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Part#: 123012, 123011

Product: 4", 6" 4-Link Upgrade Kit

Application: 2005 Ford SuperDuty 4WD

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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
02023	2	Lower 4-Link Arm
02024	2	Upper 4-Link Arm
02026	1	4-Link Frame Bracket (drv)
02027	1	4-Link Frame Bracket (pass)
3527	8	Link Bushing
7-1	4	1.000 x 0.120 x 3.250 Sleeve
60107	4	90 deg grease zerk
432	1	Bolt Pack

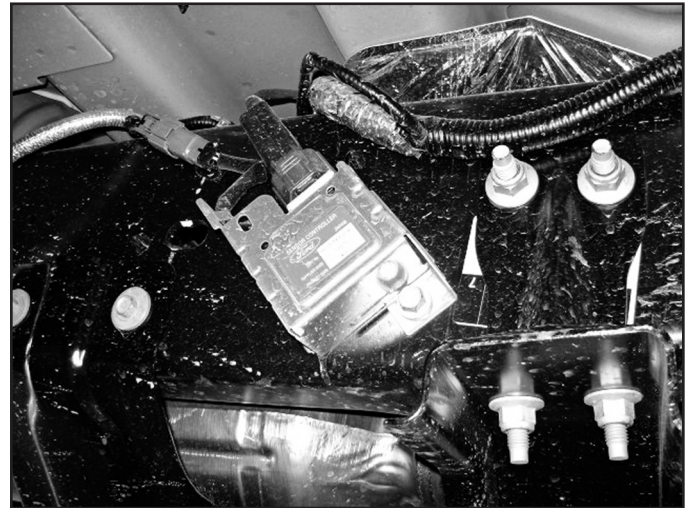
## Bolt Pack 432

14	1/2"-13 x 1-1/2" bolt grade 8 yellow zinc
14	1/2"-13 prevailing torque nut yellow zinc
28	1/2" SAE flat washer thru-hardened yellow zinc
4	3/4"-10 x 5-1/2" bolt grade 8 yellow zinc
4	3/4"-10 prevailing torque nut yellow zinc
8	3/4" SAE flat washer thru-hardened yellow zinc
2	Wire Clip (Fastenal #0708762)
2	1/4"-20 x 3/4" bolt grade 5 clear zinc
2	1/4"-20 prevailing torque nut clear zinc

## INSTALLATION INSTRUCTIONS

### Pre Installation Note:

Disconnect the modules on the side of the frame rail before beginning the installation. Vibration from an air hammer may damage the modules and are expensive to replace. Modules may not be present on earlier year / gas engine configuration trucks. Reattach at the end of the installation.



### Front Installation

1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Disconnect the front track bar from the frame mount. Retain hardware.
3. Raise the front of the vehicle and support under the frame rails with jack stands. **Note:** 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.
4. Remove the front wheels.
5. Support the front axle with a hydraulic jack.
6. Loosen the four radius arm-to-axle mounting bolts but do not remove. Once again, ensure that the front axle is well supported.
7. Starting with the passenger's side, remove the upper radius arm-to-axle mounting bolt. Remove the radius arm-to-frame bolt as well. This will allow the radius arm to swing down away from the frame. Remove the lower radius arm-to-axle bolt and remove the arm from the vehicle. Retain hardware.
8. Lightly grease and install the provided bushings (3527RB) and sleeves (7-1) in the four new control arms (02023, 02024).
9. Install the provided 90° grease fittings in the threaded holes at the bushing end of the control arms. When installed the fittings should point toward the body of the control arm. (Fig. 1)

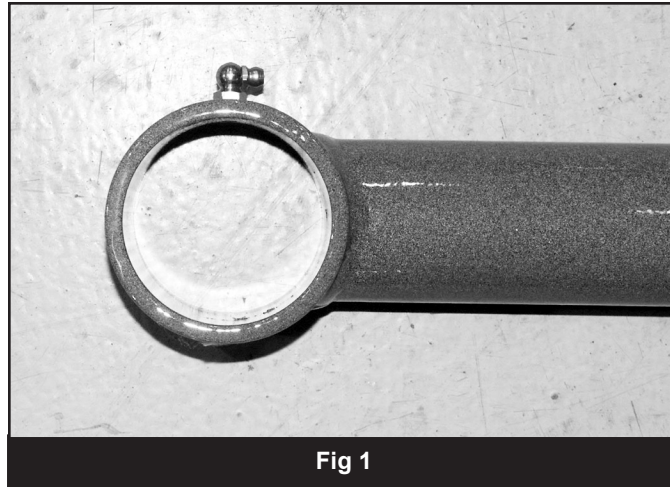


Fig 1

10. Locate the seven rivets that attach the OE radius arm mounting bracket to the frame. There will be four on the outside and three in the inside of the bracket fastening the bracket to the bottom of the frame. (Fig. 2)

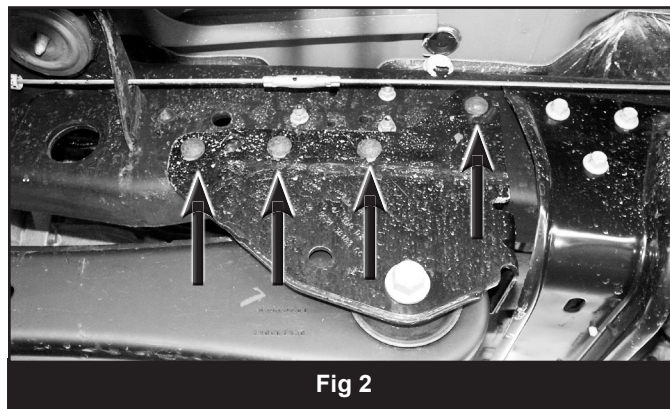


Fig 2

11. Remove the seven rivets with a grinder, drill, air chisel or combination of these tools. Do not use a torch. The undercoating used on the frame is highly flammable. Also, the fuel system lines run inside of the driver's side frame rail.
12. With the rivets removed, free the radius arm bracket from the frame. Ensure that all of the rivets are removed from the holes in the frame.
13. Place the new passenger's side 4-Link bracket (02027) up to the frame and align the existing rivet holes with the corresponding holes in the bracket. Attach the bracket with  $\frac{1}{2}$ " x 1-1/2" bolts, nuts and  $\frac{1}{2}$ " SAE flat washers from bolt pack #432. Torque  $\frac{1}{2}$ " hardware to 70 ft-lbs. (Fig. 3, 4)

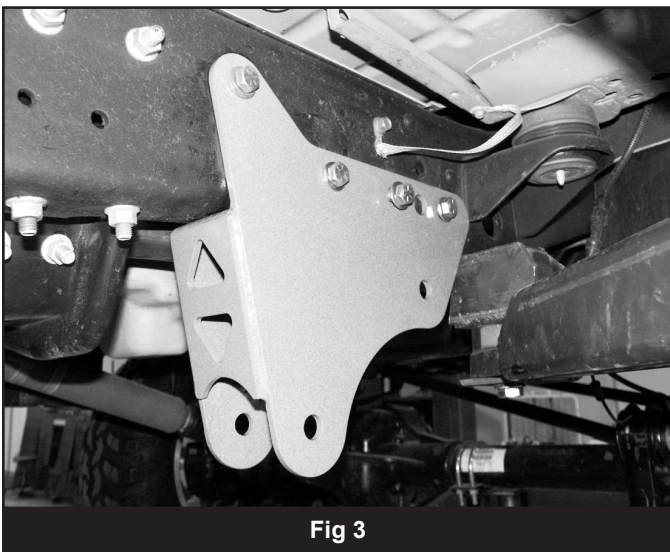


Fig 3

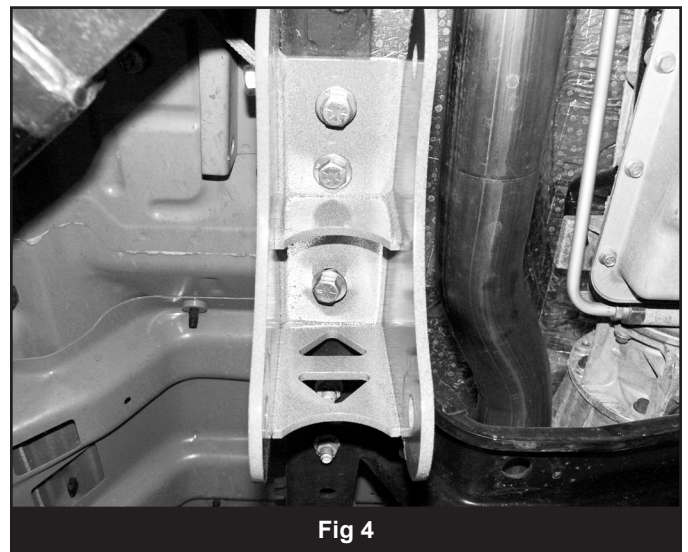


Fig 4

14. Install the assembled upper control arm in the new frame bracket and fasten with a  $\frac{3}{4}$ " x 5-1/2" bolt, nut and  $\frac{3}{4}$ " SAE flat washers from bolt pack #432. The two tabs on the control arm go up. Leave hardware loose. (Fig. 5)

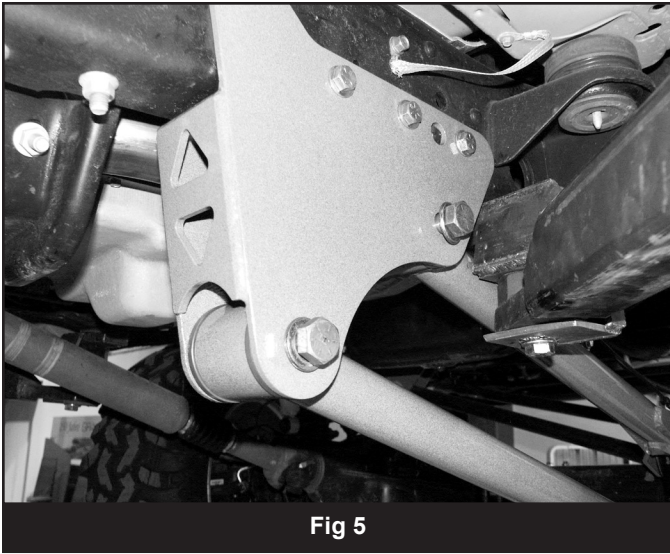


Fig 5

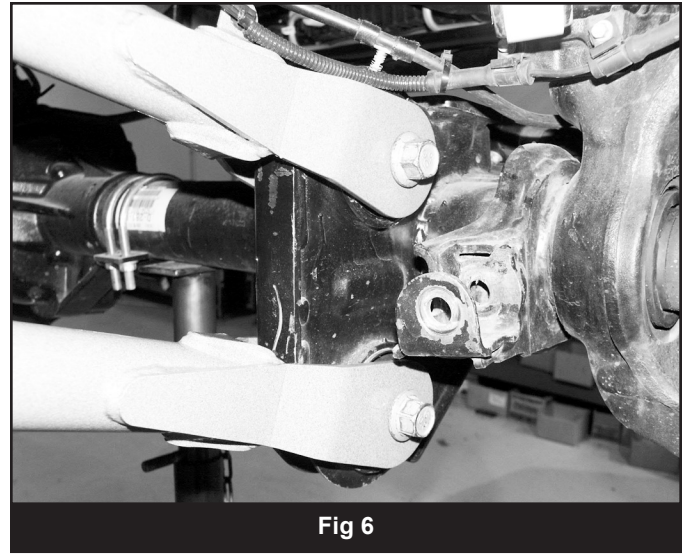


Fig 6

15. Attach the axle end of the control arm with the original hardware. Leave hardware loose. (Fig. 6)
16. Install the new lower control arm in the new frame bracket with a  $\frac{3}{4}$ " x 5-1/2" bolt, nut and  $\frac{3}{4}$ " SAE flat washers. Install arm so that the grease fitting is up. Leave hardware loose.
17. With the axle well supported, disconnect the driver's side radius arm from the axle. Retain hardware.
18. Attach the new passenger's side lower control arm to the axle with the original hardware. Leave hardware loose.
19. Repeat the frame bracket and control arm procedure on the driver's side of the vehicle. **Notes:** To help in accessing the bracket bolts, the fuel junction block mounted to the inside of the driver's side frame rail can be disconnected and repositioned out of the way. Use the nut that was removed from the radius arm-to-frame bolt for the upper control arm-to-axle mount bolt on the driver's side. The OE bolt in this position is welded to the radius arm. (Fig. 7, 8)

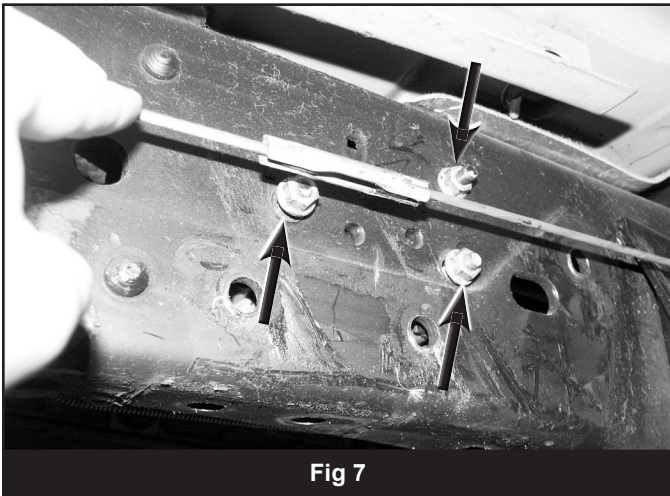


Fig 7

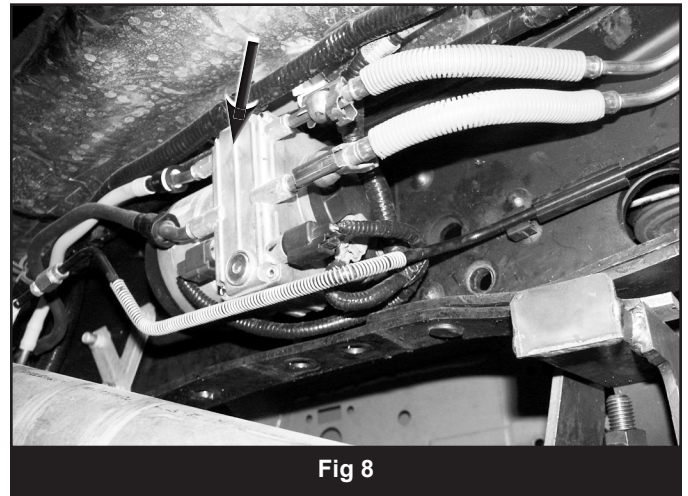
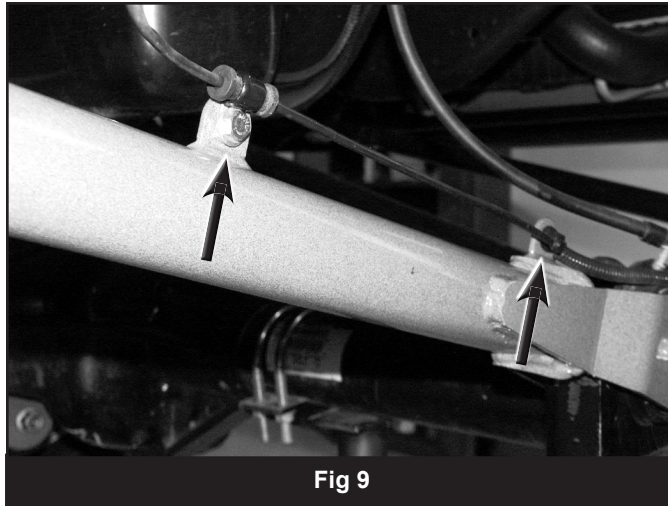


Fig 8

20. With all of the control arms attached, reinstall the fuel junction block (if removed) on the driver's side frame rail. Torque hardware to 20 ft-lbs.
21. Attach the plastic ABS wire clip to the front tab on the new upper control arm. Secure the wire to the rear tab with the provided wire clip and 1/4" x 3/4" blot, nut and 1/4" USS washers. Torque 1/4" hardware to 10 ft-lbs. (Fig. 9)



22. Install wheels and lower the vehicle to the ground.
23. Bounce the vehicle to settle the suspension. Torque all eight control arm bolts to 250 ft-lbs.
24. Check all hardware for proper torque.
25. Check hardware after 500 miles.