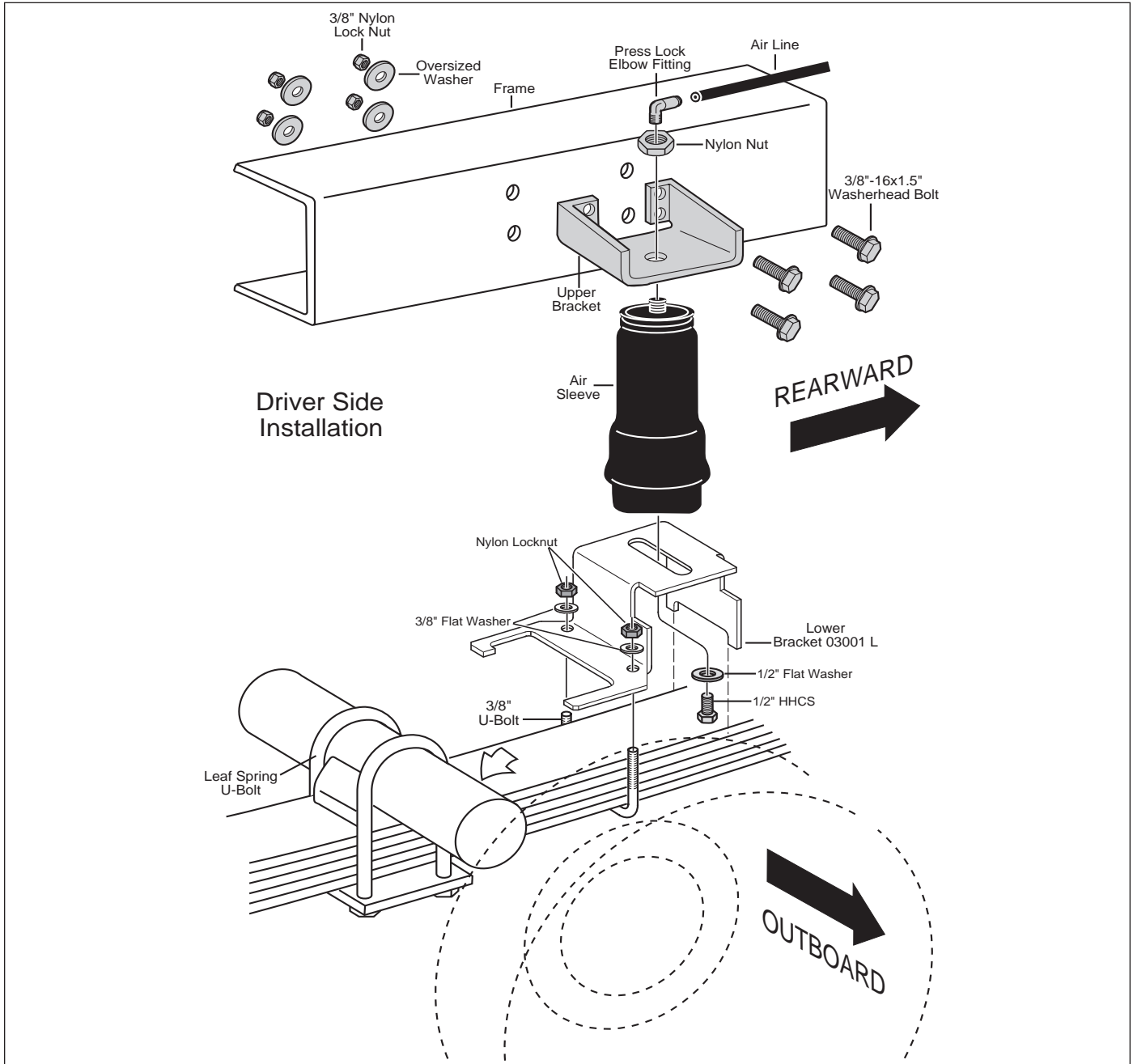


**Please read these instructions completely before proceeding with the installation.**



**Figure 1**

**WARNING:** Do not inflate the assembly when it is unrestricted. The assembly must be restricted by suspension or other adequate structure. Do not inflate beyond 100 p.s.i. Improper use or over inflation may cause the assembly to burst, causing property damage or severe personal injury.

**IMPORTANT:** Your vehicle may be equipped with a rear brake proportioning valve. Any type of load assist suspension product could affect brake performance. We recommend that you check with your dealer before installing this type of product. If your vehicle does not have a proportioning valve or is equipped with an anti-lock brake system, no adjustment or modification is required.

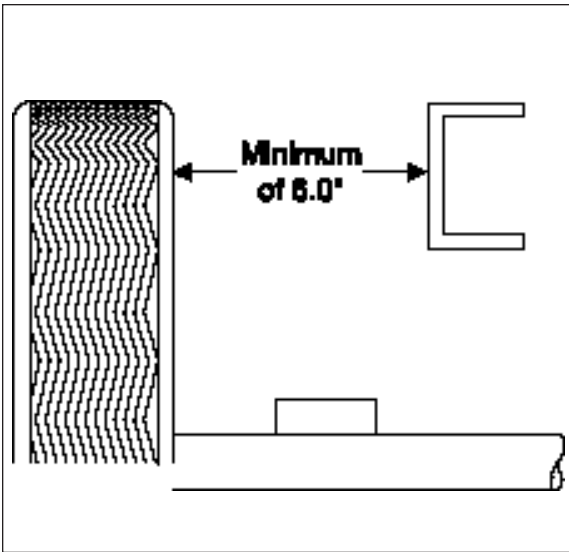


Figure 2

**IMPORTANT:** This kit requires a minimum clearance of 6.0" between the tire and frame (Figure 2).

### I. GETTING STARTED

1. Determine the Normal Ride Height. The Normal Ride Height (no load) is the distance between the bottom edge of the wheel-well and the center of the hub with the vehicle in the *ias delivered* condition. In some cases, Normal Ride Height is not perfectly level.
  - a. Remove unusual loads and examine your vehicle from the side to ensure it is on a level surface.
  - b. If necessary (in cases where your leaf springs are sagging badly), use a jack to raise the rear end so that the vehicle achieves the original *ias delivered* ride height.
2. Measure the distance between the center of the hub and the bottom edge of the wheel well. This is the Normal Ride Height.
3. Jack up rear of vehicle or raise on hoist and remove rear wheels. Raise axle or lower frame until the leaf spring is at normal ride height (no load).

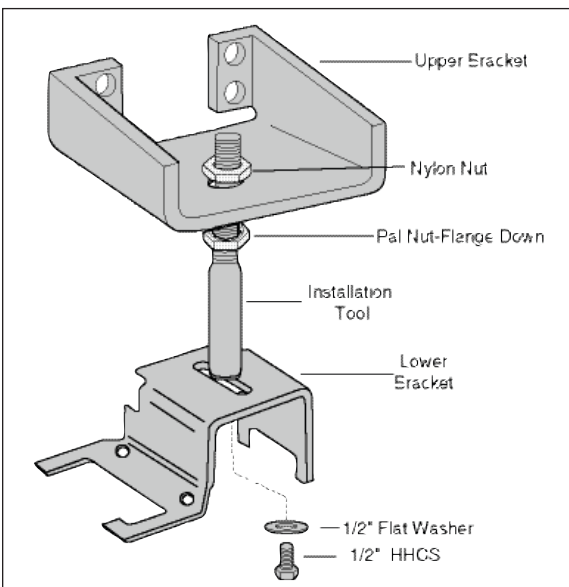


Figure 3

### II. ASSEMBLING THE INSTALLATION TOOL

1. The installation tool is designed to assist in properly installing the kit for correct height and alignment. The range of adjustment to attain the correct mounted height is determined by the upper threaded section of the tool. The kit may be mounted anywhere in that range.
2. Place the upper bracket (legs up) onto the threaded end of the tool resting on the bottom Pal nut. Then thread a nylon nut onto the tool to hold the bracket in place (Figure 3).
3. Use the 1/2" x 7/8" hex head bolt and flat washer to attach the lower bracket to the bottom of the installation tool. Part #03001 is the driver-side bracket. Part #03002 is the passenger-side bracket. Leave loose enough to adjust in and out (Figure 3).

### III. INSTALLING THE ASSEMBLY

**IMPORTANT:** Sleeve diameter grows to 4.6" maximum at high pressure. Take this diameter into consideration when checking for possible interference in the mounting area. It is necessary to have sufficient clearance around the sleeve when it is inflated.

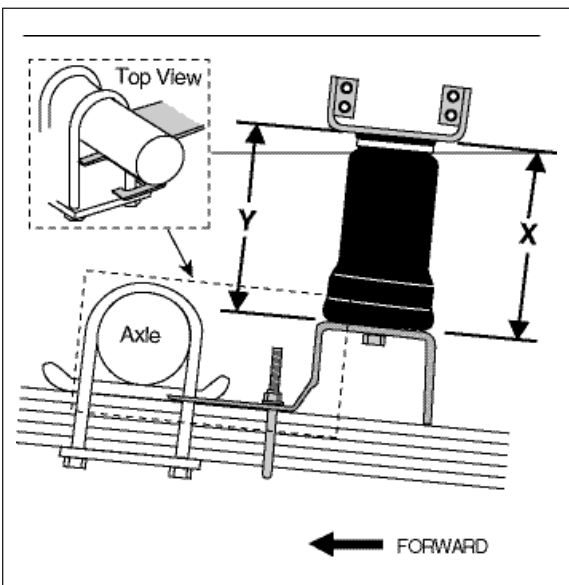


Figure 4

1. Set the preassembled bracket/tool assembly on the leaf spring behind the axle. Hook the C-shaped end of the lower bracket around the axle U-bolt, and secure the lower bracket to the leaf spring with the provided U-bolt, flat washers, and lock nuts (Figure 4). Torque to 16 ft-lbs.

**NOTE:** If the brake lines hit the bracket, gently pull the brakeline away from the bracket. Gently bend the line to prevent it from coming in contact with the lower bracket.

2. Using the slot in the lower bracket, push the upper bracket against the frame rail. Use the nuts on the threaded portion of the installation tool to adjust the upper bracket so that the flanges of the upper bracket are flat against the frame rail and four mounting holes are on the flat middle section of the frame rail. The mounting holes must be at least 3/4" from the rounded edges of the frame rail. The brackets can be mounted anywhere within the threaded range of the installation tool (Figure 1).
3. Using the bracket as a template, mark four holes on each side of the bracket to be drilled. The X and Y dimensions (Figure 4) should be

equal. The sleeve should be mounted so that it follows the natural arc of the suspension through its full travel (Figure 1 & 4). Remove the upper bracket and installation tool and drill the four  $\frac{3}{8}$ " holes.

**CAUTION: Do not drill holes into the frame until all hydraulic lines, gas lines, and electrical wires have been moved aside on both sides of the frame rail.**

4. Assemble upper bracket onto the sleeve and tighten the nylon nut to 4 ft-lbs. Install the air fitting (this fitting is pre-coated with thread sealant) finger tight plus  $1\frac{1}{2}$  turns. Use an open end wrench being careful to tighten on the metal hex nut only. **Do not overtighten.**
5. Orient the fitting so that it faces in the direction of the intended air line route. Install the upper bracket onto the frame rail using the  $\frac{3}{8}$ " washer head frame bolts, large flat washers, and nylon locknuts provided in the kit. Tighten 20 ft-lbs. (Figure 1).
6. Attach the sleeve onto the lower bracket using the  $\frac{1}{2}$ " bolt previously used on the tool. Leave loose for adjustment.

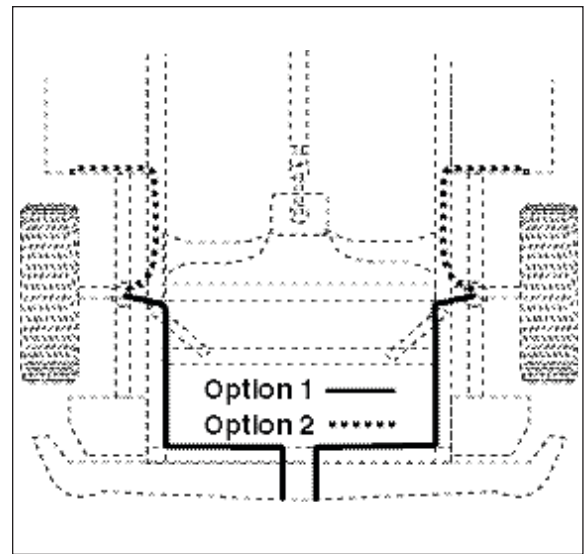


Figure 5

#### IV. INSTALLING THE AIR LINES

1. Select a location for the inflation valves in the rear bumper area or rocker panel flange insuring that each valve will be protected and accessible with an air hose (Figure 5).
2. Use a standard tube cutter, a razor blade, or very sharp knife to cut the air line in two equal lengths. A clean square cut will ensure against leaks. Drill  $\frac{5}{16}$ " hole for inflation valve and mount as illustrated. The rubber washer on outside is for weather seal (Figure 6).

**CAUTION: Leave sufficient air line slack to prevent any strain on the valve stem during normal axle motions.**

3. Route air line along frame to desired inflation valve location (Figure 5). Attach air line to chassis with the provided plastic straps.

**CAUTION: Keep the air line at least 12" from the exhaust system to prevent it from melting.**

4. Cut off excess air line squarely and install the air line into the fitting. This is a self locking fitting. Push and slightly turn the cut end of the air line into the fitting as far as it will go. A definite click can be heard/felt when the air line is seated. The air line is now installed. Air line should go in approximately  $\frac{9}{16}$ ".

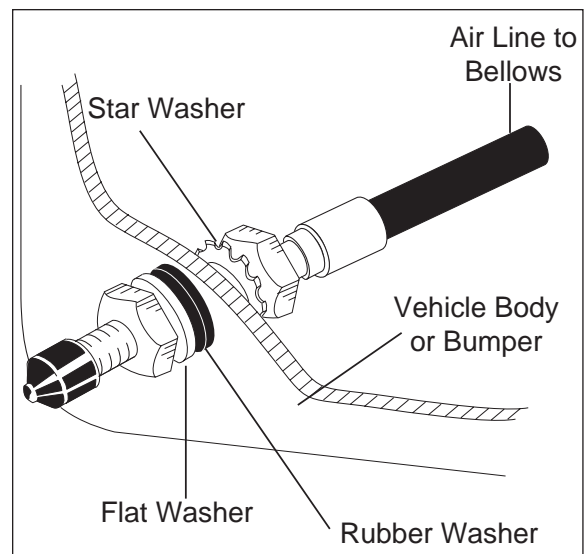


Figure 6

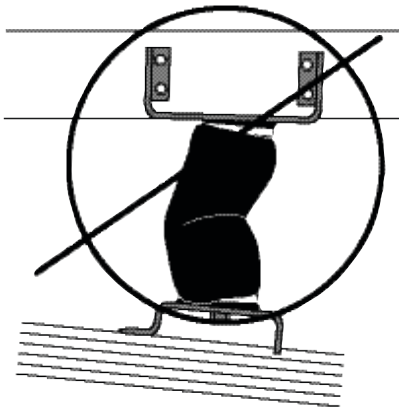
#### V. FINISHING THE INSTALLATION

1. Repeat entire installation process for the remaining side and return to section V, step 2.
2. VERY IMPORTANT: With the bottom still loose, inflate the sleeve to approximately 10 p.s.i. By using the slotted adjustments, align the sleeve so that there is a symmetrical cushion of air around the lower base of the sleeve to prevent side load wear. Tighten the lower sleeve mounting bolt to 10 ft-lbs. Do not overtighten.

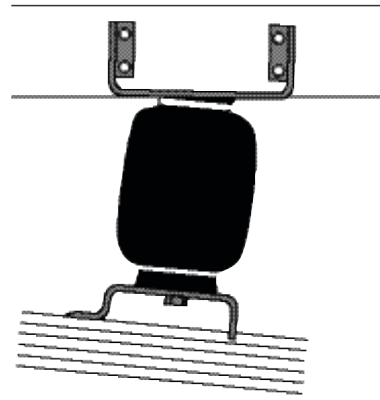
#### VI. CHECKING THE AIR SPRINGS

1. Inflate to 30 p.s.i. Check all fittings and valve core with a soapy water solution for leaks. Check again to be sure that there is proper clearance around the sleeve. When the sleeve is inflated there must be sufficient clearance all around the sleeve.
2. Recheck air pressure after 24 hours. A 2-4 p.s.i. loss after initial installation is normal. If pressure has dropped more than 5 lbs. re-test for leaks with soapy water solution. Please read and follow the Maintenance and Operating tips. (Check to see that the sleeve rolls back down over the bottom piston after the vehicle is lowered.)

FINISHED INSTALLATION



Incorrect: Misaligned or under inflated. Only OK during installation.



Correct: Sleeve is fully inflated and also properly aligned.

VII. MAINTENANCE AND OPERATIONS

Minimum Air Pressure	Maximum Air Pressure
5 p.s.i.	100 p.s.i.
<b><i>Failure to maintain correct minimum pressure (or pressure proportional to load), bottoming out, over-extension, or rubbing against another component will void the warranty.</i></b>	

By following these steps, vehicle owners will obtain the longest life and best results from their air springs.

1. Check the air pressure weekly.
2. Always maintain Normal Ride Height. Never inflate beyond 100 p.s.i.
3. If you develop an air leak in the system, use a soapy water solution to check all air line connections and the inflation valve core before deflating and removing the air spring.
4. When increasing load, always adjust the air pressure to maintain the Normal Ride Height. Increase or decrease pressure from the system as necessary to attain Normal Ride Height for optimal ride and handling. Remember that loads carried behind the axle (including tongue loads) require more leveling force (pressure) than those carried directly over the axle.
5. **IMPORTANT:** For your safety and to prevent possible damage to your vehicle, **do not exceed maximum Gross Vehicle Weight Rating (GVWR), as indicated by the vehicle manufacturer.** Although your air springs are rated at a maximum inflation pressure of 100 p.s.i. The air pressure actually needed is dependant on your load and GVWR, which may be less than 100 p.s.i. Check your vehicle owners manual and do not exceed the maximum load listed for your vehicle.
6. Always add air to springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.
7. **Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure (5 p.s.i.) to reduce the tension on the suspension/brake components. Use of on-board leveling systems do not require deflation or disconnection.**



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