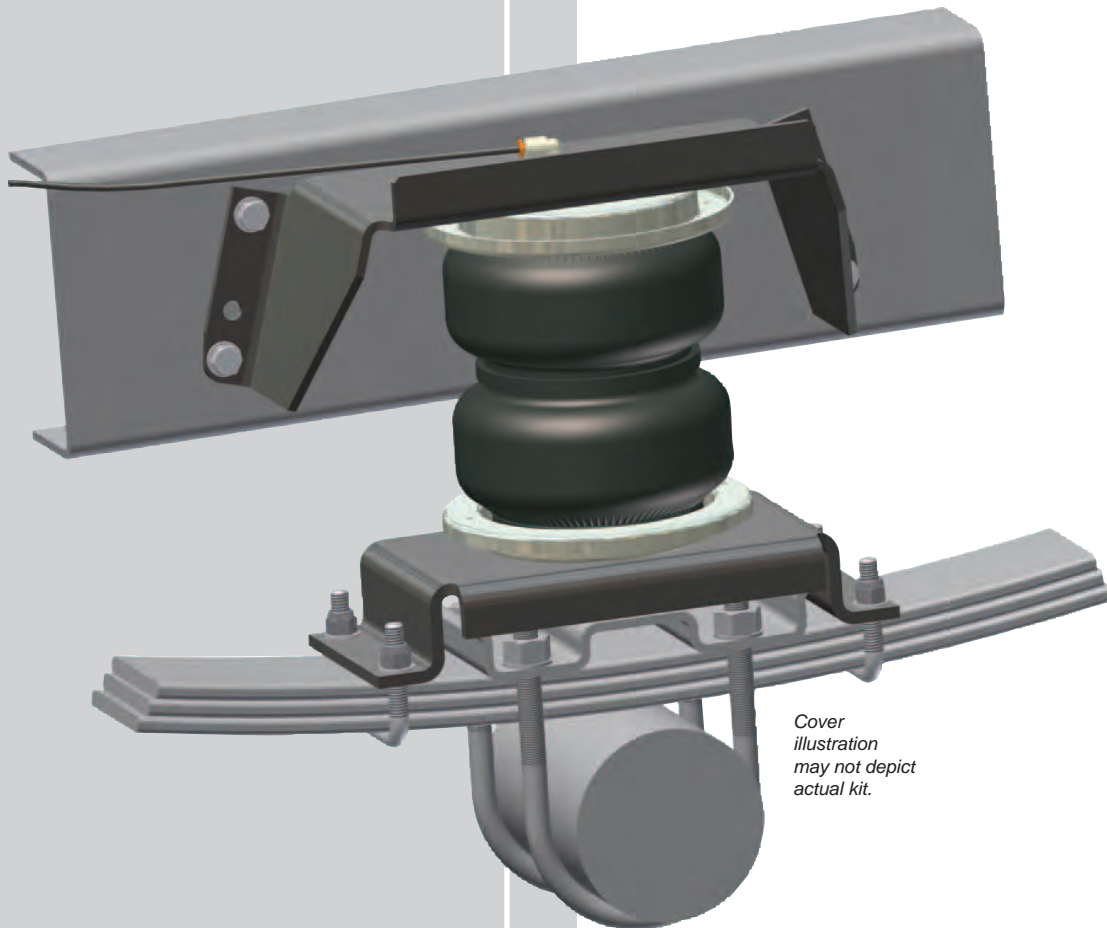


# LoadLIFTER 5000

by AIR LIFT®

## Kit 57410

### Ford F-53 Class "A"



*Cover  
illustration  
may not depict  
actual kit.*



## INSTALLATION GUIDE

For maximum effectiveness and safety, please read these instructions completely before proceeding with installation.

*Failure to read these instructions can result in an incorrect installation.*

# Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of the LoadLifter 5000 air spring kit. LoadLifter 5000 utilizes sturdy, reinforced, commercial grade single or double, depending on the kit, convolute bellows. The bellows are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter 5000 kits are recommended for most  $\frac{3}{4}$  and 1 ton pickups and SUVs with leaf springs and provide up to 5,000 lbs of load leveling support with air adjustability from 5-100 PSI. The kits are also used in motorhome rear kits and some motorhome fronts where leaf springs are used.

It is important to read and understand the entire installation guide before beginning installation or performing any maintenance, service or repair. The information here includes a hardware list, tool list, step-by-step installation information, maintenance tips, safety information and a troubleshooting guide.

Air Lift Company reserves the right to make changes and improvements to its products and publications at any time. For the latest version of this manual, contact Air Lift Company at (800) 248-0892 or visit our website at [www.airliftcompany.com](http://www.airliftcompany.com).

## IMPORTANT SAFETY NOTICE

The installation of this kit does not alter the Gross Vehicle Weight Rating (GVWR) or payload of the vehicle. Check your vehicle's owner's manual and do not exceed the maximum load listed for your vehicle.

**Gross Vehicle Weight Rating:** The maximum allowable weight of the fully loaded vehicle (including passengers and cargo). This number — along with other weight limits, as well as tire, rim size and inflation pressure data — is shown on the vehicle's Safety Compliance Certification Label.

**Payload:** The combined, maximum allowable weight of cargo and passengers that the truck is designed to carry. Payload is GVWR minus the Base Curb Weight.

## NOTATION EXPLANATION

Hazard notations appear in various locations in this publication. Information which is highlighted by one of these notations must be observed to help minimize risk of personal injury or possible improper installation which may render the vehicle unsafe. Notes are used to help emphasize areas of procedural importance and provide helpful suggestions. The following definitions explain the use of these notations as they appear throughout this guide.

### DANGER

INDICATES IMMEDIATE HAZARDS WHICH WILL RESULT IN SEVERE PERSONAL INJURY OR DEATH.

### WARNING

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN SEVERE PERSONAL INJURY OR DEATH.

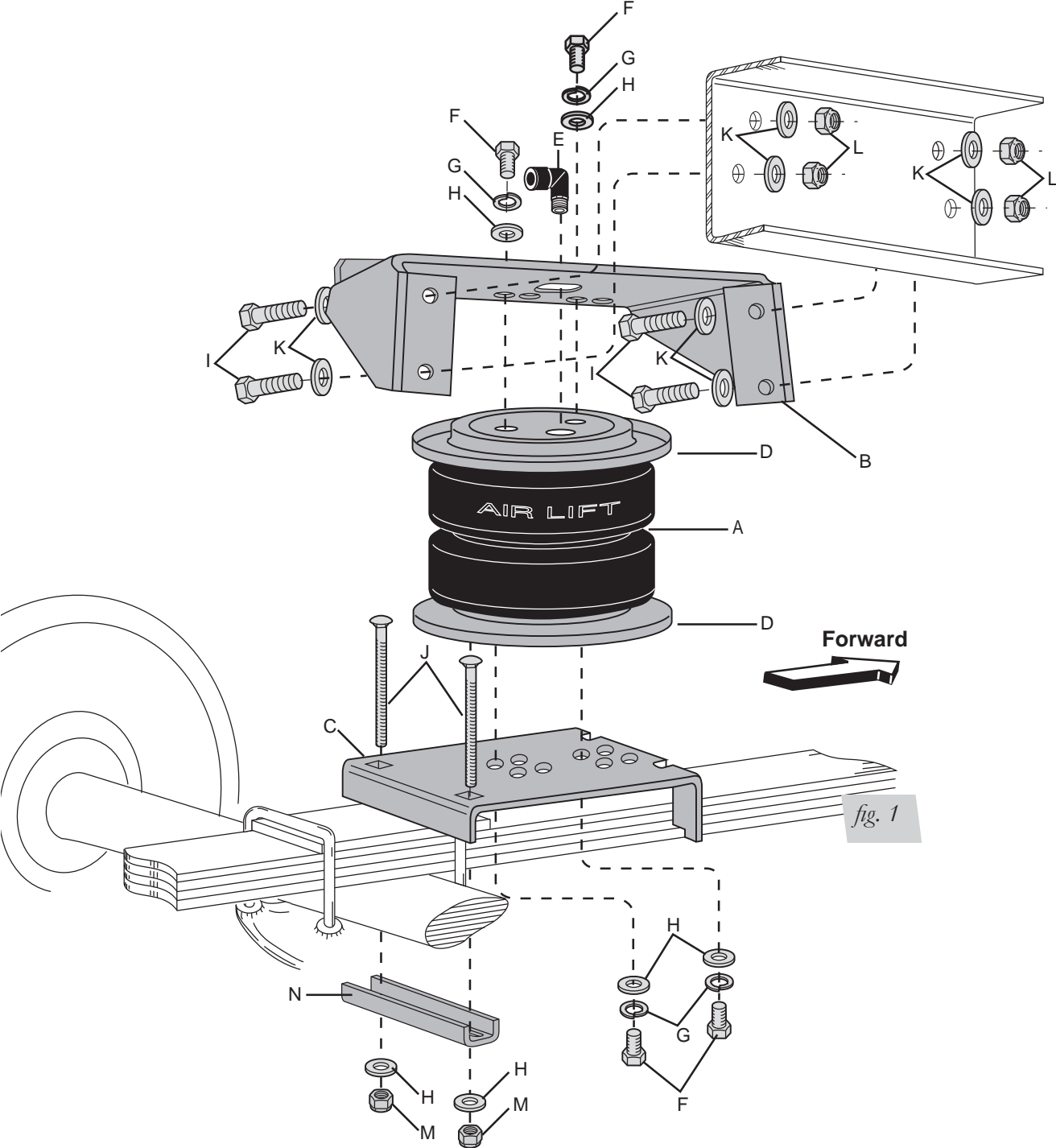
### CAUTION

INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE MACHINE OR MINOR PERSONAL INJURY.

## NOTE

*Indicates a procedure, practice or hint which is important to highlight.*

# Installation Diagram



## HARDWARE LIST

Item	Part #	Description.....Qty	Item	Part #	Description.....Qty
A	58115	Air spring.....2	M	18435	3/8" Nyloc nut.....4
B	07887	Upper bracket .....2	N	01665	Clamp bar .....2
C	03605	Lower bracket .....2			
D	11897	Roll plate.....4	AA*	20086 <sub>sub</sub>	Air line assembly.....1
E	21830	Elbow fitting .....2	BB*	10466	Tie strap .....6
F	17203	3/8"-24 x 7/8" Bolt .....8	CC*	21230	Valve cap .....2
G	18407	3/8" Lock washer.....8	DD*	18405	5/16" Flat washer .....2
H	18444	3/8" Flat washer .....16	EE*	21234	Rubber washer.....2
I	17146	1/2"-13 x 1.5" HHCS bolt.....8	FF*	18411	Star washer.....2
J	17133	3/8"-16 x 6" Carriage bolt.....4	GG*	21233	5/16" Hex nut .....4
K	18414	1/2" Flat washer .....16			
L	18460	1/2" Nyloc nut.....8			

\* Not shown in figure 1.

## TOOLS LIST

Description..... Qty	Description..... Qty
7/16" open-end or box wrench..... 1	Heavy duty drill..... 1
9/16" open-end or box wrench..... 1	Hose cutter, razor blade, or sharp knife ..... 1
3/4" open-end or box wrench..... 1	Hoist or floor jacks ..... 1
Crescent wrench..... 1	Safety stands..... 2
Ratchet with 9/16", 1/2" & 3/4" deep well sockets.. 1	Safety glasses ..... 1
5/16" and 1/2" drill bits (very sharp)..... 1	Air compressor or compressed air source..... 1
Torque wrench..... 1	Spray bottle with dish soap/water solution ..... 1

# Installing the LoadLifter 5000 System

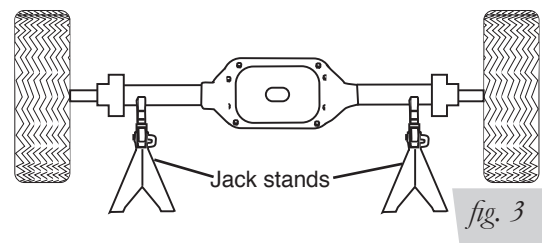
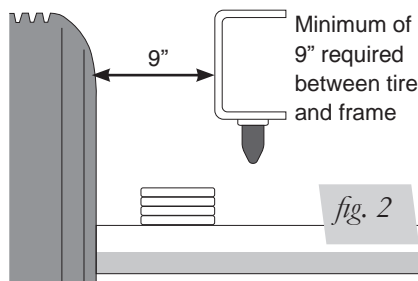


COMPRESSED AIR CAN CAUSE INJURY AND DAMAGE TO THE VEHICLE AND PARTS IF IT IS NOT HANDLED PROPERLY. FOR YOUR SAFETY, DO NOT TRY TO INFLATE THE AIR SPRINGS UNTIL THEY HAVE BEEN PROPERLY SECURED TO THE VEHICLE.

## GETTING STARTED

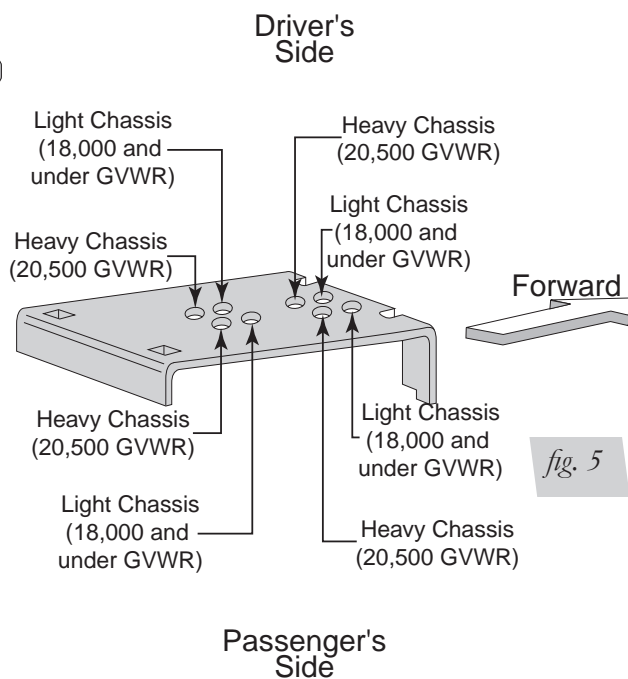
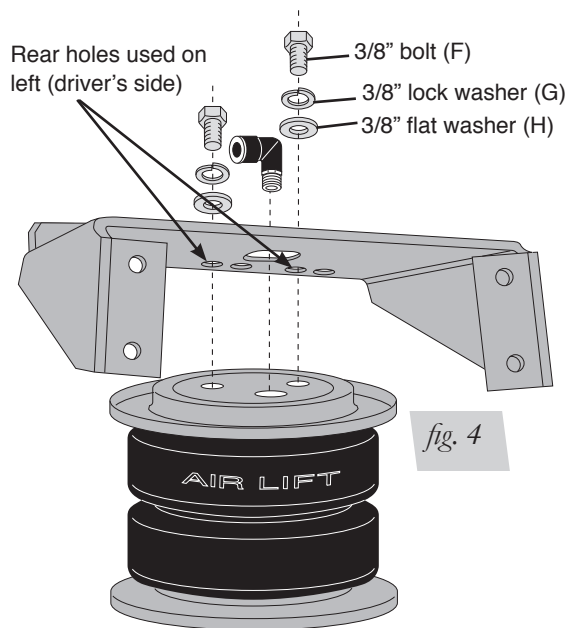
**IMPORTANT:** There must be at LEAST 9" between the tire and the frame to install this LoadLifter 5000 kit (fig. 2).

1. Raise the vehicle, remove the wheels, and obtain normal ride height (fig. 3).
2. Remove the emergency brake cable bracket from the driver side spring retainer. Save the bolt for later use.
3. Remove both jounce bumpers from under the frame above the axle. Save for later use.



## ASSEMBLING THE AIR SPRING ASSEMBLY

1. Set a roll plate (D) on both ends of the air spring (A). The radiused (rounded) edge of the roll plate will be towards the air spring, enabling the air spring to be seated in both roll plates (fig. 4).
2. Install a 90° elbow fitting (E) to the top of the air spring. Tighten finger tight plus 1 and ½ turns. Be careful to only tighten on the metal hex nut. Do not over tighten (fig. 4).
3. When installing the upper bracket (B) to the air spring and roll plate, use the rearward holes for the left (driver's side) installation. On the right (passenger's side) of the vehicle, continue to use the most rearward holes ( fig. 4). The upper bracket is marked "L" and "R" on the top. Attach the assembly using two 3/8" bolts (F), lock washers (G), and flat washers (H). Tighten hardware to 20 ft/lbs.
4. To find the proper air spring mounting holes on the lower bracket (fig. 5), place the template, provided on page 15, on to the top of the lower bracket (C). Be sure to line up the outside edges of the bracket to the outline on the template. Using the key on the template, determine and mark the correct mounting holes. The driver's side will use one of the sets of holes on the left side of the template/bracket, and the passenger's side will use one of the sets of holes on the right side of the template/bracket.



5. Upon determining the correct mounting holes on the lower bracket, insert two carriage bolts (J) into the lower bracket (fig. 1). Attach the air spring assembly to the lower bracket using two 3/8" bolts (F), lock washers (G), and flat washers (H). Tighten bolts to 20 ft/lbs.

## ATTACHING THE AIR SPRING ASSEMBLY

### NOTE

*It may be necessary to support the frame and drop the axle to obtain sufficient clearance in order to install the assembly.*

1. Set the assembly on the leaf spring forward of the axle.

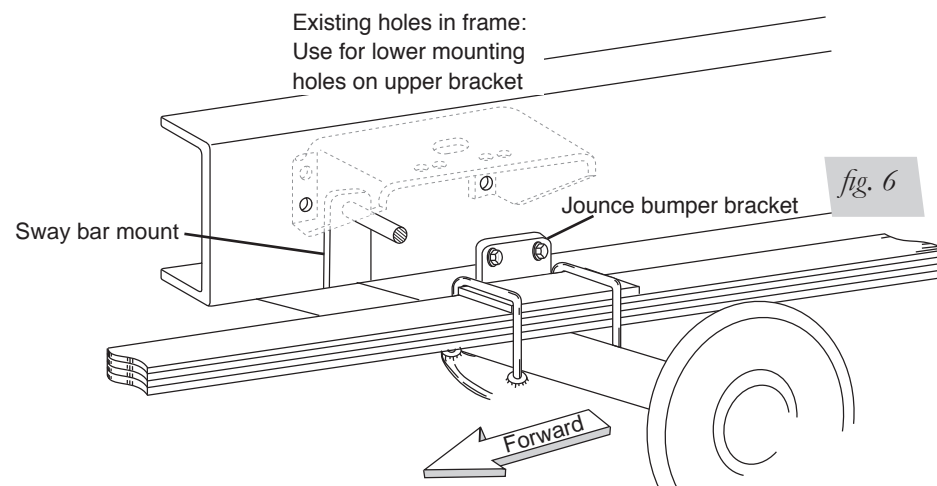
### NOTE

*The rear of the lower bracket should hook around the forward U-bolt (fig. 1).*

2. Using the existing holes in the frame (fig. 6), loosely attach the upper bracket (B) with a 1/2" HHCS bolt (I), two 1/2" flat washers (K), and 1/2" nyloc nut (L) through both of the lower mounting holes in the upper bracket (fig. 1).

### NOTE

*The rearward existing hole in the frame is located directly over the jounce bumper bracket. Also, the upper bracket goes around the sway bar mount (fig. 6).*



3. Center punch the upper mounting holes.
4. Drill a 1/2" hole for both upper mounting holes.
5. Use a 1/2" HHCS bolt (I), two 1/2" flat washers (K), and 1/2" nyloc nut (L) in each upper hole to secure the bracket to the frame (fig. 1). Tighten to 80 ft/lbs.
6. Attach the lower bracket to the leaf spring using the clamp bar (N), 3/8" flat washers (H), and 3/8" nyloc nuts (M). Tighten the carriage bolt hardware to 16 ft/lbs (fig. 1).

## INSTALLING THE AIR LINES

1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valve are:
  - a. The wheel well flanges.
  - b. License plate recess in bumper.
  - c. Under the gas cap access door.
  - d. Through license plate itself.

### NOTE

*Whatever the chosen location is, make sure there is enough clearance around the inflation valves for an air chuck.*

2. Drill a 5/16" hole to install the inflation valves.

- Cut the air line assembly in two equal lengths.

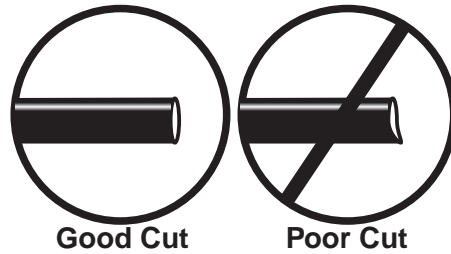


fig. 7

**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 CAUSING IT TO LEAK AROUND THE O-RING SEAL INSIDE THE ELBOW FITTING (FIG. 7).

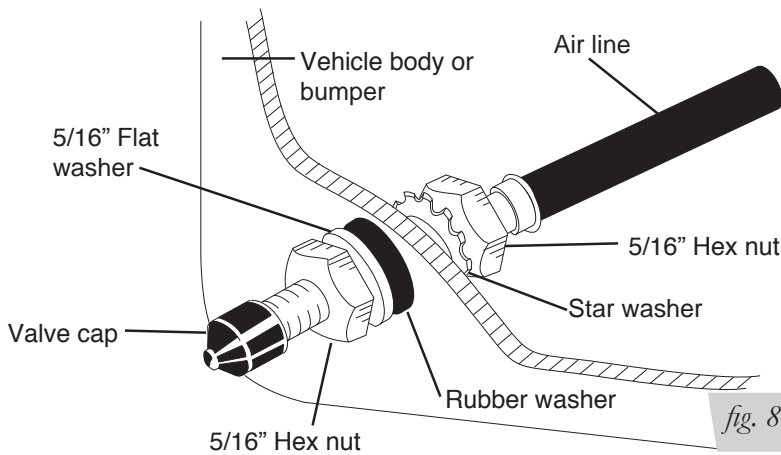


fig. 8

- Place a 5/16" nut and star washer on the air valve. Leave enough of the inflation valve in front of the nut to extend through the hole and have room for the rubber washer, flat washer, and 5/16" nut and cap. There should be enough valve exposed after installation—approximately 1/2"— to easily apply a pressure gauge or an air chuck (fig. 8).
- Push the inflation valve through the hole and use the rubber washer, flat washer, and another 5/16" nut to secure it in place. Tighten the nuts to secure the assembly.
- Route the air line along the frame to the air fitting on the air spring (fig. 9). 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 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. Leave at least 2" of slack to allow for any movement that might pull on the air line (fig. 9).

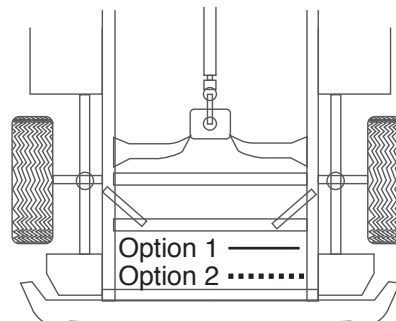


fig. 9

7. Cut off the air line, leaving approximately 12" of extra air line. A clean square cut will ensure against leaks. Insert the air line into the air fitting. This is a push-to-connect fitting. Simply push the air line into the 90° swivel fitting until it bottoms out (9/16" of air line should be in the fitting).
8. Install the minimum/maximum air pressure decal in a highly visible location. We suggest placing the decal on the driver-side window, just above the door handle.

## CHECKING FOR LEAKS

1. Inflate the air spring to 30 PSI.
2. Spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water. Spot leaks easily by looking for bubbles in the soapy water.
3. After the test, deflate the springs to the minimum pressure required to restore the system to normal ride height. Do not deflate to lower than 5 PSI.
4. Check the air pressure again after 24 hours. A 2 - 4 PSI loss after initial installation is normal. Retest for leaks if the loss is more than 5 lbs.

## FIXING LEAKS

1. If there is a problem with the swivel fitting:
  - 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 (see fig. 7). Reinsert the air line into the push-to-connect fitting.
  - b. Check the threaded connection by tightening the swivel fitting another 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 and then use a wrench for an additional two turns.
2. If there is a problem with the inflation valve:
  - a. Check the valve core by tightening it with a valve core tool.
  - b. Check the air line by removing the air line from the barbed type fitting. Cut the air line off a few inches in front of the fitting and use a pair of pliers or vice grips to pull/twist the air line off of the fitting.

 **CAUTION**

DO NOT CUT OFF THE AIR LINE COMPLETELY AS THIS WILL USUALLY NICK THE BARB AND RENDER THE FITTING USELESS.



# Maintenance and Servicing

Minimum Air Pressure	Maximum Air Pressure
20 PSI	100 PSI
FAILURE TO MAINTAIN CORRECT MINIMUM PRESSURE (OR PRESSURE PROPORTIONAL TO LOAD), BOTTOMING OUT, OVER-EXTENSION OR RUBBING AGAINST ANOTHER COMPONENT WILL VOID THE WARRANTY.	

## MAINTENANCE GUIDELINES

### NOTE

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

1. Check the air pressure weekly.
2. Always maintain normal ride height. Never inflate beyond 100 PSI.
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 spring.
4. When increasing load, always adjust the air pressure to maintain 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.

### CAUTION

FOR YOUR SAFETY AND TO PREVENT 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 PSI, THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDENT ON YOUR LOAD AND GVWR.

5. Always add air to the springs in small quantities, checking the pressure frequently. Sleeves require less air volume than a tire and inflate quickly.
6. Should it become necessary to raise the vehicle by the frame, make sure the system is at a minimum pressure (20 PSI) to reduce tension on the suspension/brake components. Use of on-board leveling systems do not require deflation or disconnection.

## Troubleshooting Guide

1. Leak test the air line connections, threaded connection of the elbow into the air spring, and the inflation valves. See "Fixing Leaks" on page 8 for repair.
2. Check for dirt debris in the valve core.
3. Inspect the air lines to be sure none are pinched. Tie straps may be too tight. Loosen or replace the strap and replace leaking components.
4. Inspect the air line for holes and cracks. Replace as needed.
5. Look for a kink or fold in the air line. Reroute as needed.

# Product Use

## 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 times 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. 10). 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. 11). 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. 12). Tuning out these problems usually requires an increase in pressure.

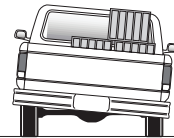


## GUIDELINES FOR ADDING AIR

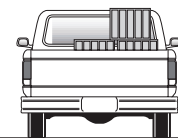
1. Start with the vehicle level or slightly above.
2. When in doubt, always add air.
3. For motorhomes, start with 50-100 PSI in the rear because it can be safely assumed that it is heavily loaded.
4. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
5. If it is ever suspected that the air bags have bottomed out, increase the pressure (fig. 13).
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. 14). As much as a 50 PSI difference is not uncommon.



Bottoming out

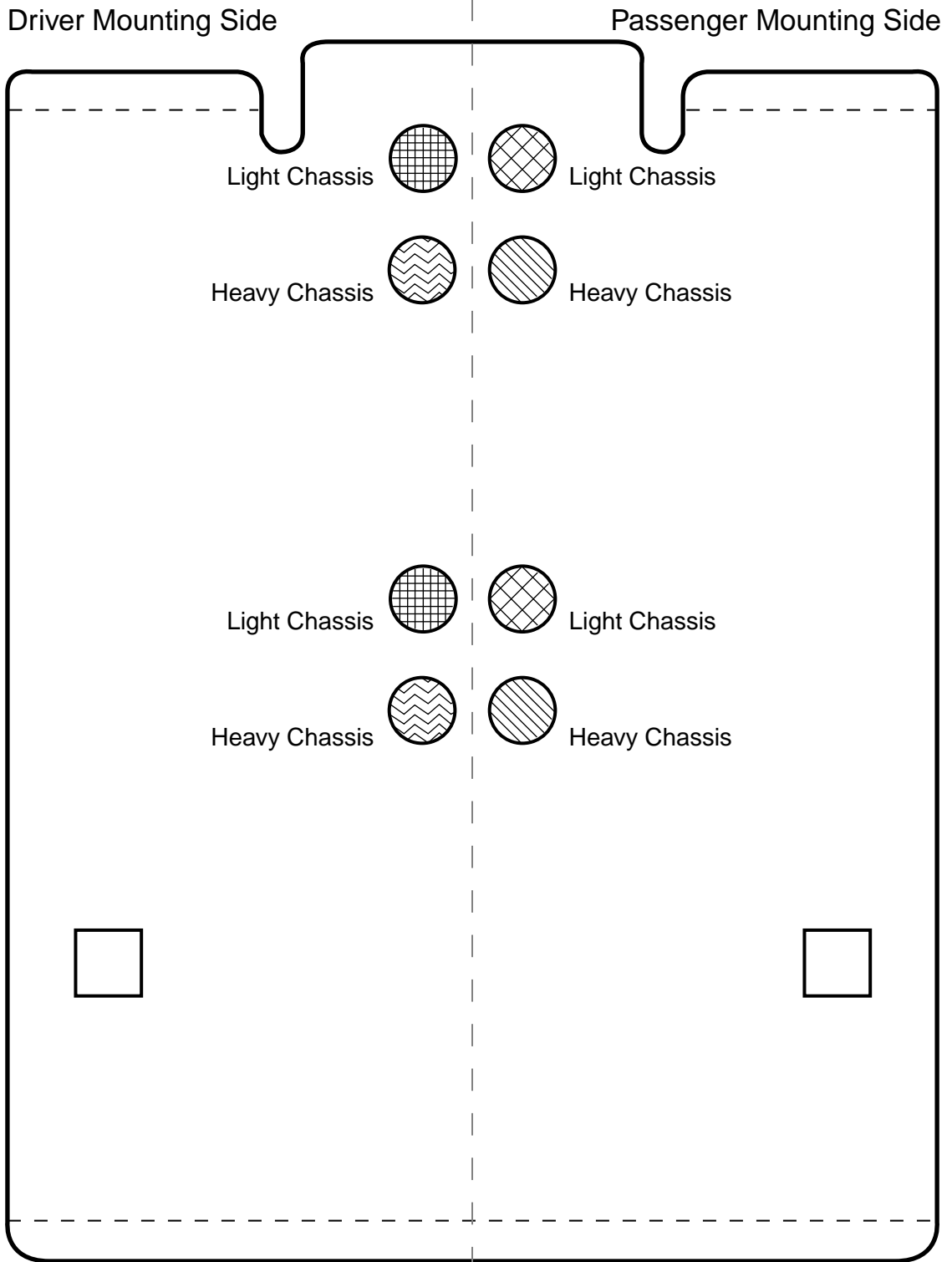
*fig. 13*

Unlevel



Level

*fig. 14*



## KEY



Left/Driver Side: For Light Chassis  
(18,000 and under GVWR)



Right/Passenger Side: For Light Chassis  
(18,000 and under GVWR)



Left/Driver Side: For Heavy Chassis  
(20,500 GVWR)



Right/Passenger Side: For Heavy Chassis  
(20,500 GVWR)