

# LoadLIFTER5000

P/N 57205



MN-573  
(01308)  
ECN 4306

Please read these instructions completely before proceeding with the installation.

## Kit Parts List

Item	Description	Quantity
A	Air Spring	2
B1	Upper Bracket (Right)	1
B2	Upper Bracket (Left)	1
C	Lower Bracket	2
D	Elbow Fitting	2
E	Axle Strap	4
F	$\frac{3}{8}$ "-24 x $\frac{7}{8}$ " Bolt	8
G	$\frac{3}{8}$ " Flat Washer	16
H	$\frac{3}{8}$ " Lock Washer	8
I	$\frac{3}{8}$ "-16 x 2.5" Carriage Bolt	8
J	$\frac{3}{8}$ " Nylock Nut	8
K	$\frac{3}{8}$ " x 1" Self Tapper	4
L	Heat Shield	1
M	Thermal Sleeve	1
N	Heat Shield Clamp	2
AA	Air Line Assembly	16'
BB	Tie Strap	6
CC	Valve Cap	2
DD	$\frac{5}{16}$ " Flat Washer	2
EE	Rubber Washer	2
FF	Small Star Washer	2
GG	$\frac{5}{16}$ " Hex Nut	4
HH	Hose Clip	4
II	Self Tapping Screw	4
JJ	Spacer	1
KK	M8-1.25x35 Screw	1

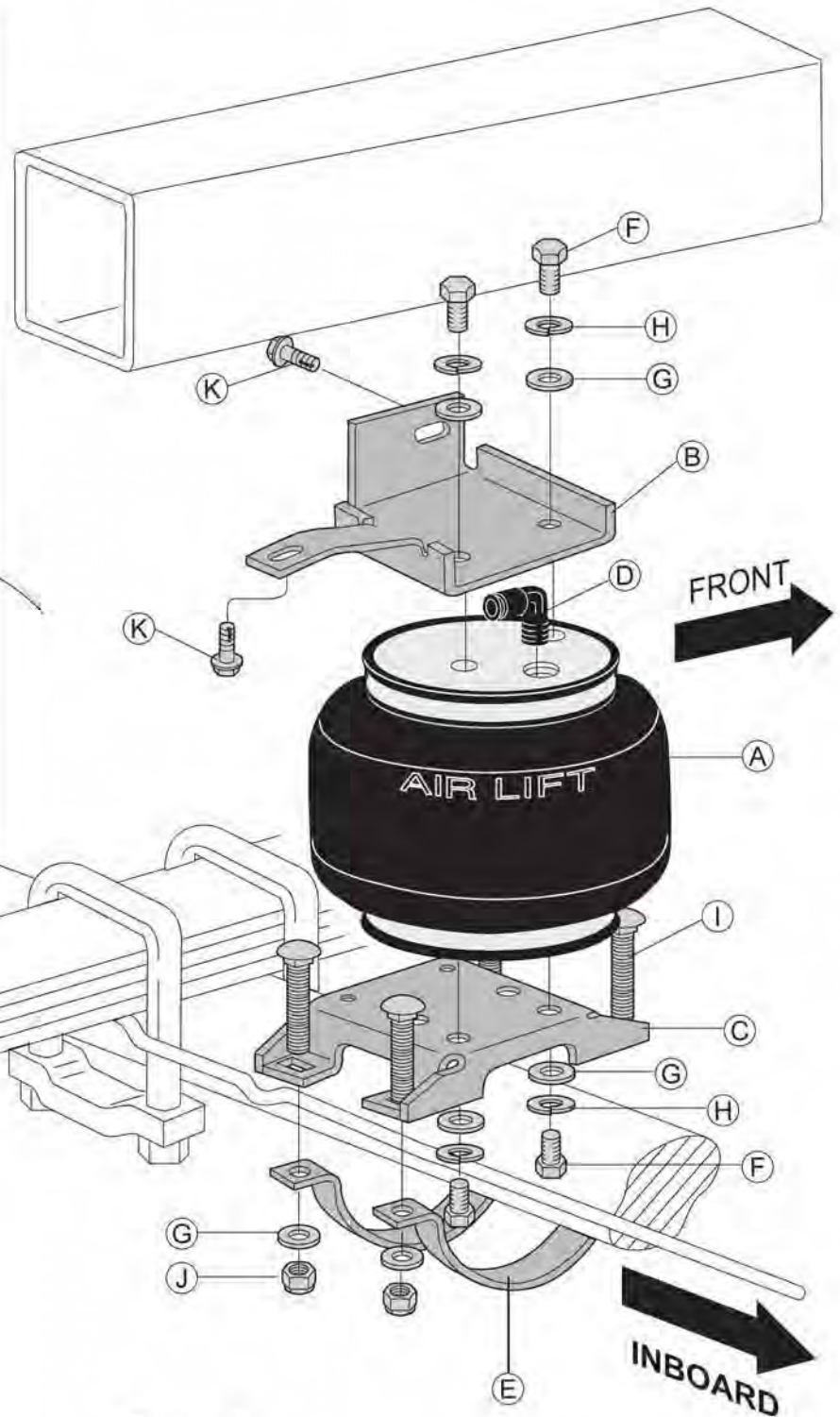


Figure 1

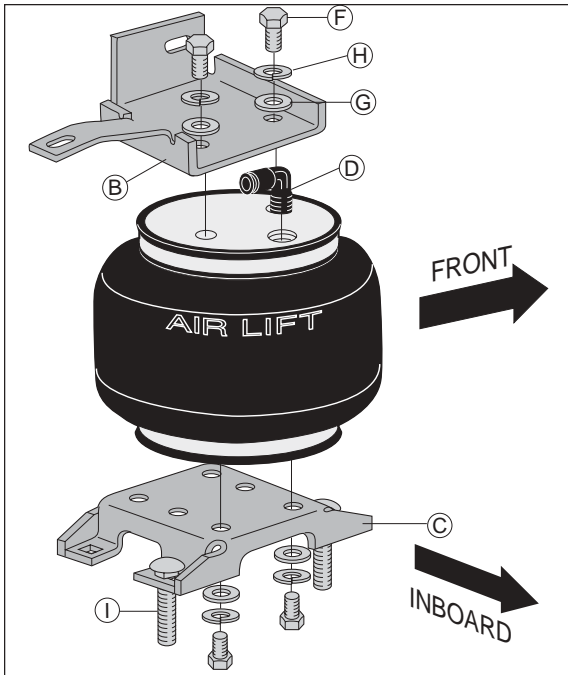


Figure 2

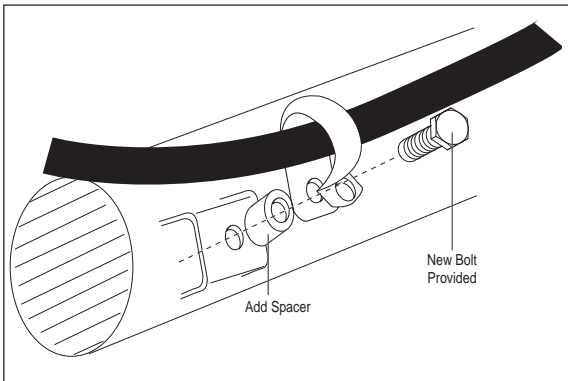


Figure 3

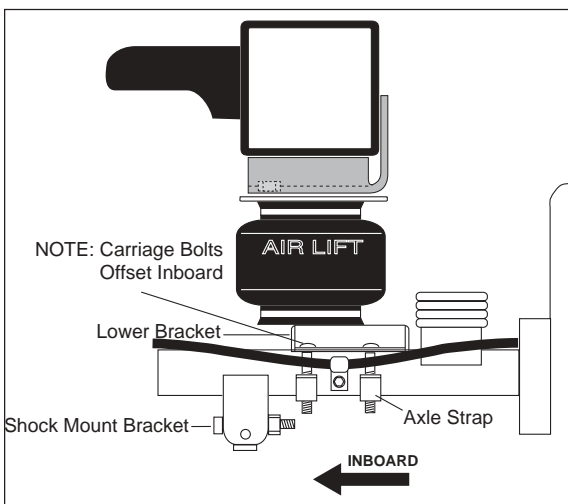


Figure 4

## I. Assembling the Air Spring

1. Install 90 degree air swivel fitting (D) to the top of the bellows. This fitting is precoated with sealant. Using an open-end wrench, tighten 1 and 1/2 turns (Figures 1 and 2).

*IMPORTANT: Tighten on the metal hex nut only. Do not over tighten.*

2. Attach the upper bracket to the top plate (label end) of the bellows with two bolts (F), lock washers (H), and flat washers (G). Torque to 20 ft-lbs. Assemble both units (Figures 1 and 2) in this manner. There are left and right hand units (indicated by "LH" or "RH" stamped in the bracket).
3. Insert two carriage bolts in the lower, inboard holes of the lower bracket before attaching the bellows (Figure 2).
4. Use the lower bracket template provided on page 7 to determine the proper mounting location for the bellows. Use the holes marked "A" for mounting. Attach the lower bracket to the air spring assembly using two bolts (F), two lock washers (H), and two flat washers (G). Torque to 20 ft-lbs.

*NOTE: On some models, it may be necessary to use holes "C" for mounting.*

## II. Installing the Air Spring Assembly

1. Jack up rear of vehicle or raise on hoist. Place safety jack stands under axle.
2. Remove the rubber jounce bumper by pulling it out of the slotted track or by prying it out with a screwdriver. This will not be reused.
3. Models with disc brakes: Remove the bolt holding the cable onto the back-side of the passenger's side axle. Install the supplied spacer (JJ) between the bracket and the emergency brake cable clip. Insert the supplied bolt (KK) and tighten the cable down securely (Figure 3).

*NOTE for Models with Disc Brakes: The inside strap on the passenger-side goes between the emergency brake cable bracket and the shock bracket on the axle.*

- Set the assembly on the axle housing between the shock absorber bracket and the leaf spring (Figure 4). Loosely attach lower bracket and straps around the axle using carriage bolts (I), flat washers (G) and lock nuts (J) (Figure 4).

*NOTE for Non-Disc Brake Models Only: The brake line should be between the carriage bolt and the axle housing (Figure 6).*

- On the Driver Side Only: Secure the breather tube away from the bellows using provided tie straps (BB). Refer to Figure 6.
- With the unit aligned vertically and horizontally, tighten the lower assembly to the axle housing. It is important to tighten the forward straps to the lower bracket first, and then the back. Tighten the lock nuts (J) to 16 ft-lbs.

*CAUTION: Do not pinch the brake line under the strap or carriage bolt.*

- Using the holes in the upper bracket as a template, drill two  $\frac{5}{16}$ " holes into the frame. Insert and tighten the self tapping bolts (K) and torque to 15 ft-lbs. (Figures 1 and 7).

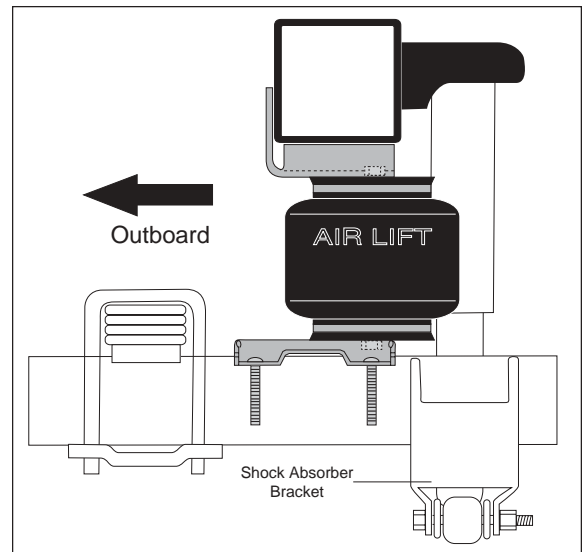


Figure 5

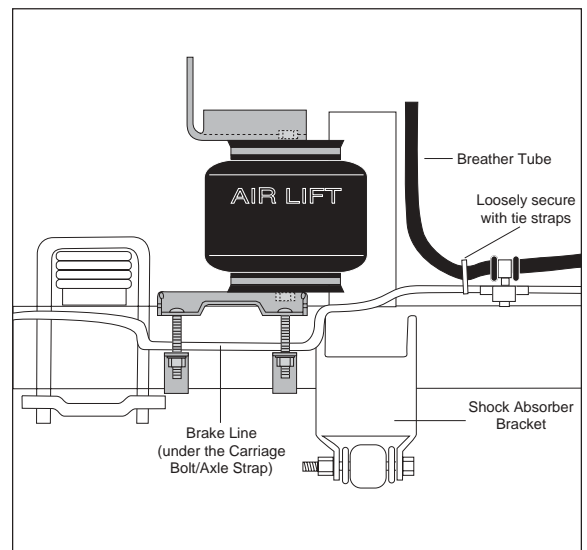


Figure 6

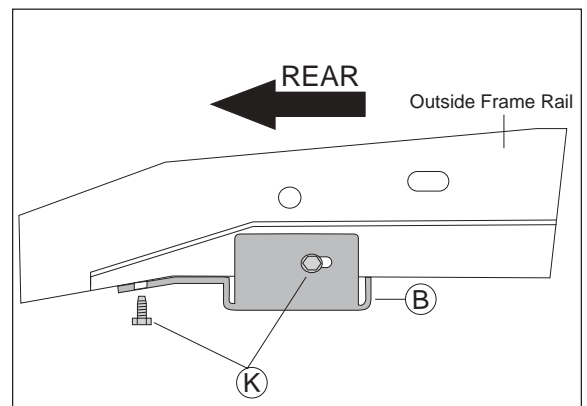


Figure 7

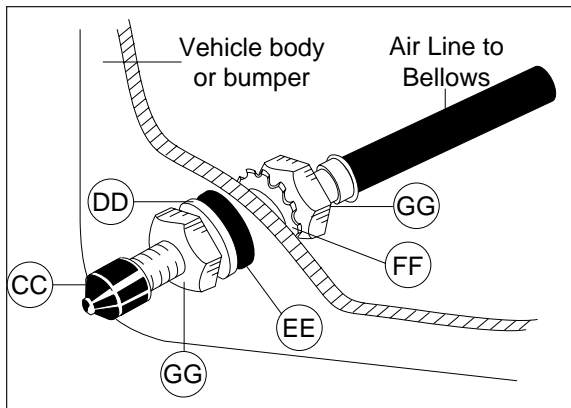


Figure 8

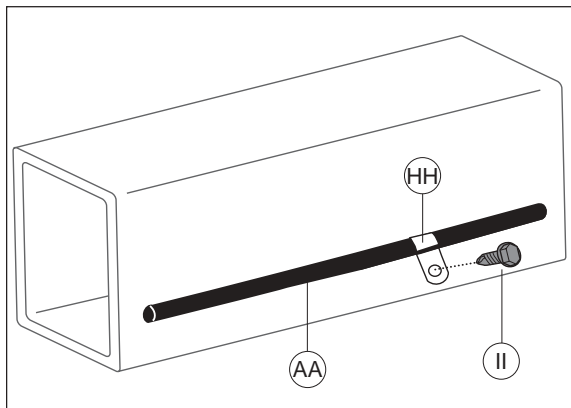


Figure 9

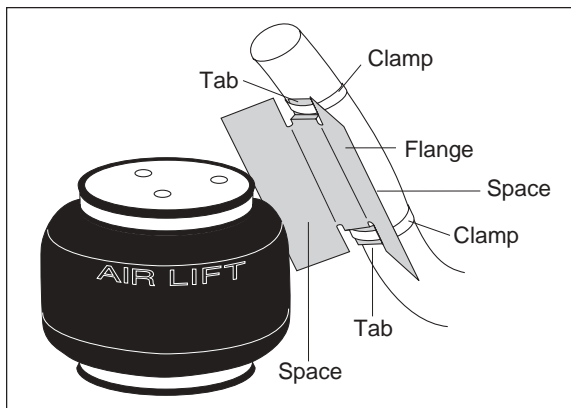


Figure 10

### III. Installing the Air Line

1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valve are in the wheel well flanges, in the stowage area, under the body flange.

*NOTE: What ever the chosen location is, make sure there is enough clearance around the inflation valves for an air chuck.*

2. Drill a  $\frac{5}{16}$ " hole to install the inflation valves.
3. Cut the air line assembly (AA) in two equal lengths.

*CAUTION: When cutting or trimming the air line, use a hose cutter, a razor blade, or a sharp knife. A clean, square cut will ensure against leaks. Do not use wire cutters or scissors to cut the air line. These tools may flatten or crimp the air line, which causes leakage around the O-ring seal inside the elbow fitting.*

4. Place a  $\frac{5}{16}$ " nut (GG) and a star washer (FF) on the air valve. Leave enough of the valve in front of the nut to extend through the hole and have room for the rubber washer (EE), flat washer (DD), and  $\frac{5}{16}$ " nut (GG) and cap (CC). There should be approximately  $\frac{1}{2}$ " of the valve exposed after installation to easily apply a pressure gauge or an air chuck (Figure 8).
5. Push the inflation valve through the hole and use the rubber washer (EE), flat washer (DD), and another  $\frac{5}{16}$ " nut (GG) to secure it in place. Tighten the nuts to secure the assembly in place (Figure 8).
6. Route the air line along the frame to the air fitting on the air spring. Keep at least 6" of clearance between the air line and heat sources, such as the exhaust pipes, muffler, or catalytic converter. Avoid sharp bends and edges. Use the plastic tie straps (BB) to secure the air line to fixed, non-moving points along the chassis. Be sure that the tie straps are tight, but do not pinch the air line. Where there are no holes to secure straps to, use the hose clips (HH) and the self tapping screw (II) to secure air line to frame (Figure 9). Leave at least 2" of slack to allow for any movement that might pull on the air line.
7. On the exhaust side only, place the provided thermal sleeve (M) on the air line near the exhaust.
8. Cut off air line, leaving approximately 12" of extra air line. A clean square cut will ensure against leaks. Insert the air line into the push-to-connect air fitting. Simply push the air line into the 90° swivel fitting until it bottoms out ( $\frac{9}{16}$ " of air line should be in the fitting).

### IV. Installing the Heat Shield

1. Bend tabs to provide a  $\frac{1}{2}$ " dead air space between exhaust pipe and heat shield (Figure 10).
2. Attach the heat shield (L) to the exhaust pipe using the provided clamps (N). Bend the heat shield for maximum clearance to the air spring (Figure 10).

## V. Checking for Leaks

1. Inflate the air spring to 60 p.s.i. and spray all connections and the inflation valves with a solution of  $\frac{1}{5}$  liquid dish soap and  $\frac{4}{5}$  water to check for leaks. Leaks will be spotted easily by looking for bubbles in the soapy water.
2. After the test, deflate the springs to the minimum pressure required, but not less than 20 p.s.i.
3. *IMPORTANT:* Check the air pressure again after 24 hours. A 2 to 4 p.s.i. loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

## VI. Fixing Leaks

1. If there is a problem with the swivel fitting, then:
  - a. Check the air line connection by deflating the spring and removing the line by pulling the collar against the fitting and pulling firmly on the air line. Trim 1" off the end of the air line. Be sure the cut is clean and square. Reinsert the air line into the push-to-connect fitting.
  - b. Check the threaded connection by tightening the swivel fitting another  $\frac{1}{2}$  turn. If it still leaks, deflate the air spring, remove the fitting, and re-coat the threads with thread sealant. Reinstall by hand tightening as much as possible, then use a wrench for an additional two turns.
2. If there is a problem with the inflation valve, then:
  - a. Check the valve core by tightening it with a valve core tool.
  - b. Check the air line connection by removing the air line from the barbed type fitting. *CAUTION: Do not cut it off. As this will usually nick the barb and render the fitting useless.* Cut air line off a few inches in front of the fitting and use a pair of pliers or vise-grips to pull/twist the air line off the fitting.

## VII. Troubleshooting Guide

*Problems maintaining air pressure, without on-board compressor.*

1. Leak test air line connections and threaded connection of the elbow into the air spring. See Section VI to repair.
2. Leak test the inflation valve for leaks at the air line connection or dirt or debris in the valve core. See Section VI for repair.
3. Inspect air lines to be sure it is not pinched at the tie straps. Loosen or replace strap and replace leaking components.
4. Inspect air line for holes and cracks. Replace as needed.
5. A kink or fold in the air line. Reroute as needed.

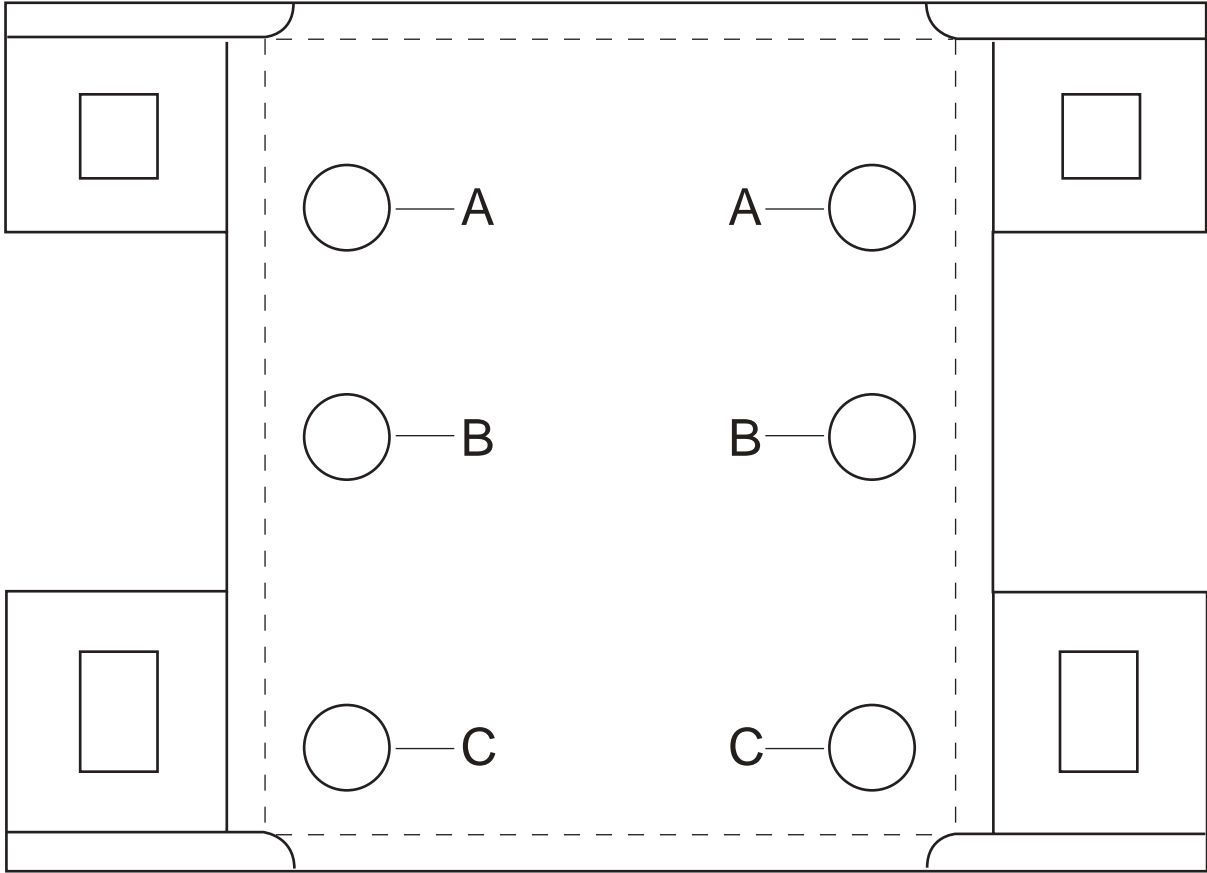
## IX. Maintenance and Operations

<b>Motorhome and Commercial Chassis</b>	
<b>Minimum Air Pressure</b>	<b>Maximum Air Pressure</b>
20 p.s.i.	100 p.s.i.
<b>Passenger Vans</b>	
<b>Minimum Air Pressure</b>	<b>Maximum Air Pressure</b>
5 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.
2. Always maintain 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 Ride Height. Increase or decrease pressure from the system as necessary to attain 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., this pressure may represent too great a load on some vehicles. 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 to reduce the tension on the suspension/brake components. Use of on-board leveling systems do not require deflation or disconnection.*

Lower Bracket Template





# Product Use Information

## Frequently asked questions

**Q. Will installing air springs increase the weight ratings of a vehicle?**

No. Adding air springs will not change the weight ratings (GAWR, GCWR and/or GVWR) of a vehicle. Exceeding the GVWR is dangerous and voids the Air Lift warranty.

**Q. Is it necessary to keep air in the air springs at all time and how much pressure will they need?**

The minimum air pressure should be maintained at all times. The minimum air pressure keeps the air spring in shape, ensuring that it will move throughout its travel without rubbing or wearing on itself.

**Q. Is it necessary to add a compressor system to the air springs?**

No. Air pressure can be adjusted with any type of compressor as long as it can produce sufficient pressure to service the springs. Even a bicycle tire pump can be used, but it's a lot of work.

**Q. How long should air springs last?**

If the air springs are properly installed and maintained they can last indefinitely.

**Q. Will raising the vehicle on a hoist for service work damage the air springs?**

No. The vehicle can be lifted on a hoist for short-term service work such as tire rotation or oil changes. However, if the vehicle will be on the hoist for a prolonged period of time, support the axle with jack stands in order to take the tension off of the air springs.

## Tuning the air pressure

Pressure determination comes down to three things — level vehicle, ride comfort, and stability.

**1. Level vehicle**

If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level (fig. 1). Raise the air pressure to correct either of these problems and level the vehicle.

**2. Ride comfort**

If the vehicle has a rough and harsh ride it may be due to either too much pressure or not enough (fig. 2). Try different pressures to determine the best ride comfort.

**3. Stability**

Stability translates into safety and should be the priority, meaning the driver may need to sacrifice a perfectly level and comfortable ride. Stability issues include roll control, bounce, dive during braking and sponginess (fig. 3). Tuning out these problems usually requires an increase in pressure.



Bad headlight aim



Sway and body roll

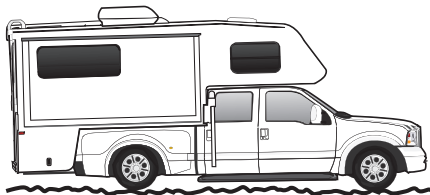


Rough ride



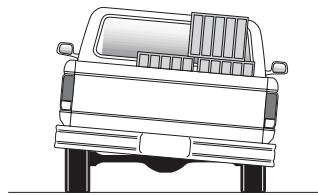
### Guidelines for adding air:

1. Start with the vehicle level or slightly above.
2. When in doubt, always add air.
3. For motorhomes, start with 50-100 PSI in the rear because it can be safely assumed that it is heavily loaded.
4. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
5. If it is ever suspected that the air bags have bottomed out, increase the pressure (fig. 4).
6. Adjust the pressure up and down to find the best ride.
7. If the vehicle rocks and rolls, adjust the air pressure to reduce movement.
8. It may be necessary to maintain different pressures on each side of the vehicle. Loads such as water, fuel, and appliances will cause the vehicle to be heavier on one side (fig. 5). As much as a 50 PSI difference is not uncommon.

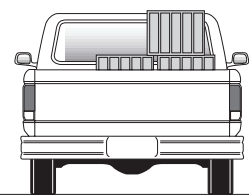


Bottoming out

*fig. 4*



Unlevel



Level

*fig. 5*