

# Installation instructions



Part#: 123251



## Replacement Radius Arm System

Ford F-250, F350 | 2005-2017

# Read And Understand All Instructions And Warnings Prior To Installation Of System And Operation Of Vehicle.



## THANK YOU

Your truck is about to be fitted with the best suspension system on the market today. That means you will be driving the baddest looking truck in the neighborhood, and you'll have the warranty to ensure that it stays that way for years to come. Thank you for choosing BDS Suspension!

### BEFORE YOU START

BDS Suspension Co. 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.

### FOR YOUR SAFETY

Certain BDS 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. BDS Suspension Co. 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.

### BEFORE INSTALLATION

- Special literature required: OE Service Manual for model/year of vehicle. Refer to manual for proper disassembly/reassembly procedures of OE and related components.
- Adhere to recommendations when replacement fasteners, retainers and keepers are called out in the OE manual.
- 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.
- 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.
- Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
- If installation is to be performed without a hoist, BDS Suspension Co. recommends rear alterations first.
- 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.



### TIRES AND WHEELS

Designed to work with:

35x12.50x17(18)(20) Tire  
4-1/2" ~ 5" Backspace Wheel



### BEFORE YOU DRIVE

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.

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. Longer replacement hoses, if needed can be purchased from a local parts supplier.

Perform head light check and adjustment.

Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

# CONTENTS OF YOUR KIT

<b>123251 - Radius Arm Box Kit - DRV</b>		
Part #	Qty	Description
A241	1	Radius Arm Assembly - DRV Side
02799	1	Superduty Radius Arm 2"-4"
868190	1	Superduty Bushing
97525A430	2	Rivets
02802	1	Name plate - aluminum
B1114	1	Bag Kit
02421	4	Cam plate
N18MPT	2	M18-2.5 Lock Nut
02002ZP	2	M18-2.5 x 150 Bolt
W34SAE	4	3/4" SAE flat washer
099000	6	Zip Ties
099002	2	Push Pin Zip Ties
A242	1	Radius Arm Assembly - PASS Side
02799	1	Superduty Radius Arm 2"-4"
868190	1	Superduty Bushing
97525A430	2	Rivets
02802	1	Name plate - aluminum

## TECH TIPS

### TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. Recommended to only be used in the factory radius arm mounting locations with 2" to 4" of lift.
2. This is only a guide for installation of the radius arms, follow main box kit installation instructions for installation of arms with a complete kit.



## INSTALLATION INSTRUCTIONS

### 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 under the frame rails with jack stands.



**Tip**

*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 as they will be replaced. This step is necessary to dislodge the tapered track bar mount in the follow step.*

3. Remove the front wheels.

### SPECIAL TOOLS

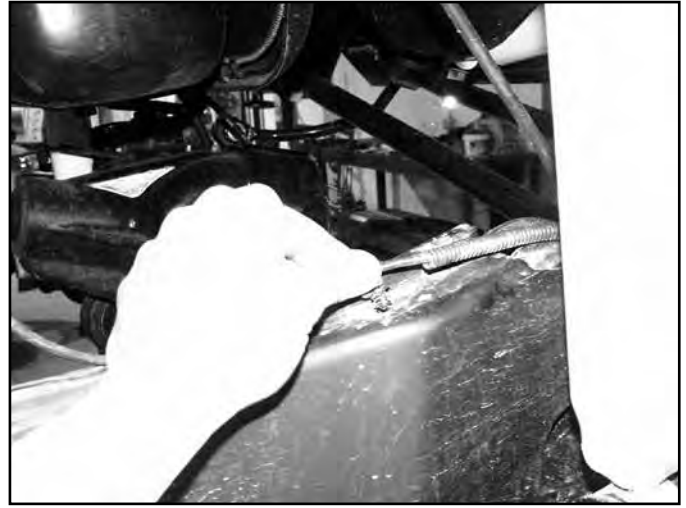
General tools, jacks, jack stands.

- Support the front axle with a hydraulic jack. With the axle supported this installation can be performed on both sides at the same time, but is not necessary.
- Remove the ABS line from the metal retaining tab on the radius arm (Fig 1). Pull the plastic retaining clip free from the radius arm (Fig 2).

**FIGURE 1**



**FIGURE 2**

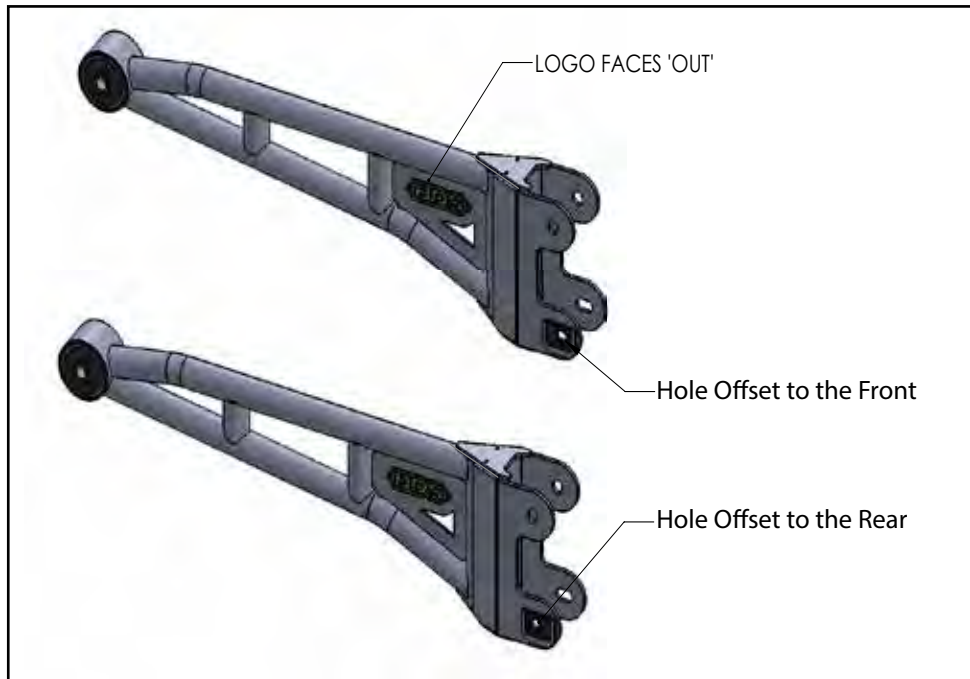


**RADIUS ARM INSTALLATION:**

- Working on one side of the vehicle at a time, remove the stock radius arm and replace with the new one. Install cams into the lower slots with new 18mm hardware, and use one of the old lower 18mm nuts on the driver's side upper mount at the axle with factory hardware. Note: The upper bolt at the axle can be removed with the stock shock in place, however, certain aftermarket shocks may need to be disconnected to allow removal of the upper bolt. (Fig 3)

*Note: 2005-2016 model year trucks with 2.5" kits hole offset to the rear or kits with front shocks 23" or less. 2005-2016 model year trucks with 4" kits hole offset to the front or kits with front shocks 23" or longer. 2017+ model year trucks with 2.5" or 4" kits hole offset to the rear.*

**FIGURE 3**



- Tighten the front hardware at the axle to 222 ft-lbs. Do not tighten the frame pivot hardware at this time.

8. Attach ABS wires to the radius arm with the included zip ties and push pin zip tie where the upper mount at the axle is located. Allow axle to droop out to check for adequate slack.
9. Reinstall wheels, lower vehicle to the ground.
10. Tighten the radius arm pivot hardware at the frame to 180 ft-lbs.
11. Check all hardware for proper torque.
12. Torque lug nuts to factory specification.
13. Recheck all hardware for proper torque, check again after 500 miles and at regularly scheduled maintenance intervals. An alignment for a caster check is now recommended, but not necessary.