

# #012307

## Installation Instructions

### Rear Block Kit

### Dodge 1/2 Ton Pickup 4WD



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

#### 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.

#### PARTS LIST

Description	Qty
9/16 x 2-9/16 x 15" "U" Bolt	4
9/16" Fine High Nut	8
9/16" Flatwasher	8
3" Lift Block	2

#### INSTALLATION INSTRUCTIONS

1. Safely raise the vehicle and support with jack stands for safety.
2. Remove the tires and wheels.
3. Place support floor jack under the rear axle.
4. Remove OEM shock absorbers.
5. With floor jack under the axle, remove the OEM u-bolts at the spring to axle connection.
6. Use the floor jack to lower the axle. Do not overextend the brake and axle vent hoses. The vent hose may need to be rerouted.
7. Inspect existing spring perches. If they are not in good condition, replace them at this time.
8. Complete the following instructions one side at a time. Place a C clamp on each side of the spring center pin and remove the pin. **Note: Be careful, the springs are under load.**
9. Carefully loosen the C clamps and place the add-a-leaf between the overload spring and the spring pack.
10. Install the new center pin into the leaf pack. Do not use the center pin to tighten the leaf pack. Compress the leaf pack with the C clamps and then tighten the center pin. After tightening, trim off the excess pin.
11. Remove the existing OEM block on the spring perch and replace with BDS's supplied block. Make sure the tapered or shorter end is toward the front of the vehicle. **Note: All contact points should be free of debris before installing.**
12. Raise the axle/blocks up to the spring pack and ensure that the center pin and block pin align with the appropriate holes.
13. Install supplied u-bolts with the fasteners supplied using the OEM u-bolt plate. **Note: It may be necessary to ream out the U-bolt plate on certain vehicles.**
14. Install correct BDS shocks, tires and wheels.
15. Lower the vehicle to the floor.
16. Torque u-bolts to 100-120 ft-lbs.
17. Check hardware after 500 miles.

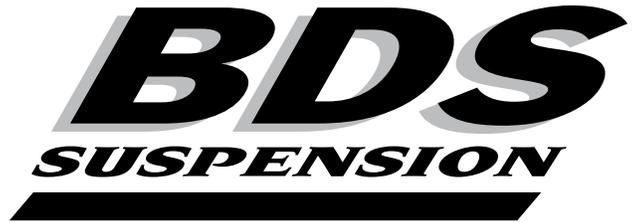
102 S. Michigan Avenue • Coldwater, MI 49036  
517-279-2135 • [www.bds-suspension.com](http://www.bds-suspension.com)

# #012503, 012504

## Installation Instructions

### Front Box Kit

### Dodge Pickup 4WD



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

#### **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.

**102 S. Michigan Avenue • Coldwater, MI 49036**  
**517-279-2135 • [www.bds-suspension.com](http://www.bds-suspension.com)**

**NOTE: This kit will only fit models manufactured on or after February 9, 1994 due to size of track bar stud.**

## **FRONT INSTALLATION**

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.
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.
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.
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. 1—Sway Bar Removal

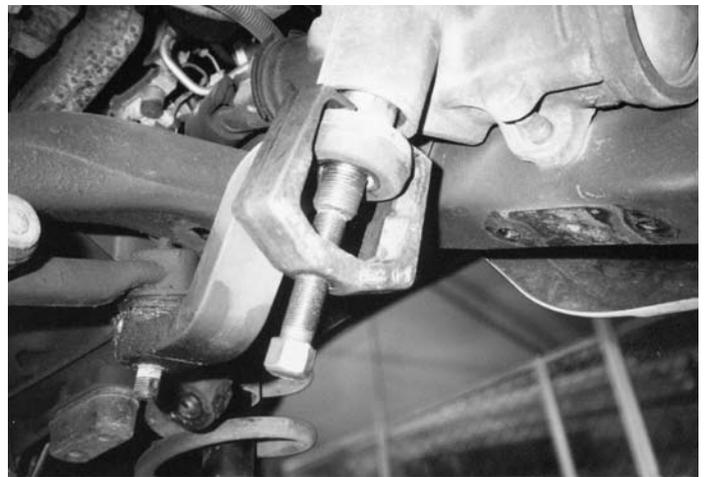


FIG. 2—Pitman Arm Removal



FIG. 3—Lower Link Removal

14. Install relocation bracket over the original mount (note there is a left/right hand). 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".

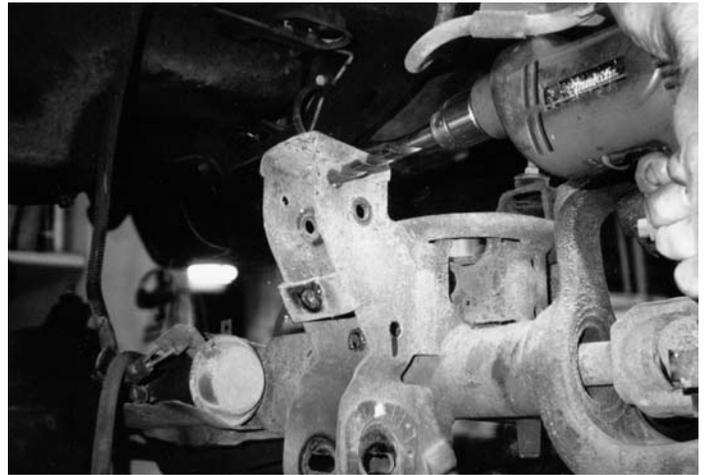


FIG. 4—Drill Holes



FIG. 5—Relocation Brackets

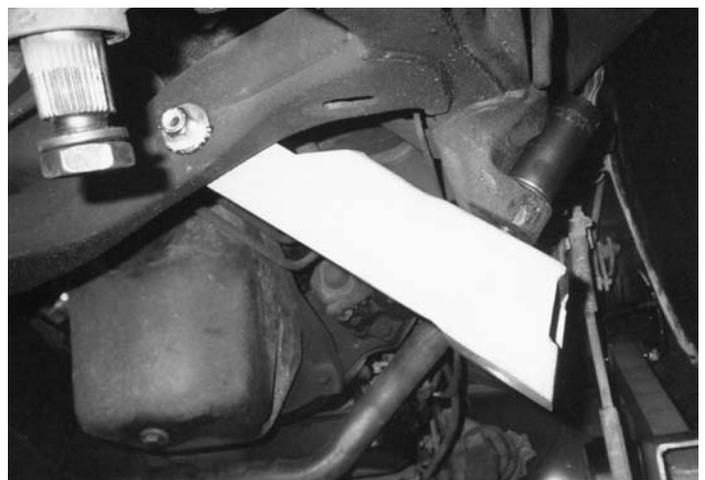


FIG. 6—Track Bar Bracket

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.
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.
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.



FIG. 7—Drill Hole

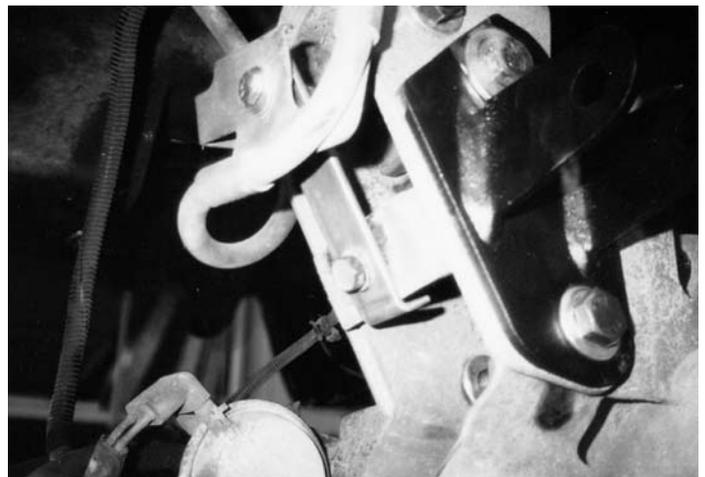


FIG. 8—Brake Line Relocation

# #55417

## Dodge Steering Stabilizer



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

### Part List

Part#	Qty	Description
5621	1	Cylinder
45313	1	5/8 x .109 x 1.375" Sleeve
51792	1	5/8 x .060 x 1.375" Sleeve
80	1	Tapered Sleeve
YJTC5	1	1-1/8" O.D. Spacer
SB58BK	2	Hourglass Bushing
319	1	Bolt Pack -1/2" x 4" bolt, nut and washer

- Attach the rod end of the stabilizer to the tie rod using the large spacer, 1/2" bolt, nut and washer supplied in bag kit # 319. The large spacer is placed between the tie rod and the stabilizer end. This will space the stabilizer end away from the tie rod to eliminate any possible interference. Tighten the 1/2 bolt to 80 ft-lbs.
- Start the vehicle and turn the wheel lock-to-lock to ensure that there is no binding and that the stabilizer doesn't bottom or top out during a full steering sweep.
- Check all hardware after 100 miles and after any off-road use.

### INSTALLATION INSTRUCTIONS

- Park the vehicle on a flat clean surface and block the rear wheels for safety. Ensure that the front wheels are positioned straight forward.
- Remove the bolt mounting the OE stabilizer to the frame on the passenger's side of the vehicle. Retain hardware for later use.
- Remove the cotter pin and nut from the stabilizer tie rod mounting stud. Remove the stud from the tie rod with a pickle fork.
- Clean the inside of the tapered hole in the tie rod and install the supplied tapered sleeve (#80) in to the tapered hole. This will make the tapered hole a straight through hole.
- Install the supplied hourglass bushings in to the new stabilizer cylinder using a vice. Lightly grease the I.D. of the bushings. Install the thicker walled sleeve (#45313) in to the cylinder end of the new stabilizer. Install the thinner walled sleeve (#51792) in to the rod end of the stabilizer.
- Extend the steering stabilizer out half way. If installing a boot, do so now.
- Attach the cylinder end to the frame mount using the O.E. hardware that was removed earlier. Tighten the O.E. bolt to 50 ft-lbs.

102 S. Michigan Avenue • Coldwater, MI 49036  
517-279-2135 • [www.bds-suspension.com](http://www.bds-suspension.com)

# Add-A-Leaf

## Installation Instructions

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

**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. 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. Secure and properly block vehicle prior to installation of BDS Suspension components. Always wear safety glasses when using power tools.
4. To properly perform installation, you must use two (2) large C-clamps or a large vise to contain the elastic potential energy stored in a leaf spring when the center bolt is removed.

### INSTALLATION INSTRUCTIONS:

1. Raise rear of vehicle and support with jack stands under frame.
2. Remove tires and wheels.
3. Raise the rear axle with a floor jack and support axle with jack stands. Remove shocks.
4. With axle firmly supported by jack stands remove the axle vent hose from the axle housing. Remove the axle u-bolts and spring plates.
5. Lower axle to allow for spring removal. **Caution:** Be careful not to over extend brake lines, etc. Remove spring eye bolt and shackles bolts. Remove springs from the vehicle.

6. Using c-clamps or large bench vise, clamp the spring assembly securely together.
7. If applicable, remove any leaf spring alignment clips. Using vise-grips to hold the head of the center bolt, loosen and remove it. If the center bolt is rusted, a hammer and drift punch may be necessary for removal.
8. Carefully remove c-clamps or loosen bench vise.
9. With a small amount of grease applied to both ends of the add-a-leaf, reassemble leaf pack with new add-a-leaf in place. The leaf pack should be assembled as a pyramid with the longest leaf on top to the shortest leaf on the bottom.
10. Use the c-clamp to compress the pack back together, making sure to align the center pin holes in each leaf. Secure with the supplied center pin nut. **Do not use the center pin to tighten the pack.** Use the c-clamps to compress the pack and then tighten the center pin. Cut off any extra pin above the nut. Install the supplied leaf alignment clamps.
11. Install the springs back in to the vehicle. Reinstall the spring eye bolts and/or shackles according to OE instructions, but **do not tighten at this time.** Use the hydraulic jack to raise or lower the axle to the springs (depending on the vehicle) making sure to align the center pin head in the axle seat. Install the new u-bolts and OE spring plates according to OE instructions and torque u-bolt nuts to factory specs.
12. Reconnect the axle vent hose and install replacement BDS shock absorbers. **Note: Original shocks will probably be too short.**
13. Lower vehicle to the ground. Bounce on the vehicle several times to allow the shackles to swing out to the proper position, then tighten the spring frame mounting bolts and the shackle bolts to OE specification. Inspect for proper clearance. Test drive.

**You must tighten the u-bolts again after 100 miles.**

**Check all fasteners after 500 miles.**

# Shock Absorber Installation Instructions



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

## LIMITED LIFETIME WARRANTY

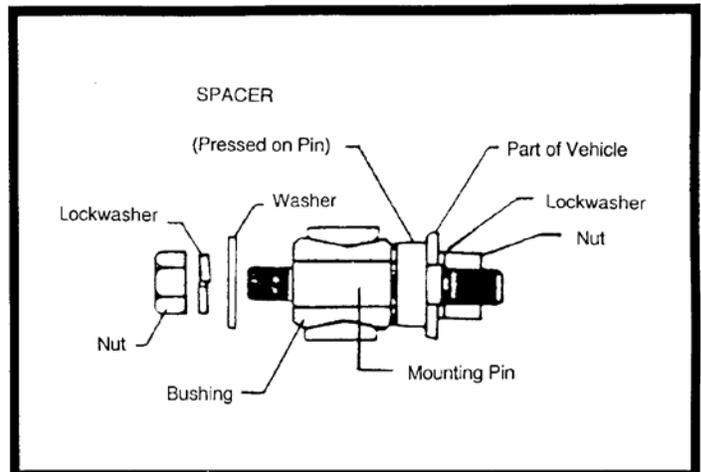
BDS Suspension Co. warrants to the original retail purchaser that its shock and stabilizer cylinders are free from defects in material and workmanship for so long as they own the vehicle. Excluded from this warranty are the finish of the product and mounting bushings. Defects in material and workmanship do not include such things as dented cylinders or bent rods caused by obvious side impact, rust, worn or deformed bushings. A shock absorber is a wear item and over time will experience diminished damping resistance due to normal component wear. This is not a defect in material or workmanship and is therefore not warrantable.

BDS Suspension's obligation under all warranties is limited to the repair or replacement, at BDS's option, of the defective material. Any cost of removal, installation or reinstallation, freight charges, incidental or consequential damages are expressly excluded from these warranties.

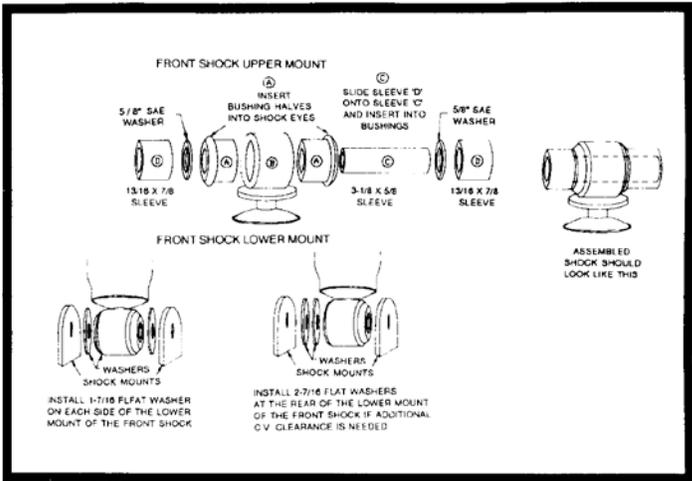
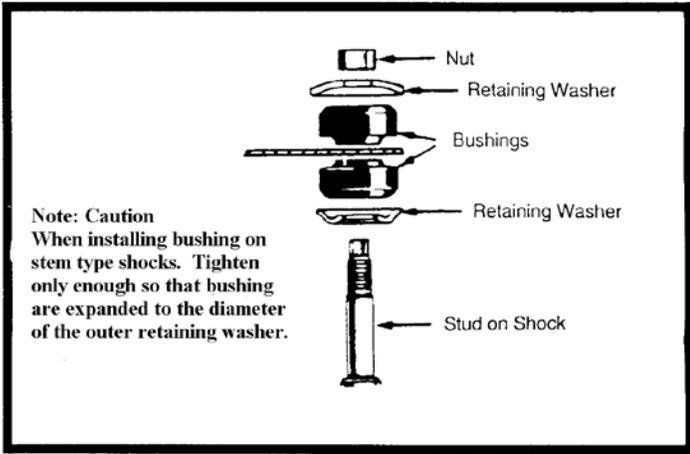
## INSTALLATION INSTRUCTIONS

1. **Note: Please read instructions thoroughly before installing shock absorber.**
2. Remove old shock absorber from vehicle. Note any spacers, washers, sleeves or other hardware and note their location. Compare the existing hardware with the supplied hardware. Always use new hardware wherever possible. Due to the variety of applications, you may not use any or all of the hardware supplied. You may need to use some of the original hardware. If any of the original hardware is damaged, corroded, bent or broken it must be replaced.

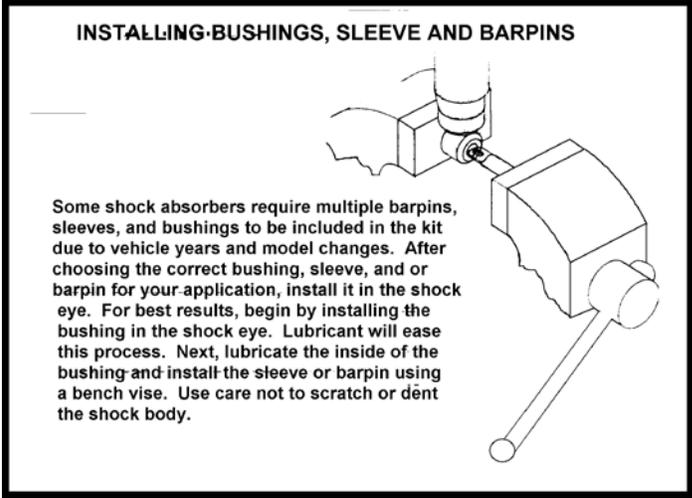
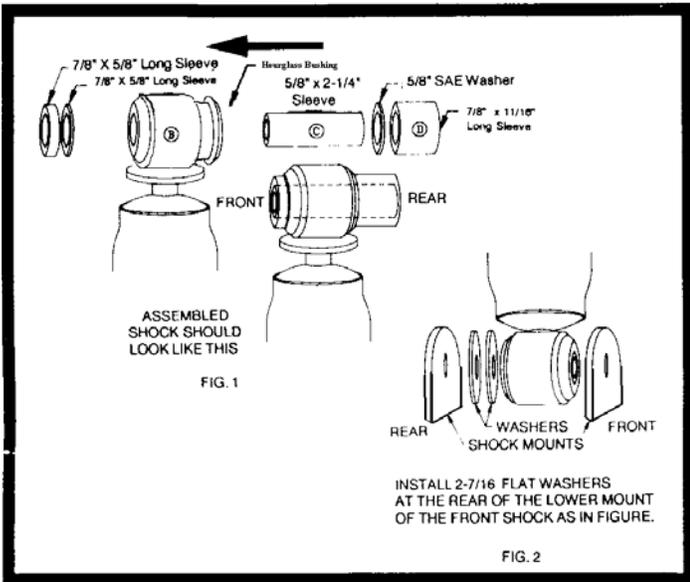
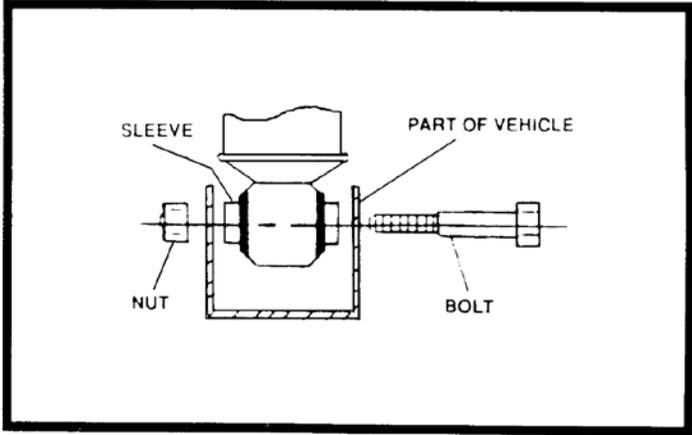
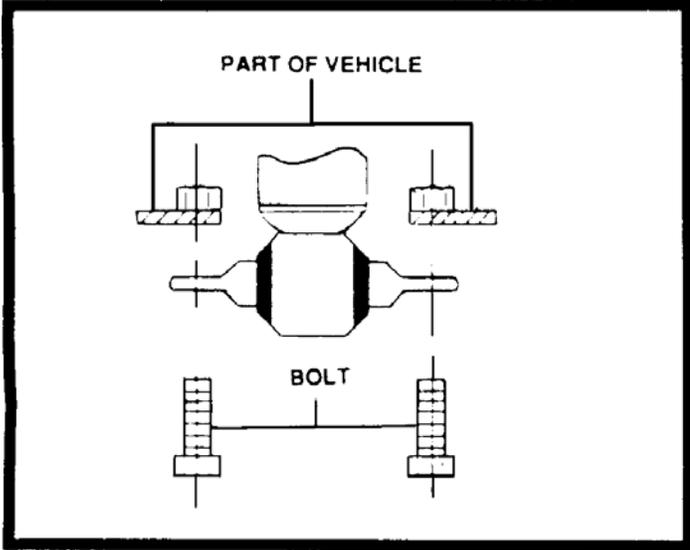
3. If installing dust boot, do so at this time. **Note: The use of a lubricant like dish soap on the inside of the boot will ease installation.** Make sure the washer at the top of the shock is fully seated in the boot all the way around. Secure the bottom of the boot to the cylinder with a plastic tie strap.
4. Install any required bushings and sleeves in to the shock eyes at this time. Install the shock absorber on the vehicle. Use the appropriate illustration as a frame of reference. Due to the different shock mounts within a vehicle model range, the shock eyes must be built to match the shocks that you removed by using the universal hardware kit included. Choose the sleeve with an I.D. closest to the O.D. of the mounting stud or bolt without binding. Some applications will require some extra effort to install.
5. Check all fasteners for tightness before driving and inspect periodically.



102 S. Michigan Avenue • Coldwater, MI 49036  
517-279-2135 • [www.bds-suspension.com](http://www.bds-suspension.com)



CHEV. S-SERIES W/LIFT



FULL-SIZE CHEV. W/LIFT 88-UP MODELS