

INSTALLATION GUIDE



Part#: 013003



HARDCORE LIMITED LIFETIME WARRANTY

4" & 6" Suspension System

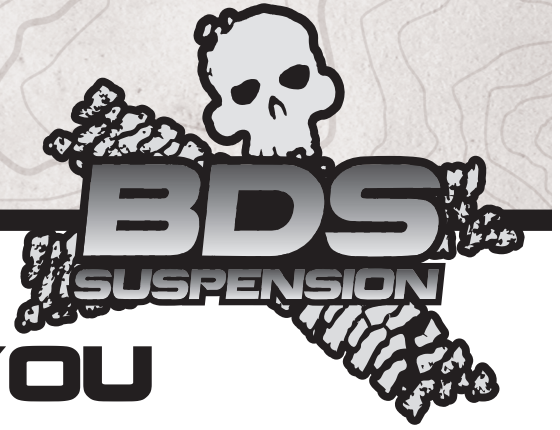
Ford F100/F150 & Bronco 4WD | 1980-1996

Rev. 071023

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

Web: www.bds-suspension.com • E-mail: 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 for more information.

TIRES AND WHEELS

33 x 12.50 w/15 x 8, 3.5" BS (4" Kit)
35 x 12.50 w/15 x 8, 3.5" BS (6" Kit)



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

013003 Box Kit

Part #	Qty	Description
083401R	1	Ford Pitman Arm
01005B	1	Axle Pivot Bracket - PS
01006B	1	Axle Pivot Bracket - DS
01011B	1	Radius Arm 4in -6in - DS
01012B	1	Radius Arm 4in -6in - PS
01013B	1	Radius Arm Drop Brkt - DS
01014B	1	Radius Arm Drop Brkt - PS
9753K55	2	.75 x 1.5 Vinyl Cap
M02170BK-01	2	Large Radius Arm Bushing - black
M02171BK-01	2	Small Radius Arm Bushing - black
411	1	Bolt Pack Radius Arm
	14	1/2"-13 x 1-1/4" Bolt, Grade 8, Yellow Zinc
	14	1/2"-13 Prevailing Torque Nut, Clear Zinc
	28	1/2" SAE Washer, Yellow Zinc
	1	9/16"-12 x 3-1/2" Bolt, Grade 5, Clear Zinc
	2	9/16" SAE Washer, Clear Zinc
	1	9/16"-12 Prevailing Torque Nut, Clear Zinc
401	1	Bolt Pack Radius Arm
	2	3/4"-10 Prevailing Torque Nut, Yellow Zinc
	2	7/8" USS Washer, Yellow Zinc
	2	3/4" USS Washer, Yellow Zinc

033601 Box Kit

Part #	Qty	Description
033601R	2	6in Lift Coil Springs

033401 Box Kit

Part #	Qty	Description
033401R	2	4in Lift Coil Springs

TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. If your vehicle is equipped with a front anti-sway bar, you will want a 123401 available in the options.
2. Does not fit F150 or Broncos without power steering.
3. Front alignment cams available in the accessories may be required for alignment.
4. #123401 recommended if equipped with a front anti-sway bar. Ford produced 3 different styles of sway bar systems between 1980 and 1996. In extremely rare cases, modification may be required.
5. Extended lines required for all 4-6" lifts.



**TECH
TIPS**

INSTALLATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS

SPECIAL NOTE FOR BRONCO:

Measure the vehicle wheelbase before beginning the suspension installation and record here _____. The wheel base is the distance from the center of the front axle to the center of the rear axle (hub-to-hub). This measurement should be approximately 105".

SPECIAL TOOLS

Air Chisel / Drill / Torches (for removing OEM rivets from the frame)
SAE and Metric Wrenches
Jack Stands
OEM Service Manual

FRONT SYSTEM INSTALLATION

1. Lift the vehicle using hydraulic jacks or equivalent and then support the vehicle with jack stands. Be sure the jack and stands gives adequate access the OEM radius arm brackets.
2. Remove the wheels and tires from the vehicle.
3. Disconnect the anti-sway bars at the frame, if present.

ⓘ *Note: If the vehicle has anti-sway bars you will need BDS Part # 123401 anti-sway bar extension kit. Disconnect steering linkage from pitman arm at this time using a pickle fork.*

4. Place hydraulic jacks under the radius arms in order to remove the OEM radius arm brackets. Remove the OEM rivets and bolts attaching the radius arm bracket to the frame. [Fig. 1]
5. Lower the brackets and remove the radius arm bushings, nut, and OEM bracket.
6. Remove the front shock absorbers. [Fig. 2]

FIGURE 1



FIGURE 2



7. Place hydraulic jacks under the axles. Adjust jacks until the coil springs are not under compression. Remove the upper coil spring retaining J-Clip from the tower.

⚠ Caution: Do not stretch brake hoses. BDS recommends replacement of OE brake hoses with extended length brake hoses that will allow full axle droop. Lower the assembly and remove the lower retaining nut and cup washer. Remove the coil spring from seat. Reference the BDS coil spring instruction sheet for additional information on coil spring removal and installation.

8. Remove the OE bolt retaining the radius arm to the axle. Install supplied BDS radius arm and retain using OE bolt. Torque to OE specification.

ⓘ *Note: The BDS radius arm should be installed so that the shock tabs are facing forward and the radius arms are bent inward for tire clearance.*

- Attach the BDS radius arm mounting brackets to the BDS radius arms using the provided bushings and hardware. Tighten radius arm nuts until bushings begin to swell. [Fig. 3]

Special Note for Bronco:

The relationship between the new radius arm bracket and the body mount illustrated in Fig 6 varies on some Broncos. Use the existing hole in the frame rail (noted in #10) to attach the new mounting bracket to the frame. Do not drill new holes at this time. Tighten the 1/2" bolt in the existing hole. When the front and rear install is complete, the bracket will be located to its final mounting place.

FIGURE 3



FIGURE 4



- Raise bracket into position on the frame and secure with the 1/2" fasteners.

Note: The rear bottom hole in the BDS mounting bracket should line up with the hole in the bottom of the frame rail where the OE crossmember attaches. This crossmember is not always in the same location on all vehicles. When in doubt use figure 5 to locate the new bracket back from the body mount. [Fig. 4, 5, & 6] Be sure all bolts are installed before tightening. Using the holes in the brackets as drill guides, drill the remaining 1/2" holes in the frame to install the additional provided 1/2" fasteners. **Torque 1/2" fasteners to 90 ft-lbs.**

Warning: Always use caution when drilling through the frame to insure that no interference occurs with brake and fuel lines or wiring. Tighten radius arm bushing nuts to OEM specification.

FIGURE 5

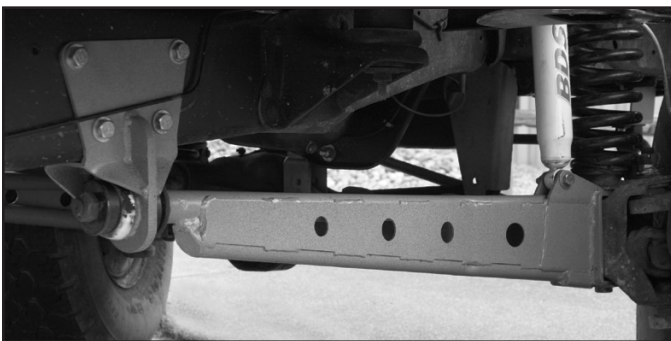
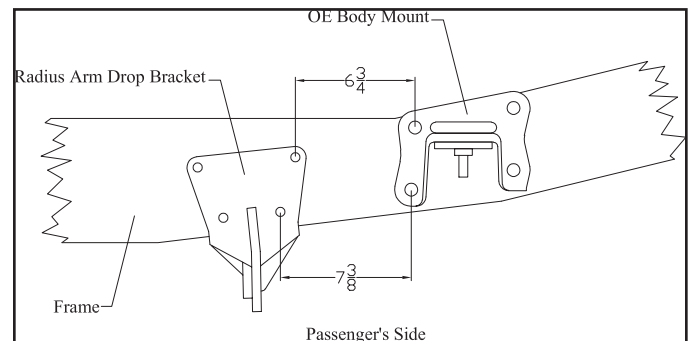


FIGURE 6



- Install shocks at this time. Do not tighten any of the hardware. The shocks will limit the droop of the axle during assembly, and will be removed later for installation of the new coil.
- Remove axle pivot bolt, repeat for opposite side, and retain hardware.
- Remove bracket from the passenger's side of the vehicle, retain hardware (Fig 7a/7b). Install new bracket with OE hardware, leave hardware loose at this time. Install radius arm into bracket with OE bolt. Snug, but do not tighten at this time. Final torque will be done with the weight of the vehicle on the ground with the suspension at ride height. (Fig 9a/9b)

FIGURE 7A

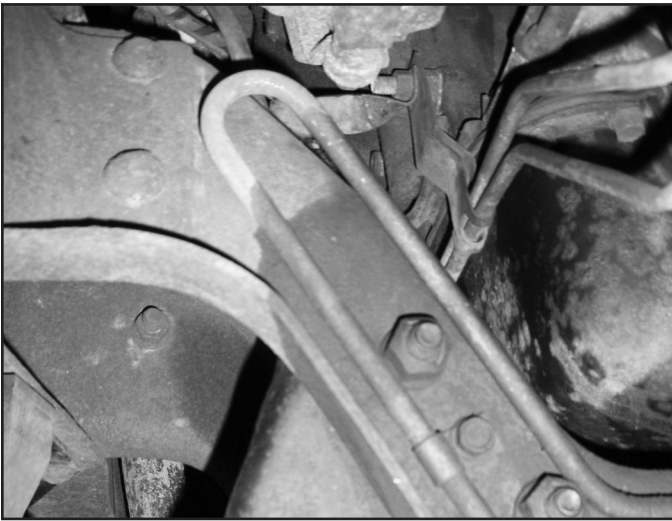


FIGURE 7B



14. Cut out the template on the back of the instruction sheet. Place template as shown in the figure. Note: Match the holes to be drilled to the replacement bracket given in the kit. The two holes shown should be vertical, and the outer profile should be horizontal. Drill holes out to 9/16". (Fig 8)

FIGURE 8

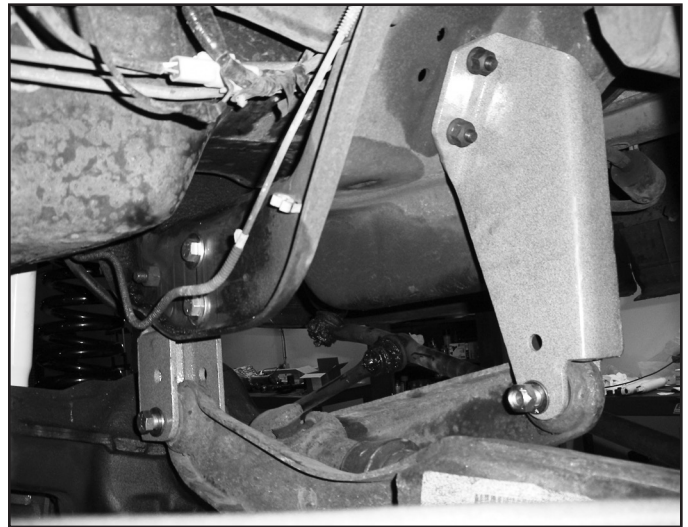


15. Install bracket with a new 9/16" x 3" bolt with nut and washers through the OE mounting hole. Attach bracket to drilled holes with 1/2" x 1-1/2" bolts with nuts and washers. Leave hardware loose at this time.
16. Install axle pivot bracket into location with OE hardware. Reference the figure for which holes to mount the brackets in. The 4" kit will use the top hole, the 6" kit will use the bottom hole (closest to the ground). Snug, but do not tighten at this time. Final torque will be done with the weight of the vehicle on the ground with the suspension at ride height. (Fig 9a / 9b)

FIGURE 9A



FIGURE 9B



17. Torque axle pivot drop bracket hardware as follows: 9/16" hardware to 92 ft-lbs, 1/2" hardware to 90 ft-lbs.
18. If front anti-sway bar is present, then install BDS sway-bar extension kit #123401 (ordered separately) at this time. Install bracket to frame using the 3/8" fasteners, do not tighten at this time. Attach the OEM sway bar bracket to the extension bracket and tighten all fasteners to specification.
19. If optional bump stop extension kit #129000 was purchased, Remove nut that attaches bump stops to frame. Install bump stop drop brackets. Attach with 3/8" x 1-1/4" bolt, washers, and nut, the hole in the frame may have to be slightly enlarged to clear the bolt. Tighten to 26 ft-lbs. Attach bump stops to drop brackets. Order kit # 170001 if you want new polyurethane bump stops, not included with this kit. (Fig 10)

FIGURE 10



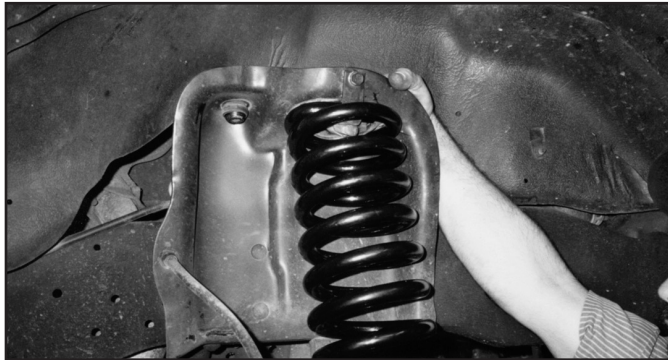
20. If optional upper ball joint cams were purchased, install them at this time. Reference the OE service manual for proper removal and installation.
21. Remove the OEM pitman arm using an appropriate puller. Install new BDS pitman arm and torque to specification. Attach steering linkage to the pitman arm and torque according to OEM specification. Be sure to install new cotter key. (Fig. 11)

FIGURE 11



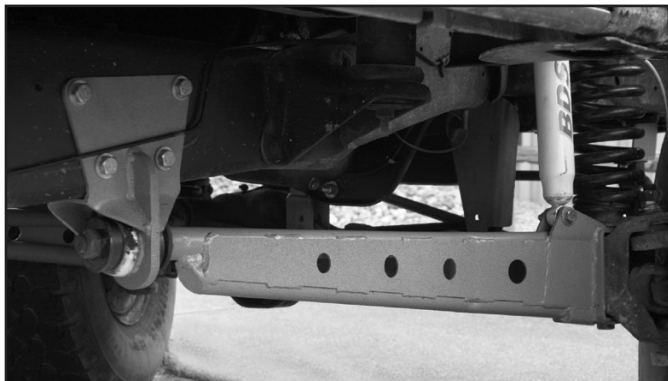
22. Place new BDS Coil Spring (4" or 6" lift coil spring) onto spring seat and secure with OEM fasteners. Raise assembly into the upper spring tower and secure with the OEM clip. (Fig. 12)

FIGURE 12



23. Remove the upper shock bushings from the spring towers. Note: The upper OEM bushing can be left in, if the shaft diameter of the aftermarket shock is the same as the OEM shock.
24. Install applicable BDS shocks for your vehicle and amount of lift. Install wheels and tires. (Fig. 13)

FIGURE 13



25. Install the desired BDS rear lift system at this time.

🔧 *Special Note for Bronco:*

With the front and rear installation complete, set the vehicle on the ground and roll it back and forth to settle the suspension. Check the wheel base measurements to those taken at the beginning of the installation. If the measurements are equal (within 1/2") the axle is in the correct position and the radius arm bracket installation can be completed as instructed in #10. If the measurements are not equal (usually short by 1" to 1-1/2") the radius arm brackets will need to be relocated to obtain the correct wheel base measurements. Follow the drilling instructions in #10 after properly locating the brackets to the new position to match the wheel base measurement. The bottom hole in the frame will have to be drilled in the new position.

26. Lower the vehicle to the ground. Torque axle pivot fasteners to specification at this time. Double check all fasteners for proper torque at this time.
27. Adjust headlights as needed.
28. Align front end to OEM alignment specifications before operating.

REPLACEMENT LEAF SPRING INSTALLATION ONLY

29. Block the front wheels, Jack up the rear of the vehicle and place jack stands along the frame rail to support the vehicle. Remove the rear wheels.
30. With the axle firmly supported by the jack. remove the OEM shocks.
31. Loosen the OEM u-bolts that retain the spring to the axle. Only remove one side at a time.
32. Lower the hydraulic jack supporting the rear axle slightly. to create a gap between the axle and leaf pack. Take note of which way the factory wedge is installed (this will be reused).
33. Remove the OE leaf pack.
34. Install the provided leaf springs with OE hardware.
35. Place the OE wedge between the axle and newly installed leaf pack. Short end towards the front.
36. Lift the axle up with the hydraulic jack and install the provided u-bolts. Snug up the u-bolts. Final torque will happen on the ground.
37. Repeat all procedures for the other sided.
38. Lower the vehicle to the ground. Torque u-bolts to factory specs.
39. Be sure to check all fasteners and the alignment after 500 miles operation.

SUPPLIED FASTENERS TORQUE SPECIFICATION

- 1/4" Fasteners (Grade 5) 7 ft lbs
- 3/8" Fasteners (Grade 5) 26 ft lbs
- 7/16" Fasteners (Grade 5) 42 ft lbs
- 1/2" Fasteners (Grade 8) 90 ft lbs
- 9/16" Fasteners (Grade 5) 92 ft lbs



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 and post them on the BDS Fan Page on Facebook at 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.

