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SUPERLIFT.COM

2023 FORD F250 / F350 4" LIFT KIT (RADIUS ARM) INSTALLATION INSTRUCTIONS

THANK YOU FOR CHOOSING SUPERLIFT FOR ALL YOUR SUSPENSION NEEDS!!

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, 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:

- Prior to beginning the installation, check all parts and hardware in the box with the parts list below. If you find a packaging error, contact Superlift® directly. Do not contact the dealer where the system was originally purchased. You will need the control number from each box when calling; this number is located at the bottom of the part number label and to the right of the bar code.
- Front end alignment is necessary.
- A foot-pound torque reading is given in parenthesis () after each appropriate fastener.
- Tool and Wrench/Socket size is given in brackets { } after each appropriate step.
- Prior to attaching components, be sure all mating surfaces are free of grit, grease, excessive undercoating, etc.
- A factory service manual should be on hand for reference.

KIT BREAKDOWN					
Kit Part Number 294			Kit Part Number 9095		
Part Number	Qty.	Part Description	Part Number	Qty.	Part Description
01-294	2	front coil springs, diesel	659590	2	shock cylinder, front Superide
Kit Part Number 9250			659539	2	shock cylinder, rear Superide
			77-9095	1	hardware bag
Kit Part Number 9095B			Kit Part Number 9095B		
Part Number	Qty.	Part Description	Part Number	Qty.	Part Description
66-04-9200	1	radius arm drop, driver side	24-185776	2	shock cylinder, front Bilstein
55-27-9200	1	Superlift badge	33-185576	2	shock cylinder, rear Bilstein
77-9250	1	badge hardware	77-80032	1	hardware bag
77-9250A	1	radius arm hardware			
77-9500B	1	cam bolts for both radius arms			
Kit Part Number 9251			Kit Part Number 84072		
Part Number	Qty.	Part Description	Part Number	Qty.	Part Description
66-05-9200	1	radius arm drop, driver side	985-24-156	2	shock cylinder, front FOX 2.0
55-28-9200	1	Superlift badge	980-24-665	2	shock cylinder, rear FOX 2.0
77-9250	1	Badge hardware	77-84072	1	hardware bag
77-9250A	1	radius arm hardware			
Kit Part Number 9113			Kit Part Number 84175		
Part Number	Qty.	Part Description	Part Number	Qty.	Part Description
55-21-9090	1	stabilizer bracket	985-24-163	2	shock cylinder, front FOX RES
55-41-9090	1	track bar bracket	985-24-149	2	shock cylinder, rear FOX RES
55-03-9074	1	dr side sway bar bracket	Kit Part Number 9099		
55-04-9074	1	pa side sway bar bracket	Part Number	Qty.	Part Description
77-9112	1	hardware bag, track bar keys	55-15-9090	2	bump stop bracket, front
77-9113	1	sway bar bracket hardware	55-09-9074	1	brake line bracket, rear
77-9093-1	1	hardware bag, front brake line bracket	77-9099	1	hardware bag
Kit Part Number 9091					
Part Number	Qty.	Part Description			
55-02-200	2	rear block, 5"			
55-03-200	2	rear block shim			
77-1509	1	9/16" ubolt nuts and washers			
77-1507	1	7/16" ubolts, nuts, and washers			
11962	4	9/16" x 3-1/4" x 15" ubolt, large radius			

Step	Part Number	Qty. per Kit	Description	New Attaching Hardware	Qty. per Bracket	Hardware Bag Number
FRONT						
18	55-41-9090	1	track bar bracket	55-47-9090 - track bar keys, 1" & 4"	2	77-9112
20	66-04-9200	1	radius arm - driver	18mm x 2.5 x 130mm bolt, 2.5 pitch	1	77-9250
	66-05-9200	1	radius arm - passenger	18mm flat washer	2	77-9250A
				18mm nyloc nut, 2.5 pitch	1	77-9500B
				cam bolts	1	
22	01-294	2	coil springs, diesel			
			or			
28	SL5146-01A	1	king coilover kit			
24	659590	2	shock cylinder, front Superide	142731 - shock stem hardware bag	1	77-9095
			or			
	24-185776	2	shock cylinder, front Bilstein		1	77-80032
			or			
	985-24-156	2	shock cylinder, front FOX 2.0		1	77-84072
			or			
	985-24-163	2	shock cylinder, front FOX RES			
35	55-22-9090	2	brake line bracket, front	3/8" x 1" bolt, coarse thread	2	77-9093-1
				3/8" sae washer	2	
				3/8" nyloc nut, coarse thread	2	
				1/4" x 1/2" bolt, self tapping	1	
46	55-15-9090	2	bump stop bracket, front	8mm x 75mm bolt, 1.25 pitch	1	77-9099
51	55-03-9074	1	sway bar bracket, passenger's side	7/16" X 1-1/2" bolt, coarse thread	2	77-9113
				7/16" nyloc nut, coarse thread	2	
				7/16" sae washer	2	
51	55-04-9074	1	sway bar bracket, driver's side	7/16" X 1-1/2" bolt, coarse thread	2	77-9113
				7/16" nyloc nut, coarse thread	2	
				7/16" sae washer	2	
52	55-21-9090	1	stabilizer bracket	7/16" x 2-1/2" bolt, coarse thread	1	77-9093-1
				7/16" sae washer	1	
				7/16" nyloc nut	1	
REAR						
7	55-02-200	2	rear block, 5"	11962 - 9/16" x 3-1/4" x 15" ubolt, large radius	2	
				55-03-200 - block shim plate	2	
				7/16" x 3-1/4" x 4-1/2" ubolt, square	2	77-1507
				7/16" flange nut, fine thread	4	
				9/16" ubolt nut	4	77-1509
				9/16" ubolt washer	4	
12	659539	2	shock cylinder, rear Superide	01-60416 - 5/8" ID bushing	1	77-9095
			or	01-60418 - 3/4" ID bushing		
	33-185576	2	shock cylinder, rear Bilstein	19-5040 - sleeve, 0.75" OD x 0.565" ID x 1.48" Long	1	77-80032
			or			
	980-24-665	2	shock cylinder, rear FOX 2.0		1	77-84072
			or			
	985-24-149	2	shock cylinder, rear FOX RES			
			or			
	SL5171-01A	1	king rear shock, pair			
13	55-09-9074	1	brake line bracket, rear	7/16" x 1" bolt, coarse thread	1	77-9099
				7/16" sae washer	2	
				7/16" nyloc nut, coarse thread	1	

FRONT INSTALLATION

NOTE: Save all factory components and hardware for reuse, unless noted.

1. Chock rear tires and place transmission in neutral.
2. Raise front of vehicle with a jack and secure a jack stand beneath each frame rail, behind the radius arm mounts; then ease the frame down onto the stands and place transmission in park.
3. Remove front tires. {Lug Nuts 21mm}
4. [Illustration 1] Prior to raising the vehicle, disconnect the track bar from its attachment point on the frame and let the bar hang. {30mm}
5. [Illustration 2] Disconnect the sway bar links for their attachment points on the axle. {18mm}

Illustration 1**Illustration 2**

PERFORM STEPS 4 THROUGH 9 ONE SIDE AT A TIME.

6. Disconnect the steering stabilizer from the frame bracket. {15mm}
7. [Illustration 3] Remove the factory steering stabilizer bracket from the frame. {13mm}

Illustration 3

8. [Illustration 4] Remove the cotter pin and castle nut from the drag link, then using the appropriate puller tool, disconnect the drag link from the pitman arm. {pliers, 24mm}
9. [Illustration 5] Remove the bolt holding the brake line bracket to the axle. {10mm}
10. [Illustration 6] Remove the bolt retaining the brake

Illustration 4

line bracket to the frame. {13mm}

Illustration 5

11. Disconnect the vent hose from the axle. {plastic fastener removal tool}
12. [Illustration 7] Disconnect the axle vacuum lines from the driver's side radius arm and from the passenger's side axle. {plastic fastener removal tool}

Illustration 6**Illustration 7**

13. [Illustration 8] Mark the drive shaft orientation, then disconnect and tie drive shaft up and out of the way. {8mm}
14. [Illustration 9] Remove the lower bolt retaining the shock absorber to the axle. Disconnect the shock from the axle. {18mm}
15. [Illustration 10] Remove the nut retaining the shock to the upper shock mount. {21mm}
16. Carefully lower the front axle enough to facilitate the removal of the front coil springs. Make sure no hoses or lines are in a bind when lowering the axle.

Illustration 8



Illustration 9



Illustration 10



Illustration 11



Illustration 12



17. [Illustration 11 & 12] Unbolt the factory track bar bracket from the frame and the crossmember. {frame 18mm, crossmember 21mm}
 18. Position the new track bar bracket (55-41-9090) on the frame in the factory position and secure using the factory hardware. Once all bolts and nuts have been started, tighten. (136) {frame 18mm, crossmember 21mm}
- NOTE: Perform the following steps one side at a time.**
19. [Illustration 13] Unbolt the radius arm from the frame and axle . {bolt 24mm, nut 27mm}

Illustration 13**Illustration 14**

20. [Illustration 14] Attach the new radius arm (66-04-9200 driver's side; 66-05-9200 passenger's side) to the axle using the supplied 18mm x 130mm bolt at the top and the 18mm cam bolt and washer at the lower mount; loosely secure with the supplied nyloc nuts. Do not tighten at this time. [27mm]
21. Attach the new radius arm to the factory frame mount and loosely secure using the factory hardware. [bolt 24mm, nut 27mm]

If installing King Coilovers, skip to step 25.

22. With the coil spring isolator in place on the new coil spring (01-294), install the coil springs over the coil spring upper mount and onto the lower seat. Rotate coil spring until the coil is seated properly against the coil spring stop on the lower seat.
23. Raise the axle until the coil spring isolator is seated securely against the upper coil tower.
24. On the shock cylinders, install the one of the new supplied shock stem washers and bushings onto the stem of the new shock (Superide 01-88510 or Bilstein BE5-6681-H5). Insert the shock stem into the factory upper shock mount and place the second bushing then washer onto the shock stem and secure using the supplied nut. Tighten until the bushing slightly swell.
25. Attach the lower shock eye to the axle in the factory location using the factory hardware. Do not tighten at this time. {18mm}

COILOVER KIT INSTRUCTIONS - If a coil spring kit was purchased, skip to step 35.

26. [Illustration K-1] Unbolt the lower coil mount from the axle. {18mm}
27. [Illustration K-2] Make sure the coil spring axle seat is free from any dirt or debris. Mount the lower coilover bracket on the axle using the supplied hardware. (90)
28. [Illustration K-3] Place the reservoir mount, located in the SL5164 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.

Illustration K-1



Illustration K-2



Illustration K-3



29. [Illustration K-4] 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.
30. Place the coilover into the lower mount and secure using the supplied hardware. (90)
31. 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.
32. [Illustration K-5] Position the reservoir mount between the shock mount and the frame. Move the coilover into position and tighten the top mounting bolts. (45) Accessing these bolts through the engine compartment may be necessary.
33. [Illustration K-6] Center the reservoir in the mount and secure with the band clamps. Position the reservoir so hose is close to the inside of the wheel well and tighten.
34. [Illustration K-7] Bolt the ABS line and the brake lines to the lower mount, making sure there is adequate clearance to any moving parts.

Illustration K-4



Illustration K-5



Illustration K-6



Illustration K-7



Illustration K-8

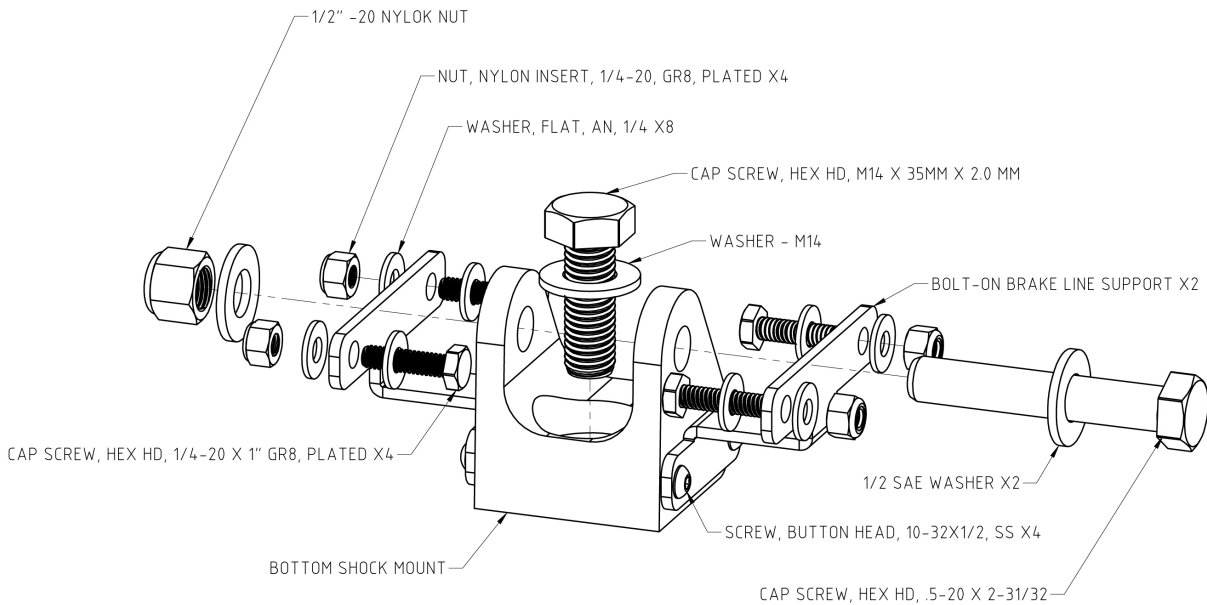


Illustration 15



Illustration 16



35. [Illustration 15 (driver) & 16 (passenger)] Install the new supplied brake line bracket (55-22-9090) to the frame using the factory hardware in the factory location. (18) {13mm}
36. Install the supplied 1/4" x 1/2" self-tapping bolt into the top hole of the new brake line bracket. This bolt will not "thread" into the frame, rather it will act as a 'pin' to keep the bracket from spinning on the frame.
37. [Illustration 15 (driver) & 16 (passenger)] Very carefully bend the brake lines so they can be attached to the new brake line bracket. **DO NOT OVER BEND or KINK THE LINES.** Attach the factory brake line bracket to the new frame bracket using the supplied 3/8" x 1" bolt, washer, and nyloc nut. (30) (9/16")
38. Reattach the factory brake line axle bracket to the coil spring seat using the factory bolt. (40) {10mm}
39. Realign the previously made mark on the drive shaft and install using the factory hardware. Apply thread locker to the bolts before installing. (11) {8mm}

Illustration 17



Illustration 18



Illustration 19



Illustration 20



40. [Illustration 17] Disconnect the axle vent line from the frame, located on the driver's side frame rail under the engine mount. {plastic fastener removal tool}
41. [Illustration 18] Disconnect the ABS line from the frame, located on the driver's side frame rail under the engine mount just above where the axle vent hose was attached. {plastic fastener removal tool}
42. [Illustration 19 & 20] Reattach the ABS line to the frame in the axle vent line's factory location. Reattach the ABS line to the factory location on the radius arm.
43. Reconnect the differential vent tube to the axle.
44. Remove the factory bump stop from its mount. {pry bar}
45. Remove the factory bump stop mount. {10mm}
46. Place the new bump stop (55-15-9090) between the frame and the factory bump stop mount and secure to the frame using the supplied 8mm x 75mm bolt. Then reinstall the bump stop into its mount. (18) {13mm}
47. Tighten the lug nuts in the sequence shown. (151) {21mm}

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.

48. Lower the vehicle to the floor.

Illustration 21



49. [Illustration 21] 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) {30mm}

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.

Illustration 22



Illustration 23



50. [Illustration 22] Remove the sway bar body from the frame. [15mm]

51. [Illustration 23] Install the new sway bar bracket (55-03-9074 driver's side; 55-04-9074 passenger's side) on the frame using the factory nuts. (40) [15mm].

52. Reattach the sway bar body to the new bracket using the supplied 7/16" x 1-1/2" bolts, washers and nyloc nuts. (50) [5/8"]

53. Reattach the sway bar links to the factory mounting hole on the axle using the factory hardware. (100) [18mm]

54. Connect the drag link to the pitman arm using the factory castle nut and cotter pin. {24mm, pliers}

55. [Illustration 24] Install the new steering stabilizer bracket (55-21-9090) using the factory hardware. (37) {15mm}

56. [Illustration 24] Attach the steering stabilizer to the new bracket using the supplied 7/16" x 2-1/2" bolt, washer, and nyloc nut. (50) {5/8"}
57. Tighten the following hardware:
shock absorber to axle (105) {18mm}
radius arm to frame (222) {bolt 24mm, nut 27mm}

Illustration 24

REAR INSTALLATION

1. Chock the front tires. Position a jack beneath the center of the rear axle then raise rear of vehicle. Secure jack stands beneath the frame rails just forward of the rear springs. Remove rear tires.

2. [Illustration 24] Unbolt the shock absorber from the lower mount. {bolt 18mm, nut 21mm}

Illustration 24



3. Unbolt the shock absorber from the upper mount and remove from vehicle. Discard. {18mm}

4. [Illustration 25 & 26] Remove the rear axle vent hose from the barbed fitting. Remove the barbed fitting and allow the brake line bracket to move freely from the axle. {plastic fastener removal tool, 16mm}

5. [Illustration 27] Using a floor jack support the rear axle and remove the u-bolts and discard. {24mm}

Illustration 25

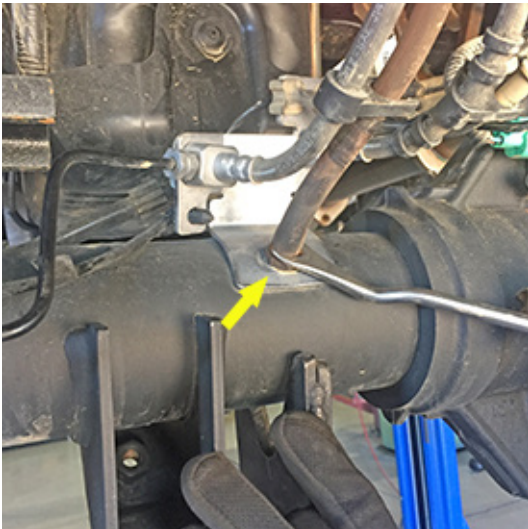


Illustration 26



6. Lower the axle to remove the factory block. Make sure no brake or ABS lines are in a bind as you lower the axle.

7. [Illustration 28] Install the new lift blocks (55-02-200). There is an indicator notch in the block that should face the front of the vehicle with the taller end of the block facing the rear. Make sure the locating pins are seated correctly. Jack the axle back into position while making sure that the axle pins are seated correctly into the block.

8. [Illustration 29] Install the new block shim (55-03-200) between the block and leaf spring, then place the supplied 7/16" ubolts over the leaf spring and through the shim and block. Do not tighten at this time.

Illustration 27



Illustration 28



9. [Illustration 30] Install the new ubolts (11962) using the supplied 9/16" washers and nuts; tighten using the "X" pattern. (210) {7/8"}
10. [Illustration 30] Install the supplied 7/16" flange nuts onto the 7/16" ubolts and tighten. (60) {5/8"}

Illustration 29



Illustration 30



11. On the shock cylinders, install the supplied 5/8" ID bushing into the eye of the shaft (upper) end and the 3/4" ID bushing into the eye of the body (lower) end.
12. Insert the supplied sleeve into the eye ring on the body (lower) end and install onto vehicle using the factory bolts and nuts. (136) {bolt 18mm, nut 21mm} NOTE: KING shocks are pre-assembled and ready to install. They are installed with the body up (frame) and shaft down (axle) (136) {bolt 18mm, nut 21mm}
13. [Illustration 31] Install the new supplied brake line bracket (55-09-9074) onto the axle between the axle and the factory brake line bracket. **Do not kink the brake lines.** Secure using the barbed fitting. {16mm}

14. [Illustration 31] Attach the vent hose to the barbed fitting.
15. Reinstall tires and wheels. Tighten the lug nuts in the sequence shown. (151) {21mm}

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.

Illustration 31



16. Lower vehicle to the floor.
17. With the vehicle on the ground, check all components for proper operation and clearances. Pay special attention to the clearance between the tires / wheels, brake hoses, wiring, etc.
18. Activate four wheel drive system and check for proper engagement.
19. A front end alignment is necessary after the installation of the radius arm and 4 link kits.
20. Re-adjust headlights to proper setting.
21. 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.

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, plus wheel alignment should be inspected by a qualified professional mechanic at least every 3000 miles.

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.

Superlift, LLC, Limited Lifetime 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 Superlift, LLC, doing business as Superlift® Suspension Systems ("Superlift®").

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

- Alteration, modification or failure to maintain.
- Normal wear and tear (bushings, rod ends, etc.). Scratches or defects in product finishes (powder coating, plating, etc.).
- Damage to, or resulting from, the 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 or Replacement. The exclusive remedy provided hereunder shall, upon Superlift's inspection and at Superlift's option, be either repair or replacement of the product 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, and this is the only warranty Superlift® makes in connection with your product purchase. 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. 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.

Superlift, LLC, Satisfaction Guarantee

We want you to purchase our product with confidence and be 100% satisfied with the end result. If you have any legitimate issue, and Superlift® cannot rectify it to your satisfaction, Superlift® will take back the Superlift® brand product and refund the customer 100% of the product purchase price.

The details:

- Offer valid to the original retail consumer for six months after product purchase.
- May require a Superlift® dealer's participation in order to assist in "troubleshooting" the issue.
- Any costs related to labor, freight, incidental or consequential are not refunded.
- Refund will not exceed Superlift's® published retail price.

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"; 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.

SUPERLIFT SUSPENSION

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