



#F1404, F1405 Installation Instructions 1999-2004 Ford Super Duty F-250/350 4wd 4" Suspension Lift

Read and understand all instructions and warnings prior to installation of product and operation of vehicle.

Zone Offroad Products recommends this system be installed by a professional technician. In addition to these instructions, professional knowledge of disassembly/ reassembly procedures and post installation checks must be known. Minimum tool requirements include the following: Assorted metric and standard wrenches, hammer, hydraulic floor jack and a set of jack stands. See the "Special Tools Required" section for additional tools needed to complete this installation properly and safely.

» PRODUCT SAFETY WARNING

Certain Zone Suspension Products are intended to improve off-road performance. Modifying your vehicle for off-road use may result in the vehicle handling differently than a factory equipped vehicle. Extreme care must be used to prevent loss of control or vehicle rollover. Failure to drive your modified vehicle safely may result in serious injury or death. Zone Offroad Products does not recommend the combined use of suspension lifts, body lifts, or other lifting devices.

You should never operate your modified vehicle under the influence of alcohol or drugs. Always drive your modified vehicle at reduced speeds to ensure your ability to control your vehicle under all driving conditions. Always wear your seat belt.

» TECHNICAL SUPPORT

Live Chat provides instant communication with Zone tech support. Anyone can access live chat through a link on www.zoneoffroad.com.

www.zoneoffroad.com may have additional information about this product including the latest instructions, videos, photos, etc.

Send an e-mail to tech@zoneoffroad.com detailing your issue for a quick response.

888.998.ZONE Call to speak directly with Zone tech support.

» PRE-INSTALLATION NOTES

1. Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
2. Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
3. Larger rim and tire combinations may increase leverage on suspension, steering, and related components. When selecting combinations larger than OE, consider the additional stress you could be inducing on the OE and related components.
4. Post suspension system vehicles may experience drive line vibrations. Angles may require tuning, slider on shaft may require replacement, shafts may need to be lengthened or trued, and U-joints may need to be replaced.
5. Secure and properly block vehicle prior to installation of Zone Offroad Products. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, Zone Offroad Products recommends rear alterations first.
7. Due to payload options and initial ride height variances, the amount of lift is a base figure. Final ride height dimensions may vary in accordance to original vehicle attitude. Always measure the attitude prior to beginning installation.

Difficulty Level

easy 1 **2** 3 4 5 difficult

Estimated installation: 4-6 hours

Special Tools Required

30mm (1-3/16") sockets

Tire/Wheel Fitment

Wheel:

16x8/16x10, 4" BS

Tire:

35x12.50

Kit Contents

Qty Part

2 Front Leaf Spring

1 Front Track Bar

4 Track Bar Bushing

2 Track Bar Sleeve - 1.125 x 0.156 x 1.745

2 Front Bump Stop Spacer

1 Bolt Pack - Front Bump Stop

4 9/16" x 3-1/8" x 9-1/2" Curved U-bolts/nuts/washers

OR 9/16" x 3-1/8" x 9" Square U-bolts/nuts/washers

4 5/8" x 3-5/8" x 15" U-bolts/nuts/washers

#F1404 Only

2 Front Sway Bar Link

4 Front Sway Bar Link Bushing

4 Front Sway Bar Link Sleeve

INSTALLATION INSTRUCTIONS

Important—measure before starting!

Measure from the center of the wheel up to the bottom edge of the wheel opening

LF _____ RF _____

LR _____ RR _____

Step 2 Note

The track bar bolts require a 30mm or 1-3/16" socket/wrench to remove and install.

»» PRE-INSTALLATION NOTES

1. These vehicles, especially diesel models, are very heavy. Be sure that proper jacks/stands are used that are rated to handle the weight of the vehicle. Ensure that the vehicle is well supported before beginning the installation.
2. Ford uses extremely strong Loctite to secure their leaf spring bolts from the factory. In some cases it may be necessary to heat the leaf spring nuts to enough to metal the Loctite in order to remove the hardware.
3. The factory front track bar bolts require 405 ft-lbs of torque to be installed properly. Be sure you have the means of removing and installing this hardware properly. It is possible to install the hardware and torque to a more modest range (200 ft-lbs or so) and take the vehicle to a shop with the means to torque the hardware properly immediately after the installation is complete.

»» FRONT INSTALLATION

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Locate and remove the front track bar bolt at the driver's side frame mount. Save hardware. **Figure 1**

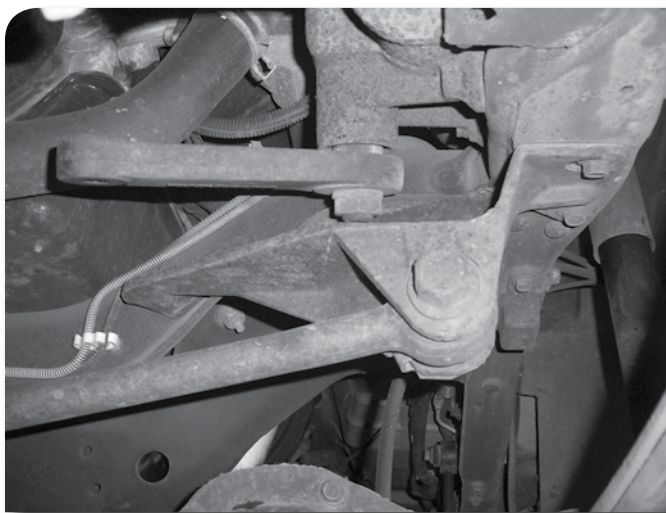


Figure 1

3. Raise the front of the vehicle and support the frame with jack stands just behind the front leaf spring. Be sure the stands are adequate for the weight of the vehicle.
4. Remove the front wheels.

5. Remove the front bumper. Removing the bumper greatly improves access to the front spring bolts and speeds installation time. Front bumper mounting varies slightly from year to year. Be sure to disconnect any auxiliary lights and shrouds before attempting to remove the bumper. The main four mounting bolts are accessed in the front near the tow hooks. Depending on the year, there will be a side support on each side that must be disconnected.
6. Disconnect the track bar from the axle mount. **Figure 2** Save hardware along with the frame hardware removed earlier. The track bar will not be reused.



Figure 2

7. Disconnect the front sway bar links from the sway bar and frame. Save links and hardware. **Figure 3a & b** New model shown, others similar.

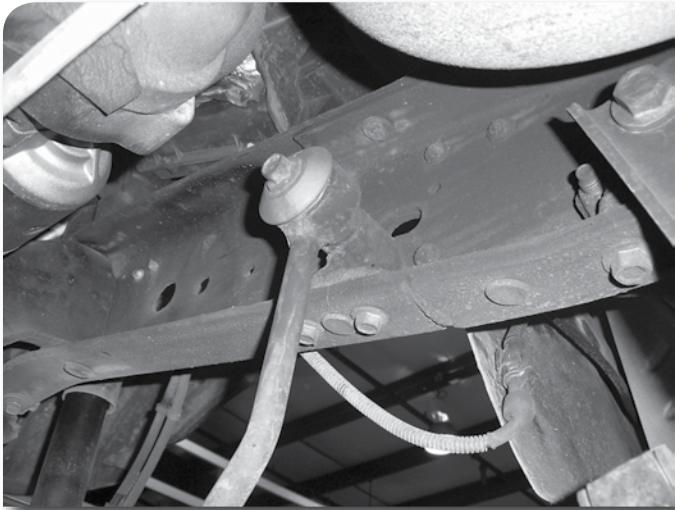


Figure 3a



Figure 3b

8. Disconnect the front shocks from the axle and frame mounts. Save hardware and discard the shocks.
9. Locate the front brake line bracket on the frame. Bend the bracket downward approximately 60 degrees. **Figure 4** This will provide adequate slack in the lines after the vehicle is lifted. After reforming the bracket, disconnect it from the frame. Save hardware.



Figure 4

10. Loosen but do not remove all four leaf spring mounting bolts. On the front, the A/C condenser brackets will need to be removed to gain access to the bolt. **Figure 5** Remove the brackets from the core support and save along with the mounting bolts.

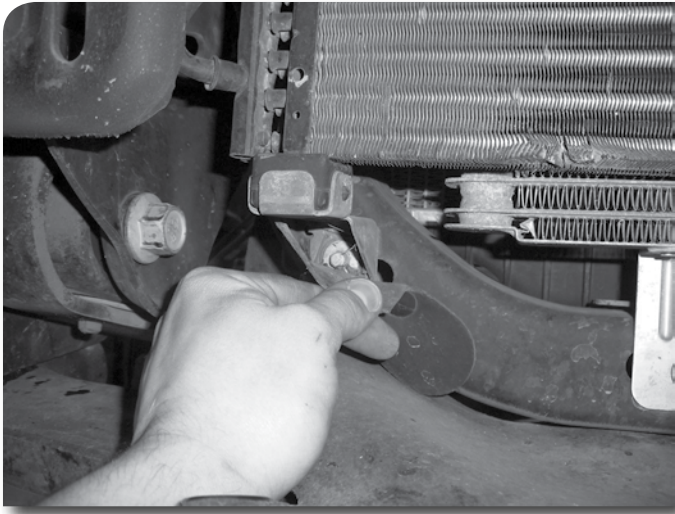


Figure 5

11. With all of the leaf spring bolts loose, support the passenger's side of the front axle with a jack. Remove the passenger's side spring u-bolts. Lower the axle away from the spring. Remove the spring bolts and remove the spring from the vehicle. Save the leaf spring bolts and discard the u-bolts.
12. Locate one of the new leaf springs. The larger spring eye will mount to the front of the vehicle. Install the new spring in the vehicle and loosely attach to the front frame mount and rear shackle with the factory hardware.
13. Raise the axle to the new spring with the jack. Align the spring pin into the pin hole in the axle mount and fasten with the new 9/16" u-bolts/nuts/washers and the factory spring plates. The axle will have to be pulled forward to align the pin. It may be necessary to loosen the driver's side u-bolts to allow the axle to move forward. Snug the u-bolts just enough to keep the spring pin in place.
14. Repeat the leaf spring installation steps on the driver's side of the vehicle. Leave all hardware loose. The u-bolts and spring bolts will be torqued with the weight of the vehicle on the suspension at the end of the installation.
15. Locate the new provided track bar, track bar bushings and sleeves. Lightly grease and install the bushings and sleeves into the ends of the track bar.
16. Install the new track bar into the passenger's side axle mount so that the gusset on the end of the bar is pointing up. **Figure 6** Install the track bar bolt but not the nut. Both of the factory track bar nuts have tabs on them that rest on the factory mounts. The last bend in the tabs must be removed to clear the new track bar. **Figure 7** This can be done with a hack saw or cut-off wheel. Once the nuts are modified install one on the axle track bar bolt. Save the other for installation later.

Step 15 Note

The track bar bushings are made with a very high durometer (stiff) urethane to work properly on the front of the Super Duty. They will be somewhat difficult to install, by design. We recommend using a bench vise to aid installation

Step 16 Note

Again, to ensure proper function of the track bar/bushings the track bar end will be a tight fit into the factory brackets. Applying some grease to the face of the bushing will aid installation.



Figure 6



Figure 7

17. Locate and remove the factory front bump stops from the frame rails. **Figure 8** Locate the provided rectangle bump stop spacers and place between the factory bump stops and the frame rail. Align the holes in the bump stop and spacer with the original frame mounting holes and fasten with the provided 10mm x 110mm bolts and washers into the captive nuts in the frame. **Figure 9** Torque bolts to 30 ft-lbs.

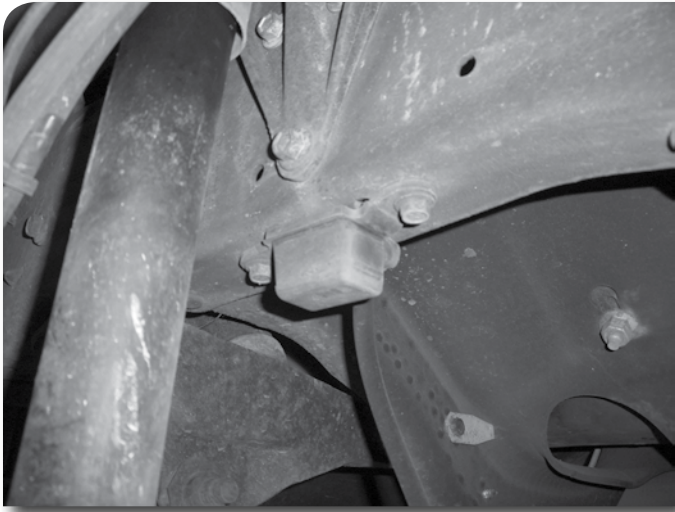


Figure 8

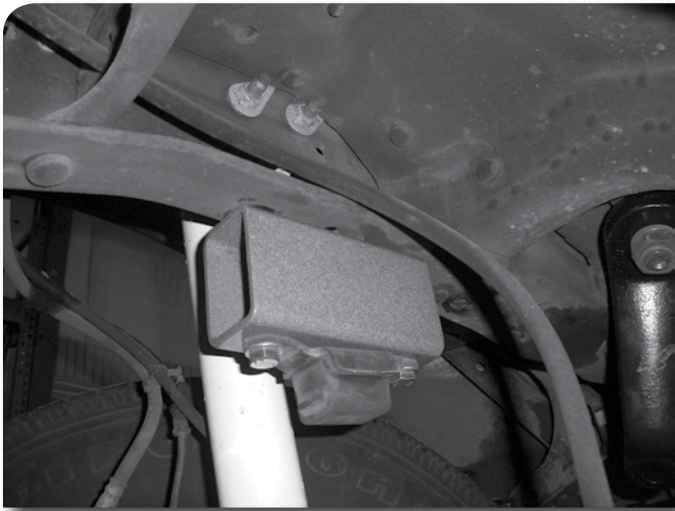


Figure 9

18. Locate the new provided front shocks (shorter set compared to the rear). Locate the bushings and sleeve provided with the shocks. There are two different bushing widths, set them side by side and determine which one is taller. Install the taller bushing into the BODY end of the shock along with the provided steel sleeve. Install the short bushing into the ROD end of the shock (this end does not require a sleeve).
19. Install the new shock to the factory axle/frame mounts with the original hardware. The BODY end of the shock mounts to the axle. Torque the upper and lower shock mount hardware to 70 ft-lbs
20. Kit F1404 Only: Locate the new provided front sway bar links, bushings and sleeves. Lightly grease and install the bushings and sleeves into the new link ends. Attach the new links to the frame and sway bar with the original hardware. The links are offset will mount in the same position as the originals. Torque link hardware to 60 ft-lbs.
21. Kit F1405 Only: Locate the factory sway bar mounts inside the frame rails. **Figure 3A** Remove the two bolts and the mounts from the inside of the frame rails and reinstall on the bottom of the frame with the original bolts. **Figure 10** Install the mounts so the small ID of the link mounting hole is toward the inside of the vehicle. Torque the link mount bolts to 35 ft-lbs.



Figure 10

22. Kit #J1405 Only: Reattach the factory front sway bar links to the relocated frame mount and the sway bar with the original hardware. Torque the link bolts to 75 ft-lbs.
23. Reattach the front brake line brackets to the frame with the original bolts. Torque bolts to 15-20 ft-lbs.
24. Install the wheels and lower the vehicle to the ground. Torque the lug nuts to 165 ft-lbs.
25. Bounce the front of the vehicle to help settle the suspension.
26. Install the driver's side end of the new track bar into the factory frame mount with the original hardware. Torque the frame and axle track bar hardware to 405 ft-lbs.
27. Torque the front leaf spring u-bolts to 100 ft-lbs. Torque the front leaf spring hanger bolts to 200 ft-lbs and the shackle bolts to 180 ft-lbs.
28. After the front spring hardware is properly tightened, reinstall the A/C condenser support brackets with the original hardware. Tighten bolt to approximately 5 ft-lbs.
29. Reinstall the front bumper with the original hardware. Be sure to replace any shrouds/wire that were removed. Adjust bumper to the desired location and tighten all mounting hardware securely.
30. Check all hardware for proper torque.

» REAR INSTALLATION

1. Block the front wheels for safety. Raise the rear of the vehicle and support the frame with jack stands just ahead of the leaf spring mounts.
2. Remove the wheels.
3. Support the axle with an appropriate jack. Remove the factory shocks from the axle and frame. Save hardware and discard shocks.
4. Working on one side at a time, remove the factory u-bolts and discard. Lower the axle from the leaf spring just enough to place the provided block between the axle pad and the factory block. Align the pin/hole in the new block with the hole in the axle and the pin in the factory block. Fasten the assembly with the new provided u-bolts, nuts and washers. Snug u-bolts but do not torque.
5. Repeat block installation on the opposite side.

Step 4 Note

Typically, the rear brake line has adequate slack to compensate for the added rear lift. If the brake line is too taunt, slightly bend the upper (frame) bracket down to gain slack. Only a little is necessary for proper slack.

6. Locate the new provided shocks (longer set compared to the front). Locate the bushings and sleeves provided with the shocks. Install the bushings into the ends of the shock. Install a steel sleeve in the bushing at the BODY end of the shock (the ROD end does not require a sleeve).
7. Install the new shock to the factory axle/frame mounts with the original hardware. The BODY end of the shock mounts to the axle. Torque the upper and lower shock mount hardware to 70 ft-lbs.
8. Install the wheels and lower the vehicle to the ground. Torque the lug nuts to 165 ft-lbs.
9. Bounce the rear of the vehicle to help settle the suspension. Torque the u-bolts to 150 ft-lbs.
10. Check all hardware for proper torque.

»» **POST-INSTALLATION**

1. Check all hardware for proper torque. Recheck fasteners after 500 miles.
2. The steering wheel will need to be re-centered after the installation is complete. This is accomplished by loosening the adjusting collar clamps up near the pitman arm on the steering drag link. **Figure 11** Rotate the adjusting collar in the proper direction (have a helper watch the steering wheel) so that the wheel is centered when the front wheels are straight ahead. Torque adjusting collar clamps to 40 ft-lbs.

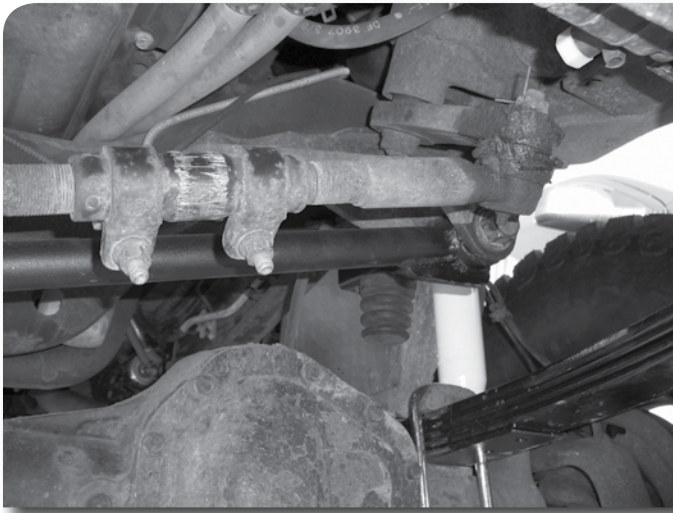


Figure 11

Post-Installation Warnings

1. Check all fasteners for proper torque. Check to ensure for adequate clearance between all rotating, mobile, fixed, and heated members. Verify clearance between exhaust and brake lines, fuel lines, fuel tank, floor boards and wiring harness. Check steering gear for clearance. Test and inspect brake system.
2. Perform steering sweep to ensure front brake hoses have adequate slack and do not contact any rotating, mobile or heated members. Inspect rear brake hoses at full extension for adequate slack. Failure to perform hose check/ replacement may result in component failure.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.