



# SUPERLIFT®

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

### Superlift 8" King Coilover System for 2005 - 2007 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 HARDWARE</b> (Qty.- if more than one)
01-1116.....	pitman arm .....	(1) tube Loctite
55-01-9028 .....	compression stop bracket,..... front, driver side	(2) 3/8" x 1-1/4" bolt (1) 3/8" x 1" bolt (3) 3/8" USS washer (3) 3/8" nyloc nut
55-02-9028 .....	compression stop bracket,..... front, passenger side	(2) 3/8" x 1-1/4" bolt (1) 3/8" x 1" bolt (3) 3/8" USS washer (3) 3/8" nyloc nut
55-06-9026.....	steering stabilizer drop .....	(1) 5/8" x 1-1/2" bolt (1) 5/8" SAE washer (1) nyloc nut (2) 7/16" USS washer (2) poly bushing half
66-09-9000.....	radius arm, .....	(1) 18mm x 130mm bolt (2) 18mm washer (2) 18mm nyloc nut (1) Cam Bolts (1) Zip Tie
66-10-9000.....	radius arm, .....	(1) 18mm x 130mm bolt (2) 18mm washer (2) 18mm nyloc nut (1) Cam Bolt (1) Zip Tie
66-04-9028.....	(2) anti-sway bar link extension	
55-15-9026.....	front track bar bracket	
55-03-9028.....	(2) brake line extension bracket ..	(2) 1/4" x 3/4" bolt (2) 1/4" nyloc nut (2) 5/16" x 3/4" bolt (2) 5/16" nyloc nut
55-03-9022.....	(2) track bar key	
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 front axle. 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. Be sure to leave sufficient room to install the radius arm drop brackets. 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.
- 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 brackets securing the front brake hoses to the coil spring tower on the frame.
- Unbolt the lower brake hose brackets 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) PITMAN ARM...

**NOTE:** The sector shaft nut that holds the pitman arm in place requires the use of a 46mm or 1-13/16" socket to remove / install. Be sure the correct socket size is available or obtained before proceeding as neither size is very common.

- Note the orientation of the pitman arm in relation to the steering sector shaft. Remove the sector shaft nut and, using the appropriate puller tool, remove the arm from the steering box.
- Apply a generous amount of the supplied thread locking compound to the sector shaft splines. Position the supplied #01-1116 pitman arm on the sector shaft in the same orientation as the original arm, then reinstall the factory lock washer (if equipped) and nut. Tighten (350).

### 4) 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 (#55-15-9026) 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).

## 5) RADIUS ARMS...

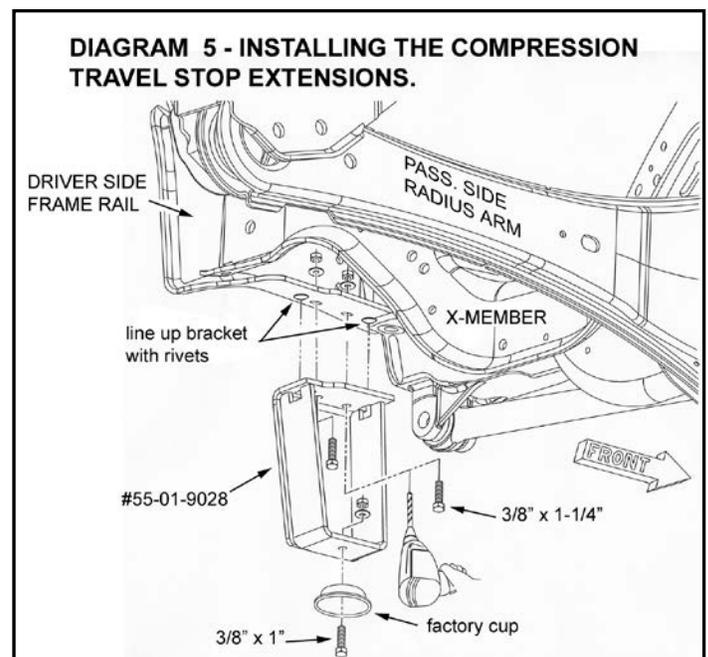
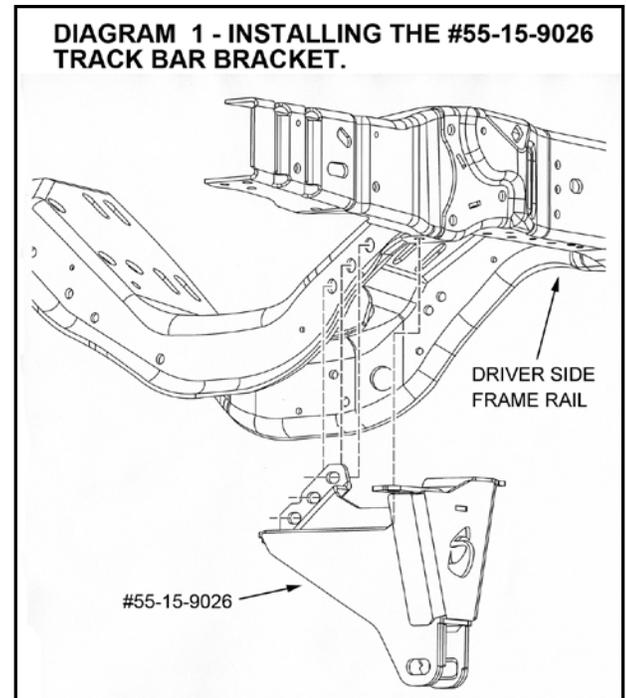
**NOTE:** Perform the following steps one side at a time. Start on the driver side.

- 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.

## 6) COMPRESSION TRAVEL STOP EXTENSIONS...

- Pry the front compression travel stops out of their mounting cups, then unbolt the cups from the frame.

- [DIAGRAM 5] Position a compression travel stop extension (#55-01-9028 driver side and #55-02-9028 passenger side) on the frame in the location that the factory cup was just removed. There are two recesses in this bracket that should line up with two existing rivets on the frame. Note that the inside edge of the extension bracket is contoured to match a similar edge on the frame. Line the two contoured edges up, and then using the bracket as a template, mark the location of the two mounting holes to be drilled.

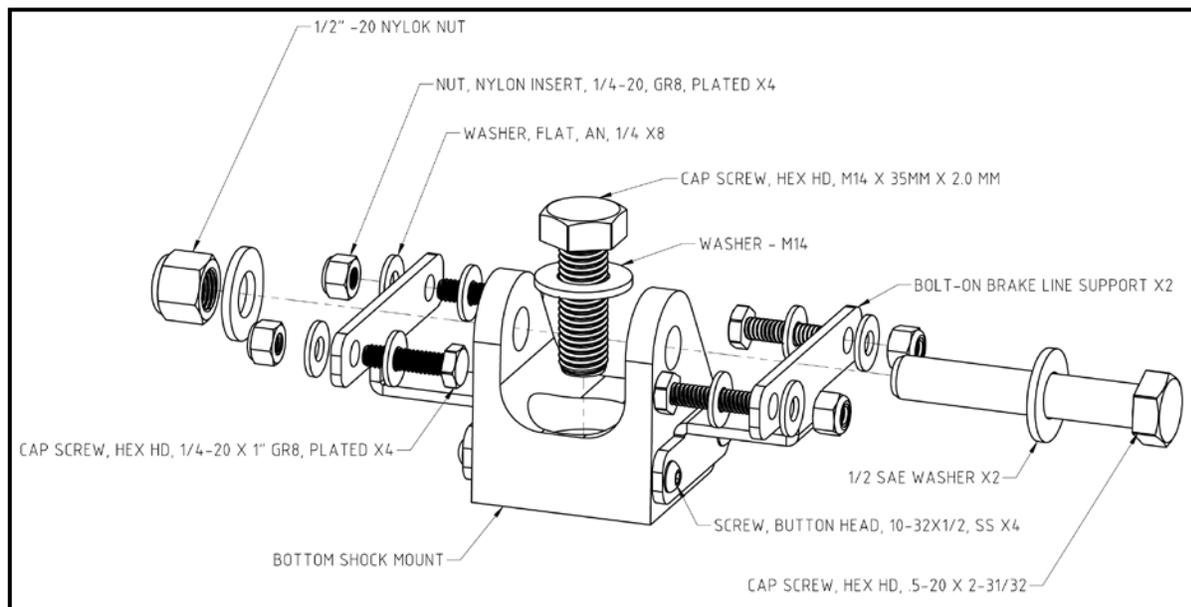


- Remove the bracket and drill two 3/8" holes at the marked locations.
- Attach the compression stop bracket to the frame using the supplied 3/8" x 1-1/4" bolts, washers, and nyloc nuts. Tighten (23).
- Drill out the mounting hole in the factory compression stop cup to 3/8", then attach the cup to the "01" and "02" brackets using the supplied 3/8" x 1" bolt, washer, and nyloc nut. Tighten (23).
- Press the factory compression stops back into their mounting cups.

## 7) 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.



### 8) BRAKE HOSE EXTENSIONS, VACUUM AND BREATHER LINES...

- Factory brackets secure the brake hoses to the front of the coil tower on the frame; these brackets were unbolted from the coil towers during initial disassembly. Attach the brake line drop brackets (#55-03-9028) to the coil towers where the factory brackets were once mounted using the factory hardware (76 in-lb).
- Insert the supplied 5/16" x 3/4" bolt through the bracket and coil tower just below the factory bolt and secure using the supplied 5/16" nyloc nut (13).
- Carefully reform the metal brake line as necessary in order to line up the factory brake hose bracket with the lower end of the "03" bracket. Attach the factory bracket to the "03" bracket using the supplied 1/4" x 3/4" bolt and nyloc nut (76 in-lb).
- [DIAGRAM 6] Cut the small plastic zip tie securing a small runner sheath to the brake hose near the lower brake hose brackets (these brackets attach to the axle). Using a screwdriver or similar tool, spread the ear of the upper hose attachment enough to remove the hose from the upper attachment.
- With the brake line out of the way, mark a radius around the small hole in the upper portion of the brake line bracket. Using a cut-off wheel, remove the upper brake hose attachment from the bracket as shown in step C of Diagram 6.

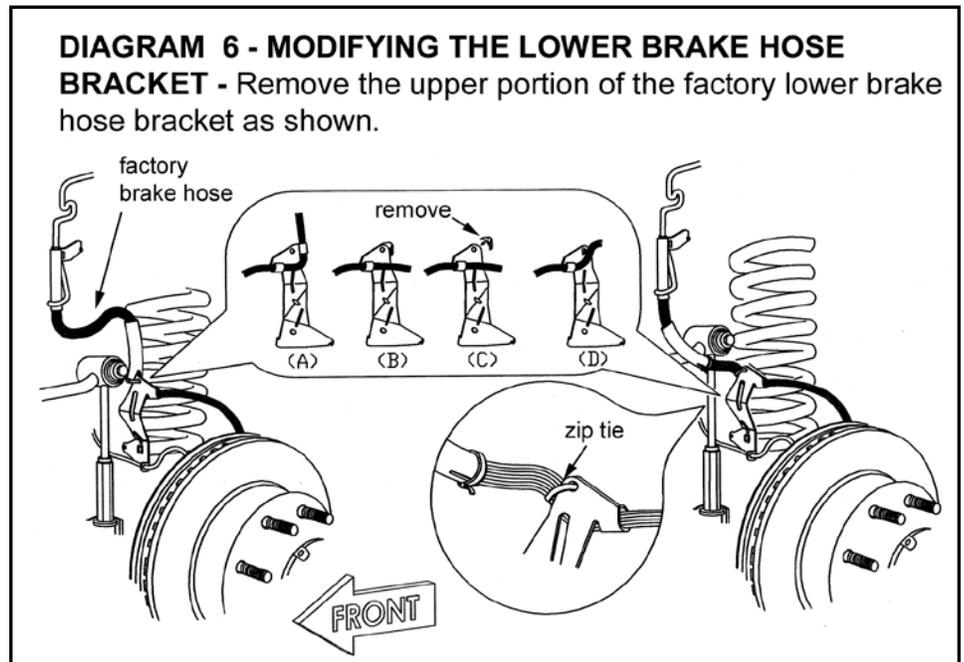
**IMPORTANT:** Smooth the cut area to ensure that the brake hose will not chafe against the bracket.

- Insert the supplied plastic zip tie through the small hole in the upper portion of the bracket and secure the brake hose as shown in step D of Diagram 6.
- Re-attach the lower brake hose brackets to the axle using the factory hardware and tighten (9).

- Adjust the routing of the front axle breather hose and hub vacuum lines as necessary to gain an adequate amount of slack with the suspension at full extension.

## 9) STEERING STABILIZER DROP BRACKET...

- The factory steering stabilizer bracket is attached to the front lip of the engine crossmember (towards the passenger side) via a two-bolt tab. Remove the nuts securing the stabilizer mount to the crossmember. It is not necessary to entirely remove the factory bracket.



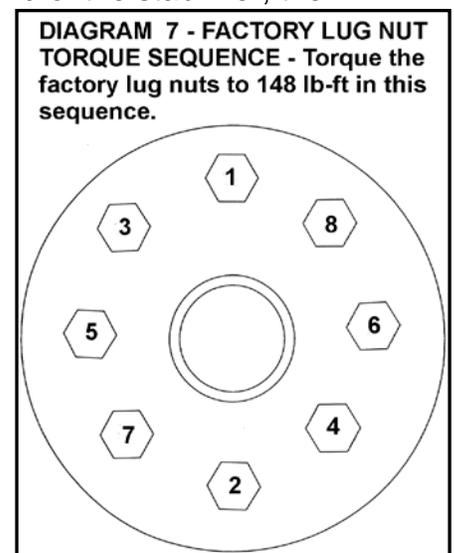
- Position the steering stabilizer drop bracket (#55-06-9026) on the back side of the crossmember lip and secure it using the factory tab bolts and nuts (the crossmember lip should be "sandwiched" between the "03 bracket and the factory stabilizer bracket). Do not tighten at this time.
- Install the supplied 5/8" x 1-1/2" bolt through the factory bracket (where the stabilizer used to mount) and the "06" bracket. The bolt should be installed from the outside and secured with the supplied 5/8" washer and nyloc nut.
- Tighten the 5/8" bolt (112) and factory bolts (136).
- Install a factory washer and supplied bushing half on the stem end of the stabilizer, then position the stem through the remaining hole in the "06" stabilizer drop bracket. Install the remaining bushing half, washer, and factory nut, then tighten until the bushings swell slightly.

## 10) FINAL ASSEMBLY...

- Secure the ABS wires to the radius arms using the factory retaining clips.
- Reattach the drag link to the pitman arm using the factory castellated nut and the supplied new cotter pin (67).

## 11) TIRES / WHEELS...

- [DIAGRAM 7] 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.

## 12) HARDWARE TIGHTENING SEQUENCE...

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

## 13) 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 there is a notch on one side of the key. **Position the keys so that the notch is pointed toward the driver 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.

## 14) ANTI-SWAY BAR LINK EXTENSIONS...

- Thread the female end of the anti-sway bar link extensions (66-04-9028) on to the factory sway bar end links and tighten (57).
- Attach the "04" sway bar link extensions to the axlehousing using the factory bushings and hardware. Tighten until the bushings swell slightly.
- Check for adequate clearance between the anti-sway bar links and the lower brake hose bracket attached to the axle. If necessary, bend the bracket slightly towards the coil spring until adequate clearance is achieved.

## 15) 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.

**16) 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.
- Verify that there is adequate front brake hose clearance and slack. It may be necessary to adjust the hose length in the modified lower brackets.

**17) REAR LIFT...**

- Remove spring to axle U-bolts and move axle several inches away from springs.
- Place C-clamps approximately six inches on either side of the leaf springs center bolt. Pinch the tie bolt head (the portion that was located in the spring perch) with a pair of pliers, then remove the tie bolt nut. Once the nut has been removed, loosen the C-clamps. **NOTE:** Be cautious when releasing the C-clamps; the springs are under load and will "spring" apart when released.
- On each side, insert the add-a-leaf in the proper pyramid order. Align the hole in the add-a-leaf with the center bolt hole in the spring pack.
- Recompress the pack with the C-clamp, not the center bolt, to avoid stripping the bolt or nut threads. Once the spring is compressed, insert the center bolt through the leaf spring pack. Tighten the center bolt nut (45). Once tightened, trim excess bolt. Remove the C-clamps.
- 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.

**18) FOUR WHEEL DRIVE...**

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

**19) HEADLIGHTS...**

- Readjust headlights to proper setting.

**20) 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 "NOTICE TO DEALER AND VEHICLE OWNER" section below.

## 21) ALIGNMENT...

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

### IMPORTANT PRODUCT USE INFORMATION

As a general rule, the taller a vehicle is, the easier it will roll over. Offset, as much as possible, what is lost in roll over resistance by increasing tire track width. In other words, go "wide" as you go "tall". Many sportsmen remove their mud tires after winter / hunting season and install ones more appropriate for street driving; always use as wide a tire and wheel combination as possible to enhance vehicle stability.

We strongly recommend, because of roll over 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 performances and capabilities are decreased when significantly larger / heavier tires and wheels are used. Take this into consideration while driving.

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.

Most states have some type of law limiting vehicle height. The amount of lift allowed, and how the lift may be achieved, varies greatly. Several states offer exemptions for farm or commercially registered vehicles. It is the owner's responsibility to check state and local laws to ensure that their vehicle will be in compliance.

Superlift makes no claims regarding lifting devices and excludes any and all implied claims. Superlift will not be responsible for any altered product or any improper installation or use of our products.

We will be happy to answer any questions concerning the design, function, and correct use of our products.

### IMPORTANT MAINTENANCE INFORMATION

It is the ultimate buyer's responsibility to have all bolts / nuts checked for tightness after the first 100 miles and then every 1000 miles. The steering, suspension and driveline systems, along with wheel alignment should be inspected by a qualified professional mechanic at least every 3000 miles.

### NOTICE TO DEALER AND VEHICLE OWNER

Any vehicle equipped with a Superlift lifting device must have the enclosed "Warning to Driver" decal installed on the inside of the windshield or on the vehicle's dash, within driver's view. The "Warning to Driver" decal is to act as a constant safety reminder for whoever may be operating the vehicle. The WARRANTY IS VOID unless this decal is in place. **INSTALLING DEALER...** It is your responsibility to install warning decal and forward these installation instructions to the vehicle owner for review of warnings, product use and maintenance information. Replacement warning decals are available free upon request. These instructions are to be kept with the vehicle registration papers and owners manual for the service life of the vehicle.

### SUPERLIFT LIMITED LIFETIME WARRANTY

Suspension products bearing the Superlift (LKI Ent.) name are warranted for as long as the original purchaser owns the vehicle that the LKI product was originally installed on. This warranty is non-transferable. Warranty covers only the product, no labor, time loss, or freight incurred. Any product that has been abused, altered, incorrectly installed, or used in competition is not covered. Product finish, spring

bushings, Polyurethane products, and normal wear is not covered. The LKI product is subject to replacement or repair. No other warranties are expressed or implied. An authorized Superlift dealer must inspect the part in question and confirm that the "Warning to Driver" decal is properly displayed. A copy of the sales invoice is required for warranty consideration.

**SUPERLIFT SUSPENSION SYSTEMS**

300 Huey Lenard Loop Rd.  
West Monroe, Louisiana 71292  
Phone: (318) 397-3000  
Sales / Tech: 1-800-551-4955  
FAX: (318) 397-3040  
[www.superlift.com](http://www.superlift.com)