

P/N 57219

Please read these instructions completely before proceeding with the installation.

KIT PARTS LIST

Item	Description	Quantity
A	Air Springs	2
B	Upper Bracket	2
C	Lower Bracket	2
D	Roll Plate	4
E	Elbow Fitting	2
F	3/8"-24 x 7/8" Bolt	8
G	3/8" Lock Washer	8
H	3/8" Flat Washer	20
I	J-Strap	4
J	3/8"-16 x 3.5" Carriage Bolt	4
K	3/8"-16 x 1.5" Carriage Bolt	8
L	3/8"-16 x 1.5" W. H. Bolt	4
M	3/8" Nylock Nut	12
N	3/8" Whiz Nut	4
O	Thermal Sleeve	2
P	Heat Shield	2
Q	Heat Shield Clamp	4
AA	Air Line Assembly*	1
BB	Tie Strap*	6
CC	Valve Caps*	2
DD	5/16" Flat Washer*	2
EE	Rubber Washer*	2
FF	5/16" Star Washer*	2
GG	5/16" Hex Nut	4

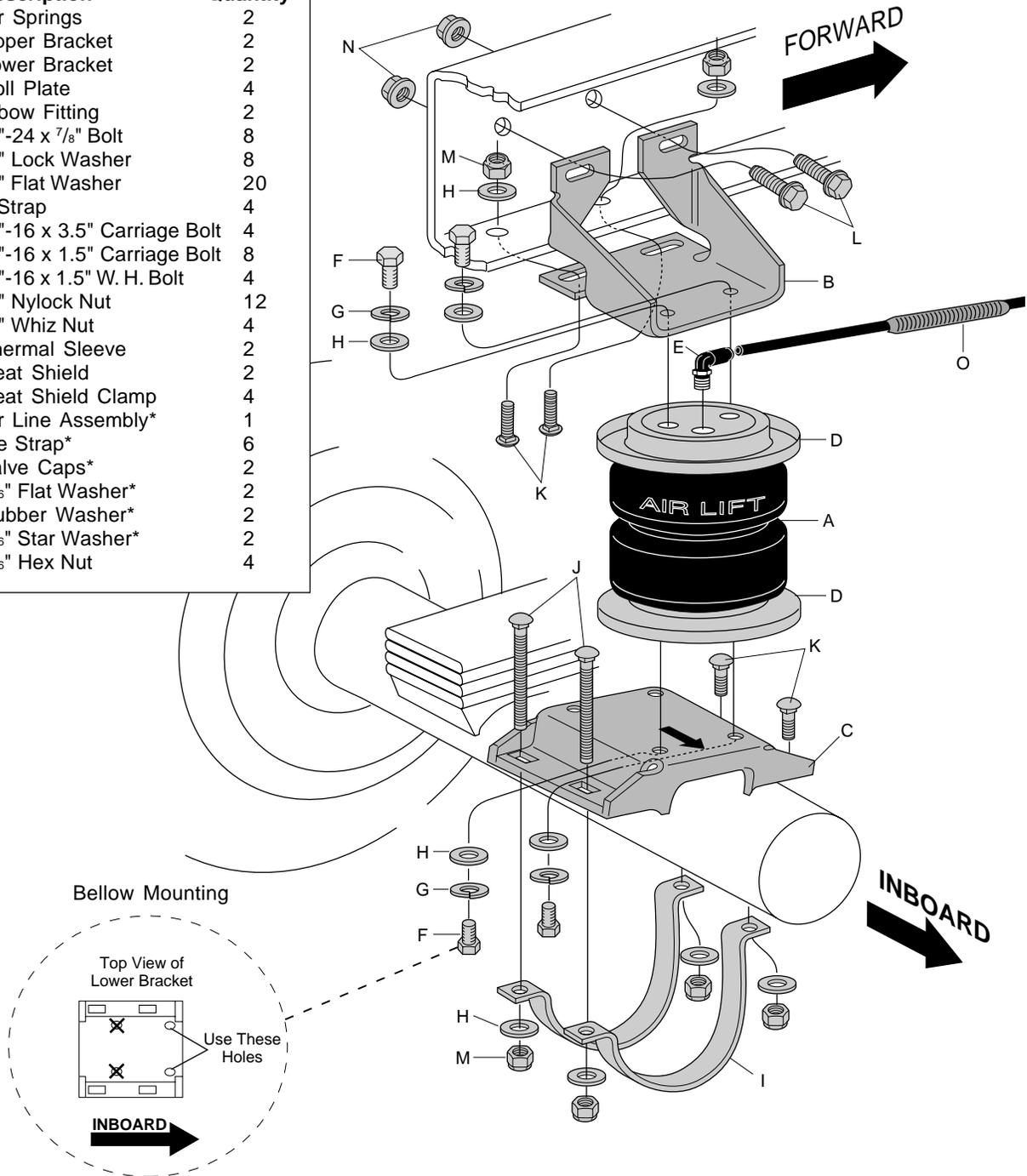


Figure 1

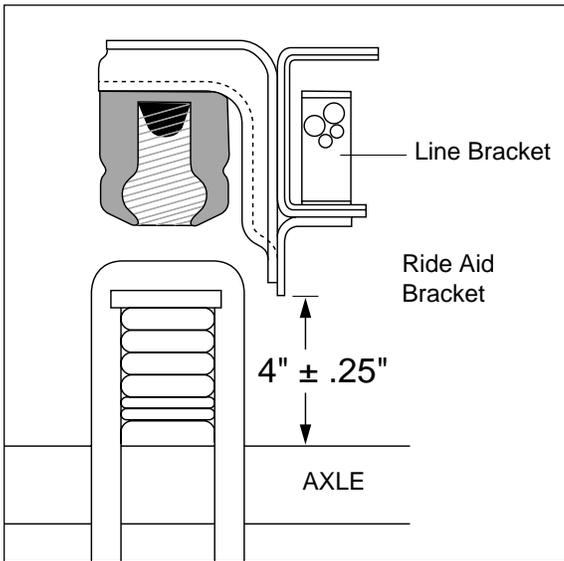


Figure 2

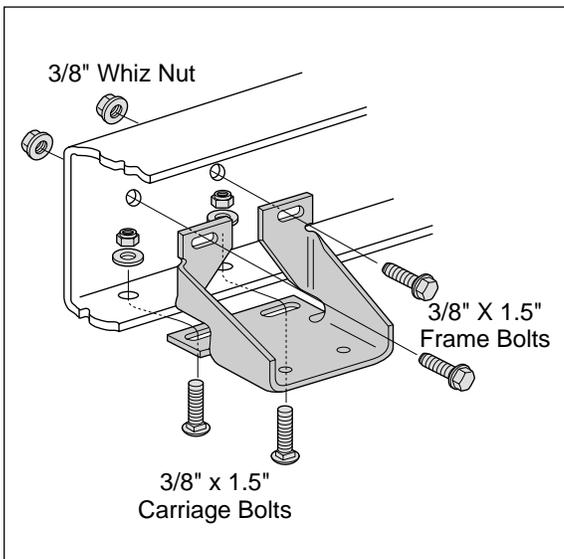


Figure 3

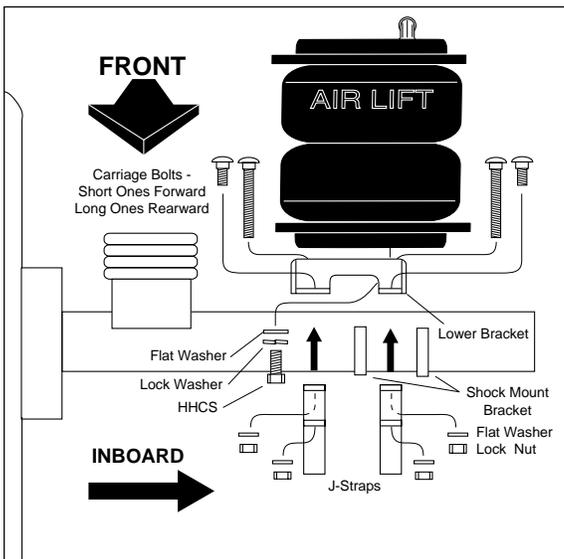


Figure 4

## I. ASSEMBLING THE AIR SPRINGS

1. Jack up rear of vehicle or raise on hoist. Place safety jack stands under axle and adjust so that the axle to ride aid bracket distance is  $4" \pm .25"$ . See Figure 2. This distance will place the vehicle at normal ride height.

Normal Ride Height is the distance between the bottom edge of the wheel well to the center point of the hub with the vehicle in an "as delivered condition" (without a load, i.e. tool box, camper, etc.). Measurements should be taken before beginning the installation. The distance from the bottom edge of the wheel well to the center point of the hub should be recorded. This kit is designed to be installed and operated at normal ride height.

2. Install the roll plates (D) to the top and bottom of the bellow (A).
3. In the forward holes on the lower bracket, insert two  $\frac{3}{8}" \times 1.5"$  carriage bolts (K). In the rearward holes on the lower bracket, insert two  $\frac{3}{8}" \times 3.5"$  carriage bolts (J). NOTE: Be sure the rounded head of the carriage bolts faces the bellow (Figure 1).
4. Attach the lower bracket (C) to the bottom of bellows using two  $\frac{3}{8}" \times \frac{7}{8}"$  bolts (F), two  $\frac{3}{8}"$  lock washers (G), and two  $\frac{3}{8}"$  flat washers (H). See Figures 1 & 4.
5. Install the swivel elbow fitting on the top side of bellows. Tighten finger tight plus  $1 \frac{1}{2}$  turns. Use a  $\frac{7}{16}"$  open end wrench being careful to tighten on the metal hex nut only. Do not over tighten. This fitting is precoated with thread sealant.
6. Attach the upper bracket (B) to the top of the bellows with two  $\frac{3}{8}" \times \frac{7}{8}"$  bolts (F), two  $\frac{3}{8}"$  lock washers (G), and two  $\frac{3}{8}"$  flat washers (H). See Figure 1.

## II. ATTACHING THE ASSEMBLY

1. Remove and discard the two nuts and bolts holding the line bracket on the bottom of the flange.
2. This upper bracket is designed to fit BEHIND any and all lines that run along the inside of the frame rail. After removing and discarding the bolts and nuts holding the line bracket to the flange, gently pull the lines out just far enough to slide the upper mounting bracket up behind them, flat to the rail.
3. Loosely attach upper bracket to the frame rail by using the  $\frac{3}{8}" \times 1.5"$  washerhead frame bolts (L) and whiz nuts (N) through the side of the rail and the two  $\frac{3}{8}" \times 1.5"$  carriage bolts (K) through the flange (Figure 3).
4. Secure the lower bracket with the two J-straps (I) and corresponding nuts, bolts, and washers (Figures 1 & 4).
5. On the shock absorber side of the lower bracket, the J-strap will fit between the installed shock and the axle housing. It is not necessary to remove the shock absorber. Loosely assemble the lower straps. Use the short carriage bolts on the shock side (Figure 4).

6. The upper bracket is slotted for adjustment. Inspect the assembly and make sure the bellows is mounted straight up and down, the lower bracket is centered, and the fasteners are in the proper positions.
7. Now tighten all nuts to the carriage bolts. Torque setting for all fasteners is 15 to 20 ft-lbs. Do not over tighten
8. Repeat procedures 2 through 11 for other side.
9. **IMPORTANT:** Installation of this kit requires two exhaust heat shields (Figure 5). The shields (P) are attached with the stainless steel clamps (Q) to the exhaust pipe, with the flanges being bent inward. Shields may be trimmed or bent to attain component clearance. Bend tabs to provide  $\frac{1}{2}$ " dead air space between exhaust pipes and heat shield and maximum clearance with bellows.

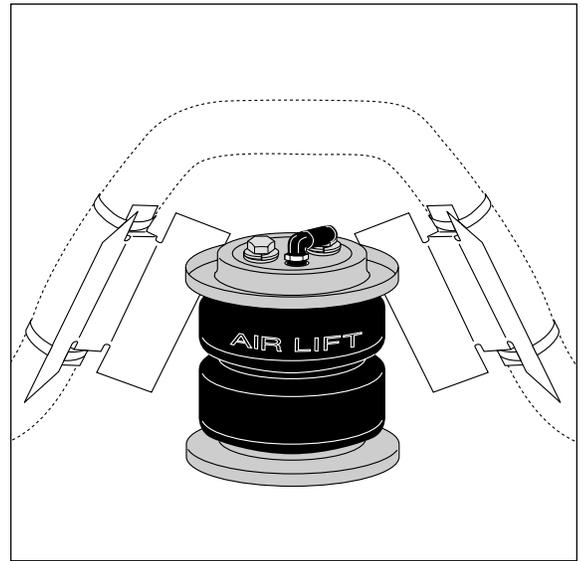


Figure 5

### III. INSTALLING THE AIR LINE

1. Select locations on the vehicle for the air inflation valve (Figure 6). The location chosen should provide protection so the valve will not be damaged but be accessible for the air inflation chuck. Recommended location is in the wheel well or lower body ahead of rear wheel. One on each side provides ease of filling, checking and measuring body height to compensate for side to side lean and front to rear sag. Install inflation pressure decal near the inflation valve.
2. Measure from selected location inboard along frame rail. Measure this same distance from each pre-installed inflation valve on the air line and cut air line off squarely. Use a standard tube cutter, a razor blade, or very sharp knife to cut the air line. A clean square cut will ensure against leaks.
3. Slide a thermal sleeve (O) onto air line (AA) from the cut end on the tail pipe side.
4. Push the air line into the swivel elbow fitting as far as it will go. A definite "click" (approximately  $\frac{9}{16}$ " ) can be heard/felt. This is a self locking fitting and the air line is now installed.
5. Slide the thermal sleeve down to the air fitting.
6. Route the air line from the bellows to the pre-determined inflation valve location. Insure that it is protected from the direct heat of the exhaust system and kept away from sharp edges. Caution should be taken not to kink or bend the air line. Secure along frame with the nylon ties supplied with this kit (Figure 6).
7. Drill two  $\frac{5}{16}$ " holes, and install inflation valves, nuts, and washers as shown in Figure 7.

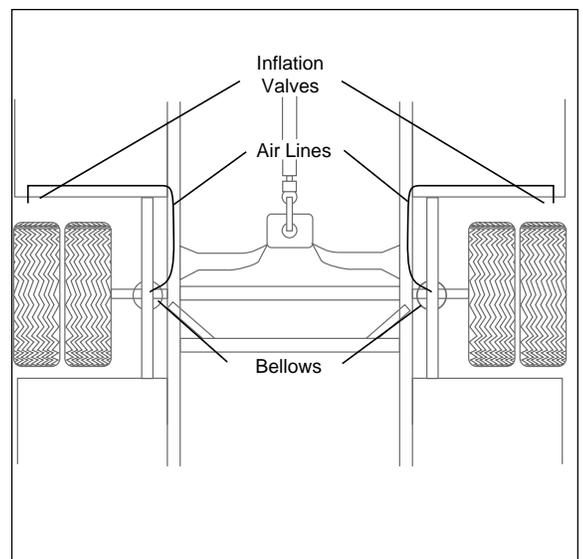


Figure 6

### IV. CHECKING FOR LEAKS

1. Inflate the bellows and check the fittings for air leaks with a solution of soap and water.
2. Raise vehicle and remove safety jack stands. Lower vehicle to ground.

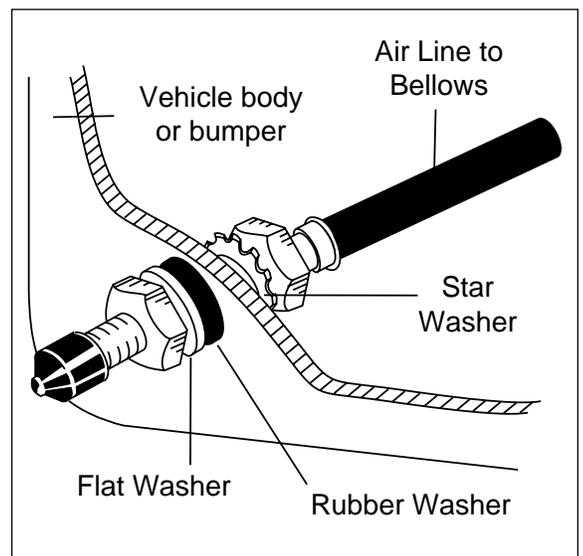


Figure 7

3. This now completes the installation. Before proceeding, check once again to be sure you have proper clearance around the bellows. With a load on the vehicle and the helper springs inflated, there must be at least 1/2" clearance all around the bellows.
4. Recheck air pressure after 24 hours. A 5–7 p.s.i. loss after initial installation is normal. If pressure has dropped more than 7 p.s.i. retest for leaks with a soapy water solution.
5. For best ride use only enough air pressure in the air springs to level the vehicle when viewed from the side (front to rear). Inflate/deflate the air springs to maintain this height under various conditions of load. NOTE: Too much air pressure in the air springs will result in a stiffer ride, while too little air pressure will allow the vehicle to bottom out. Too little air pressure will also not provide the improvement in handling that is possible.

## MAINTENANCE AND OPERATIONS

Minimum Air Pressure	Maximum Air Pressure
20 p.s.i.	100 p.s.i.
<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>	

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

1. Check the air pressure weekly and always maintain at least 10 p.s.i. air pressure.
2. If you develop an air leak in the system, use a solution of 1/5 dish soap to 4/5 water to check all air line connections and the inflation valve core before removing sleeve.
3. Inflate your air springs to 60 p.s.i. before adding the payload. After vehicle is loaded, adjust your air pressure to level the vehicle and for ride comfort. 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.
4. When carrying a payload it will be helpful to increase the tire inflation pressure in proportion to any overload condition. We recommend a 2 p.s.i. increase above normal (not to exceed tire manufacturer maximum) for each 100 lbs. total overload on 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 (10 p.s.i.) to reduce the tension on the suspension/brake components.* Check to see that the sleeve rolls back down over the bottom piston after the vehicle is lowered (Figure 8). If sleeve fails to roll back down over the piston, add air pressure until sleeve “pops” back over piston (do not exceed 100 p.s.i.).



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