



## #F1601 Installation Instructions 2005-2021 Ford Super Duty F250/350 4wd Radius Arm Upgrade 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: 1-3 hours

#### Special Tools Required

Heavy Duty Floor Jack and Stands

**\*Important\* Verify you have all of the kit components before beginning installation.**

### **Kit Contents (2 Boxes)**

Qty	Part
2	Radius Arm
4	Radius Arm Cam Plate
2	Zone Badge
6	#8-32 Button Head Bolt
6	#8-32 Flange Nut
6	5/32 Rivet
2	18mm-2.50 x 150mm Bolt
2	18mm Lock Nut
4	3/4" SAE Flat Washer
2	Sleeve
4	Bushing
2	Grease Fitting
4	Mountable Zip Tie

## **INSTALLATION INSTRUCTION**

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### **»» 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. As a result of the location of the long radius arm suspension, support locations are limited. Use your best judgment while supporting the vehicle with sufficient strength stands at appropriate locations. The radius arms will need to move freely during this installation.
3. This Radius Arm Upgrade Kit is packaged as a stand-alone upgrade as well as part of a several complete suspension systems offered by Zone Offroad Products. If installing these radius arms in conjunction with a complete Zone Offroad system, the main instruction manual for the system should be used instead of this instruction manual. Only the basic installation of the Radius Arms will be covered within this instruction manual.

### **»» FRONT INSTALLATION**

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Raise the front of the vehicle and proper support with jack stands under the frame rails - See Pre-Installation Note 2.
3. Remove the front wheels.
4. Support the front axle with a hydraulic jack.
5. Remove the ABS brake lines from the retaining tabs on the radius arms. **Figure 1**



Figure 1

6. With the axle still well supported with a jack, disconnect the front shocks from the axle mounts. Leave the shocks attached to the frame. Save axle hardware.
7. Carefully lower the axle to remove pressure from the front springs. Take care not to over-extend any lines/hoses. Be sure axle is well supported.
8. Locate and loosen the four radius arm mounting bolts at the axle. **Figure 2** Once again make sure that the axle is well supported by a jack.



Figure 2

9. Starting with the passenger's side, remove the upper radius arm mounting bolt at the axle. Remove the radius arm bolt at the frame **Figure 3** and lower the radius arm from the frame bracket. Remove the lower mounting bolt at the axle and remove the radius arm from the vehicle. Save hardware.



Figure 3

10. If the vehicle has a current radius arm drop style lift installed, the aftermarket drop bracket must be removed from the factory mount. Remove the bracket. **Figure 4** The new radius arm will mount in the stock location, with the factory hardware.



Figure 4

11. Locate the new radius arms, bushings, sleeves and grease fittings. Lightly grease and install the bushings and sleeves in each radius arm. Install the provided grease fittings into the thread hole and tighten securely. **Figure 5**



Figure 5

12. Install the new radius arm to the factory axle mounts. The end of the radius arm with the cam tabs goes to the bottom axle mount. **Figure 6 - Arm Orientation** Loosely fasten the radius arm with the factory hardware. At the lower mount, install the provided rectangle cam plates on the new 18mm x 150mm bolt with a 3/4" SAE flat washer. Leave hardware loose.

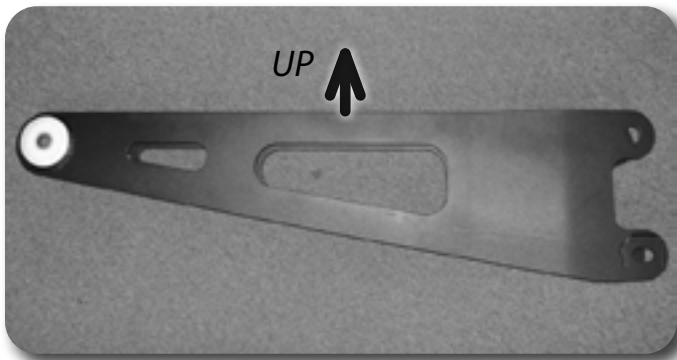


Figure 6

13. If possible, attach the the new radius arm to the factory frame mount. It may be necessary to remove the driver's side radius arm first before attaching the passenger's side. Use the factory hardware and leave loose at this time.
14. Repeat install procedure on the driver's side. On some models, the upper mount on the driver's side factory radius arm will have a captive nut. If this is the case, use one of the left-over lower factory nuts. Use the provided 18mm nut and 3/4" SAE flat washer on the new 18mm bolt along with the provided cam washers.
15. With both sides completely installed and loosely fastened, position the rectangle cam plates properly from the amount of lift on the vehicle. For lift heights of 3" or less the cam should be positioned back, so that the bolt is offset closer to the rear of the vehicle. For lift heights of 4" or more the cam should be positioned forward, so that the bolt is offset closer to the front of the vehicle. **Figure 7A/B - Cam position**



Figure 7A - 3" Lift

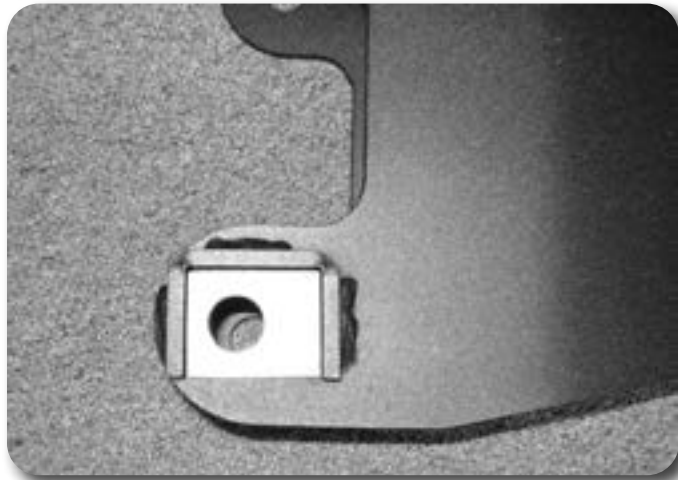


Figure 7B - 4" Lift

16. With the hardware install complete, go back and torque all 6 radius arm bolts to 220 ft-lbs.
17. If removed/loosened, reconnect the shocks to the axle mounts and torque hardware to 95 ft-lbs.
18. Attach the ABS wires to the new radius arms using the provided mountable zip ties installed into the small holes located in the top of the radius arms. **Figure 8** Tighten securely and cut off excess zip tie material.

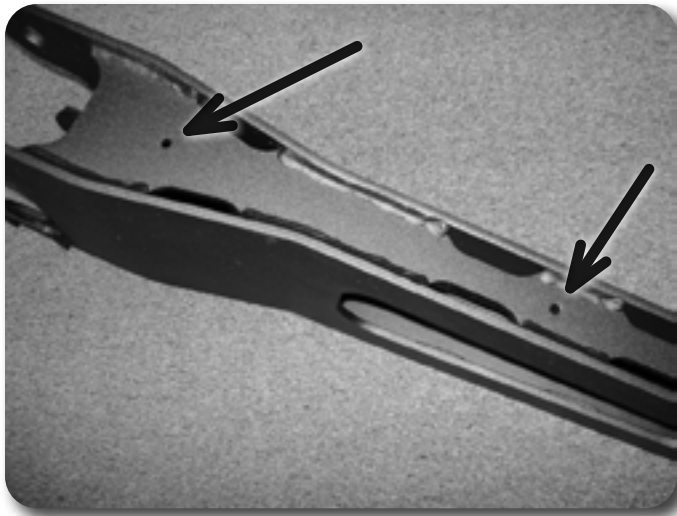


Figure 8

19. Using the hardware from bolt pack #492, attach the Zone badge plate to the radius arm on the side facing out. Repeat for both sides of vehicle. Rivets and #8 hardware are both included, either can be used to attach the badge to the radius arm. Figure 9



Figure 9

20. Install the front wheels and lower the vehicle to the ground. Torque lug nuts to 165 ft-lbs.
21. Check all hardware for proper torque.

### 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.