



## F1300 Installation instructions 2022 Ford F-150 Lightning AWD 3" Strut / Preload Spacer Leveling 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: 3-4 hours

### Special Tools Required

Strut Compressor

36mm Socket

Torque Wrench capable of 350 ft-lbs

Air hammer/ hand hammer and punch

Basic Hand Tools

Special Service Tool: 204-592 Separator

Tie Rod End Separator

### 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 \_\_\_\_\_

## 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.

## F1300 Kit Contents

Qty	Part
2	Strut Spacer
2	Preload Spacer
1	Bolt Pack 475
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
2	Rear Strut Spacer
1	Bolt Pack 659
6	7/16"-14 x 2" Bolt, Grade 8, Yellow Zinc
6	7/16"-14 Nut, Yellow Zinc (non locking Nut)
6	7/16" split Lock Washer, Yellow Zinc
6	7/16" SAE Washer, Yellow Zinc

## 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 3".
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. If equipped 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. **Figure 1**

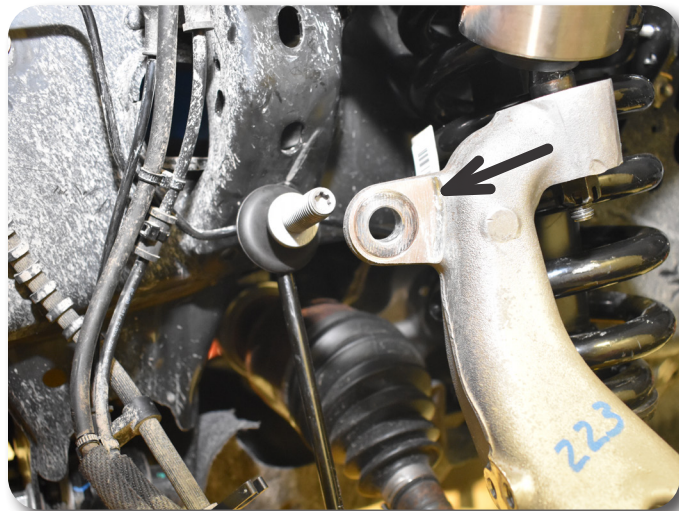


Figure 1

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. Figure 2



Figure 2

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

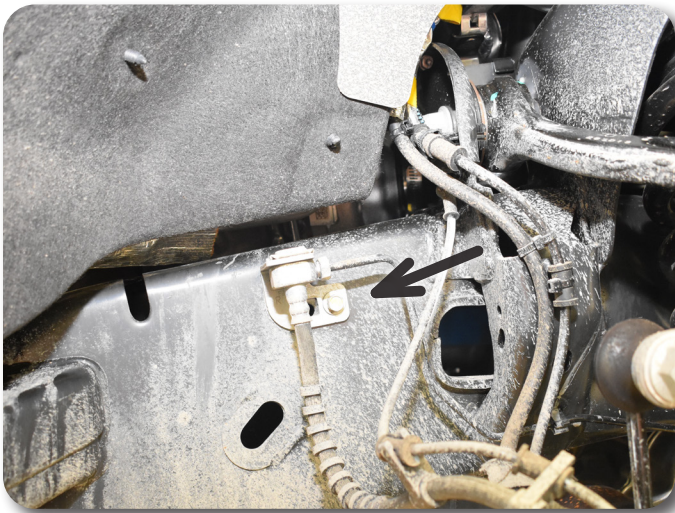


Figure 3

8. Remove the CV retaining nut Figure 5

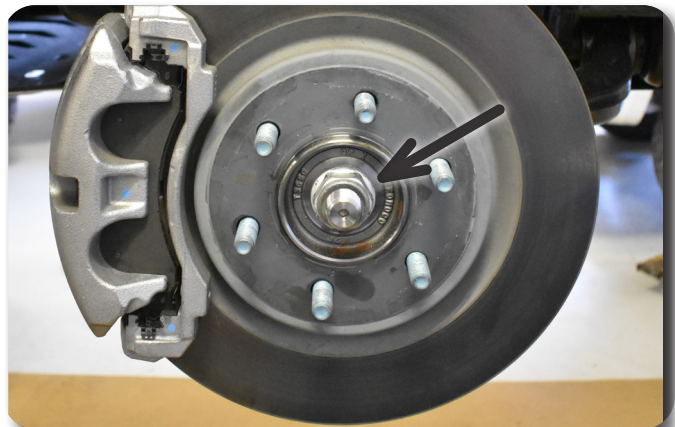


Figure 5



### Step 9 Note:

Use a tie rod end separator to release the taper from the steering knuckle.

9. Remove the steering tie rod end nut from the tie rod end at the steering knuckle. Avoid hitting the aluminum steering knuckle, use appropriate tool to remove tie rod end from steering knuckle. Take care not to strike the tie rod end, or damage the threads Figure 6

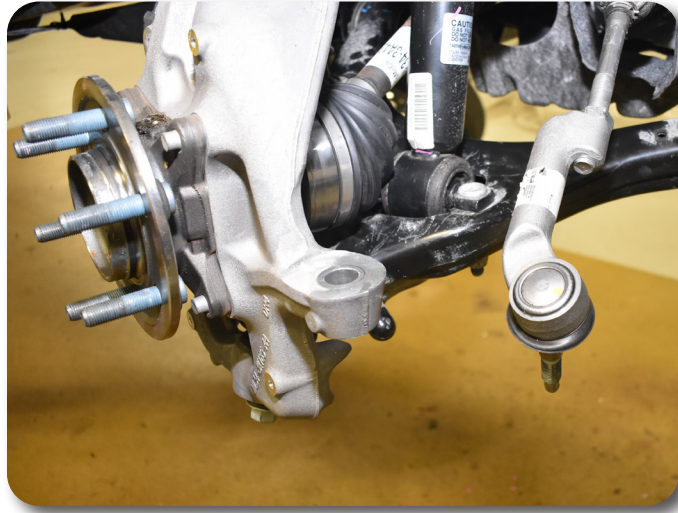


Figure 6

10. Unseat the upper ball joints from the knuckle, refrain from hitting the aluminum steering knuckle, use appropriate tool to separate ball joints, avoid damaging the threads. Figure 7 Allow the knuckle to rest back away from the front strut.

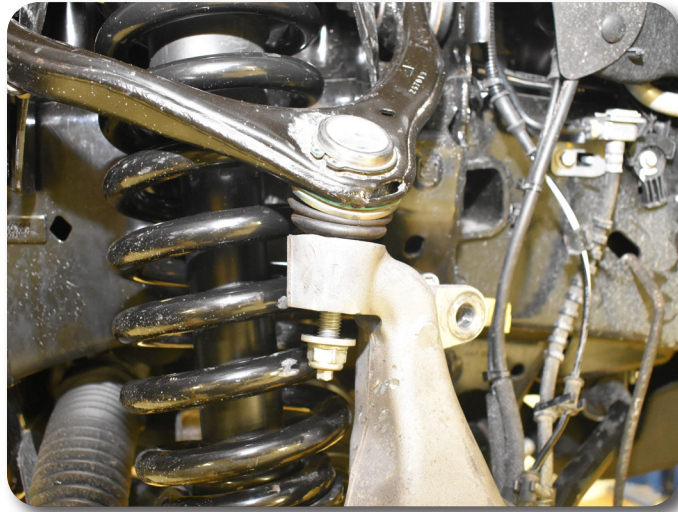


Figure 7

### Step 11 Note:

Use Special Service Tool: 204-592 Separator to release the taper from the steering knuckle.

11. 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

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

### » STRUT SPACER INSTALLATION

13. 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.

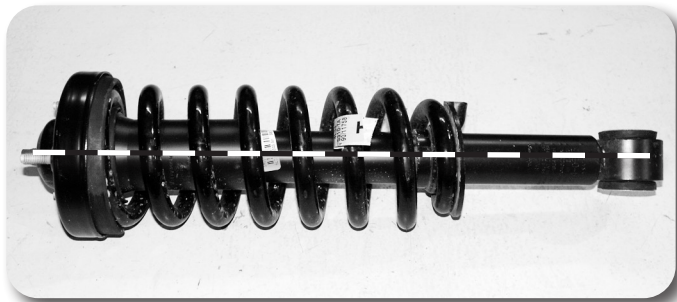


Figure 9A



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.*

14. 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

15. 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

16. Rotate the **only** 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.
17. 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.
18. Install the 7/16" bolts into the holes labeled "D" only, do NOT use the "P" holes on the passenger's side. Once complete both struts will look exactly the same, there will not be side specific strut assemblies like earlier years. **Figure 12a, b, c, d, e, f**





Figure 12A



Figure 12B



Figure 12C - Driver's Side Shown





Figure 12D

**Fig 12D Note**

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

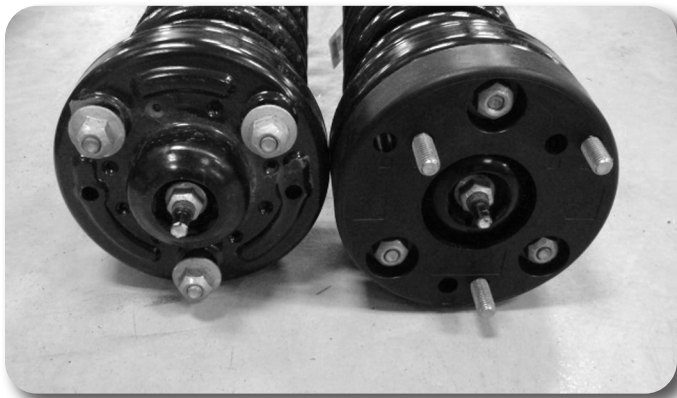


Figure 12E



Figure 12F

19. Tighten the factory strut hardware to 35 ft-lbs.. Figure 13



Figure 13- Passenger's Side Shown

### Step 21 Note:

Hardware for the strut spacer is in Bolt Pack 475

## » STRUT INSTALLATION

20. 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).
21. 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 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.
22. 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. Torque the upper ball joint nut to 46 ft-lbs.

## » FRONT ASSEMBLY

23. Be sure the CV is properly seated in the hub. Replace the CV nut with factory hardware and torque nut to 186 ft-lbs. 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.
24. Attach the steering tie rod end to the steering knuckle and replace with factory hardware. Torque to 76 ft-lbs.
25. With both sides complete, reconnect the sway bar links to the knuckle and replace with factory hardware. Torque to 59 ft-lbs.
26. If equipped, re-connect EPAS control module connector.

### Step 25 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.

27. Install the wheels and lower the vehicle to the ground. Torque lug nuts to 150 ft-lbs in a crossing pattern.
  28. Check all hardware for proper torque.
- 

## » REAR INSTALLATION

1. Block the front wheels for safety
2. Raise the rear of the vehicle and support with jack stands on the frame rails to allow the suspension to be fully extended.
3. Remove the rear wheels.
4. While supporting the rear control arm with a hydraulic jack or screw jack stand remove the lower strut bolt and carefully use a prybar to remove the lower strut eye from the control arm. **Figure 14**



Figure 14

5. Once the lower strut mount is removed carefully remove the 3 upper strut mounting nuts and remove the strut assembly from the vehicle. **Figure 15**

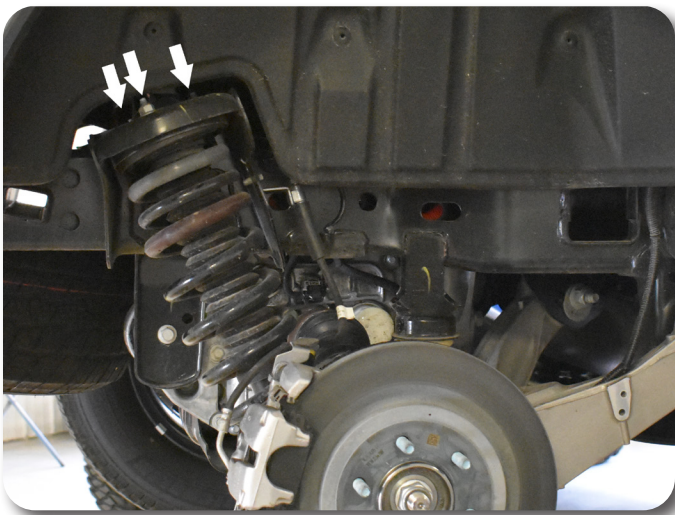


Figure 15



### Step 6 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.

6. Mark and cut the three top plate factory studs on the strut to 3/4". Figure 16A & B



Figure 16A



Figure 16B

7. Install the 10mm bolts through the hex holes on the bottom of the strut spacer. Attach strut spacer on top of the factory strut, there is only one way it can be installed. Tighten the top plate to the strut using the provided 10mm nuts and 3/8 SAE washer (smaller diameter) to 35 ft-lbs DO NOT EXCEED 35 ft-lbs when tightening the spacer to the strut. DO NOT USE an impact to tighten the spacer to the strut. Figure 17A, B, C



Figure 17A





Figure 17B



Figure 17C

**Figure 17C Note:**

Verify the studs are cut flush / below the surface of the strut spacer.

» **STRUT INSTALLATION**

8. 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 struts with the provided 10mm nuts and 3/8" USS washers (larger diameter).
9. Install the bottom of the strut back into the original mount. Insert the bolt with the threaded end towards the outside of the truck and install the nut. Do not tighten lower hardware. With lower hardware installed go back and torque new 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.

Figure 18

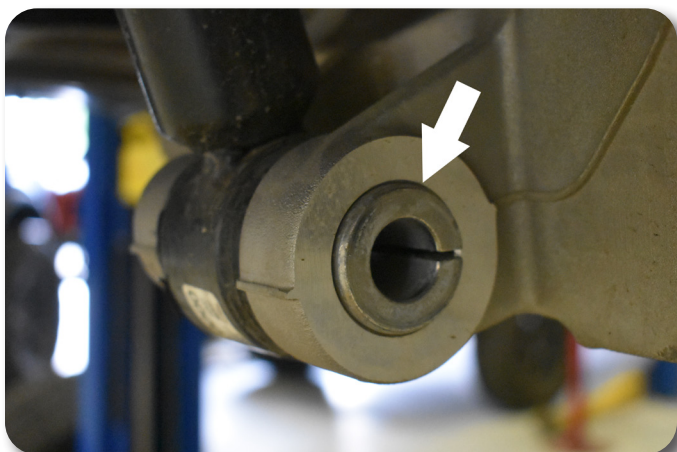


Figure 18

**Step 9 Note:**

The lower mount on the control arm has a press sleeve that moves to fit the lower bushing perfectly when tightened. This can make the opening tight on the strut bushing, use care to align the strut bushing in the opening when installing, it may be necessary to use a rubber mallet to install the lower mount fully

## 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.

---

## » REAR ASSEMBLY

10. Install the wheels and lower the vehicle to the ground. Torque lug nuts to 150 ft-lbs in a crossing pattern.
11. Once vehicle is on the ground with lug nuts torqued jounce the vehicle to settle the suspension, then torque rear lower strut mounting bolt to 350 ft-lbs.
12. Check all hardware for proper torque.
13. Adjust headlights.
14. Vehicle will need a complete front end alignment.
15. Check hardware after 500 miles.

