



Loaded Strut Installation Instructions

2009-2013 Ford F-150 4wd (ZONF4201)
2014-2025 Ford F-150 4wd (ZONF4202)
2" Loaded Strut Leveling Kit

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

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

Send an e-mail to tech-zone@ridefox.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: 2-3 hours

Special Tools Required

204-592 Separator Tie Rod End Separator

Tire/Wheel Fitment

Tire:

33 x 12.50

Wheel:

stock to 5.5" B.S.

IMPORTANT

It is required that ride height measurements be taken before and after installation. Measure from the **WHEEL AXLE CENTER** up to the **FENDER LIP** of the wheel opening. Do this for all 4 wheels. Record measurements below.**

BEFORE:

LF _____ RF _____ LR _____ RR _____

AFTER:

LF _____ RF _____ LR _____ RR _____



***These ride heights will be required if you have any ride height concerns after installation. Please be prepared to provide these to Technical Support.*

Loaded Strut Kit Contents

Qty	Part
2	ZONF4201 - 2" 2009-2013 Ford F150 Loaded Struts
2	ZONF4202 - 2" 2014-2025 Ford F150 Loaded Struts
1	Bolt Pack 838

INSTALLATION INSTRUCTIONS

»» PRE-INSTALLATION NOTES

1. Wider tires on stock wheels will need clearance checked to the steering knuckle / UCA.
2. To aid in alignment, Alignment Cam kits are recommended such as MOOG K100010.
3. Will fit models with 4 Auto that do not have the 4WD actuator hub assembly.

»» FRONT DISASSEMBLY

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Raise the front of the vehicle and support with jack stands at the frame rails.
3. Remove the front wheels.
4. **2011+ F150:** Disconnect the power steering control module connector (EPAS Electronic Power Assist Steering) to avoid arching of the contacts in the internal power relay from a hammer blow or impact wrench.
5. Disconnect the driver's and passenger's side front sway bar links from the steering knuckle (2021+) or lower control arm (2009-2020). **Figure 1**

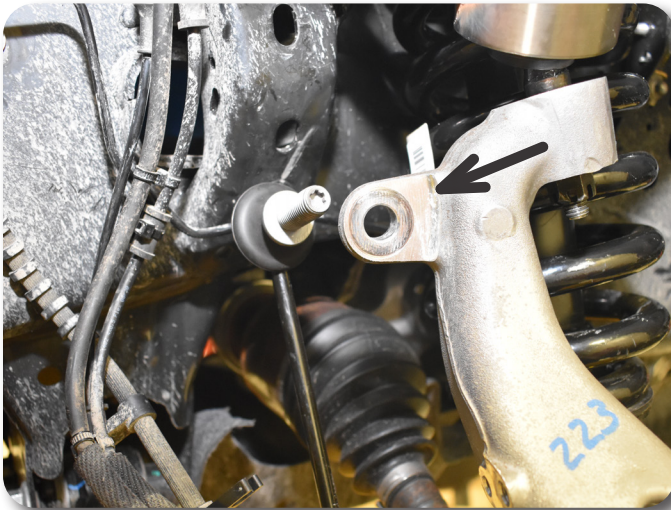


Figure 1

Step 5 Note:

Do not use power tools to remove the stabilizer bar link nut. Damage to the stabilizer bar link ball joint or boot may occur.

Complete this portion of the installation on one side at a time

6. Disconnect the front brake line and ABS line from the steering knuckle. **Figure 2**

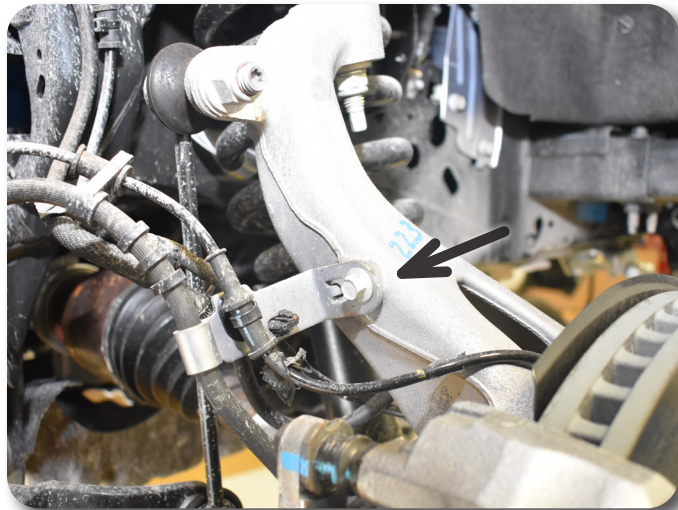


Figure 2

7. Disconnect the front brake line from the frame. Figure 3

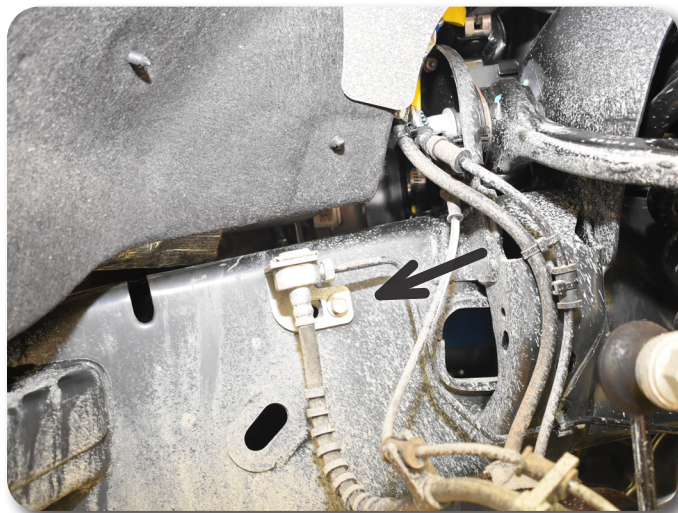


Figure 3

8. **If applicable:** Locate the small dust cap on the hub. Figure 4 Carefully remove the cap using a pair of channel lock (or any wide jaw style) pliers. Save dust cap.



Figure 4

9. Remove the CV retaining nut (which was covered by the dust cap). **Figure 5**

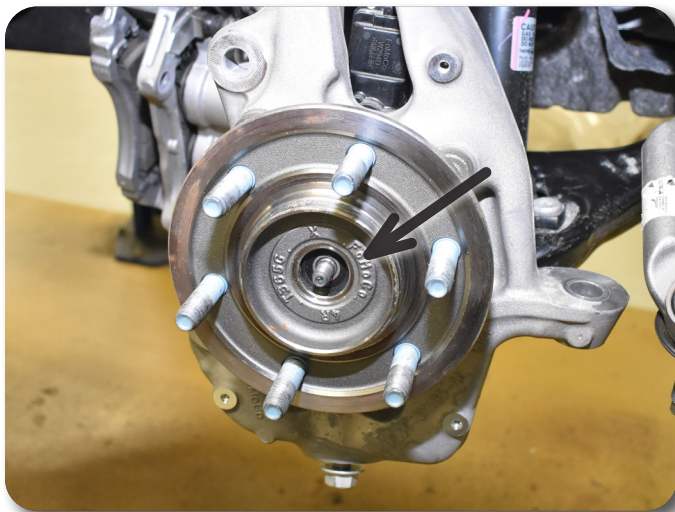


Figure 5

10. Remove the steering tie rod end nut from the tie rod end at the steering knuckle. Use an appropriate ball joint separator to dislodge the upper ball joint taper from the knuckle. **Figure 6**

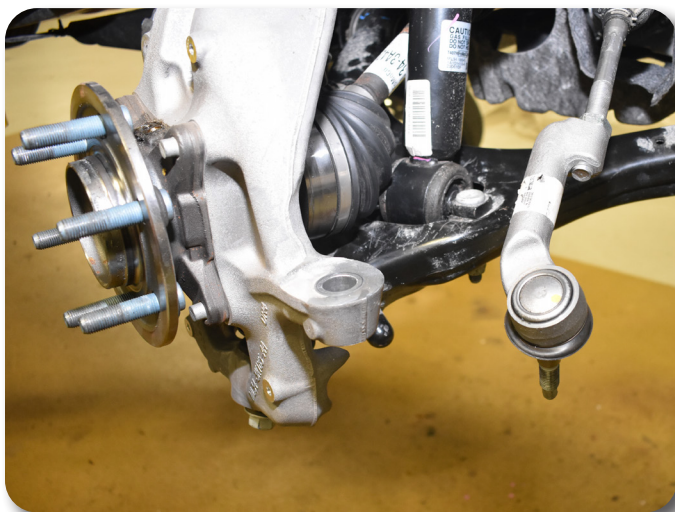


Figure 6

11. Support the lower control arm with a hydraulic jack. Remove the upper ball joints from the knuckle. Use an appropriate ball joint separator to dislodge the upper ball joint taper from the knuckle. **Figure 7** Allow the knuckle to rest back away from the front strut.

Step 10 Note:

Use Special Service Tool: 204-592 Separator to release the taper from the steering knuckle. Do NOT strike the aluminum knuckle with a hammer!

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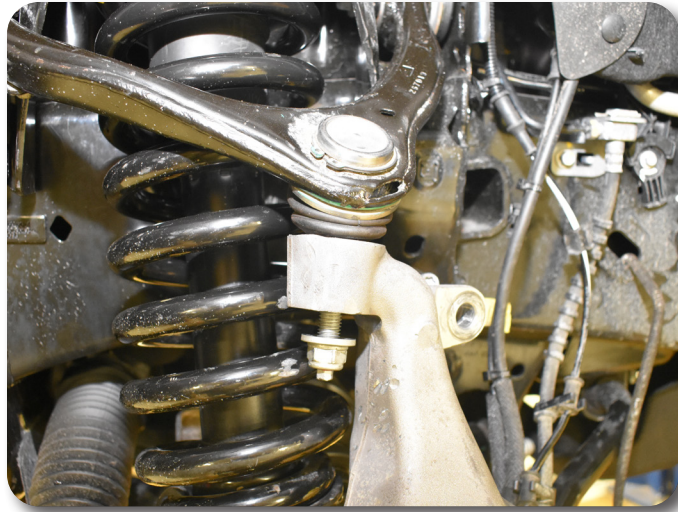


Figure 7

12. Support the lower control arm with an appropriate jack. Remove the three upper strut mounting nuts at the frame. **Figure 8** DO NOT remove the center strut rod nut. Discard nuts.



Figure 8

13. Remove the lower strut mount nuts at the lower control arm. Lower the control arm and remove the strut from the vehicle.

» STRUT INSTALLATION

14. Install the new loaded strut assembly into the upper frame mount by aligning the studs in the strut with the original mounting holes. Loosely fasten the strut with the hardware.
15. **2009-2013 Models Only:** Install the bottom of the strut back into the original mount on the lower control arm, leaver hardware loose. With the lower hardware installed, go back and torque the upper strut hardware to **35 ft-lbs**. DO NOT EXCEED 35 ft-lbs when tightening the strut to the frame. DO NOT USE an impact to tighten the strut to the frame.
16. **2014+ Models Only:** Install the bottom of the strut back into the original mount on the lower control arm, torque to 66 ft-lbs. With the lower hardware installed, go back and torque the upper strut hardware to **35 ft-lbs**. DO NOT EXCEED 35

ft-lbs when tightening the strut to the frame. DO NOT USE an impact to tighten the strut to the frame.

17. With the strut installed, reconnect the knuckle to the upper ball joint. Replace with factory hardware. While connecting the upper ball joint, be sure that the CV shaft properly aligns into the hub. **Figure 9** Torque the upper ball joint nut to 46 ft-lbs.



Figure 9

» FRONT ASSEMBLY

18. Be sure the CV is properly seated in the hub. Replace the CV nut with factory hardware and torque nut to 30 ft-lbs. Reinstall the hub dust cap by tapping in place with a small hammer. *Note: Trucks that do NOT have the IWE / 4wd actuator hub assembly, that DO have the large diameter axle nut, torque the nut to 221 ft-lbs.*
19. Reconnect the brake line and ABS line to the steering knuckle and replace with factory hardware. Torque brake line bolt to 22 ft-lbs and ABS line bolt to 106 in-lbs.
20. Attach the steering tie rod end to the steering knuckle and replace with factory hardware. Torque to 76 ft-lbs.
21. With both sides complete, reconnect the sway bar links to the knuckle or lower control arm and replace with factory hardware. Torque to 59 ft-lbs.
22. If equipped, re-connect EPAS control module connector.
23. Install the wheels and lower the vehicle to the ground. Torque lug nuts to 150 ft-lbs in a crossing pattern.
24. Bounce the front of the vehicle to settle the suspension.
25. **2009-2013 Trucks Only:** Torque the lower strut mounting bolts to 406 ft-lbs
26. Check all hardware for proper torque.
27. Adjust head lights.
28. Check hardware after 500 miles.
29. The vehicle will need a complete front end alignment.

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.

Step 20 Note:

Do not use power tools to attach the stabilizer bar link nut. Damage to the stabilizer bar link ball joint or boot may occur.