



Part#: 013001

Product: **Front Box Kit**

Application: **Ford F-100/F-150 & Bronco**

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## READ AND UNDERSTAND ALL INSTRUCTIONS AND WARNINGS PRIOR TO INSTALLATION OF SYSTEM AND OPERATION OF VEHICLE.

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**SAFETY WARNING** 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.

**PRODUCT SAFETY WARNING** 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.

### 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 BDS Suspension components. Always wear safety glasses when using power tools.
6. If installation is to be performed without a hoist, BDS Suspension Co. 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.

### 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. Longer replacement hoses, if needed can be purchased from a local parts supplier.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

## PARTS LIST

Part #	Qty	Description
083401R	1	Ford drop pitman arm
01005	1	Axle pivot drop bracket - DS
01006	1	Axle pivot drop bracket - PS
01007	1	Radius arm drop brkt - DS
01008	1	Radius arm drop brkt - PS
BP013001	1	Bolt Pack
	1	<i>9/16"-12 x 3 1/2" bolt grade 8 yellow zinc</i>
	2	<i>9/16" SAE Thru hardened washer yellow zinc</i>
	1	<i>9/16"-12 prevailing torque nut yellow zinc</i>
	2	<i>1/2"-13 x 1 1/2" bolt grade 8 yellow zinc</i>
	4	<i>1/2" USS washer yellow zinc</i>
	2	<i>1/2"-13 prevailing torque nut yellow zinc</i>
	12	<i>7/16"-14 x 1 1/4" bolt grade 8 yellow zinc</i>
	24	<i>3/8" USS washer yellow zinc</i>
	12	<i>7/16"-14 prevailing torque nut yellow zinc</i>
	2	<i>5/16"-18 x 1-1/4" bolt - grade 5 - clear zinc</i>
	4	<i>1/4" USS washer - Clear zinc</i>
	2	<i>5/16"-18 Nylock nut - clear zinc</i>

## SPECIAL TOOLS & LITERATURE

- High Quality Jack Stands
- Air Chisel/Drill/Torches (for removing OEM rivets from the frame)
- SAE and Metric wrenches
- OEM service manual for the year/application of the vehicle



## FRONT SYSTEM INSTALLATION

1. Park vehicle on clean, flat, and level surface. Block the rear wheels for safety.
2. Lift front of vehicle with hydraulic jack. Secure frame rails with jack stands. If installing optional long radius arms, make sure there will be clearance for brackets.
3. Remove wheels
4. Disconnect the anti-sway bar (if equipped) from the frame, retain hardware. (Fig 1)
5. Disconnect steering linkage from pitman arm, retain nut. (Fig 2)

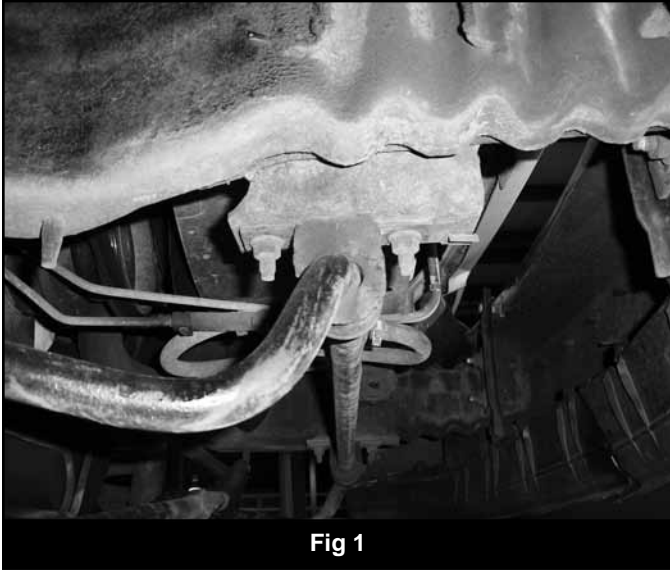


Fig 1

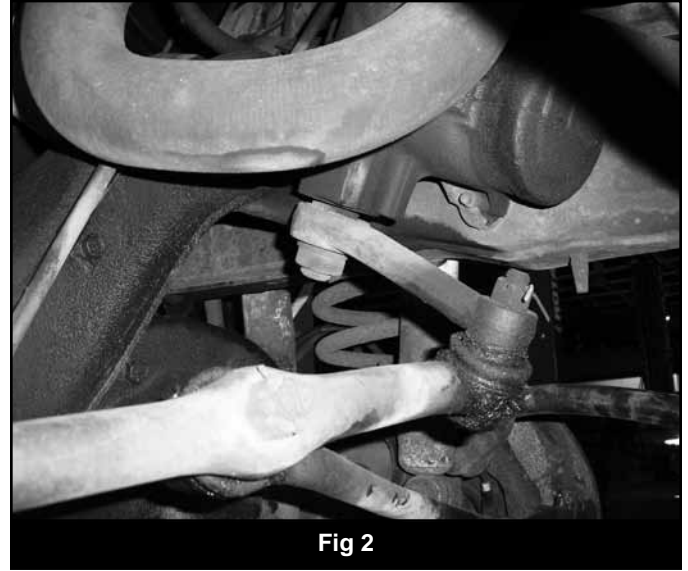


Fig 2

6. Remove pitman arm from sector shaft with appropriate puller.
7. Install new pitman arm with OE hardware. Tighten nut to factory specifications.
8. Remove radius arm nut and bushing, retain bushings and nut. (Fig 3)

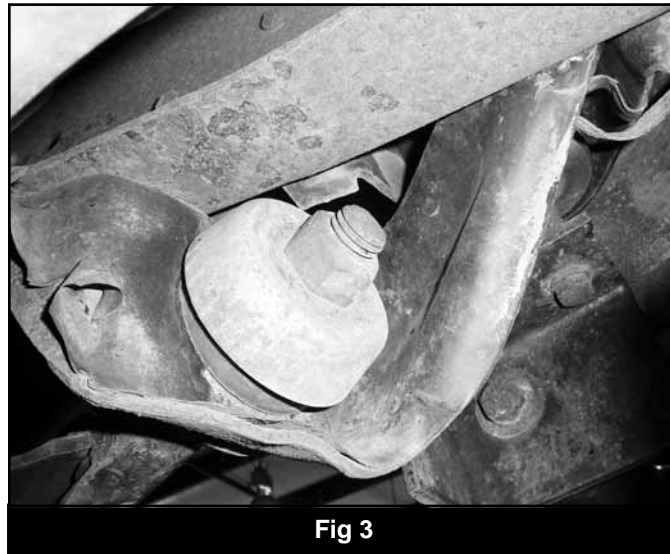


Fig 3

9. Place a hydraulic jack under the radius arm bracket. Remove OEM rivets and bolts that attach the bracket to frame rail, discard hardware. Lower jack and move to radius arm at axle mount, under the coil. (Fig 4)
10. Support the axle with a hydraulic jack under the coil spring. Remove shocks and lower the axle until there is no load on the coil. The upper shock bushings will not be reused when the kit is installed with BDS replacement shocks. They can be removed with a punch / chisel and hammer.
11. Remove J-clips, retain hardware. Lower the axle and pull the top of the coil from the upper coil bucket. (Fig 5)

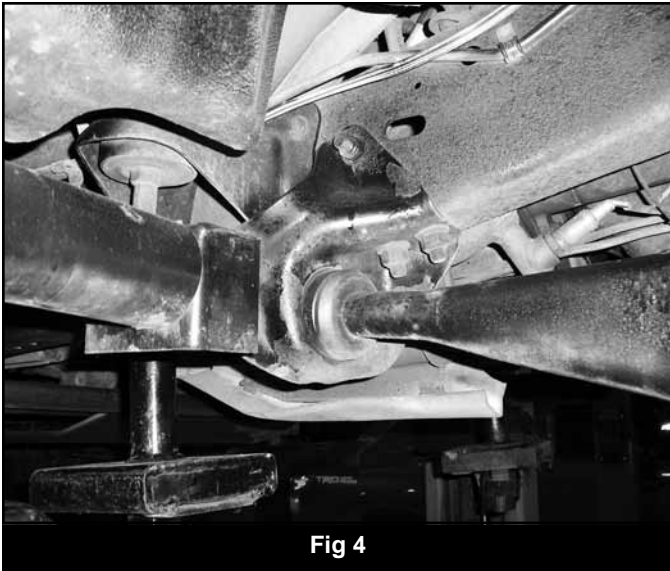


Fig 4

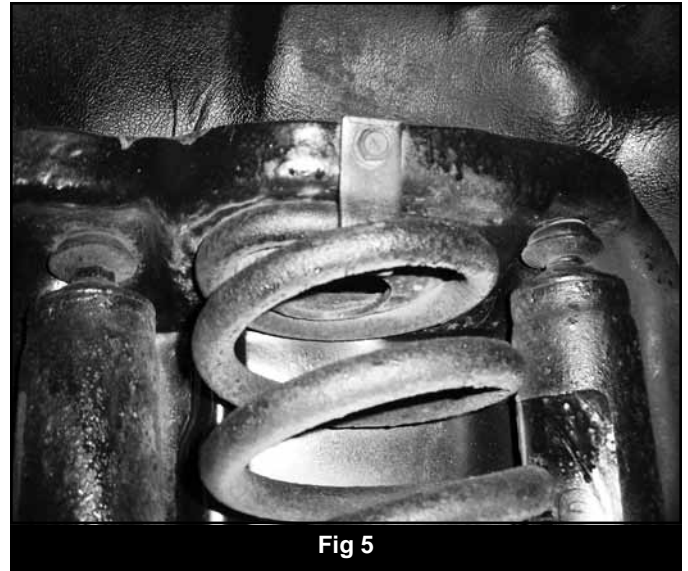


Fig 5

12. Remove the nut and captive washer retaining the coil to axle, retain hardware. Remove the coil from vehicle. (Fig 6a/6b)

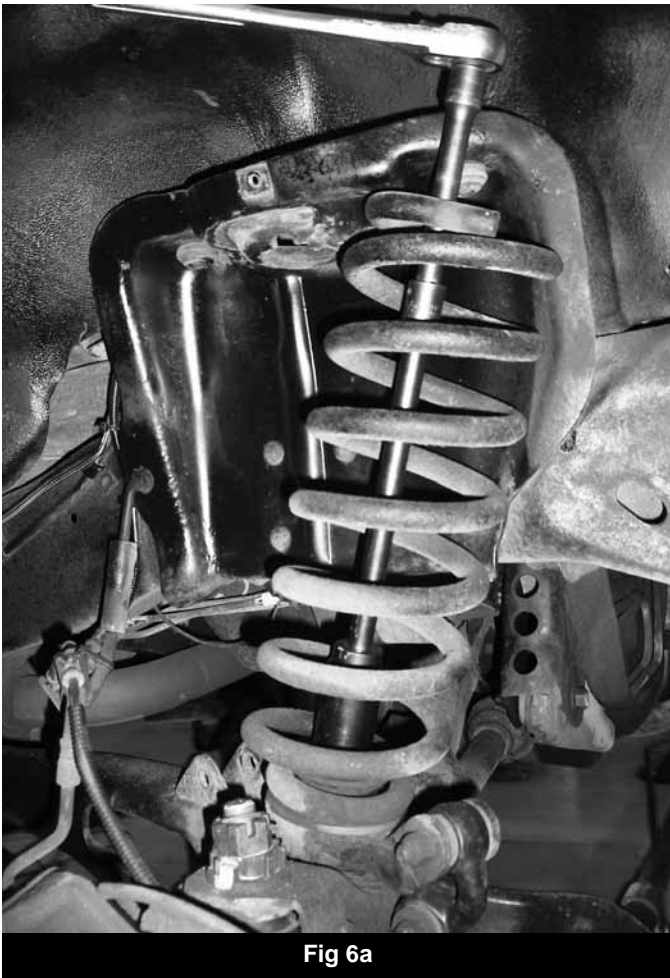


Fig 6a

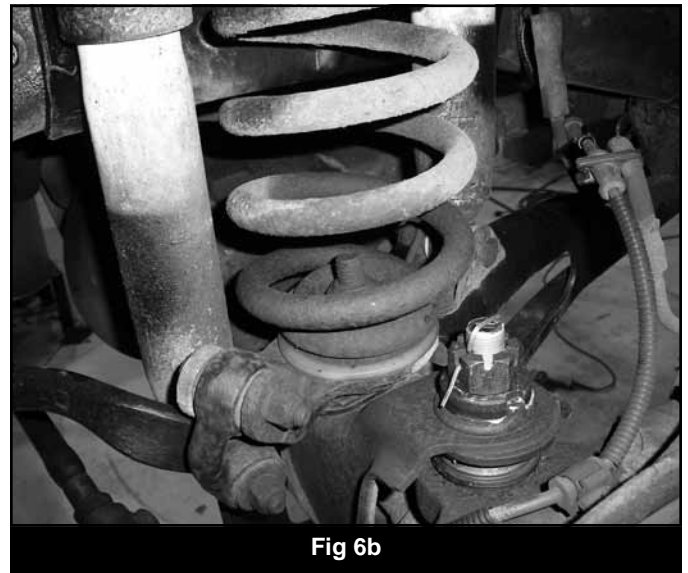


Fig 6b

13. 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.
14. Remove axle pivot bolt, repeat for opposite side, and retain hardware.
15. 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)

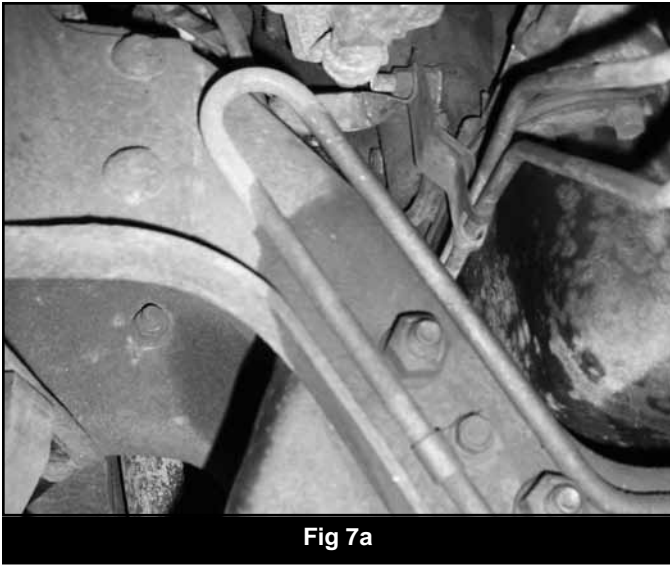


Fig 7a

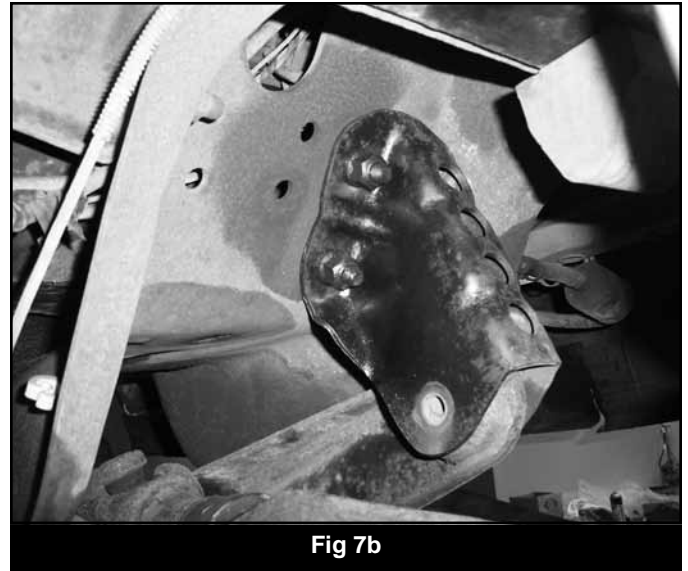


Fig 7b

16. 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)

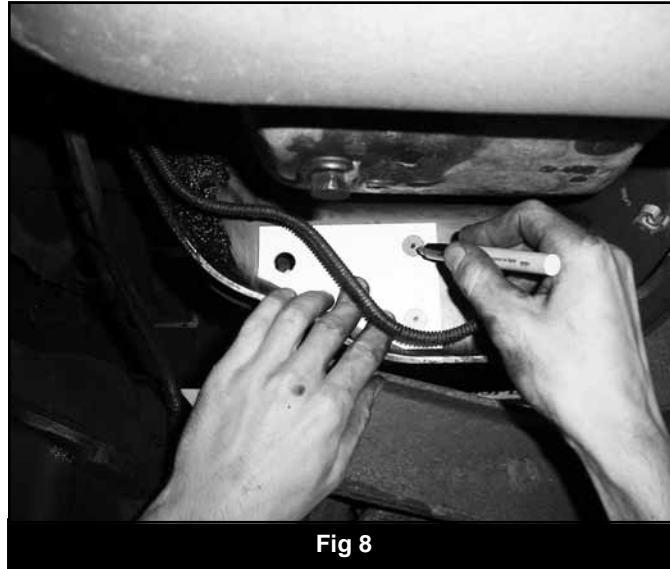


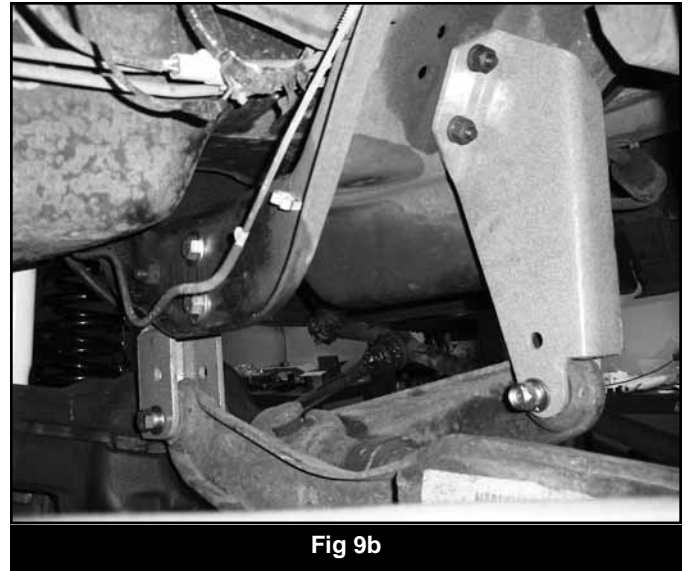
Fig 8

17. 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.
18. Install axle pivot location into bracket 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)



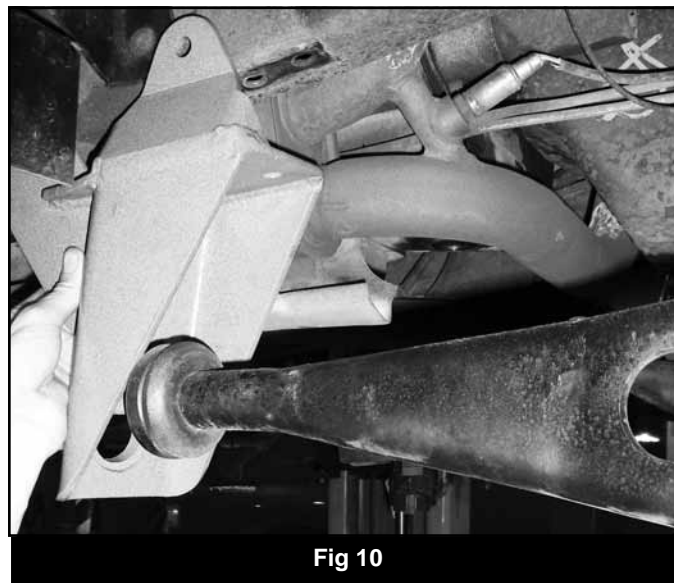


**Fig 9a**



**Fig 9b**

19. Tighten axle pivot drop bracket hardware as follows: 9/16" 110 ft-lbs, 1/2" 75 ft-lbs.
20. Attach radius arm drop brackets on frame rails to existing holes with 7/16" hardware. Use bracket as a guide and drill remaining mounting holes with 1/2" drill bit. Secure remaining mounting points with supplied 7/16" hardware. Tighten hardware to 50 ft-lbs. (Fig 10)



**Fig 10**

21. Install OE radius arms with OE bushings and hardware at this time, snug but do not tighten at this time.
22. Support the front axle with a hydraulic jack. Disconnect the front shocks that were temporarily installed to allow the axle to droop.
23. Droop the axle far enough to install the coil springs. Take care not to over-extend the brake lines. See coil spring instructions for more details.
24. Reattach shocks with new bushings, new upper nut with jam nut, and OE lower hardware. Repeat for auxiliary shock if applicable.
25. Form the brake line at the caliper (bend towards frame rail) to allow for adequate slack in the line at full droop. Cycle the steering to ensure that there is adequate slack in the line. If there is not enough slack, replacement longer length lines must be installed. If lines are installed the brake system must be bled prior to vehicle operation. (Fig 11)

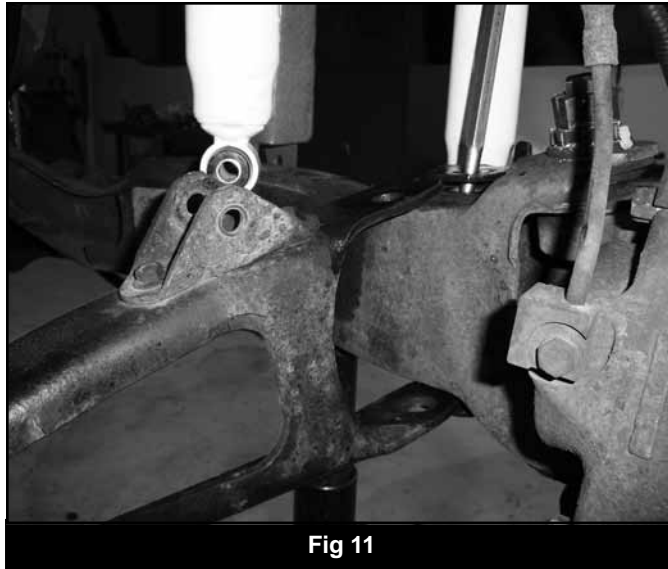


Fig 11

26. If front anti-sway bar is present, then install BDS sway-bar extension kit #123401 (ordered separately) at this time. Install the bracket to the 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.
27. 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 30 ft-lbs. Attach bump stops to drop brackets. Order kit # 170001 if you want new polyurethane bump stops, not included with this kit. (Fig 12)

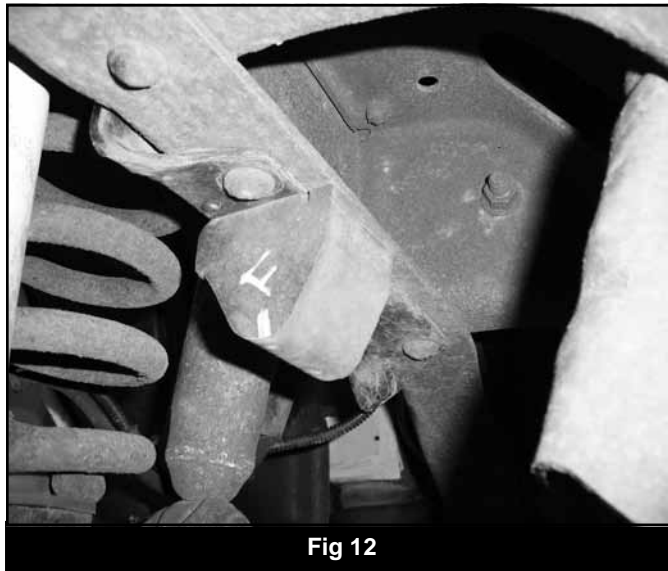


Fig 12

28. If optional upper ball joint cams were purchased, install them at this time. Reference the OE service manual for proper removal and installation.
29. Reattach steering linkage to pitman arm with OE nut and new cotter pin.
30. Reinstall wheels and torque lug nuts to OE specifications.
31. Install applicable BDS shocks for your vehicle and amount of lift.
32. Install the desired BDS rear lift system at this time.
33. Lower vehicle to ground, bounce the suspension to allow it to settle. Tighten lower axle pivot bolts to 105 ft-lbs. Tighten radius arm bushing nuts until nut bottoms out.
34. Adjust headlights as needed.
35. Align front end to OEM alignment specifications before operating.
36. Be sure to check all fasteners and the alignment after 500 miles operation.

## SUPPLIED FASTENERS TORQUE SPECIFICATION

- 1/4" Fasteners 17 ft lbs
- 3/8" Fasteners 30 ft lbs
- 7/16" Fasteners 55 ft lbs
- 1/2" Fasteners 75 ft lbs
- 9/16" Fasteners 105 ft lbs

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### NOTICE TO DEALER/INSTALLER

These instructions, the warning card, and included decals must be given to the owner of this BDS Suspension product.

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

