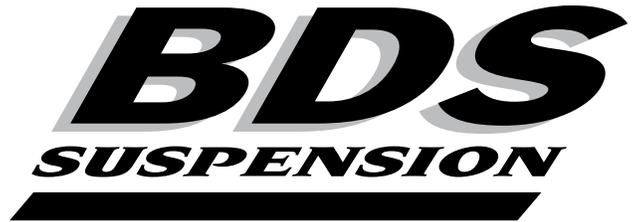


#013101, 013201

2005 Ford Super Duty 4wd

Front Spacer Kit



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.

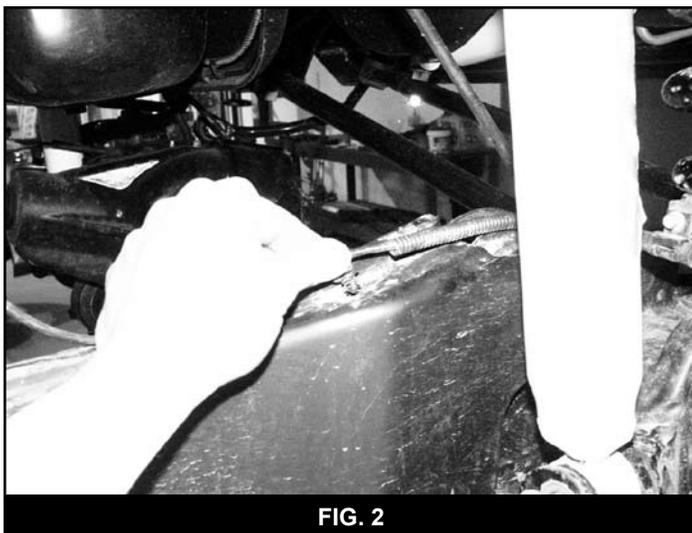
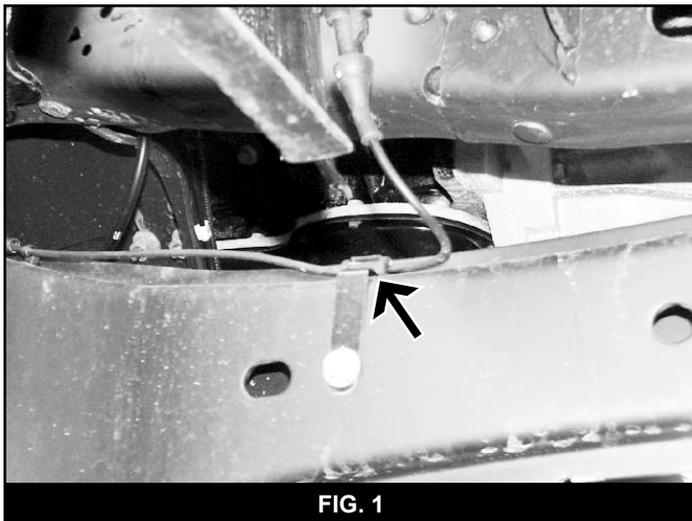
POST-INSTALLATION WARNINGS

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.

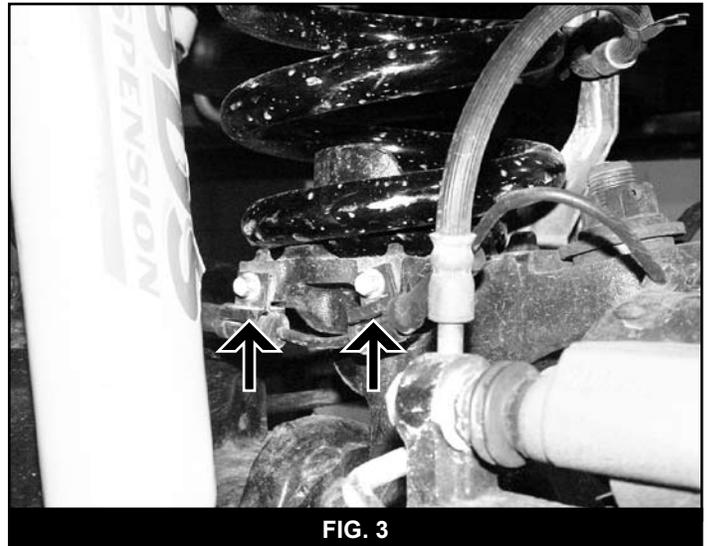
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INSTALLATION INSTRUCTIONS

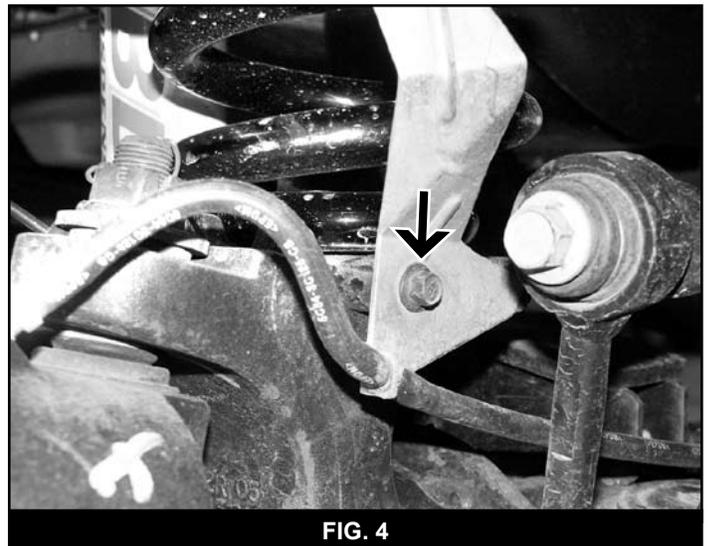
1. Park the vehicle on a clean, flat surface and block the rear wheels for safety.
2. Disconnect the front track bar from the frame mount.
3. Raise the front of the vehicle and support under the frame rails with jack stands. **Note:** As a result of the location of the long radius arm suspension, support 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. With the axle supported this installation can be performed on both sides at the same time, but is not necessary.
6. Disconnect the sway bar links from the axle mounts. Retain hardware.
7. Remove the OE shock. Retain lower mounting hardware.
8. Remove the ABS line from the metal retaining tab on the radius arm (Fig 1). Pull the plastic retaining clip free from the radius arm (Fig 2).



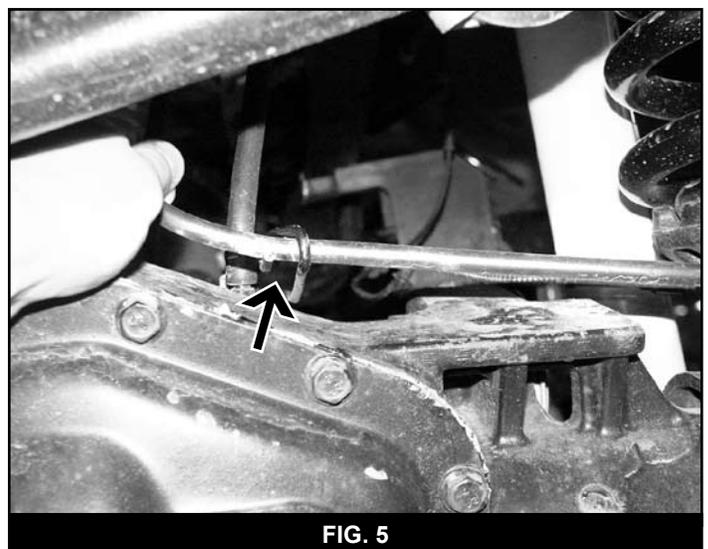
9. Remove the two bolts mounting the plastic ABS wire clips to the back side of the coil perch (Fig 3). Retain hardware.



10. Disconnect the brake line bracket from the front of the coil perch (Fig 4). Retain hardware.



11. Free the hub vacuum line from the axle (Fig 5, 6).



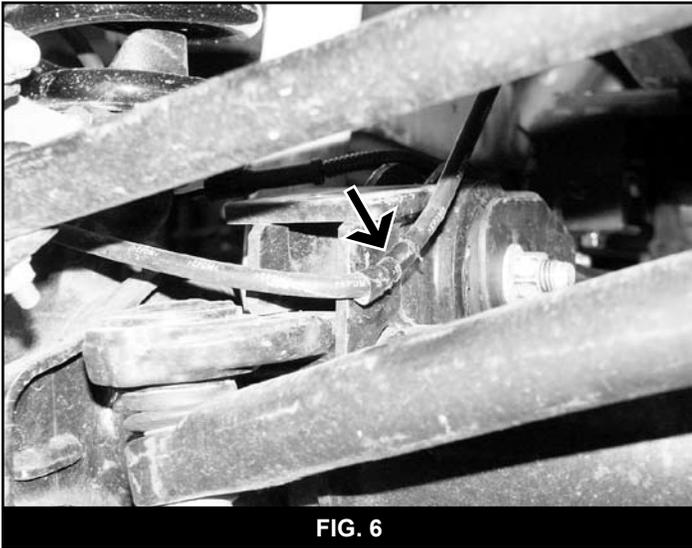


FIG. 6

12. Lower the axle until the spring is free and remove the spring from the vehicle. Note: Do not over extend the brake lines.
13. Remove the bolt mounting the coil perch to the axle and remove the perch from the vehicle.
14. Apply thread locker to the supplied 14mm bolt. Install the OE coil perch in conjunction with the new spacer (Fig 7) on the axle. The chamfer in the block goes toward the outside and the upper tabs nest in the recesses in the coil perch. Fasten the assembly with the 14mm x 100mm bolt (14mm x 80mm for #013101) and 9/16" SAE flat washer. Torque hardware to 95 ft-lbs. Note: The coil perch is labeled "FRT" for the front side.

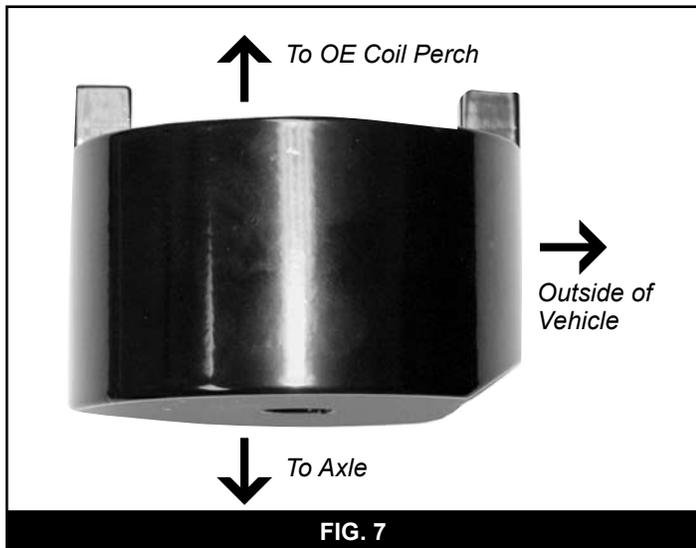


FIG. 7

15. Reinstall the OE coil and index it correctly in the coil perch.
16. Install the new BDS shocks with the OE lower hardware and provided upper hardware. Torque the lower bolt to 50 ft-lbs and tighten the upper hardware until the bushings begin to swell.
17. Reattach all brake, ABS and vacuum lines to the original locations with the OE mounting hardware.
18. Reattach the sway bar links to the axle with the OE hardware and tighten securely.

Alignment Cam Installation (Required for 2", Optional for 1")

19. Remove the cotter pin from the upper ball joint.

20. Loosen the upper ball joint stud until the nut is level with the top of the stud. Strike the axle "ear" near the upper ball joint to release the ball joint to sleeve taper. **Note:** *The top of the stud can also be struck using a soft blow hammer to aid in loosening the taper. Take care not to damage the stud/nut threads.*
21. Remove the OE ball joint sleeve from the axle using the appropriate removal tool (SPC #41550 or equivalent).
22. Install the new sleeve with the arrow on the top of the sleeve pointing toward the front of the vehicle. Using the old sleeve, pound down on the new sleeve to seat it on the ball joint taper. Make sure that the flat of the sleeve is flush with the flat of the axle.
23. Install and torque the OE ball joint nut to 120 ft-lbs. Install the cotter pin. Note: Do not loosen the nut to install the cotter pin.
24. Install the wheels and lower the vehicle to the ground.
25. If the track bar was disconnected, reattach it now with the OE hardware. Turn the steering wheels to aid in aligning the track bar in the bracket. Torque hardware to 406 ft-lbs.
26. Check all hardware for proper torque.
27. Adjust steering wheel.
28. Check hardware 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

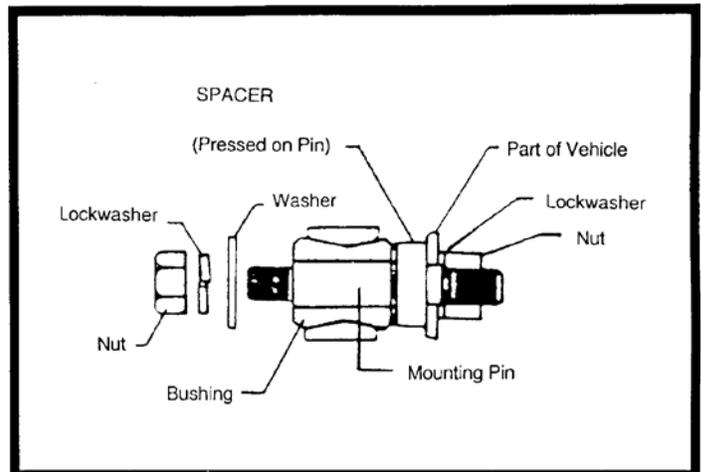
BDS Suspension Co. warrants to the original retail purchaser that its shock and stabilizer cylinders are free from defects in material and workmanship for so long as they own the vehicle. Excluded from this warranty are the finish of the product and mounting bushings. Defects in material and workmanship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

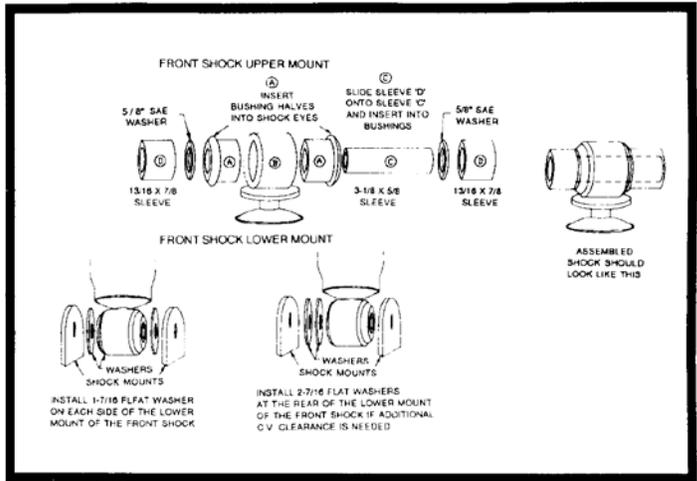
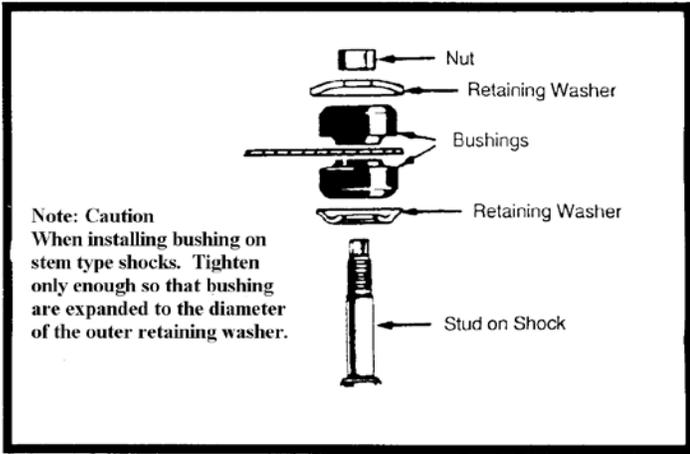
INSTALLATION INSTRUCTIONS

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.

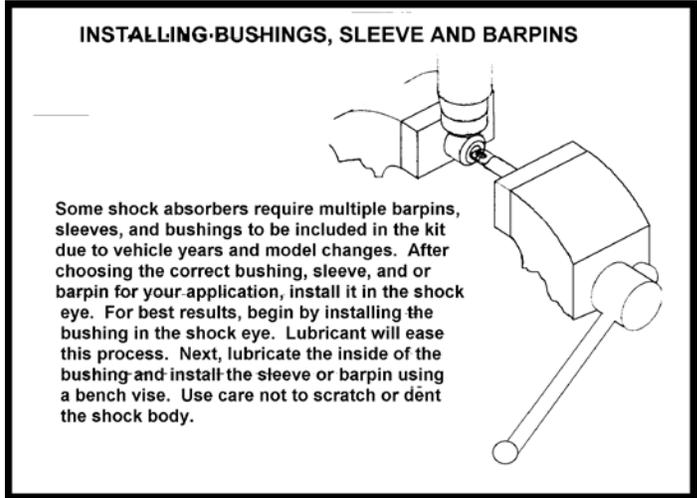
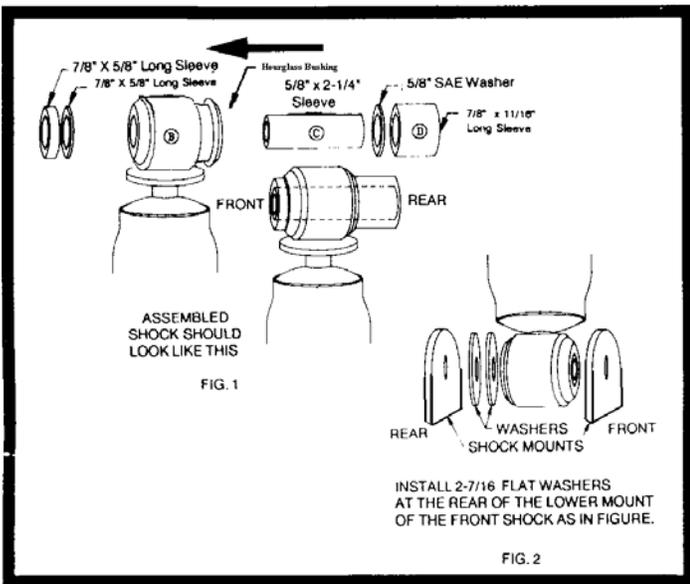
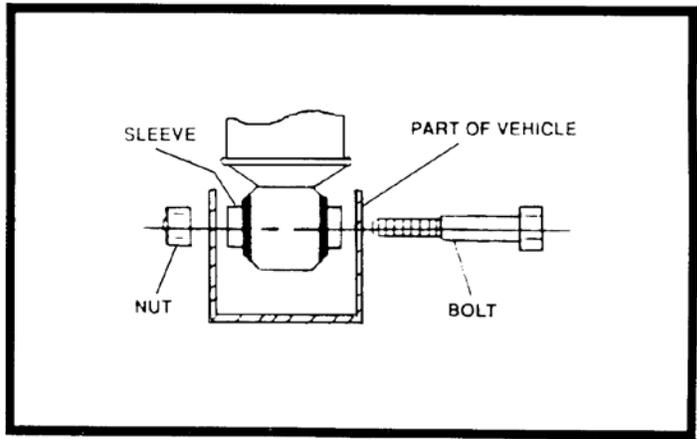
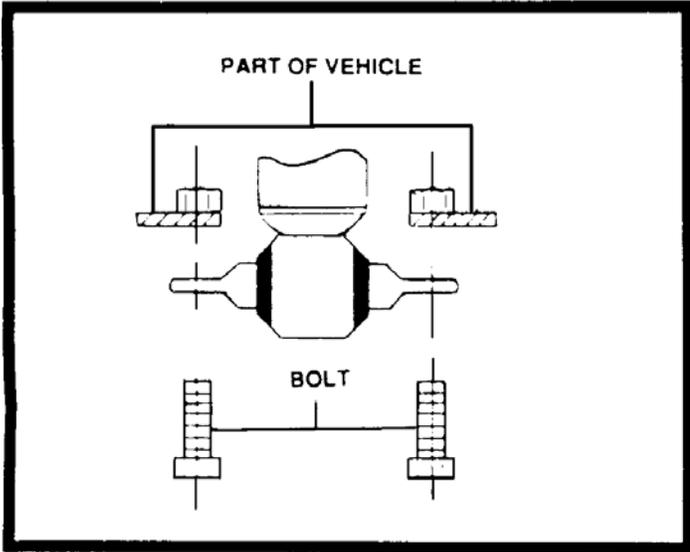
3. If installing dust boot, do so at this time. **Note: The use of a lubricant like dish soap on the inside of the boot will ease installation.** Make sure the washer at the top of the shock is fully seated in the boot all the way around. Secure the bottom of the boot to the cylinder with a plastic tie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