



# F1203 Installation Instructions

## 2009-2013/2014-2020 Ford F-150 2wd/4wd

### 2" Strut Spacer 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

[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

30mm (1-3/16") socket or wrench

27mm (1-1/16") socket or wrench

Spring compressor

#### Tire/Wheel Fitment

Tire:

33 x 12.50

Wheel:

stock to 5.5" B.S.

## Kit Contents

Qty	Part
2	Strut Spacer
1	Bolt Pack

### Important—measure before starting!

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

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

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

2009-2013 model year instructions are given below,  
2014 and newer model year, skip to page #8

1. While the 2009-2013 model trucks use the same parts as the 2014 and newer models, the instruction process is different. Skip to page #8

### INSTALLATION INSTRUCTIONS

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 and newer models equipped with EPAS (Electronic Power Assist Steering), disconnect the power steering control module connector 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 sway bar. Save sway bar link nuts. 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 1

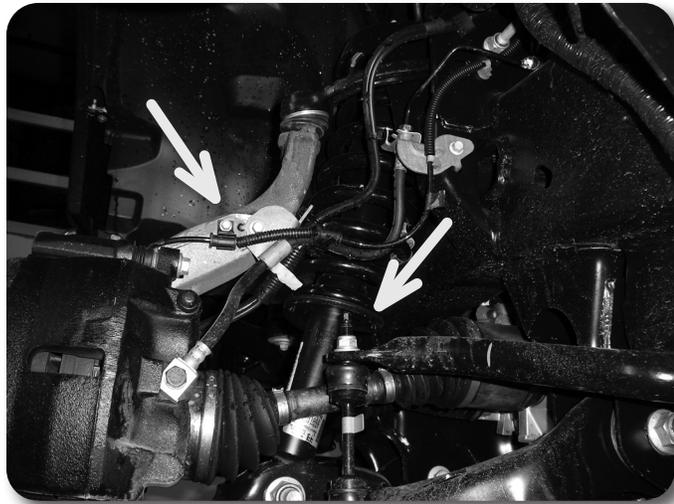


Figure 1

7. Locate the small dust cap on the hub. Figure 2 Carefully remove the cap using a pair of channel lock (or any wide jaw style) pliers. Save dust cap.
8. Remove the CV retaining nut (which was covered by the dust cap). Save nut Figure 3
9. 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 4 Remove the nut and remove the tie rod end from the knuckle. Save nut.



Figure 2



Figure 3



Figure 4

10. 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 5 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 5

### Step 11 Note

The lower strut bolt requires a 30mm (1-3/16") and 27mm (1-1/16") socket / wrench to remove.

11. Support the lower control arm with an appropriate jack. Remove the three upper strut mounting nuts at the frame. Figure 6 DO NOT remove the center strut rod nut. Save nuts.



Figure 6

12. Remove the lower strut mount bolt/nut at the lower control arm. Lower the control arm and remove the strut from the vehicle. Save lower strut hardware.
13. 2009-2013 model years: Locate the new strut spacers. Install the 7/16" bolts into the holes for correct side (P = Passenger, D = Driver). Figure 8A,B,C

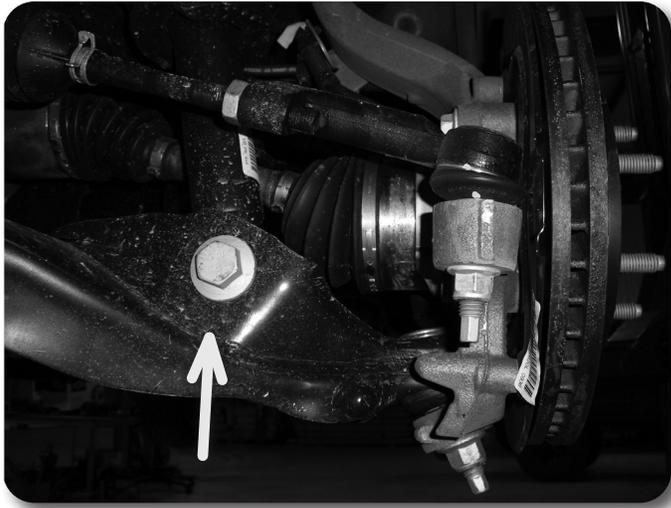


Figure 7

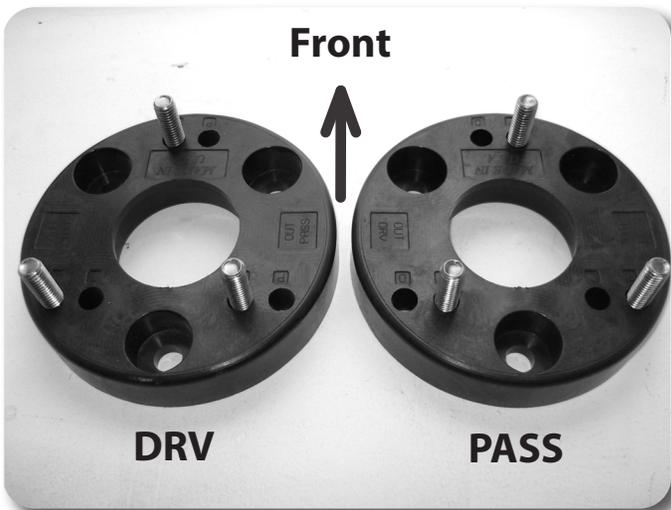


Figure 8A-2009-2013



Figure 8B



Figure 8C - Driver's Side Shown

14. Install the new spacer on the strut and fasten with the original mount nuts. The spacers are labeled to indicate which side will face 'out' on the vehicle once they are installed. Figure 9 Torque nuts to 35 ft-lbs.



Figure 9 - Passenger's Side Shown

15. 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 7/16" nuts and washers.
16. Install the bottom of the strut back into the original mount with the factory hardware, leave hardware loose. With the lower hardware installed, go back and torque the new upper hardware to 40 ft-lbs.
17. 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 10 Torque ball joint nut to 85 ft-lbs.



Figure 10

## Recommend Alignment Specifications

### CASTER

$4.50^{\circ} \pm 1.00^{\circ}$

### CAMBER

$-0.20^{\circ} \pm 0.75^{\circ}$

### TOTAL TOE

$+0.15^{\circ} \pm 0.25^{\circ}$

## 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.

18. 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.
19. Reconnect the brake line and ABS line to the steering knuckle with the original bolt. Torque brake line bolt to 22 ft-lbs and the ABS line bolt to 106 in-lbs..
20. Attach the steering tie rod end to the steering knuckle with the original nut. Torque to 85 ft-lbs.
21. With both sides complete, reconnect the sway bar links to the sway bar with the original 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. **2009-2013 ONLY**  
Trucks: Torque the lower strut mounting bolts to 406 ft-lbs.
25. Check all hardware for proper torque. Check hardware after 500 miles.
26. The vehicle will need a complete front end alignment.

## 2014-2020 MODEL: INSTALLATION INSTRUCTIONS

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 and newer models equipped with EPAS (Electronic Power Assist Steering), disconnect the power steering control module connector 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 sway bar. Save sway bar link nuts. 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 1

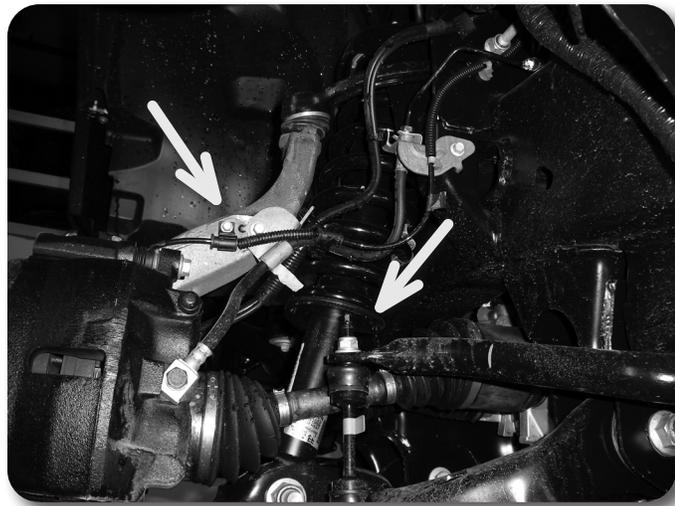


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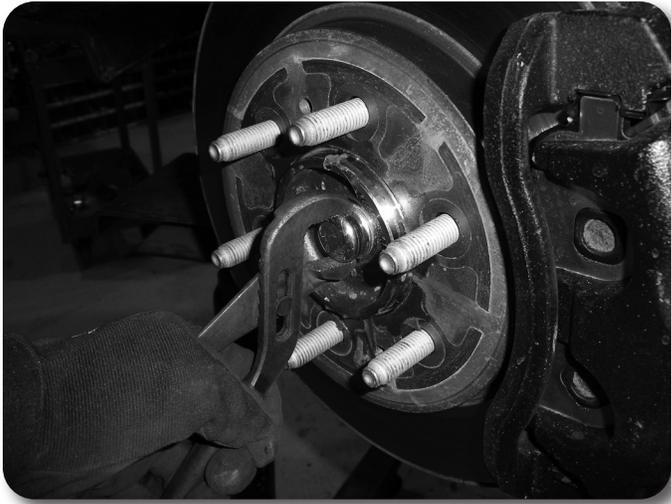


Figure 2



Figure 3

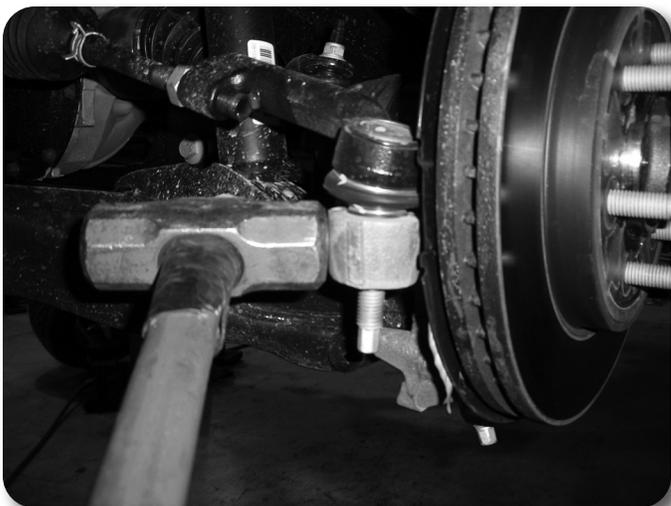


Figure 4

10. 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 5 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 5

11. Support the lower control arm with an appropriate jack. Remove the three upper strut mounting nuts at the frame. Figure 6 DO NOT remove the center strut rod nut. Save nuts.



Figure 6

12. Remove the lower strut mount bolt/nut at the lower control arm. Lower the control arm and remove the strut from the vehicle. Save lower strut hardware.
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 7a, b, c

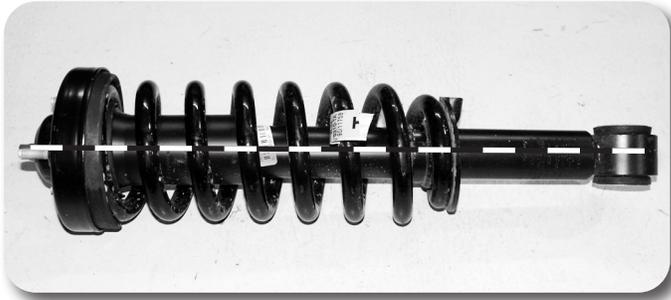


Figure 7a



Figure 7b



Figure 7c

**! 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. 2014 and newer model years: 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 8a, b, c, d, e, f



Figure 8a



Figure 8b



Figure 8c - Driver's Side Shown



Figure 8d

### Fig 8D Note

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

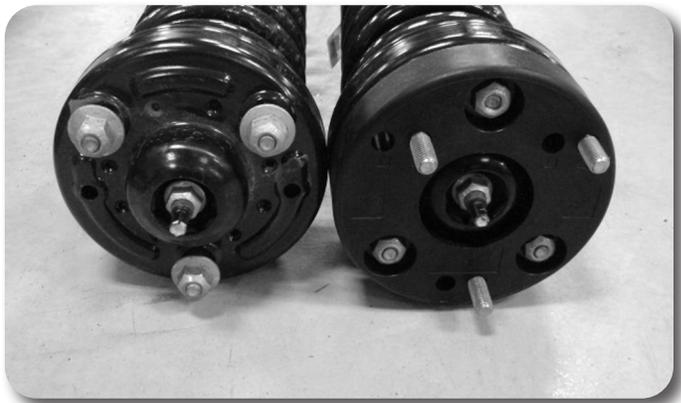


Figure 8e



Figure 8f

15. Tighten the factory strut hardware to 35 ft-lbs.. Figure 9



Figure 9 - Passenger's Side Shown

16. 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 7/16" nuts and washers.

17. 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 40 ft-lbs.
18. 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 10** Torque the upper ball joint nut to 46 ft-lbs.



Figure 10

19. 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.
20. 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.
21. Attach the steering tie rod end to the steering knuckle with the original nut. Torque to 76 ft-lbs.
22. With both sides complete, reconnect the sway bar links to the sway bar with the original hardware. Torque to 59 ft-lbs.
23. If equipped, re-connect EPAS control module connector.
24. Install the wheels and lower the vehicle to the ground. Torque lug nuts to 150 ft-lbs in a crossing pattern.
25. Check all hardware for proper torque. Check hardware after 500 miles.
26. The vehicle will need a complete front end alignment.

### Recommend Alignment Specifications

#### CASTER

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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.