

NOTE:

Please review the product instructions prior to attempting installation to ensure installer is equipped with all tools and capabilities necessary to complete the product installation. We recommend thoroughly reading the instructions at least twice prior to attempting Installation.

Before beginning disassembly of the vehicle, check the “What’s Included” section of the instructions to ensure you’ve received all parts necessary to complete installation. Further, verify that the parts received are PROPER TO YOUR application (year range, motor, etc.) to avoid potential down-time in correcting potential discrepancies. Any discrepancies will be handled by Carli Suspension and the correcting products will be shipped UPS Ground.

LIFETIME PRODUCT WARRANTY

Carli Suspension provides a limited lifetime product warranty against defects in workmanship and materials from date of purchase to the original purchaser for all products produced by Carli Suspension. Parts not manufactured by, but made to Carli Suspension’s specifications by third party manufacturers will carry a warranty through their respective manufacturer. (i.e. King Shocks, Bilstein Shocks, Fox Shocks). Deaver Leaf Spring’s warranty will be processed by Carli Suspension.

Proof of purchase (from the original purchaser only) will be required to process any warranty claims. Carli Suspension products must be purchased for the listed Retail Price reflected by the price listed on the Carli Suspension Website at the time of purchase. Carli Suspension reserves the right to refuse warranty claims made by any customer refusing or unable to present proof of purchase, or presenting proof of purchase reflecting a price lower than Carli Suspension’s Retail Price at the time the item was purchased.

Carli Suspension’s Limited Lifetime Warranty excludes the following parts which are subject to wear: Track Bar Bushings, Track Bar Heim Joints, Limit Straps, Control Arm Bushings, Radius Arm Bushings, Shock Bushings, Sway Bar End Link Heim Joints, Shock Seals, Shock Bearings, and Corrosion on Shock Shafts or Bodies. These items will be warranted for a period of 60 days from the date of purchase only if determined to be installed properly signifying manufacturing defect. Carli Suspension cannot warrant a product’s cosmetic finish due to the varying extreme elements that may be encountered.

Any alterations, modifications, or improper installation, of the product will void this warranty. Products should be inspected for defect upon receipt and approved before installation. Any defect in NEW product will be warranted if returned before installation in its original packaging. Carli Suspension’s obligation under this warranty is limited to the repair or replacement of the defective product only. All costs of removal, installation or reinstallation, freight charges, incidental or consequential damage are expressly excluded from this warranty.

Carli Suspension is not responsible for damages and/or warranty of other vehicle parts related or non-related to the installed Carli Suspension product. This warranty shall not apply to any product that has been subjected to accident, negligence, alteration, abuse or misuse as determined by Carli Suspension. Carli Suspension reserves the right to refuse warranty claims if produced parts are combined and/or substituted with other aftermarket suspension products. Combination and/or substitution of other aftermarket suspension components may cause premature wear and/or product failure. Carli Suspension reserves the right to change/alter product without obligation to update any previously purchased products.



Please Visit: Forums.CarliSuspension.com

Troubleshooting advice or to download an electronic copy of this document.

Ford King Pintop 2.5: 4.5" Lift System

What's Included

1. 4.5" Multi-Rate Coil Springs
2. Add-a-Packs, U-Bolts, Center pins **OR** Full Progressive Leaf Springs, U-Bolts and Center Pins and Bump Drops
3. Pintop 2.5 Shock Package:
 - a. Front and Rear Shocks
 - b. Front, Coil Mounted Reservoir Mounts
4. Adjustable Track Bar
5. Extended Sway Bar End Links (2005-2010) **OR** Sway Bar Drop Brackets with End-link Spacers (2011-2015)
6. Radius Arm Drop Brackets with Crossmember and Hardware Pack
7. Front Bump Stop Drops and Hardware
8. Stainless Steel, Braided Brake lines
9. Caster Shim

System Notes:

- Super Duties equipped with a 2" tall block from the factory will require the factory 3-5/8" tall Block to attain leveled stance with the add-a-pack. Part Number: 7C3Z-5598-HB, 7C3Z-5598-JB
- Rear Driveshaft must be checked for 1 piece or 2 piece units. It is recommended that 2 piece driveshafts order a carrier bearing drop, PN# CS-CARRIERDROP-F
- Carli Recommends a 17"-18" Wheel, no more than 9" wide with 5" of Backspacing on 4.5" Lift Systems
- 37", E-Rated Tire Fitment is recommended. Recommended unloaded Tire Pressure 45F/40R

Installation Instructions

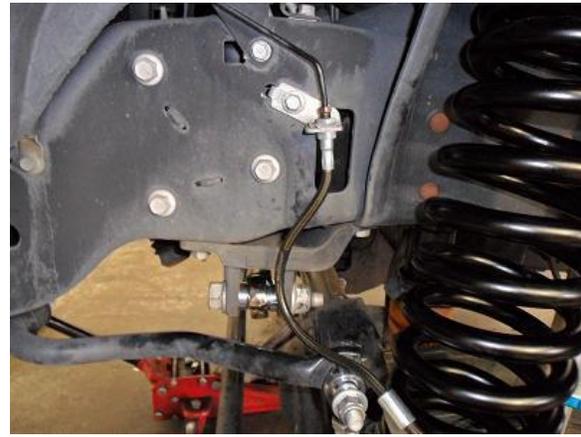
Note: Prior to installation, carefully inspect the vehicles steering and drive train components. Be sure to check all front end components. Everything must be tight and in good working condition prior to installation of a Lift system.

- *We recommend installation be done by a trained professional.
- *Read instructions carefully before attempting installation.
- *Secure and properly block vehicle prior to installation.
- *Front end alignment is necessary upon completion of install.
- *Re-torque all nuts and bolts Front and Rear after 500 miles to ensure tightness.

1. Set emergency brake and block rear wheels, in front and behind tires.
2. Lift truck to extend suspension 3 to 4 inches. Do not lift truck all the way.
3. Remove factory transfer case skid plate and hardware.
4. With a jack supporting radius arms, remove rear bolts from radius arms and lower radius arms.
5. Install new radius arm drop brackets using supplied 3/4" and 3/8" hardware. Do not tighten at this time.
NOTE: 2011+ vehicles may require drilling two 3/8" holes on the bottom of the passenger side frame rail where the drop bracket meets the frame.
6. Raise radius arms up into drop brackets and re-install rear bolt using factory hardware. Do not tighten at this time.
7. Set truck on the ground.
8. Torque radius arms drop bracket hardware.
Torque 3/4" hardware to 350 ft/lbs. and 3/8" hardware to 47 ft/lbs.
9. Torque rear radius arm bolts to factory spec.



10. Install new transfer case skid plate using supplied 3/8" hardware. Torque to 47 ft/lbs.
11. Jack up the front end and properly support the frame on jack stands that are rated for the weight of the vehicle.
12. Use a hydraulic jack under the axle to compress the front suspension.
13. Remove the front wheels and set aside.
14. Disconnect sway bar end links from sway bar and axle.
(2011's will reuse OEM Endlinks).



15. Disconnect brake lines and ABS wires from lower factory spring mount (disconnect 4wd vacuum lines as necessary).
16. Remove upper track bar bolt at the frame end.
17. Remove factory shocks.
18. Fully extend front suspension and remove factory coils.
19. Remove O.E.M. bump stops.

DO NOT discard, these will be re-used later.

20. Using a 5/16 drill bit, drill out the threads in the frame where the O.E.M. bump stops attach to the frame.
21. Install Carli front bump stop drops and OEM mount, using supplied 5/16 x 18 x 4.25 bolts, washers, and nuts.
22. Reinstall the factory foam bump stops into the O.E.M. mounts.
23. Replace front and rear factory brake lines with supplied steel braided brake lines.

Note: 2011+ Trucks with dual rear brake lines will likely require rear ABS lines to be removed from the lower axle bracket to accommodate full droop as extension isn't possible. These lines should be zip-tied to the supplied Stainless Brake lines.

24. Install Carli Coils. Place supplied Carli front reservoir mount on top of coil spring isolator during coil spring installation. Be sure reservoir mount is lined up properly as coil is being seated
NOTE: COILS ARE SIDE SPECIFIC! NEXT TO THE LOGO ON EACH COIL WILL BE A (D) FOR DRIVER SIDE OR (P) FOR PASSENGER SIDE.

25. Install the new Carli 4.5" coils making sure that they are indexed properly in the lower mounts. Spin them while watching the bottom tail drop into the proper location.

26. Compress the front suspension using the hydraulic jack.
27. Install bottom of FRONT Pintop Shocks into lower shock mount, then insert pintop into upper shock mount.
28. Install pintop bushing hardware onto shock. Tighten nut until the rubber compresses.
29. Rotate reservoir so that the hose bends towards the frame away from the tire. Mount the shock reservoir using supplied hose clamps.
30. Attach the supplied Carli Decal; this will help re-align the reservoirs if removed in the future.



FOR 2005-2010 VEHICLES (FOR 2011-12, See Next Section)

31. Adjust supplied Carli sway bar endlinks to 7.25" eye to eye if 2008-10.
If 2005-07. Adjust the end link so the pin is perpendicular to the mounting bracket at ride height (in the middle of travel)
32. Install supplied Carli end links in the factory location using O.E.M mounting hardware. Tighten all sway bar hardware including jam nuts.

FOR 2011-12 VEHICLES ONLY:

33. Disconnect factory Sway Bar from the frame and install supplied Drop Brackets to the frame mount with OEM Hardware. Make sure the Drop Brackets angle forward so that it pushes the sway bar away from Coils.
34. Reinstall Sway Bar onto Drop Bracket with supplied 3/8"x1.25" hardware.
35. Disconnect the lower retaining nuts on the sway bar end links from the axle bracket (both sides).

36. Push up on the passenger side of the sway bar to remove the lower pin-mount on the end link from the axle bracket.
37. Slide the provided gold spacer onto the lower end link stud and push the sway bar back into position guiding the end link back into the axle mount.
38. Re-secure the end link to the lower axle mount with the factory nut with the spacer sandwiched between the end link and axle mount as pictured below. Do this hand tight until the Driver's side spacer is in place as well.
39. Repeat spacer installation on Driver's side.
40. It may be necessary to remove the thin metal "bridge" that binds the clamps on the drag-link adjustment collar to ensure full clearance of the drag link and sway bar.
41. Tighten all hardware to factory spec.



ALL YEARS:

42. Remove O.E.M. track bar from the axle with a ball joint puller.
43. Adjust the supplied Carli Track Bar to 38" center eye of bearing to center eye of the tapered end.
44. Apply thread locker to threads and torque Jam nut to 150 lb./ft.
45. Install Carli track bar onto factory axle mount using the factory nut.
46. Torque to 150 lbs/ft.
47. Install factory fender liners using factory hardware.
48. Set truck on ground.
(If front tires were removed, reinstall and only slightly tighten until the truck is lowered onto the ground, then set torque.)
49. Install frame end of track bar into the factory mount.
NOTE: Have someone turn the steering wheel to help line up the rod-end to the mount.
50. Install upper factory bolt. Torque to 406 Ft Lbs (factory torque).
51. Reconnect factory ABS lines and vent tubes. Mount new brake line tabs in factory mounting locations.



Rear Installation – Add-a-Pack

(Full Spring Pack, Reference Instructions in U-Bolt Box.)

52. Raise the rear of the truck and place floor jacks underneath rear axle. Place safety jack stands under the frame to support the truck and lower the truck onto jack stands.
53. Remove rear wheels.
54. Use a floor jack to raise the rear axle just enough to take tension from the shocks and remove them.
55. Remove rear U-bolts attaching rear axle to driver side leaf spring.
56. Carefully lower rear axle.
57. **DO NOT ALLOW AXLE TO HANG FROM ANY HOSES OR CABLES**
58. Secure main spring assembly together with 2 C-clamps on outer edges of lower leaf. **Do not include the lower overload** (thick leaf on the very bottom). If your truck has Upper Overload (Helper Springs), you can reuse them, but longer U-Bolts (NOT INCLUDED) will be required to keep the Helper Springs. We **STRONGLY** recommend you remove them for rear suspension performance.
59. Remove the leaf spring center pin(s) and lower overload spring. Discard the factory overload as the add-a-pack will replace it.
60. Install 6 leaf Add-A-Pack using supplied new center pin.
(Order of assembly = New center pin- 6 leaf add-a-pack- remaining leaves on the truck.)
Note: You may have to slightly loosen U-bolts on opposite side of the truck to droop axle enough for install of Add-A-Pack.
61. **CAREFULLY** tighten center pin to bring the leaves together. It might be required to compress them together with a C-Clamp to get the center pin to fully tighten.
62. Once tight, set F350 Blocks on the axle mount with the bump-stop tang facing inward.
63. Raise axle until the block meets the add-a-pack spring and the center pin indexes into the hole on the top of the block.
64. Drill out factory spring retainer plate in order to accommodate new, larger center-pin nuts. We use a step-chamfer bit for this.
65. Set the retainer plate on top of the leaves and install U-bolts to secure the assembly.
66. Torque U-bolt nuts to 110 ft.-lbs in a cross pattern.
67. Repeat installation on passenger side.



Completing Installation:

68. Install rear wheels
69. Lower truck onto the ground
70. Torque wheels and suspension components to OEM specs once the truck is on the ground.
71. Mount the REAR Piggyback shocks body up, shaft down. Both Reservoirs should face AWAY from the axle. Driver's side reservoir points rearward and Passenger reservoir points forward.
72. Torque shock bolts to 35 ft lbs upper and lower.
DO NOT USE AN IMPACT ON THE UPPER NUTS! YOU WILL SHEAR THE SHOCK MOUNT!
73. Place Carli Sticker (from hardware kit) onto the shock reservoir facing rearward.
74. Take truck for an alignment.
75. Re-torque after 1000 Miles.

Operational Inspection and Settings

Please note, the shocks included with this system are nitrogen charged, they require specific nitrogen pressure to operate correctly. Ensure the vehicle is supported properly and that the axle is at full droop when verifying nitrogen pressure. Many gauges will release nitrogen in the process of checking the pressure; ensure your gauge will maintain shock pressure during verification (Lock out Gauge) to avoid loss of nitrogen. If you're unsure, many suspension shops, welding supplies, tire shops, or motorcycle repair shops will be able to check or refill your nitrogen charged shocks.

Without the proper nitrogen pressure, Carli Suspension's shocks will not operate properly and will be more susceptible to damage to the seals and internals of the shock. No shocks will be replaced under warranty if the shocks were not properly charged before installation. Shock should ship charged but should be verified prior to installation. **ONLY USE NITROGEN TO CHARGE THE SHOCKS.**

Nitrogen Pressure: King 2.5 225 psi