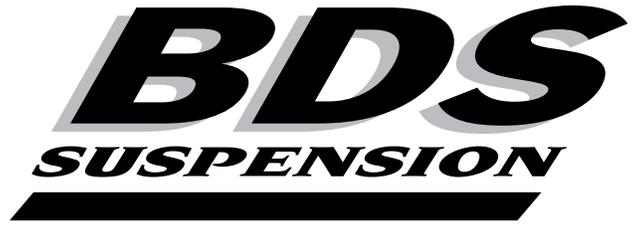


#024201

1.75" Front Coil Spacer/ Rear Add-a-Leaf Lift

1984-2001 Jeep XJ



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.

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Kit Contents

Qty	Part
2	2" Front Coil Spacer
2	2" Add-A-Leaf
4	U-bolts/nuts/washers
2	Front Bump Stop Extension
1	Bolt Pack - Front Bump Stops

Qty	Part
4	Leaf Spring Clamp
2	5/16" center pin/nut
2	Front Shock
2	Rear Shock

INSTALLATION INSTRUCTIONS

1. Park the vehicle on an appropriate work surface. Ensure that the vehicle is in park for automatic transmission or in first gear for manual transmissions and the parking brake is applied. Block the wheels for added safety.

FRONT INSTALLATION

2. Remove the bolt mounting the front track bar to the passenger's side of the axle (Figure 1). Save track bar bolt and nut tab. Allow the track bar to hang free. *Note: The track bar bolt may require a T-50 Torx socket on early models.*

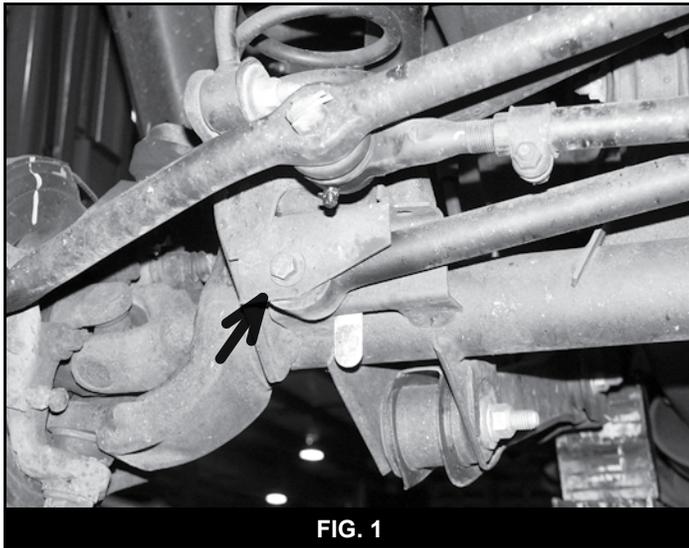


FIG. 1

3. Raise the front of vehicle with a hydraulic jack and place jack stands under the frame rails, just behind the lower control arm pockets.
4. Remove the wheels.
6. Support the front axle with a hydraulic jack. Remove the shocks. Save the lower shock hardware.
7. Remove the upper mounting nut from the sway bar links (Figure 2). Swing the sway bar up off of the links. Save all hardware/bushings.

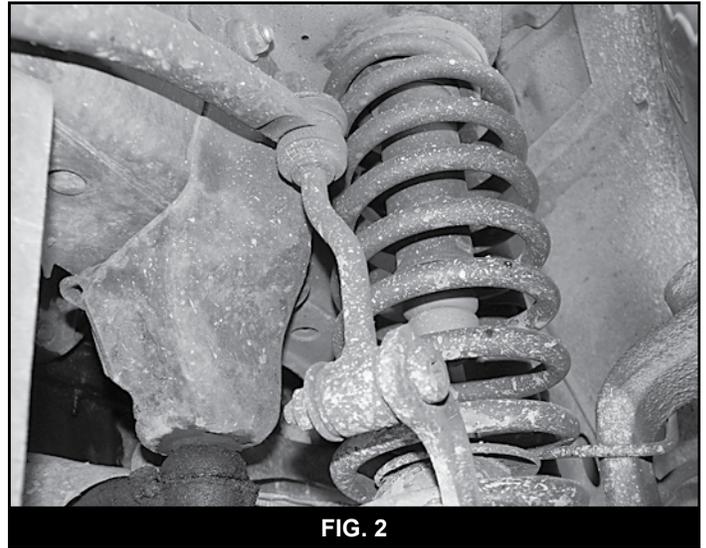


FIG. 2

8. Remove the cotter pin and castellated nut from the drag link end at the pitman arm (Figure 3). Thread the nut back on a couple of turns. Strike the pitman arm near the drag link end to release the tapered seat. Take care not to damage the end. Remove the nut and the drag link from the pitman arm. Save hardware.

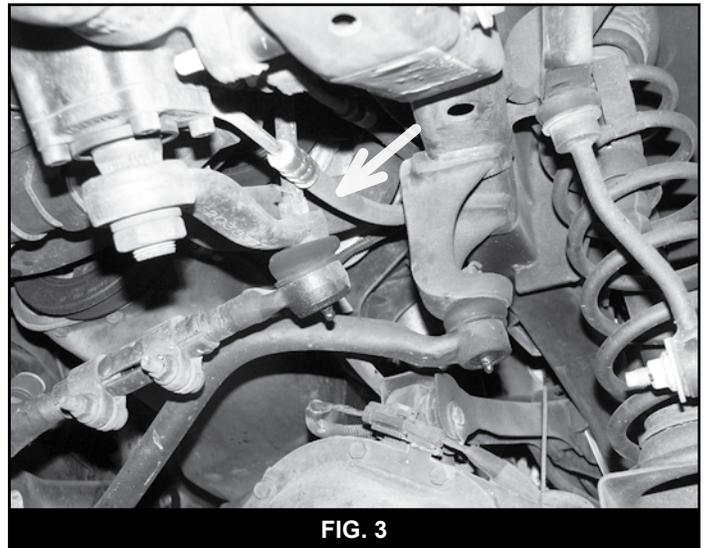


FIG. 3

9. Remove the driver's and passenger's side coil spring retainer clip located on the back side of the axle coil seat. Save clips and bolts.
10. Loosen the driver's and passenger's side lower control arm bolts at the axle. Completely remove the passenger's side bolt and leave the driver's side in place. This should allow the axle to lower enough to remove and install the coil springs.
11. Lower the axle with the hydraulic jack and remove the original coil springs. Take care not to over extend the brake lines.
12. Locate and drill a 5/16" hole in the center of the front coil spring axle mount (Figure 4). Use a provided 3/8" x 1" self-tapping bolt (BP 439) to cut the threads in the hole for the bump stop extension. Remove the bolt and repeat on other side. *Note: It is important to drill the hole*

using a 5/16" bit to allow the 3/8" self-tapping bolt to work properly. Be sure the 3/8" bolt is square to the axle mount when cutting the threads.



13. Place the provided coil spacer on the top of the factory coil spring so that the lip on the spacer fits in the coil spring. Install the spacer and coil on the upper coil mount. Before positioning the coil on the axle mount put the provided bump stop extension inside the coil. Install the coil on the axle mount and rotate the end so it seats properly in the axle mount. Note: The bump stop extension must be placed inside the coil spring before the coil is placed on the axle mount. The bump stop extension will be attached to the axle mount after the coil is in place.
14. Raise the axle until the coils seat in the upper mounts and have a slight amount of pressure on them. Reinstall the driver's and passenger's side coil retainers and torque to 20 ft-lbs.
15. Attach the bump stop extension to the axle mount using the provided 3/8" x 2-1/2" bolt and washer (BP 439) into the hole that was drilled and tapped earlier. Torque bolt to 25 ft-lbs.
16. Reattach the passenger's side lower control arm bolt/nut/washers. Snug the bolt but do not tighten completely. Both lower control arm bolts will be tightened with the weight of the vehicle on the suspension.
17. Install the new shocks with the provided upper bushings/hardware. Leave the upper nut loose.
18. Attach the shock to the axle with the original shock hardware. Torque bolts to 20 ft-lbs. Go back and tighten the upper shock stem nut until the stem bushings begin to swell. Install the thin jam nut on the stem and tighten it against the first nut.
19. Reattach the drag link to the pitman arm with the original castellated nut. Torque the nut to 60 ft-lbs. Align the cotter pin hole with the slots in the nut and install the cotter pin. Never loosen the nut to align the cotter pin, only tighten. If the original cotter pin is damaged, replace it with a new one.
20. Install the wheels and torque the lug nuts to the manu-

facturer's specs. See vehicle owner's manual.

21. Remove the jack stands and lower the vehicle to the ground.
22. Bounce the front of the vehicle to settle the suspension.
23. Attach the sway bar links to the sway bar with the original hardware/bushings. Tighten nuts until the bushings begin to swell.
24. Reconnect the front track bar to the axle mount with the original hardware. Torque bolt to 50 ft-lbs. Note: To aid in aligning the track bar hole have an assistant turn the steering wheel to shift the trackbar in the correct direction.
25. Torque the lower control arm bolts to 85 ft-lbs.
26. Check all hardware for proper torque.

REAR INSTALLATION

1. Block the front wheels for safety.
2. Raise the rear of the vehicle with a hydraulic jack and support with jack stands at the frame rails just ahead of the leaf spring hanger.
3. Remove the wheels.
4. Support the rear axle with a hydraulic jack. Remove the shocks. Save all shock hardware. Note: The upper factory shock bolts are prone to corrosion. Take care removing the bolts, they can break easily.

Complete the following one side at a time, starting with the passenger's side.

5. With the rear axle well supported with a hydraulic jack, remove the leaf spring u-bolts. The sway bar link bracket will be free with the removal of the outer u-bolt.
6. Lower the axle from the spring. Note: Slightly loosening the driver's side u-bolts will allow the axle to lower from the spring with less restriction.
7. Remove the factory bend-over style leaf spring clamps. These will not be reused.
8. Place C-clamps on each side of the leaf spring center pin to hold the leaf pack together. Remove the leaf spring center pin and then release the C-clamps. This will allow the leaf pack to come apart. Take note each leaf's position and orientation (front to rear).
9. Place the provided new leaf in between the 2nd and 3rd leaf in the factory leaf pack. The leaf lengths get shorter as they go from the top leaf in a pyramid shape (Figure 5). Using the C-clamps on each side of the center pin hole, compress the leaves together while aligning the new center pin through all of leaf center pin holes (from the bottom up). With the pack completely compressed together with the clamps, fasten the center pin with the provided nut. Torque nut to 20 ft-lbs. Cut off any access center pin. Do not use the center pin to compress the pack together.



FIG. 5

10. Remove the C-clamps from the leaf pack and ensure the individual leafs are all inline with each other. Install the provided bend-over style clamps on the leaf pack (Figure 6). Install one clamp on each side of the center pin about 12" from the center pin. Bend the ends of the clamps over to secure them to the spring.



FIG. 6

16. Bounce the rear of the vehicle to settle the suspension. Torque the u-bolts to 75-90 ft-lbs.

POST-INSTALLATION

1. A complete front end alignment is required.
3. Perform head light check and adjustment.
4. Re-torque all fasteners after 500 miles. Always inspect fasteners and components during routine servicing.

11. Raise the axle to the leaf spring, aligning the center pin with the center pin hole in the axle. Fasten with the provided u-bolts, nuts and washers. Snug u-bolts but do not tighten completely. U-bolt torque will be set with the weight of the vehicle on the suspension. Note: Make sure to reattach the sway bar end bracket to the outer u-bolt.
12. Repeat procedure on the driver's side. Note: Take care not to overextend the rear brake line. It may be necessary to remove the brake line retaining clip and free the line from the bracket at the frame to provide more slack.
13. With both sides complete, install the new shocks with the factory hardware. Torque the upper hardware to 25 ft-lbs and the lower nut to 50 ft-lbs.
14. If the rear bracket line was removed from the frame bracket, reattach it with the factory retaining clip.
15. Install the wheels and lower the vehicle to the ground.

Add-A-Leaf

Installation Instructions

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

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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

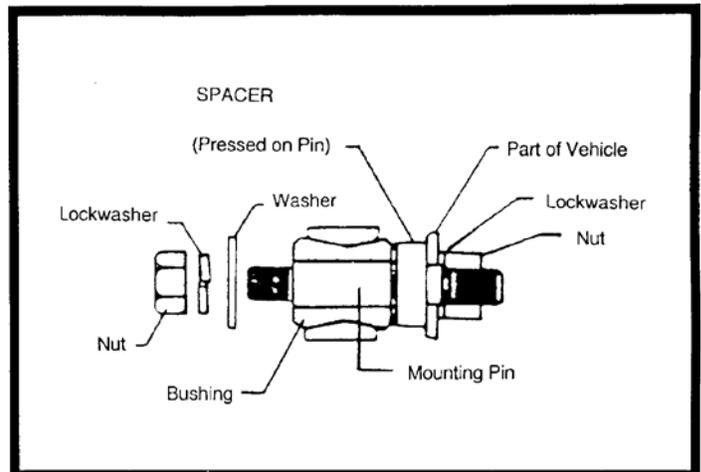
BDS Suspension Co. warrants to the original retail purchaser that its shock and stabilizer cylinders are free from defects in material and workmanship for so long as they own the vehicle. Excluded from this warranty are the finish of the product and mounting bushings. Defects in material and workmanship 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.

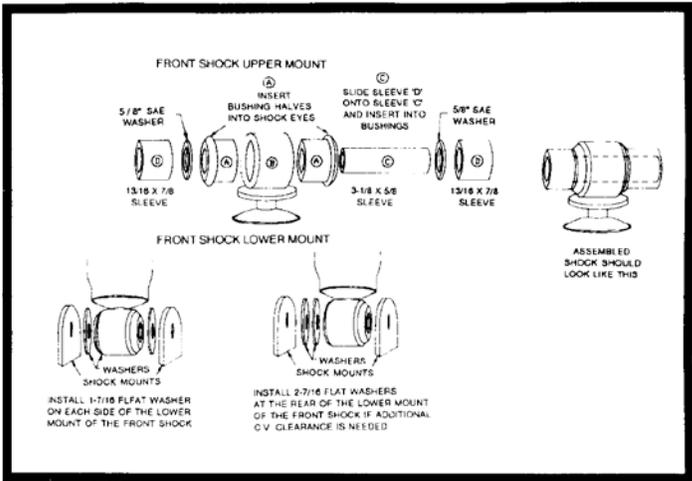
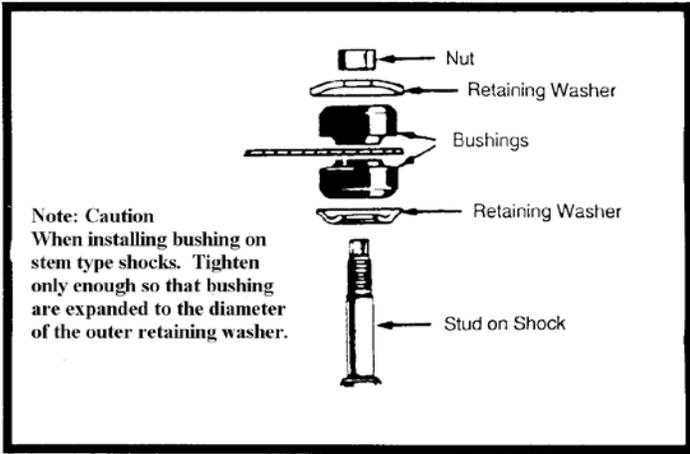
INSTALLATION INSTRUCTIONS

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.

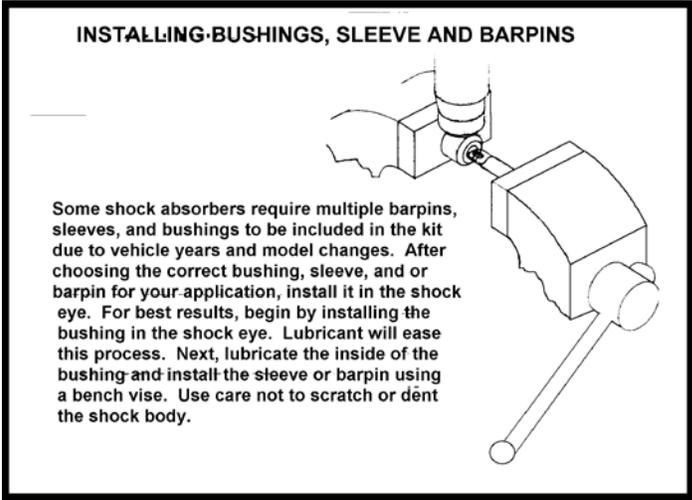
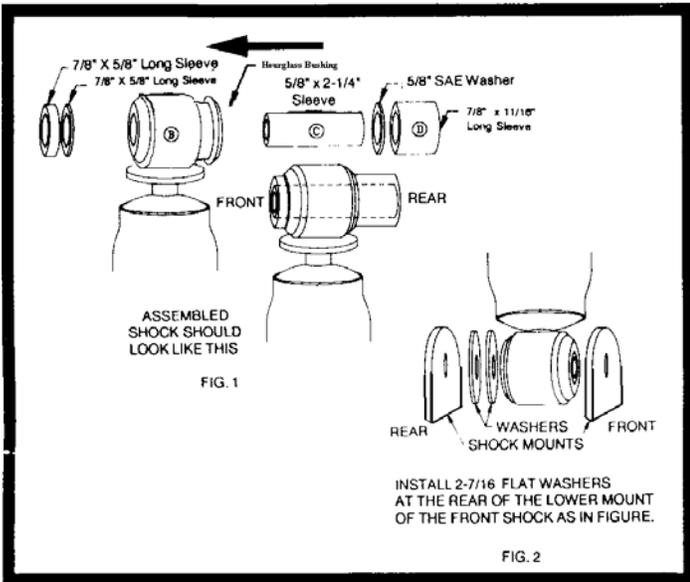
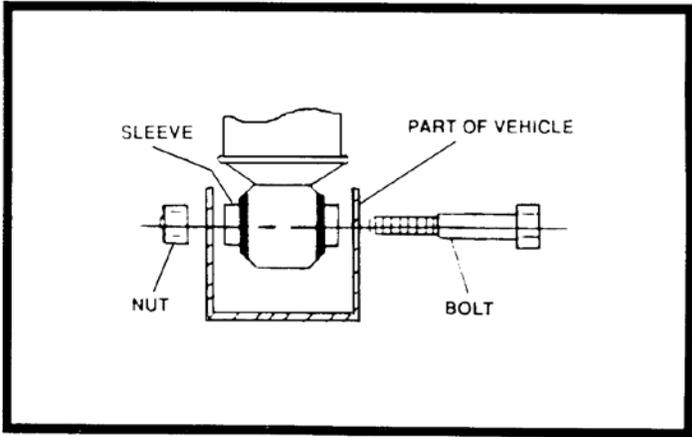
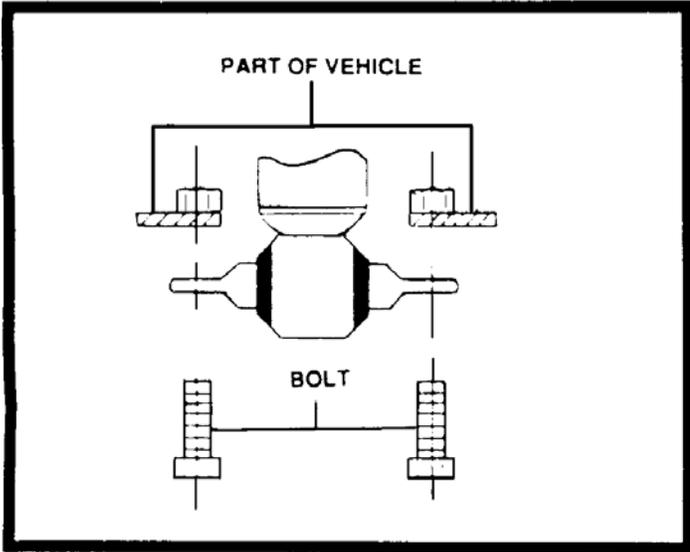
3. If installing dust boot, do so at this time. **Note: The use of a lubricant like dish soap on the inside of the boot will ease installation.** Make sure the washer at the top of the shock is fully seated in the boot all the way around. Secure the bottom of the boot to the cylinder with a plastic tie 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.



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