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1999-2004 Ford Super Duty Patent Pending Z-Link Coil Over Conversion 6" & 8" Installation Instructions

REQUIRED TOOL LIST:

- * Metric and Standard wrenches and sockets
- * Assorted Drill Bits
- * Floor Jack
- * Jack Stands
- * Measuring Tape
- * Torque Wrench



WARNING:

- This kit must be used with the correct Skyjacker Coil-Over only! The use of another brand Coil-Over or the wrong Coil-Over will **completely void all warranty!** Due to the Suspension design, it is critical that the correct Coil-Over be used. The Skyjacker Coil-Over is precisely designed to work with this Suspension System and supply the correct spring rate, length, valving, gas pressure, etc.

The use of another Coil-Over could result in:

- **Poor Driving Characteristics.**
- **Extremely Dangerous Caster Changes.**
- **Loss of Control Resulting in Possible Injury or Death!**

Before beginning the installation, read these instructions and the enclosed driver's WARNING NOTICE thoroughly and completely. Also affix the WARNING decal in passenger compartment in clear view of all occupants. If any of these items are missing from this instruction packet, do not proceed with installation, but call SKYJACKER[®] to obtain needed items. If you have any questions or reservations about installing this lift kit, call SKYJACKER[®] at 318-388-0816 for Technical Assistance or Customer Service departments.

Make sure you park the vehicle on a level concrete or asphalt surface. Many times a vehicle is uneven (side-to-side) from the factory, but usually not noticed until a lift kit has been installed which makes the difference more visible. Using a measuring tape, measure the front and rear (both sides) from the ground up to the center of the fender opening above the axle. Record for future reference.

Driver Side Front: _____

Passenger Side Front: _____

Driver Side Rear: _____

Passenger Side Rear: _____

IMPORTANT NOTES:

- **Depending on wheel offset and tire size, the steering may need to be limited to allow clearance of the lower control arm.**
- Please refer to Parts List to insure that all parts and hardware are received prior to disassembly of vehicle. If any parts are found to be missing, contact your dealer as soon as possible.
- This lift is determined from the front while only lifting the rear to a position level with the front.

Kit Box Breakdown:

COF65:

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
SKTJ8-S	COIL-OVER PLATINUM SHOCK	2
DSK45S	FORD Z-LINK PLATINUM COIL	2
SKSPC-DGEUPR	STEEL SHOCK SPACERS	8
SKTJ-SEAT	LOWER SPRING SEAT	2
SW250	SPANNER WRENCH 2.5"	1

FZ968:

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
FZCBD1-B	UPPER COILOVER BRKT,DRIVER	1
FZCBP2-B	UPPER COILOVER BRKT,PASSENGER	1
FZLFBD3-B	LOWER LINK BRKT,DRIVER	1
FZLFBP4-B	LOWER LINK BRKT,PASSENGER	1
FZUABD5-B	UPPER AXLE BRKT,DRIV	1
FZUABP6-B	UPPER AXLE BRKT,PASSE	1
FZLABD7-B	LOWER AXLE BRKT,DRIVE	1
FZLABP8-B	LOWER AXLE BRKT,PASSENGER	1
FZCFBP9-B	UPPER FRAME BACKING PLATE	2
12X358X6U	1/2 X 3 5/8 X 6 UBOLT ROUND	2
FZULF305-L	UPPER LINK FRONT,30.5"	2
FZLLR43-L	LOWER LINK REAR,43"	2
HB-ZLINKS	HDWR BAG,UPPER / LOWER LINKS	1
HB-ZLINK2	HRDWR BAG 2,PASSENGER BRKTS	1
HB-ZLINK3	HRDWR BAG 3,DRIVER BRKTS	1

Hardware Bag Breakdown:

HB-ZLINKS

Upper / Lower Links

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
2617	RED UPPER / LOWER BUSHING	12
SP3446	LOWER A-ARM BUSHING,02DODGE	4
D2-LAS3543	DODGE 02,LOWER A-ARM SLEEVE	2
LS20DL	LINK SLEEVE,2K LOWER DODGE	6
ZF316	ZERK FITTING ALEMITE, 3/16"	8

Hardware Bag Breakdown:

HB-ZLINK2

Passenger Side Brackets

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
916X712FTB	9/16 X 7 1/2 FINE THREAD GRADE 8	4
58X3SHB	5/8 X 3 SOCKET HEAD BOLT	1
58X412SHB	5/8 X 4 1/2 SOCKET HEAD BOLT	1
716X112FTB	7/16 X 1 1/2 FINE THRD BOLT	5
716X2FTB	7/16 X 2 FINE THREAD GRADE 8	1
12X2FTB	1/2 X 2 FINE THREAD BOLT	3
12X112BHFTB	1/2 X 1 1/2 BUTTON HEAD BOLT	1
TS250	SPACER .250" TALL	1
916FTN	9/16-18 NYLON INSERT LOCKNUT	4
58CTN	5/8-11 NYLON INSERT LOCKNUT	2
716FTN	7/16-20 FINE N/I LOCK NUT	7
12FTN	1/2-20 FINE N/I LOCK NUT	6
58SAEW	5/8 SAE WASHERS	2
916SAEW	9/16 SAE WASHERS	8
716SAEW	7/16 SAE WASHER	10
12SAEW	1/2 SAE WASHER	7
12UBW	1/2" U-BOLT WASHER, A325	2

HB-ZLINK3

Driver Side Brackets

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
916X8FTB	9/16 X 8 FINE THREAD GRADE 8	4
58X3SHB	5/8 X 3 SOCKET HEAD BOLT	1
58X412SHB	5/8 X 4 1/2 SOCKET HEAD BOLT	1
716X112FTB	7/16 X 1 1/2 FINE THREAD BOLT	5
716X2FTB	7/16 X 2 FINE THREAD GRADE 8	1
12X2FTB	1/2 X 2 FINE THREAD BOLT	3
12X112BHFTB	1/2 X 1 1/2 BUTTON HEAD BOLT	1
TS250	SPACER .250" TALL	1
916FTN	9/16-18 NYLON INSERT LOCKNUT	4
58CTN	5/8-11 NYLON INSERT LOCKNUT	2
716FTN	7/16-20 FINE N/I LOCK NUT	7
12FTN	1/2-20 FINE N/I LOCK NUT	6
58SAEW	5/8 SAE WASHERS	2
916SAEW	9/16 SAE WASHERS	8

Kit Box Breakdown:

FZ962:

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
TB9483-B	TRK BAR BRKT UPR 3/99UP F25	1
TB9203-B	TRK BAR BRKT LWR 3/99UP F25	1
SBE409	FRONT SWAY BAR LINKS,6" ZLINK PAIR	1
RB55	5.5" REAR BLOCK	2
58X312X18U	5/8 X 3 1/2 X 18 U-BOLT RD	4
HB-FZ9623	HDWR BAG,6"ZLINK, FZ962/963	1

Note: Box #FZ962S will not have lift blocks and u-bolts will be part #58X312X12U
 Box #FZ963 will be the same except the sway bar link will be part #SBE403
 Box #FZ963S will not have lift blocks and u-bolts will be part #58X312X12U

Hardware Bag Breakdown:

HB-FZ9623 Main Hardware Bag

<u>ITEM#</u>	<u>DESCRIPTION</u>	<u>QTY</u>
12X212FTB	1/2 X 2 1/2 FINE THRD BOLT	1
916X3FTB	9/16 X 3 FINE THREAD BOLT	1
20X90MMB	20 X 90 METRIC BOLT/10.9	1
12FTN	1/2-20 FINE N/I LOCK NUT	1
20MMN	20MM X 2.5 TPI N/I LOCK NUT	1
916FTN	9/16-18 NYLON INSERT LOCKNUT	1
58FSFTN	5/8-18 FLANGE STOVER NUT	8
12SAEW	1/2 SAE WASHER	2
916SAEW	9/16 SAE WASHER	1
34SAEW	3/4 SAE WASHER	1
SP1025	.813 X .563 X 1.025 11GAUGE	1

TORQUE SPECIFICATIONS

INCH SYSTEM			METRIC SYSTEM		
Bolt Size	Grade 5	Grade 8	Bolt Size	Class 8.8	Class 10.9
5/16	15 FT LB	20 FT LB	6MM	5 FT LB	9 FT LB
3/8	30 FT LB	35 FT LB	8MM	18 FT LB	23 FT LB
7/16	45 FT LB	60 FT LB	10MM	32 FT LB	45 FT LB
1/2	65 FT LB	90 FT LB	12MM	55 FT LB	75 FT LB
9/16	95 FT LB	130 FT LB	14MM	85 FT LB	120 FT LB
5/8	135 FT LB	175 FT LB	16MM	130 FT LB	165 FT LB
3/4	185 FT LB	280 FT LB	18MM	170 FT LB	240 FT LB

*The above specifications are not to be used when bolt is being installed with a bushing.

Front Installation:

Note: It is very important to take the Stock height measurements mentioned on page #1. They will be needed later on.

1. Park the vehicle on level ground, set the emergency brake, and block the rear tires. Raise the vehicle and support frame rails using jack stands.
2. While supporting front axle with floor jack, remove tires and wheels. Remove factory springs, shackles, shocks, sway bar links, track bar and sway bar. Disconnect tie rod assembly from pitman arm. Remove OEM bump stops from frame rail.
3. Attach the new upper coil over frame bracket to the frame using the (3) 1/2 x 2" fine thread bolts, washers, and nuts. Install these bolts at the location shown in Photo #1. **Be sure to install the reinforcement backing plate on the inside of the frame rail. (See Photo #2).**
4. In the remaining four holes, install the 7/16 x 1 1/2" fine thread bolts, washers, and nuts. (See Photo #3).
5. On the bottom of the bracket, there are 4 mounting holes. The last hole from the front must be drilled. Drill this location using a 15/32" drill bit.
6. Locate the factory bump stops removed in step #2. Drill the mounting holes in the factory bump stop using a 7/16" drill bit.
7. In the 3rd hole from the front of the bracket, install the 1/2 x 1 1/2" button head bolt. (See Arrow #1 in Photo #4). Only use one washer under the nut, DO NOT use a washer under the head of the bolt. Now install the bump stop. The bump stop will mount to the 2nd and 4th hole from the front. On the front of the bump stop, the mount is flat, be sure to place one of the 1/4" spacers between the bumpstop mount and the new bracket. (See Arrow #2 in Photo #4). Attach the front of the bump stop using the 7/16 x 2" fine thread bolt, washers, and nut. The rear of the bumpstop will attach using a 7/16 x 1 1/2" fine thread bolt, washers, and nut.
8. Place the new driver's side upper axle bracket onto the top of the driver's side axle as shown in Photo #5. Install Passenger side upper axle bracket on passenger side.
9. Install new lower driver's axle bracket and attach to upper bracket as shown in Photo #6. Driver's Side bracket will have the additional tab on front side of bracket. Attach using the 9/16 x 8" fine thread bolts, washers, and nuts on driver side. Use the 9/16 x 7 1/2" bolts and hardware on passenger side.
10. Attach supplied 1/2 x 3 5/8 x 6" U-Bolt with thick U-Bolt washers and nuts to upper axle bracket. See Arrow in Photo #7.

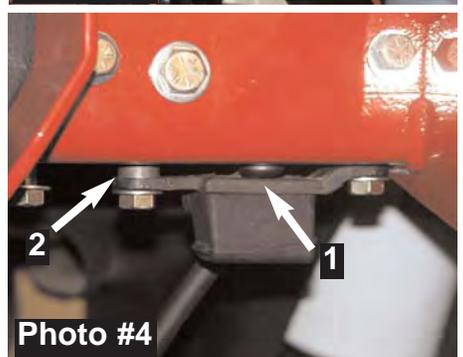
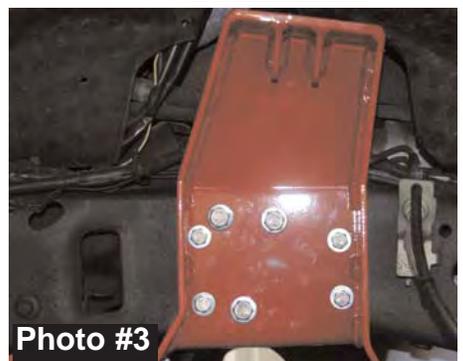


Photo #5
I-FZ968

Photo #6

Photo #7

11. Install new lower control arm brackets. The new bracket will mount in front of the transmission cross member. Install the (7) 7/16 x 1 1/2" fine thread bolts, washers, and nuts into the factory holes on the outside of frame. On the rearward most hole on the driver side, the bolt will have to be installed from the inside pointing out. (See Arrow in Photo #8).
12. On the bottom of the lower control arm bracket there are 5 mounting holes. The 3 rearward holes will have to be drilled. Mark these holes, remove bracket, and drill these points using a 15/32" drill bit. Once drilled, reinstall bracket, install 7/16 x 1 1/2" fine thread bolts, washers, and nuts into the 7 locations on the outside of the frame, and the same hardware in the 5 locations on the bottom of frame.
13. Assemble the upper and lower control arms. The upper arm is the shortest, 30.18" center to center. The lower arm is the longest, 42.75" center to center. Install drive-in zerk fittings in each end of all 4 links by using a 1/4" socket over the fitting, tap with a hammer until fitting is completely tapped in.
14. Install poly bushings into each eye of each control arm. The front eye of the upper arm will use the black bushing part # SP3446. Install the red bushings part # 2617 into the remaining eyes. Be sure to slightly grease all bushings before installation. Install the two 16mm inside diameter steel sleeves into the front eye of each upper control arm. Install the .650" inside diameter steel sleeves into each of the remaining eyes.
15. It will be necessary to grind the sway bar mount on the passenger side of the axle to allow clearance of the new lower control arm. Photo #9 shows the white line of the portion to be removed, Photo #10 shows portion removed.
16. Install the new lower control arms into the new mounting brackets using the 5/8 x 4 1/2" fine thread bolts washers and nuts. (See Photo #11 and #12). Be sure to install so that the zerk fittings are accessible with grease gun.
17. Attach the upper control arm to the new axle bracket using the 5/8 x 4 1/2" fine thread bolt, washers, and nut. Attach the upper portion to the front factory spring hanger location using the factory spring eye bolt. Be sure to install so that the zerk fittings are accessible with grease gun. (See Photo #13 / #14).

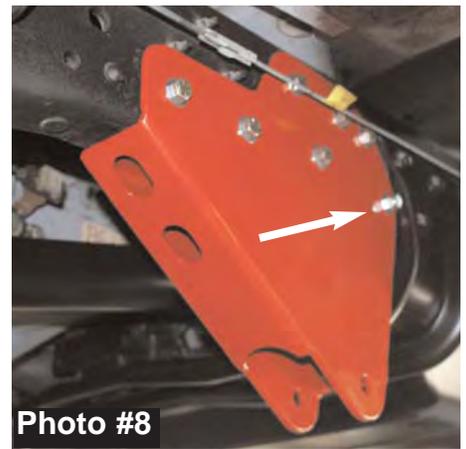


Photo #8

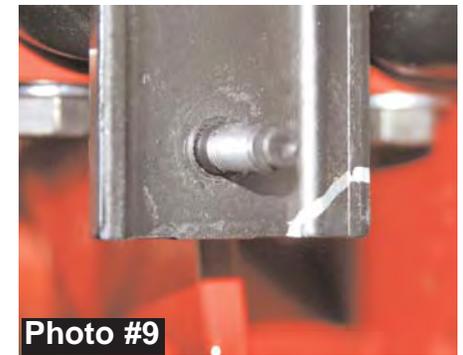


Photo #9

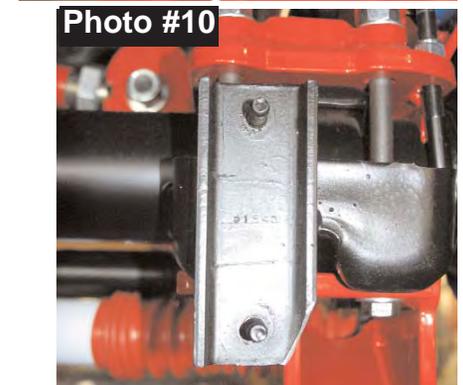


Photo #10



Photo #11



Photo #12

I-FZ968



Photo #13



Photo #14

18. Assemble coil over assembly per instructions provided with that box. Adjust the upper spanner so that there is 2" of threads exposed above the spanner. Insert the supplied steel spacers into each side of shock eye. Attach coil over to upper mount using the 5/8 x 3" socket head bolt, washer, and lock nut. Only use a washer under the nut. No washer will be used under head of the bolt. Be sure to install so that the schrader valve is pointing out. (See Photo #15).



Photo #15

19. Attach bottom of coil over to axle bracket using the 5/8 x 4 1/2" socket head bolt, washer, and locknut. Only use a washer under the nut. No washer will be used under head of the bolt. (See Photo #16).

20. With both coil overs installed, adjust the spanner down by hand so that there is no slack in between the coil and the upper spanner. Tighten the set screw at this time. Reinstall the factory tires and wheels, and let the weight down on to the coil overs.

21. Reinstall the factory sway bar back onto the axle. Assemble the supplied sway bar links. Install the Large hourglass bushings into each end of the swaybar links. Install one of the 1.6" long sleeves into each bushing. Attach to sway bar and axle using the 12x110 mm bolt, 1/2 x 3" fine thread bolt, and washers and nuts supplied.



Photo #16

22. Remove factory pitman arm using a pitman arm puller. Install new Skyjacker pitman arm. Be sure to install so that the arm is pointing in the same direction as factory.

22. Attach new drop track bar bracket to frame using the original bolts and retainer clip (inside frame rail). Install new 1/2" x 2 1/2" bolt with a washer into bracket from the front, then through the crossmember using a washer and lock nut on the back (see arrow in Photo #17). **NOTE:** Some models may require slight grinding to the crossmember for bracket to pull flush against it. Tighten all track bar bracket bolts. Reattach track bar to new drop bracket using original hardware.



Photo #17

23. Place new lower track bar mounting bracket into original trackbar mount (Photo #18). Note: Bracket supplied with lift may look slightly different depending on year model. You may need to tap bracket down in place. (Rotate top of bracket toward passenger side until rear gusset is against original trackbar mount, See Arrow in Photo #18). Insert new 20mm x 90mm bolt through original mounting hole using new 20mm locknut provided, and tighten to hold bracket in place. Note: It may be necessary to turn the steering wheel slightly left to right to help align the track bar with the new mounting bracket. Using new brackets left tab as a guide, drill 9/16" hole through both the **inner and outer** OEM plates. Be sure to keep drill bit level vertically and horizontally. Insert 1" long spacer at new drilled hole, inside the original mounts. Insert 9/16" x 3" bolt with washer thru spacer and tighten locknut. Reattach track bar using original hardware (Photo #19). Completely tighten all hardware.

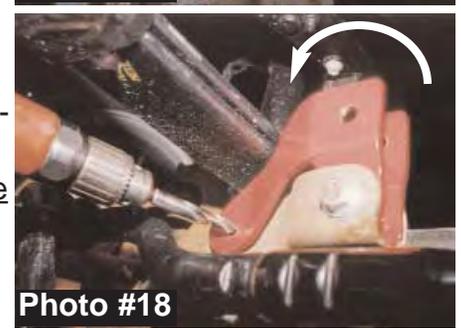


Photo #18

24. Reattach drag link assembly to new drop pitman arm being sure to reinstall cotter pin. On 8" kits, install the provided front brake lines using the instructions inclosed.



Photo #19

To Install Rear:

25. Raise rear and support securely with jack stands and block the front wheels. Remove the tires, shocks, u-bolts and vent tube on differential. (CAUTION: the rear axle will now be free to move, so support securely on floor jack.)
26. New rear leaf spring installation: Unbolt and remove the stock rear springs and bolt up the new rear springs with long end of spring towards rear bumper. (NOTE: be sure thick end of bottom degree shim is also towards rear bumper.) The original blocks are maintained.
27. Rear block installation: Install the new lift blocks, taller end toward the rear bumper, between springs and original blocks (new block will be installed on top of the original block). On 8" kits, install the provided rear brake lines using the instructions enclosed.
18. Using the floor jack, raise the axle up to rear springs. Be sure the spring tie bolts and block pins all align in proper holes and are completely seated. Install and torque new u-bolts to 110 ft. lbs.
19. Install rear sway bar endlinks (supplied only in 8" kit or ordered optionally w/ 6" kits). Install new shocks and tires, then lower vehicle to ground.
20. With vehicle on the ground with weight on the front and rear springs, measure from the ground to the center of the front fender well. Compare this measurement to the measurement taken prior to installation. It will now be necessary to adjust the upper coil seat to gain desired lift height. Raise the vehicle from the frame, so that there is no load on the coil. Loosen set screw, and adjust the upper seat using a spanner wrench to gain desired lift height. Adjust both driver and passenger side coils to the same height. Let the weight down on the spring to check the lift height. Repeat this process until accurate lift height is gained.
21. Once adjustment is done, tighten the set screw on the upper seat. Tighten the screw gradually so the upper spring seat does not move. Be careful not to overtighten the set screw. Not tightening the set screw may allow the coil to become loose causing possible damage to the shock and other components. This could result in possible injury or death.

Notes:

- **On Some 2004 Models, Longer Front Brakelines will be Required. Part# FBL92**
- If vehicle is equipped with rear sway bars, you need to order the following extended sway bar end links for 6" kits: Part # SBE405
- According to Ford manuals there is a 3/4" tolerance on side to side height differences from factory. If you are having this problem after installation, please call for further options.
- On models equipped with a rear carrier bearing, if a driveline vibration occurs, it may be required to lower carrier bearing after installation of this lift. 6" Lifts use Skyjacker Part # CBL3401 8" Lifts use Skyjacker Part # CBL214
- Be sure to have front end alignment checked periodically by a professional for your safety and longer tire life.
- Check drive shafts for proper length and clearance. Check brake line length; it may be necessary to re-route original lines or replace with new longer stainless steel lines from SKYJACKER®.
- It may be necessary to recenter the steering wheel by adjusting the turn buckle on the drag link assembly.

NOTICE: Retorque ALL nuts, bolts and especially the u-bolts after the first 100 miles, again after another 100 miles, and then check periodically thereafter.

Torque Specifications:

7/16" Bolts55 - 58 ft.lbs.
1/2" Bolts85 - 90 ft.lbs.
9/16" Bolts115 - 125 ft.lbs.
9/16" Front U-Bolts85 - 90 ft.lbs.
5/8" Rear U-Bolts100-110 ft. lbs
12mm Bolts73-77 ft.lbs.
1/2" Front U-Bolts.....75-80 ft.lbs.

- ### **Accessories:**
- HD OEM Replacement Steering Stabilizer #7099
 - Single Steering Stabilizer #7199
 - Dual Steering Stabilizer #7299 (shown below)
 - Adjustable Heavy Duty Track Bar #FTBA99 (shown below)



