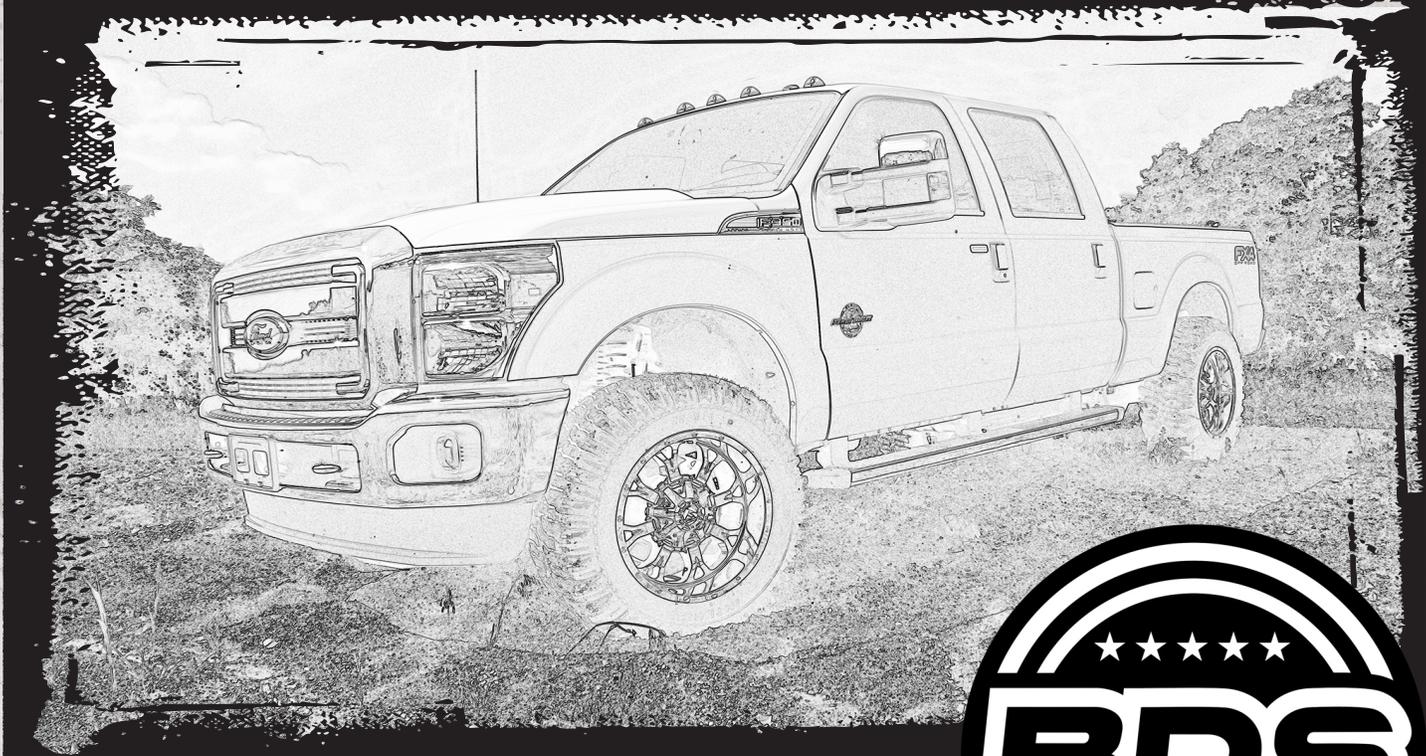


# INSTALLATION GUIDE



Part#: 013255



**HARDCORE LIMITED LIFETIME WARRANTY**

## Ford F-250 / F-350 2-1/2" Coil Kit

Ford F-250, F-350 | 2011-2016

Rev.010526

491 W. Garfield Ave., Coldwater, MI 49036 • Phone: 517-279-2135

Web/live chat: [www.bds-suspension.com](http://www.bds-suspension.com) • E-mail: [tech-bds@ridefox.com](mailto:tech-bds@ridefox.com)

# 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.



Visit [560plus.com](http://560plus.com) for more information.

### TIRES AND WHEELS

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

## 033251 - 2.5" Coil Springs

| Part #  | Qty | Description |
|---------|-----|-------------|
| 033251R | 2   | Coil Spring |

## 123251 - Radius Arm Box Kit

| Part #  | Qty | Description                          |
|---------|-----|--------------------------------------|
| A261    | 2   | Radius Arm Assembly                  |
| 02799   | 1   | <i>Super Duty Radius Arm</i>         |
| 868190  | 1   | <i>Super Duty Radius Arm Bushing</i> |
| 995     | 1   | Rivet Bolt Pack                      |
| 02802   | 1   | BDS Name Plate Badge                 |
| 02421   | 2   | Cam Plate                            |
| N18MPT  | 1   | M18-2.5 Prevailing Torque Lock Nut   |
| 02002ZP | 1   | M18-2.5 x 150mm Bolt                 |
| W34SAE  | 2   | 3/4" SAE Washer                      |
| 099000  | 6   | Zip Ties                             |
| 099002  | 2   | Tree Zip Tie                         |

## 013255- Front Box Kit

| Part #    | Qty | Description                           |
|-----------|-----|---------------------------------------|
| A230      | 1   | Adjustable Track Bar Assembly         |
| 02583     | 1   | <i>Adjustable Track Bar Frame End</i> |
| 02584     | 1   | <i>Adjustable Track Bar Axle End</i>  |
| 02738     | 1   | <i>Track Bar Collar</i>               |
| B56X114G8 | 4   | 5/16-18 x 1-1/4 SHCS Clear Zinc       |
| 107       | 1   | 1.125 x .156 x 1.745 Sleeve           |
| 3535BK    | 2   | Bushings                              |
| 516       | 1   | Grease Fitting                        |
| 342701    | 1   | Thread Locker                         |
| 02824     | 1   | Brake Line Bracket                    |
| 02825     | 1   | Brake Line Bracket                    |

## 013408 - Rear 4" Block Kit

| Part #      | Qty | Description                            |
|-------------|-----|--|
| 02786       | 2   | 4" Superduty Rear Block                |
| 583181400SB | 4   | 5/8" x 3-1/8" x 14" Semi Round U-bolts |
| N58FHB      | 8   | 5/8 Fine High Nut Black E-coat         |
| W58SB       | 8   | 5/8 SAE Flat Washer -Black             |

## 013519 - 5" Rear Block Kit (Optional)

| Part #      | Qty | Description                      |
|-------------|-----|----------------------------------|
| 02414       | 2   | 5" Rear Super Duty Block         |
| 02415       | 2   | Super Duty Rear Spring Plate     |
| 343581500RB | 4   | 3/4" x 3-5/8" x 15" Round U-bolt |
| N34FLG      | 8   | 3/4" Serrated Edge Flanged Nut   |

## TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. Track bar mounting bolt requires 405 ft-lbs of torque, plan ahead on how to achieve this.
2. If installing optional coilovers, there is a separate instruction sheet for coilover and bracket installation. Follow those steps when it is time to install coilover with bracket.

# 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.

## SPECIAL TOOLS

General tools, jacks, 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 track bar ball joint nut at the axle. (Fig 1) Thread the nut back on a couple of turns. Raise the axle a couple of inches with the jack. Place an appropriate sized pry bar between the axle mount and the track bar. (Fig 2) Lower the axle to pinch the pry bar between the track bar and axle mount. Take your hands off of the pry bar. Continue lowering the axle until the track bar unseats from the taper. Remove the nut and track bar from the ball joint. Save nut.

**FIGURE 1**



**FIGURE 2**

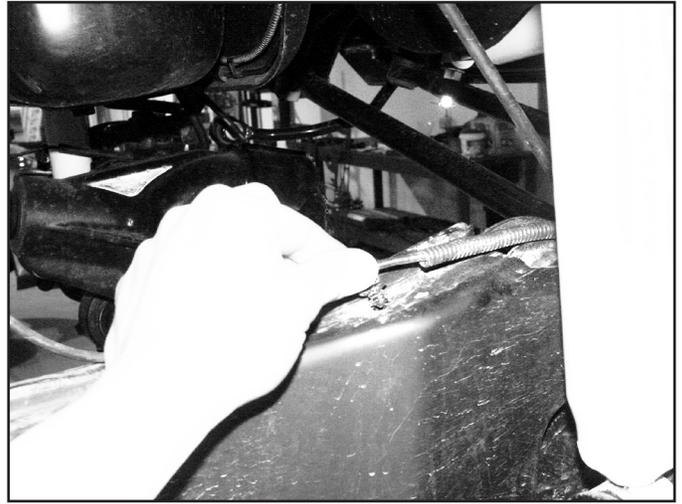


4. Disconnect the front track bar from the frame mount.
5. Remove the stock track bar. Retain all hardware.
6. Remove the front wheels.
7. Support the front axle with a hydraulic jack. With the axle supported this installation can be performed on both sides at the same time, but is not necessary.
8. Disconnect the sway bar links from the axle mounts. Retain hardware.
9. Remove the OE shock. Retain lower mounting hardware.
10. Remove the ABS line from the metal retaining tab on the radius arm (Fig 3). Pull the plastic retaining clip free from the radius arm (Fig 4).

**FIGURE 3**

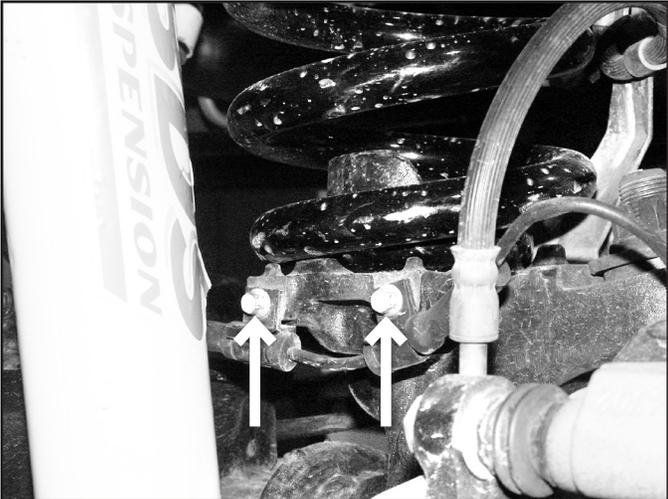


**FIGURE 4**

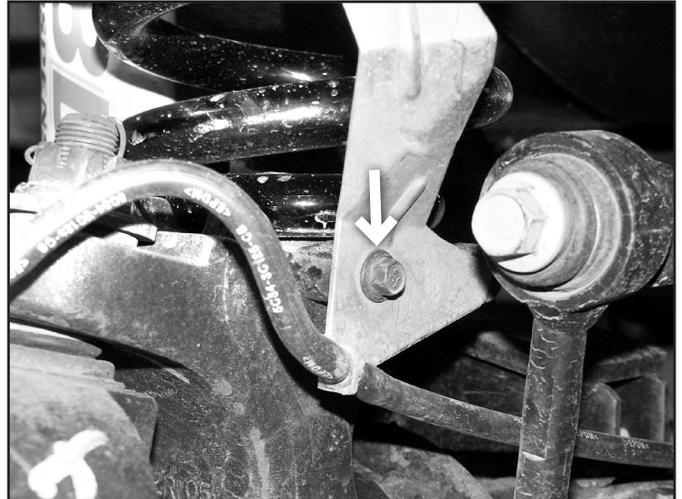


11. Remove the two bolts mounting the plastic ABS wire clips to the back side of the coil perch (Fig 5). Retain hardware.

**FIGURE 5**



**FIGURE 6**



12. Disconnect the brake line bracket from the front of the coil perch (Fig 6). Retain hardware.

13. Free the hub vacuum line from the axle (Fig 7, 8).

**FIGURE 7**



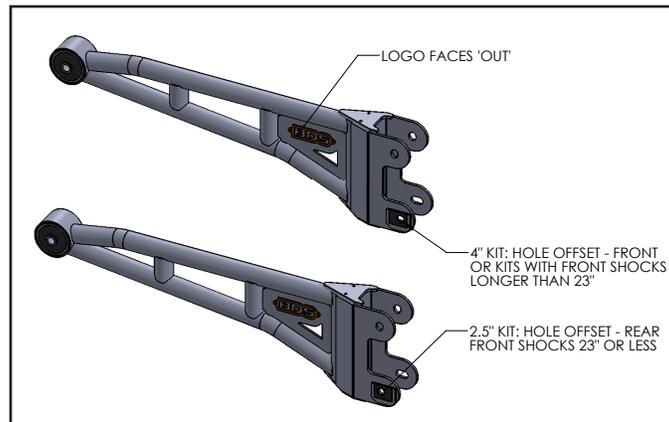
**FIGURE 8**



## RADIUS ARM INSTALLATION:

14. 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 new 18mm nut on the driver's side upper mount at the axle. (Fig 9)

**FIGURE 9**



## COIL INSTALLATION

*Note: For Fox 2.5" Coilovers, see separate instruction sheet on how to install the coilovers and bracket at this time.*

15. Lower the axle until the spring is free and remove the spring from the vehicle. Note: Do not over extend the brake lines.
16. Install new coils with the factory rubber isolators located on top of the coils.
17. Compress the coils slightly by using a hydraulic jack on the axle. Install new shocks with factory lower hardware and stem washers, bushings, and 1/2" fine thread nut on the upper mount. Tighten the upper mount until the bushings begin to swell. Tighten lower mount to 50 ft-lbs.
18. Reattach all brake and vacuum lines to the original locations with the OE mounting hardware. There are provided zip ties for attaching the ABS wire to the radius arm. The rubber grommets on the ABS wire can be slid by spraying the ABS wire with silicone spray.
19. Reattach the sway bar links to the axle with the OE hardware and tighten securely.
20. Install the wheels and lower the vehicle to the ground. Ensure the lower cam is orientated correctly in the slot. Tighten radius arm hardware to 150 ft-lbs.

## TRACK BAR INSTALLATION

21. Adjust the track bar length (eye to eye) to 37-1/8" for 2-1/2" lift, 37-1/2" for 4" lift.
22. Install track bar into vehicle with the grease fitting facing down at the frame mount with factory bolt. Check the track bar collar to frame cross member for adequate clearance. A small amount of grinding on the frame cross member lip may be required for clearance to the track bar under compression clearance. (Fig Track Bar Clearance Check)

**FIGURE TRACK BAR CLEARANCE CHECK**



23. Attach the axle mount to the track bar. It may be necessary to have an assistant turn the wheel to get the mount to line up. Square the mount up to the factory joint. Attach with factory nut. Tighten to 184 ft-lbs

24. Ensure the axle is square under the vehicle. Additional adjustment of the track bar collar may be required. Do not extend past 37-5/8" eye-eye measurement, due to the maximum length of the factory drag link.
25. Remove (4) allen bolts and apply thread locker to threads, reinstall into track bar.
26. First, tighten pinch bolts on track bar left-to-right at 30 ft-lbs.
27. Repeat left-to-right torque sequence at 30 ft-lbs until all pinch bolts meet 30 ft-lbs specification.
28. Tighten track bar hardware at the frame to 405 ft-lbs. Grease the track bar mount at the frame.
29. Install new brake line drop brackets onto the side of the frame with factory hardware and clip. (Fig 10a, 10b)

**FIGURE 10A**



**FIGURE 10B**



30. The badge can now be riveted on to the outside faces of the radius arms using the provided 1/8" rivets. Any residue on the badge can be cleaned up using alcohol or brake cleaner before install. With the badge not installed it can be painted to what ever color you desire, or left raw as a stainless steel badge.
31. Check all hardware for proper torque.
32. Adjust steering wheel to center.
33. Check hardware after 500 miles.

## **REAR INSTALLATION 4" BLOCK KIT (5" BLOCK - SEE 013518-013519 INSTRUCTION SHEET)**

*Rear Installation Note: The factory rear block will vary depending on the vehicle model. F-250s will have a 1-7/8" block and F-350s will have a 3-3/4" block. In both cases, replacing the factory block with the new provided block will net the same level stance regardless of vehicle model.*

34. Block the front wheels for safety.
35. Raise the rear of the vehicle and support with jack stands under the frame rails just ahead of the spring hangers.
36. Remove the wheels.
37. Support the axle with a hydraulic jack.
38. Remove the factory shocks. Retain all mounting hardware.
39. Disconnect the passenger's side spring u-bolts. (Fig 11)

**FIGURE 11**



40. Remove the factory lift block. It will not be reused.
41. Lower axle enough to place the provided 4" lift block between the axle and the leaf spring. Position block so bump stop wing faces inward.
42. Raise the axle to engage the block spring alignment pin. (Fig 12) Fasten the entire assembly with the provided u-bolts, high nuts and washers. Snug but do not torque the u-bolts at this time.

**FIGURE 12**



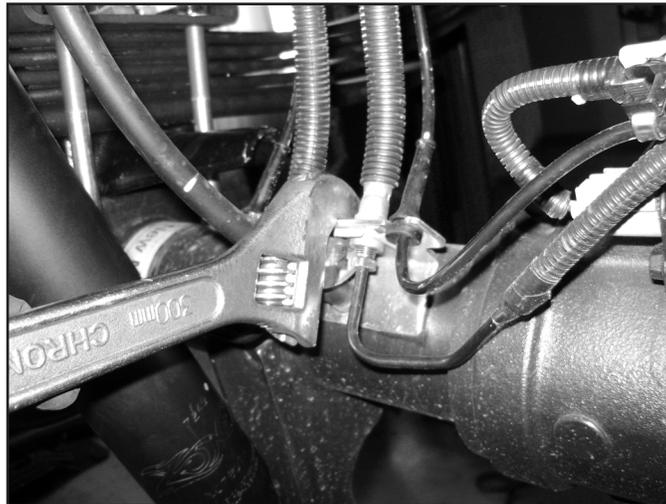
43. Repeat block installation of the driver's side. Take care not to over extend the brake lines.
44. If more parking brake cable slack is needed, remove the cable from the rear-most retaining bracket on the frame. (Fig 12)

**FIGURE 13**



45. The brake lines may require additional slack. Located the factory bracket on the axle. Using an adjustable wrench, carefully bend the bracket so the fittings are positioned vertical to allow more slack. (Fig 14)

**FIGURE 14**



46. Install the new shocks with the original mounting hardware. Tighten to 55 ft-lbs.  
47. Install wheels and lower the vehicle to the ground.  
48. With the weight of the vehicle on the axle, torque the u-bolts to 130-150 ft-lbs.  
49. Torque lug nuts to factory specification.  
50. Recheck all hardware for proper torque, check again after 500 miles and at regularly scheduled maintenance intervals.



**WE WANT TO SEE YOUR RIDE!**

Grab photos of your BDS-equipped truck in action and send them in for a chance to be featured. Send it in to our Bad Ass Rides customer gallery at [bds-suspension.com/bar](http://bds-suspension.com/bar) and post them on the BDS Fan Page on Facebook at [facebook.com/BDSSuspensions](https://facebook.com/BDSSuspensions). Don't forget about your BDS swag! BDS offers t-shirts, hoodies, decals and more available on the BDS website or through your local BDS distributor.

---

**TIME TO HAVE SOME FUN**

**Thank you for choosing BDS Suspension.**

For questions, technical support and warranty issues relating to this BDS Suspension product, please contact your distributor/installer before contacting BDS Suspension directly.