

INSTALLATION GUIDE



Part#: 012503, 012504

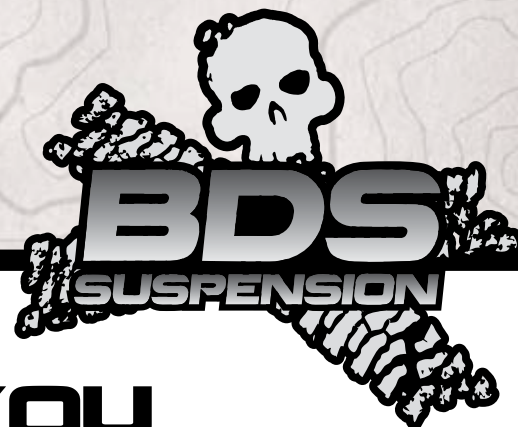


HARDCORE LIMITED LIFETIME WARRANTY

4.5 & 5" Suspension System

Dodge 1500 Pickup 4WD | 1994-2001
Dodge 2500/3500 Pickup 4WD | 1994-2002

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

FITMENT GUIDE

3/4 & 1 Ton 4.5" Lift:

35x12.50 on 16x8 w/ 4" backspacing

1/2 Ton 5" Lift:

35x12.50 on 16x8 w/ 3.5-4" backspacing



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

012503/012504 Box Kit

Part #	Qty	Description
082401R	1	Pitman Arm (012503)
082404R	1	Pitman Arm (012504)
01044B	1	Sway Bar Drop DS
01045B	1	Sway Bar Drop PS
02585B	1	Track Bar Bracket
01223B	2	Upper Control Arm
01255B	2	Lower Control Arm
01251B	1	UCA Relocation Bracket - PS
01252B	1	UCA Relocation Bracket - DS
02322BK	2	Bump Stop
01257	1	Brake Line Drop
01258	2	Brake Line Drop w/Tab
01259	1	Brake Line U Drop Bracket
01262	1	Track Bar Washer
60107	6	1/4"-28 Grease Zerk 90 degree
516	2	1/4"-28 Grease Zerk
17	2	.750 x .120 x 2.375 Sleeve
19	4	.750 x .095 x 2.51 Sleeve (012503)
18	4	.750 x .134 x 2.25 Sleeve (012503)
23	2	.750 x .095 x 2.25 Sleeve (012504)
24	2	.875 x .120 x 2.51 Sleeve (012504)
3522BK	8	Upper Control Arm Bushing

012503/012504 Box Kit

3520BK	8	Lower Control Arm Bushing (012503)
3521BK	8	Lower Control Arm Bushings (012504)
BP123401	1	Bolt Pack - Sway Bar
	4	3/8" x 1 1/4" bolt
	4	3/8" prevailing torque nut
	8	3/8" USS washer
BP123406	1	Bolt Pack - Brake Line Relocation
	8	1/4" USS washer
	4	1/4"-20 x 1" bolt
	4	1/4"-20 prevailing torque nut
610	1	Bolt Pack - Relocation Brackets
	4	1/2" USS washer
	16	1/2" SAE washer
	8	12mm x 40mm bolt
	2	12mm x 110mm bolt
	10	12mm prevailing torque nut
611	1	Bolt Pack - Track Bar Bracket
	1	18mm x 70mm bolt
	1	18mm flat washer
	1	18mm-2.50mm prevailing torque nut
	1	1/8" x 2" cotter pin
	1	1/2"-13 x 2 1/2" bolt
	1	1/2" USS washer
	1	1/2" SAE washer
	1	1/2"-13 prevailing torque nut



TROUBLESHOOTING INFORMATION FOR YOUR VEHICLE

1. This kit will only fit models manufactured on or after **February 9, 1994** due to size of track bar stud.
2. May require exhaust modification.

TECH TIPS

INSTALLATION INSTRUCTIONS

INSTALLATION INSTRUCTIONS

SPECIAL TOOLS

Pitman Arm Puller

1. Secure vehicle on a level surface.
2. Open hood, remove the upper shock nuts and retainers. Remove the three nuts retaining the upper shock tower and remove the brackets.
3. Raise the front of the vehicle and install jack stands under the frame behind the lower link rear brackets.
4. Remove the tires. Remove the brakeline anchor bracket between the upper and lower links behind the coil spring.
5. Disconnect the original steering stabilizer from the steering link. Disconnect the track bar from the frame end and lower down.
6. Disconnect the sway bar at the frame side and lower out of the way. Disconnect the drag link from the pitman arm. (Fig. 1)

FIG. 1



7. Use a pitman arm puller to remove the pitman arm from the steering sector. Install new BDS drop pitman arm and retain with original fasteners. Torque to 185 ft-lbs. Do not attach drag link to the pitman arm at this time. (Fig. 2)

FIG. 2



8. Remove lower shock bolts and pull shocks up through the coil spring. Lower the front axle to remove the coil spring, rubber isolator and 3-bolt shock tower ring.
9. Remove the front bump stops from their pocket by working them back and forth with a large set of channel locks.
10. Mark the lower link adjustment cams and the surrounding reinforcement bracket so you can realign the cams after installation.
11. Remove the upper and lower links from both sides. (Fig. 3)

FIG. 3



12. The longer of the supplied links are the lower links. The wider of the supplied bushings are for the lower links. The longer sleeves (3/4 x 2.51") are for the lower links. Install the bushings and sleeves into the lower links. Install the lower links in the vehicle with the OE fasteners.
13. Prior to installing the upper link relocation brackets, check the holes on each side of the upper link axle mounts to ensure that a 12mm bolt fits through them. If not, drill out the holes to 1/2". (Fig. 4 & 5)

FIG. 4



FIG. 5



14. Install relocation bracket over the original mount (note there is a left/right hand).
Note: The longer lower leg goes toward the outside of the vehicle. Install a 12mm x 110mm (4-1/2") bolt using the 3/4 x 2.375" sleeve inside the original axle mount to maintain spacing.
15. Install the shorter bushings and sleeves into the upper links. Install the upper link by sliding them through the relocation bracket to the original frame mount. Install original bolts, but do not tighten at this time.
16. Remove the screw retaining the steel vacuum lines to the passenger's side of the frame at the drop point going to the vacuum actuator valve. Install the furnished drop bracket (1" wide x 4" long) using the original screw at the frame. Use the supplied 1/4 x 1" bolt, nut and washer to attach the vacuum line to the new drop bracket.
17. Unplug the electrical line at valve and release the plastic clip at the bracket. If additional slack is needed, remove wire from top of crossmember and route it under the crossmember.
18. Begin installing track bar drop bracket by first removing the brakeline clamp screw from the crossmember. This is located next to the original frame mount for the track bar. After removing the screw push the brakeline up approximately 2" for clearance.
19. First, check the track bar frame mount to ensure that it is a smooth surface. Some models have a reinforcement gusset on the edge of the mounting point. This must be ground off to make a flat mounting point for the new bracket. It is vital that the new bracket mounts to a flat smooth surface.
20. Apply loctite to end of 18mm bolt. Hold new drop bracket up to OE mount. Insert 18mm bolt through the original mount and the drop bracket and start the nut with washer. Tighten the nut until it is snug.
21. Twist the drop bracket until the extension brace hits the back of the crossmember. The brace should sit flat against the crossmember.

22. Use a 1/2" drill and start through the hole in the supplied brace and drill through the crossmember being sure to come out just below the weld mount on the front side of the crossmember. It may help to drill a smaller pilot hole and then open to 1/2". (Fig. 6)

FIG. 6



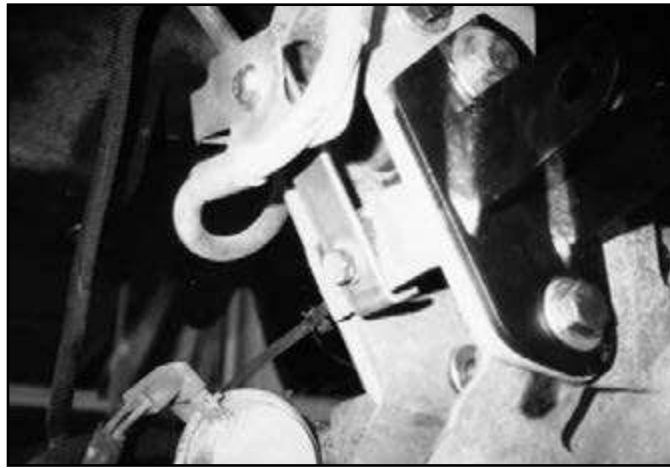
23. Install a 1/2 x 2-1/2" bolt with washer through the brace and crossmember. On the front side of the crossmember install the step washer over the weld mount to create a flat surface. Install the nut and torque to 70-75 ft-lbs. Be sure not to crush the crossmember. Then torque the 18mm bolt to 200 ft-lbs. (Fig. 7)

FIG. 7



24. Move the brake line clamp back down and drill a new 19/64" hole.
25. Install new poly bumpstops in the original pockets. A jack may be used to force the bumpstops into the original pocket or use a wood block and a 2x4 for leverage.
26. Insert 3-bolt shock tower ring inside the top of the coil tower. Start a couple of nuts on the ring to hold it up in place. See dual shock instructions if installing.
27. Install coil springs and place rubber isolators on the tops of the coils. Turn the coils so the end of the bottom wraps is toward the center of the vehicle. Lift up on jack under the differential to place a small load on the coils to hold them in place.
28. Remove the nuts that you previously installed on the 3-bolt ring. Install new shocks down through the coils springs and install bolt at the bottom. Install original shock tower bracket over the 3-bolts of the ring. Install nuts on the 3 bolts and tighten. Install shock to the top of the tower with the shock fasteners per their instructions. (If installing dual shocks, refer to those instructions at this time.
29. Install the supplied brake line relocation brackets at this time. The brackets are the two with a small 90 degree bend. Install the bracket with the small leg at the bottom facing toward the front of the vehicle. Install original metric bolt in the bottom hole on the bracket and tighten. Attach the original brake line anchor bracket to the top hole of the new bracket with the supplied 1/4 x 1" bolt, nut, and washer supplied and tighten. (Fig. 8)

FIG. 8



30. Loosen the turn buckle clamps on the drag link and rotate 180 degrees. This will allow the drag link to be connected with the new pitman arm. Install drag link into pitman arm and tighten OE nut. Be sure to use a new cotter pin. Rotate the turn buckle clamps to the top side of the drag link to gain clearance for the steering stabilizer. Tighten turn buckle clamps to 45 ft-lbs.
31. Install new BDS steering stabilizer at this time.
32. Swing sway bar back up to the frame mounts. Install sway bar drop brackets between the sway bar and the frame with the supplied 3/8 x 1" bolts, nuts, and washers. The solid side of the bracket should be facing out and should slope toward the bumper. Torque bolts to 35 ft-lbs.
33. Install tires and lower vehicle to the ground.
34. Attach the track bar to the track bar relocation bracket with the original fasteners and Torque to 70 ft-lbs. Install new cotter pin. Torque track bar at axle end to 130 ft-lbs.
35. Tighten upper and lower link bolts making sure the alignment cams are in line with the original marks. Upper arms Torque to 89 ft-lbs. Lower arms Torque to 110 ft-lbs.
36. Complete a full steering cycle to ensure that nothing is hitting. Check the clearance between the sway bar end links and the drag link tie rod assembly. It may be necessary to trim/grind for needed clearance.