incidental, consequential or other damages you may have.
- This Limited Warranty gives you specific rights. You may also have other rights that vary from state to state. For example, while all implied warranties are disclaimed herein, any implied warranty required by law is limited to the terms of our Limited Lifetime Warranty as described above. Some states do not allow limitations of how long an implied warranty lasts and / or do not allow the exclusion or limitation of incidental or consequential damages, so the limitations and exclusions herein may not apply to you.

### **Important Product Use and Safety Information / Warnings**

As a general rule, the taller a vehicle is, the easier it will roll over. Offset, as much as possible, what is lost in rollover resistance by increasing tire track width. In other words, go "wide" as you go "tall". Many sportsmen remove their mud tires after hunting season and install ones more appropriate for street driving; always use as wide a tire and wheel combination as feasible to enhance vehicle stability. We strongly recommend, because of rollover possibility, that the vehicle be equipped with a functional roll bar and cage system. Seat belts and shoulder harnesses should be worn at all times. Avoid situations where a side rollover may occur.

Generally, braking performance and capabilities are decreased when significantly larger / heavier tires and wheels are used. Take this into consideration while driving. Also, changing axle gear ratios or using tires that are taller or shorter than factory height will cause an erroneous speedometer reading. On vehicles equipped with an electronic speedometer, the speed signal impacts other important functions as well. Speedometer recalibration for both mechanical and electronic types is highly recommended.

Do not add, alter, or fabricate any factory or aftermarket parts to increase vehicle height over the intended height of the Superlift product purchased. Mixing component brands is not recommended.

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