



## F1215 Installation Instructions 2021 Ford F-150 2wd/4wd 2" Strut / Preload Spacer Lift 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](http://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](mailto: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

Strut Compressor

Cut Off Wheel

Basic Hand Tools

### Tire/Wheel Fitment

Tire:

33 x 12.50

Wheel:

stock to 5.5" B.S.

## Important—measure before starting!

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

LF \_\_\_\_\_ RF \_\_\_\_\_

LR \_\_\_\_\_ RR \_\_\_\_\_

## F1215 Kit Contents

Qty	Part
2	Strut Spacer
2	Preload Spacer
2	2" Rear Lift Blocks
4	9/16" x 3-1/8" x 12" Radius Square U-Bolt
1	Bolt Pack 898
6	10mm-1.50 x 35mm Bolt, Class 8.8, Clear Zinc
12	10mm-1.50 Prevailing Torque Nut, Clear Zinc
6	3/8" USS Washer, Clear Zinc
6	3/8" SAE Washer, Clear Zinc
8	9/16"-18 High Nut, Black
8	9/16" SAE Washer, Black

## INSTALLATION INSTRUCTIONS

### »» PRE-INSTALLATION NOTES

1. If desired the preload spacer can not be installed, this will result in around 3/4" lower ride height than the advertised 2".
2. Wider tires on stock wheels will need clearance checked to the steering knuckle /UCA.

### »» 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. 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. Save sway bar link nuts. **Figure 1**

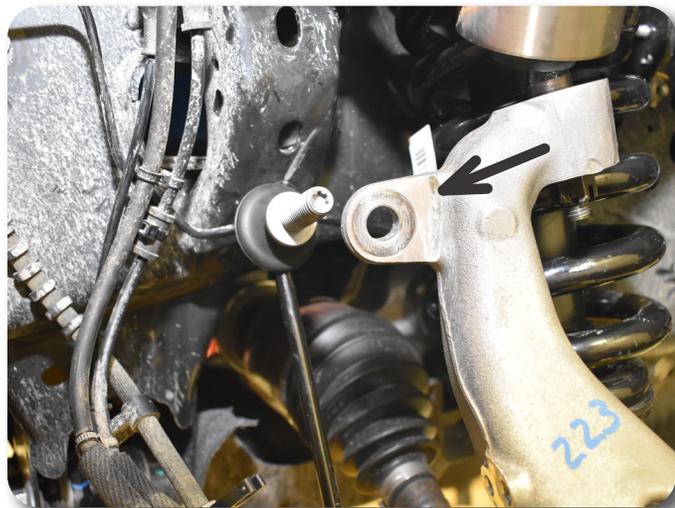


Figure 1

*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. Save bolts. Figure 2



Figure 2

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

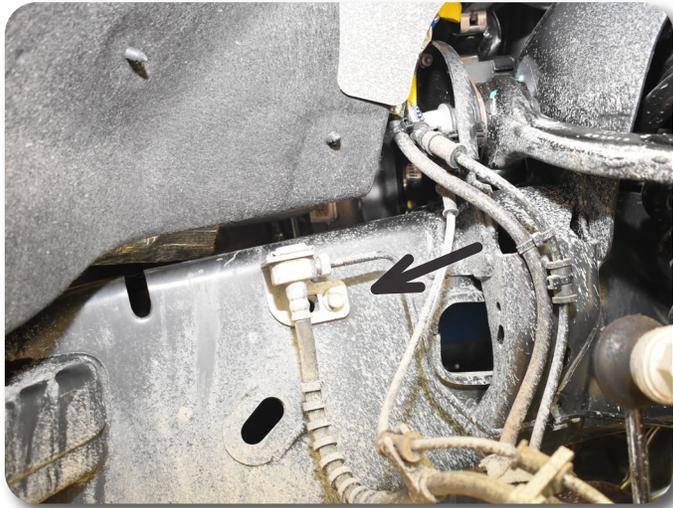


Figure 3

8. 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). Save nut. Figure 5

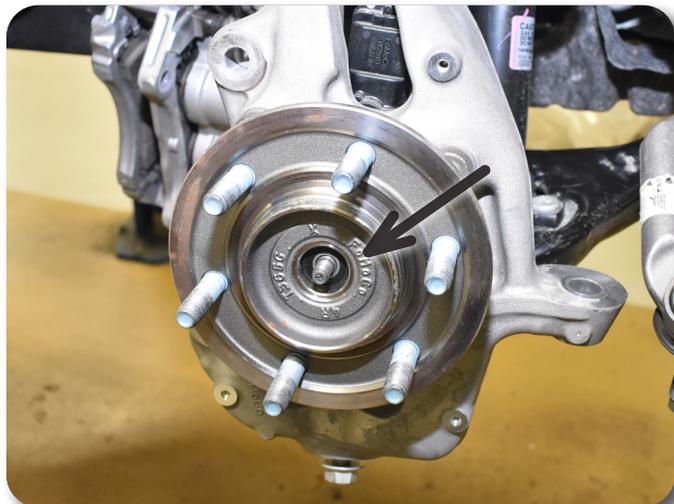


Figure 5

10. Remove the steering tie rod end nut from the tie rod end at the steering knuckle. Thread the nut back on a couple of turns by hand. Strike the knuckle near the tie rod end to dislodge it from the knuckle. Figure 6 Remove the nut and remove the tie rod end from the knuckle. Save nut.

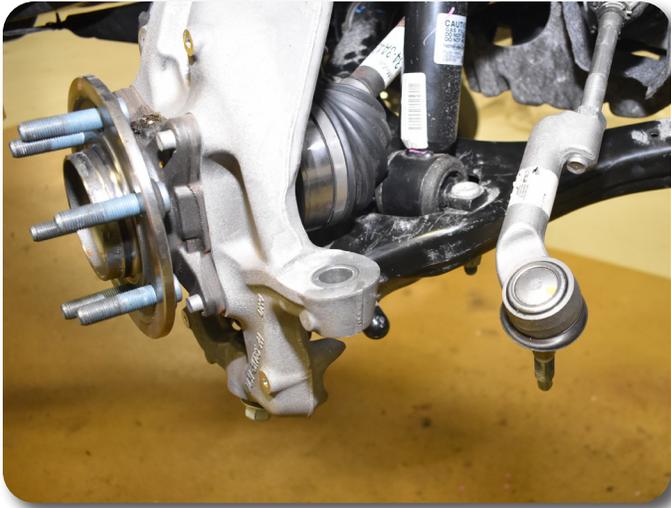


Figure 6

11. Remove the upper ball joint nut and thread back on a couple of turns by hand. Strike the knuckle near the ball joint to dislodge it from the knuckle. **Figure 7** Remove the nut and remove the ball joint from the knuckle. Save nut. Allow the knuckle to rest back away from the front strut.



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. Save lower strut nuts.
14. Due to lower bar pin angle in the strut, the top plate of the strut assembly must be rotated 180 degrees. Place alignment marks on the upper strut mount, isolator, spring, strut body and lower coil seat for reference when the strut is assembled. Compress the coil spring slightly and rotate the upper plate 180 degrees. Figure 9A, B, C.

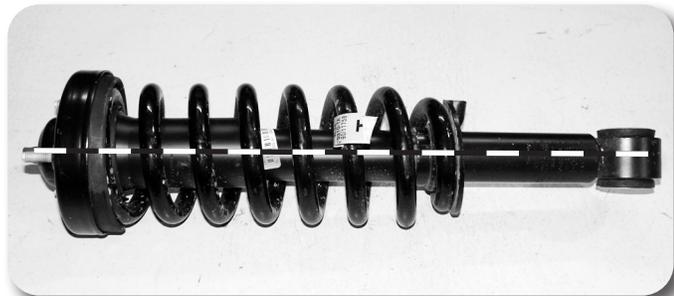


Figure 9A



Figure 9B



Figure 9C

**! Caution** *Coil Spring is under extreme pressure. Improper removal/installation of coil spring could result in serious injury or death. Use only a high-quality spring compressor and carefully read and follow the manufacturer's instructions.*

## » STRUT SPACER INSTALLATION

15. Using an appropriate strut compressor, compress the coil spring and remove the upper strut nut Figure 10. Remove the strut and upper strut mount/isolator from the coil spring.



Figure 10

16. Working on the upper strut mount, remove the rubber isolator Figure 11A from the strut mount and install the provided preload ring, Figure 11B. Reinstall the rubber isolator and line up the align marks made earlier.



Figure 11A



Figure 11B

### Step 19 Note:

Run a 10mm-1.50 die down the threads of the studs after they have been cut to clean up the threads. If you do not have a die, thread the factory 10mm strut nuts on the studs before cutting them. After the studs are cut, when removing the nuts they will help to clean up the threads as they are unthreaded.

17. Rotate the top plate 180 degrees. This will allow the lower bar pin to reassemble in the lower control arm smoothly. Note the before and after strut pictures.
18. Reassemble the strut. Make sure to line up all of the alignment marks other than the top plate will be rotated 180 degrees. Fasten the strut rod with the original nut. Torque the strut nut to 41 ft-lbs.
19. Mark and cut the three top plate factory studs on the strut to 3/4". **Figure 12A & B**



Figure 12A



Figure 12B

**Figure 12B Note:**

Shown with strut spacer installed.  
The studs must sit flush / below the  
surface of the strut spacer.

20. Install the 10mm bolts through the hex holes on the bottom of the strut spacer. Attach strut spacer on top of the factory strut, the strut spacer will only install one way. Tighten to the top plate using the provided 10mm nuts and 3/8" SAE washer (smaller diameter) to 35 ft-lbs. Figure 13A, B, C, D.

**Step 20 Note:**

Hardware for the strut spacer is in  
Bolt Pack 898



Figure 13A



Figure 13B

### Fig 13C Note

Modified strut assembly on top, stock strut on bottom, notice lower bar pin angle is the same.



Figure 13C



Figure 13D

### Step 21 Note:

Hardware for the strut spacer is in Bolt Pack 898

### » STRUT INSTALLATION

21. Install the modified strut assembly into the upper frame mount by aligning the studs in the new spacer with the original mounting holes. Loosely fasten the strut with the provided 10mm nuts and 3/8" USS washers (Larger diameter).

22. Install the bottom of the strut back into the original mount with the factory hardware, torque to 66 ft-lbs. With the lower hardware installed, go back and torque the new upper hardware to 35 ft-lbs.
23. With the strut installed, reconnect the knuckle to the upper ball joint with the original nut. While connecting the upper ball joint, be sure that the CV shaft properly aligns into the hub. **Figure 14** Torque the upper ball joint nut to 46 ft-lbs.



Figure 14

## » FRONT ASSEMBLY

24. Be sure the CV is properly seated in the hub and reinstall the original retaining nut. Torque nut to 30 ft-lbs. Reinstall the hub dust cap by tapping in place with a small hammer.
25. Reconnect the brake line and ABS line to the steering knuckle with the original bolt. Torque brake line bolt to 22 ft-lbs and ABS line bolt to 106 in-lbs.
26. Attach the steering tie rod end to the steering knuckle with the original nut. Torque to 76 ft-lbs.
27. With both sides complete, reconnect the sway bar links to the knuckle with the original hardware. Torque to 59 ft-lbs.
28. If equipped, re-connect EPAS control module connector.
29. Install the wheels and lower the vehicle to the ground. Torque lug nuts to 150 ft-lbs in a crossing pattern.
30. Check all hardware for proper torque.

## » REAR INSTALLATION INSTRUCTIONS

**NOTE:** Complete the following instructions one side at a time. Do not attempt to drop the entire axle at one time.

1. Raise rear of vehicle and support with jack stands under frame. Remove wheels.
2. With axle firmly supported by jack stands remove the OEM shock. Place a hydraulic jack under the rear differential.
3. Loosen the OEM u-bolts that retain the spring to the axle.
4. With the hydraulic jack supporting the axle, slowly allow the axle to drop away from the leaf spring. Replace the jack stands for additional support.

### Step 3 Note:

To avoid axle shift, only remove/replace the u-bolts from one side at a time.

### Step 4 Note:

It may be necessary to adjust the brake line in order to gain additional length. Do not kink the brake line in any way.

### Step 6 Note:

Do not bring this assembly under pressure until the u-bolts have been installed.

### Step 7 Note:

Hardware for the U-bolts is in Bolt Pack 898

### 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.

5. Remove the stock block (if equipped). Place the new block between the axle and the leaf pack.
6. Slowly raise the axle with the hydraulic jack in order to assemble the blocks and leaf springs. Make sure that all of the locating pins are inside their female counterparts.
7. Install u-bolts with the supplied nuts and washers. Be sure the u-bolts are perpendicular to the axle before tightening.
8. Tighten the u-bolts to 100-120 ft-lbs.
9. Install the provided new shocks with the OE hardware. Torque to 60 ft-lbs.
10. Complete the above instructions for the other side of the vehicle.
11. Install the wheels and lower the vehicle to the ground. Torque lug nuts to 150 ft-lbs in a crossing pattern.
12. Adjust head lights.
13. Check hardware after 500 miles.
14. The vehicle will need a complete front end alignment.