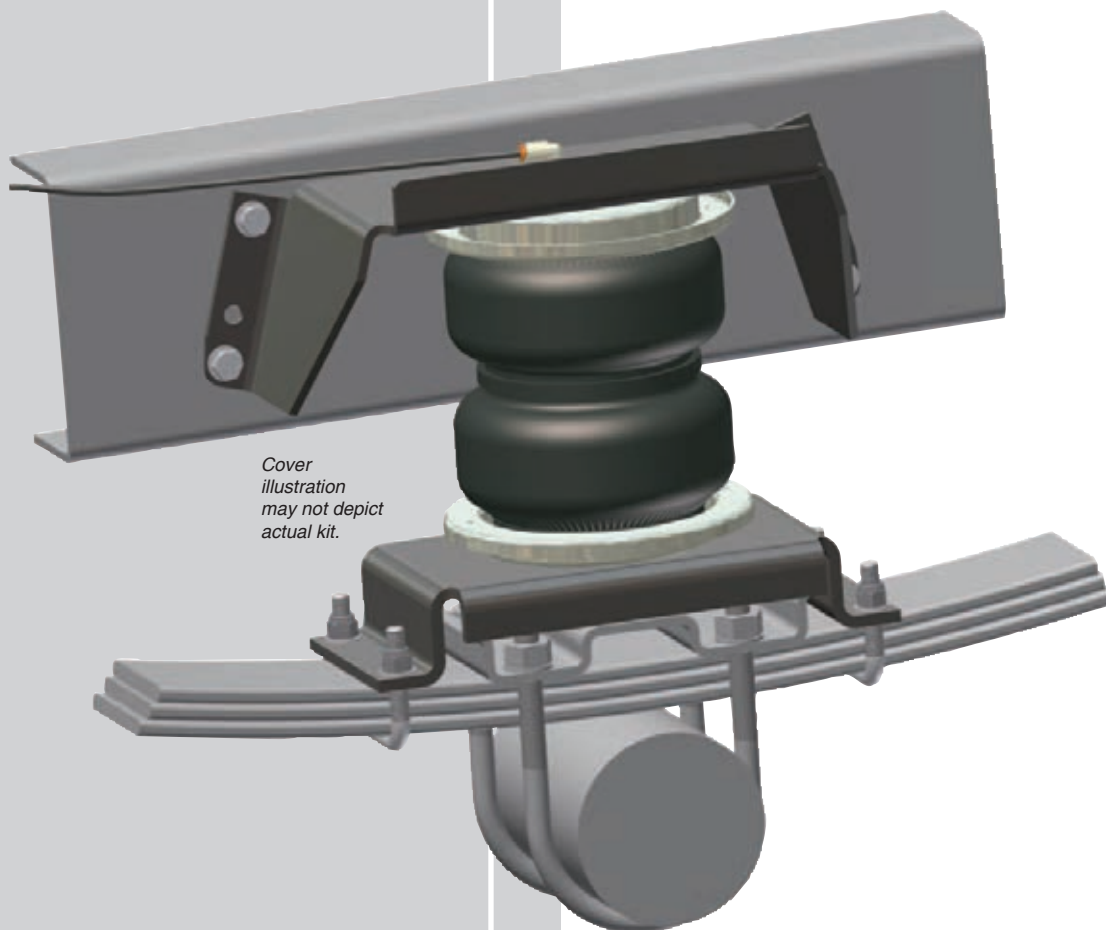


LoadLIFTER 5000

by AIR LIFT®

Kits 57410 & 57344

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.

TABLE OF CONTENTS

Introduction	2
Important Safety Notice	2
Notation Explanation	2
Installation Diagram	3
Hardware List	4
Tools List	4
<u>Installing the LoadLifter 5000 System</u>	4
Getting Started	4
Assembling the Air Spring Assembly	5
Attaching the Air Spring Assembly	6
Installing the Air Lines	6
Checking for Leaks	8
Fixing Leaks	8
Before Operating	9
Installation Checklist	9
Post-Installation Checklist	9
Maintenance and Servicing	10
Minimum and Maximum Air Pressure	10
Maintenance Guidelines	10
Troubleshooting Guide	10
Warranty and Returns Policy	11
Product Use	12
Frequently Asked Questions	12
Tuning the Air Pressure	12
Guidelines for Adding Air	13
Replacement Information	13
Contact Information	13
Template	14

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.

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.

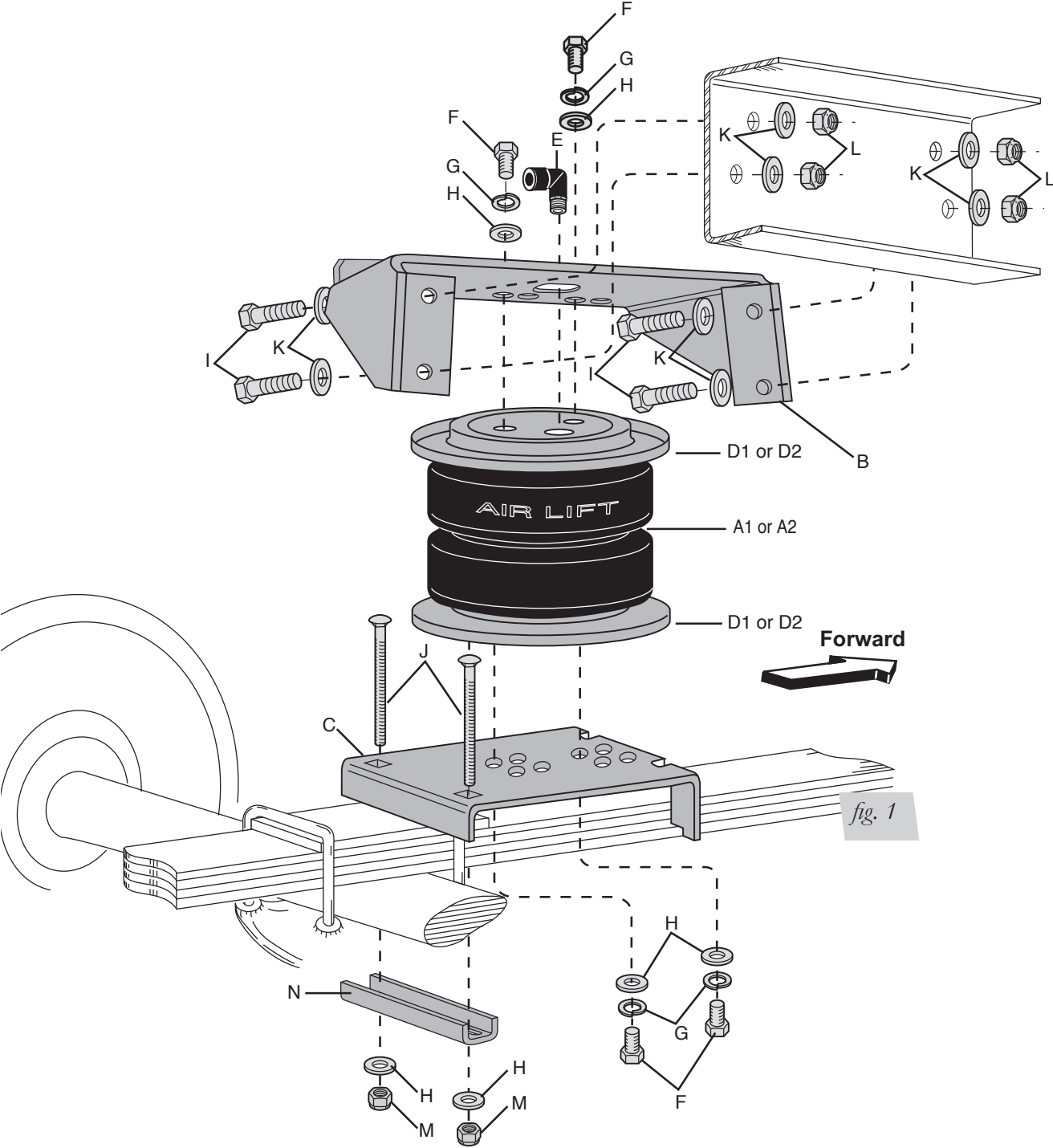
 **CAUTION**

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
A1	58115	Air spring (57410)2	K	18414	1/2" Flat washer16
A2	58437	Air Spring (57344).....2	L	18460	1/2" Nyloc nut.....8
B	07887	Upper bracket2	M	18435	3/8" Nyloc nut.....4
C	03605	Lower bracket2	N	01665	Clamp bar2
D1	11897	Roll plate (57410).....4	AA*	20086 _{sub}	Air line assembly.....1
D2	11951	Roll plate (57344).....4	BB*	10466	Tie strap6
E	21830	Elbow fitting2	CC*	21230	Valve cap2
F	17203	3/8"-24 x 7/8" Bolt8	DD*	18405	5/16" Flat washer2
G	18407	3/8" Lock washer.....8	EE*	21234	Rubber washer.....2
H	18444	3/8" Flat washer16	FF*	18411	Star washer.....2
I	17146	1/2"-13 x 1.5" HHCS bolt.....8	GG*	21233	5/16" Hex nut4
J	17133	3/8"-16 x 6" Carriage bolt.....4	* Not shown in figure 1.		

TOOLS LIST

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

Installing the LoadLifter 5000 System

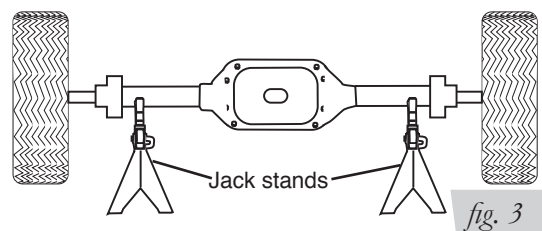
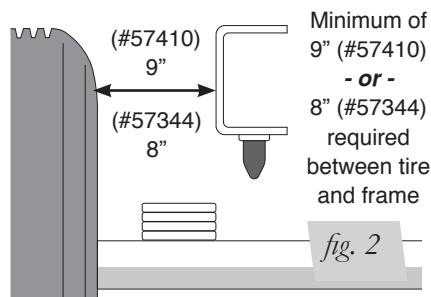


COMPRESSED AIR CAN CAUSE INJURY AND DAMAGE TO THE VEHICLE AND PARTS IF IT IS NOT HANDLED PROPERLY. FOR YOUR SAFETY, DO NOT TRY TO INFLATE THE AIR SPRINGS UNTIL THEY HAVE BEEN PROPERLY SECURED TO THE VEHICLE.

GETTING STARTED

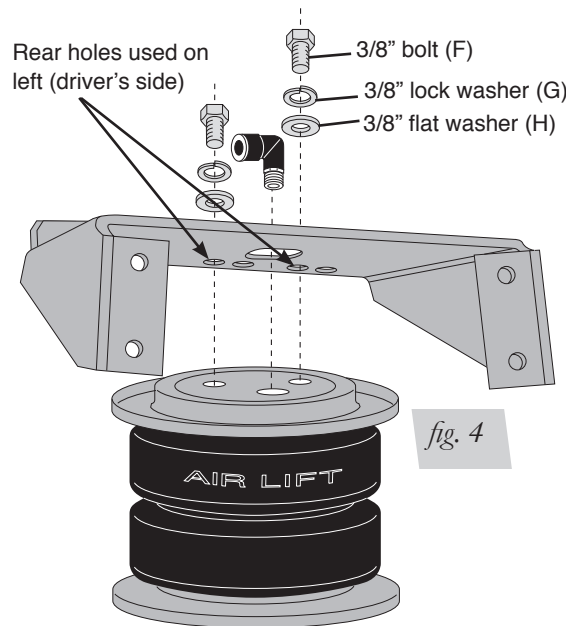
IMPORTANT: 1.) There must be at LEAST 9" between the tire and the frame to install LoadLifter 5000 kit #57410. 2.) There must be at LEAST 8" between the tire and the frame to install LoadLifter 5000 kit #57344. (fig. 2)

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.

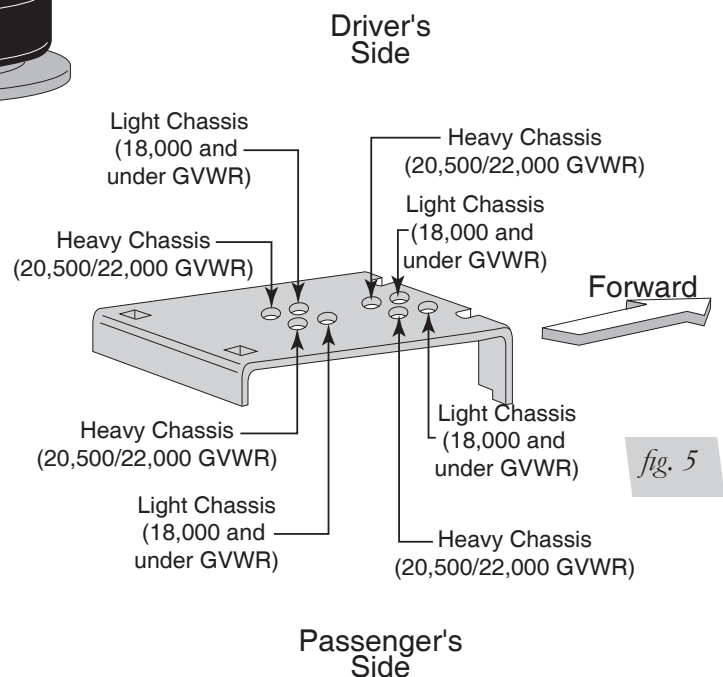


ASSEMBLING THE AIR SPRING ASSEMBLY

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 14, 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.



See template on page 14



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).

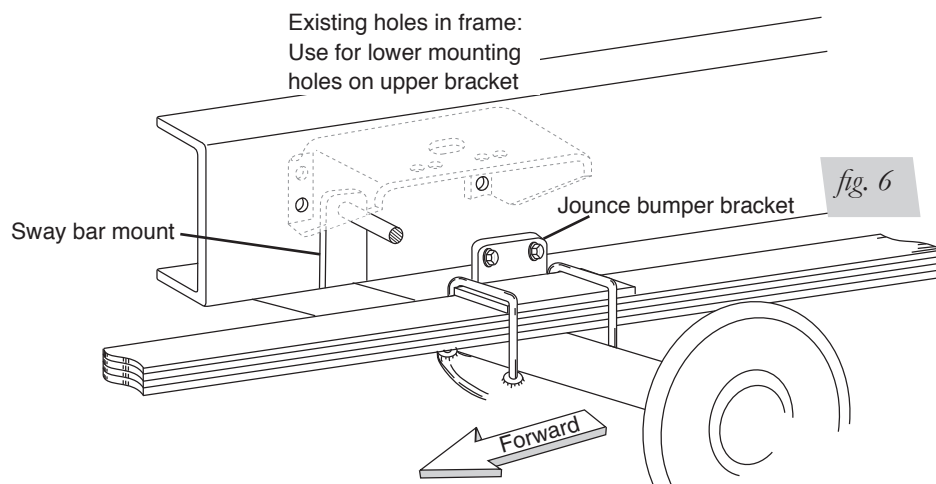
2. Using the existing holes in the frame (fig. 6), loosely attach the upper bracket (B) with a 1/2" HHCS bolt (I), two 1/2" flat washers (K), and 1/2" nyloc nut (L) through both of the lower mounting holes in the upper bracket (fig. 1).

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).

NOTE

Some late models do not have any existing holes to line up the upper bracket. With the assembly set into position, raise the axle up (if dropped to set the assembly into position) so the upper bracket is just below the frame and parallel to the lower bracket. Mark all four holes. Drop the axle (if needed to remove the assembly) and remove the assembly to drill the holes. (figs. 1 & 6)



3. Center punch the upper (and, if needed, the lower) mounting holes.
4. Drill a 1/2" hole for both upper mounting holes, or all four if needed.
5. Use a 1/2" HHCS bolt (I), two 1/2" flat washers (K), and 1/2" nyloc nut (L) in each 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

What ever 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.
3. Cut the air line assembly 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 CAUSING IT TO LEAK AROUND THE O-RING SEAL INSIDE THE ELBOW FITTING (FIG. 7).

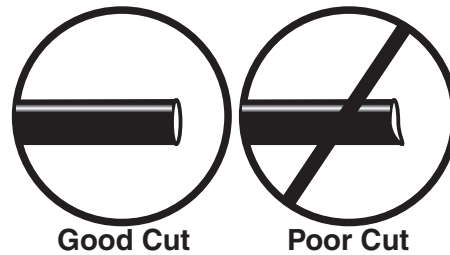


fig. 7

4. 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).

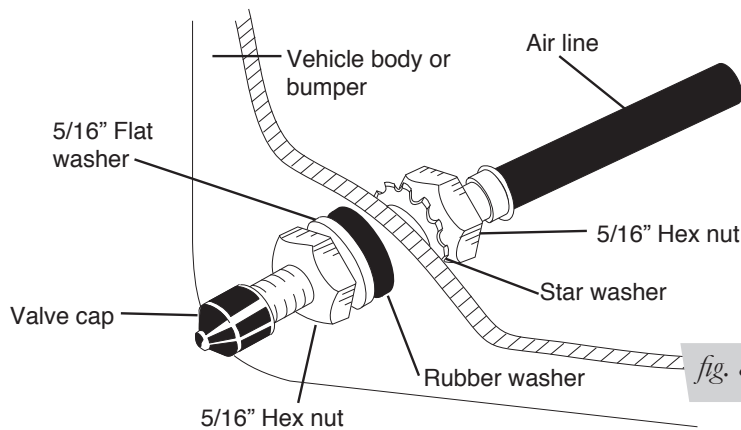


fig. 8

5. 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.
6. 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).

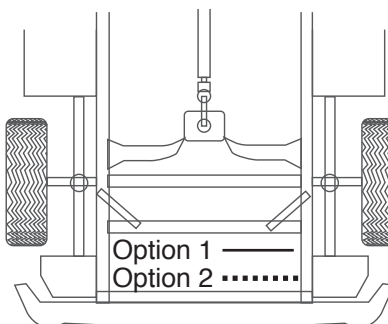


fig. 9

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.

Before Operating

INSTALLATION CHECKLIST

- Clearance test — Inflate the air springs to 60 PSI and make sure there is at least ½” clearance from anything that might rub against each sleeve. Be sure to check the tire, brake drum, frame, shock absorbers and brake cables.
- Leak test before road test — Inflate the air springs to 30 PSI and check all connections for leaks. Refer to “Checking for Leaks” on page 8. All leaks must be eliminated before the vehicle is road tested.
- Fastener test — Recheck all bolts for proper torque.
- Road test — The vehicle should be road tested after the preceding tests. Inflate the springs to 25 PSI (50 PSI if the vehicle is loaded). Drive the vehicle 10 miles and recheck for clearance, loose fasteners and air leaks.
- Operating instructions — If professionally installed, the installer should review the operating instructions with the owner. Be sure to provide the owner with all of the paperwork that came with the kit.

Technician's Signature _____

Date _____

POST-INSTALLATION CHECKLIST

- Overnight leak down test — Recheck air pressure after the vehicle has been used for 24 hours. If the pressure has dropped more than 5 PSI, then there is a leak that must be fixed. Either fix the leak yourself or return to the installer for service.
- Air pressure requirements — I understand the air pressure requirements of my air spring system. Regardless of load, the air pressure should always be adjusted to maintain ride height at all times.
- Thirty day or 500 mile test — I understand that I must recheck the air spring system after 30 days or 500 miles, whichever comes first. If any part shows signs of rubbing or abrasion, the source should be identified and moved, if possible. If it is not possible to relocate the cause of the abrasion, the air spring may need to be remounted. If professionally installed, the installer should be consulted. Check all fasteners for tightness.

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.

If the preceding steps do not solve the problem, it is most likely caused by a failed air spring — either a factory defect or an operating problem. Please call Air Lift at (800) 248-0892 for assistance or a replacement air spring.

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.



Bad headlight aim

fig. 10



Rough ride

fig. 11



Sway and body roll

fig. 12

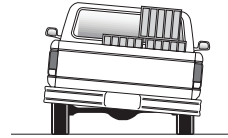
GUIDELINES FOR ADDING AIR

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.

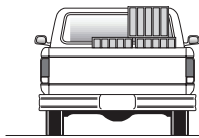


Bottoming out

fig. 13



Unlevel

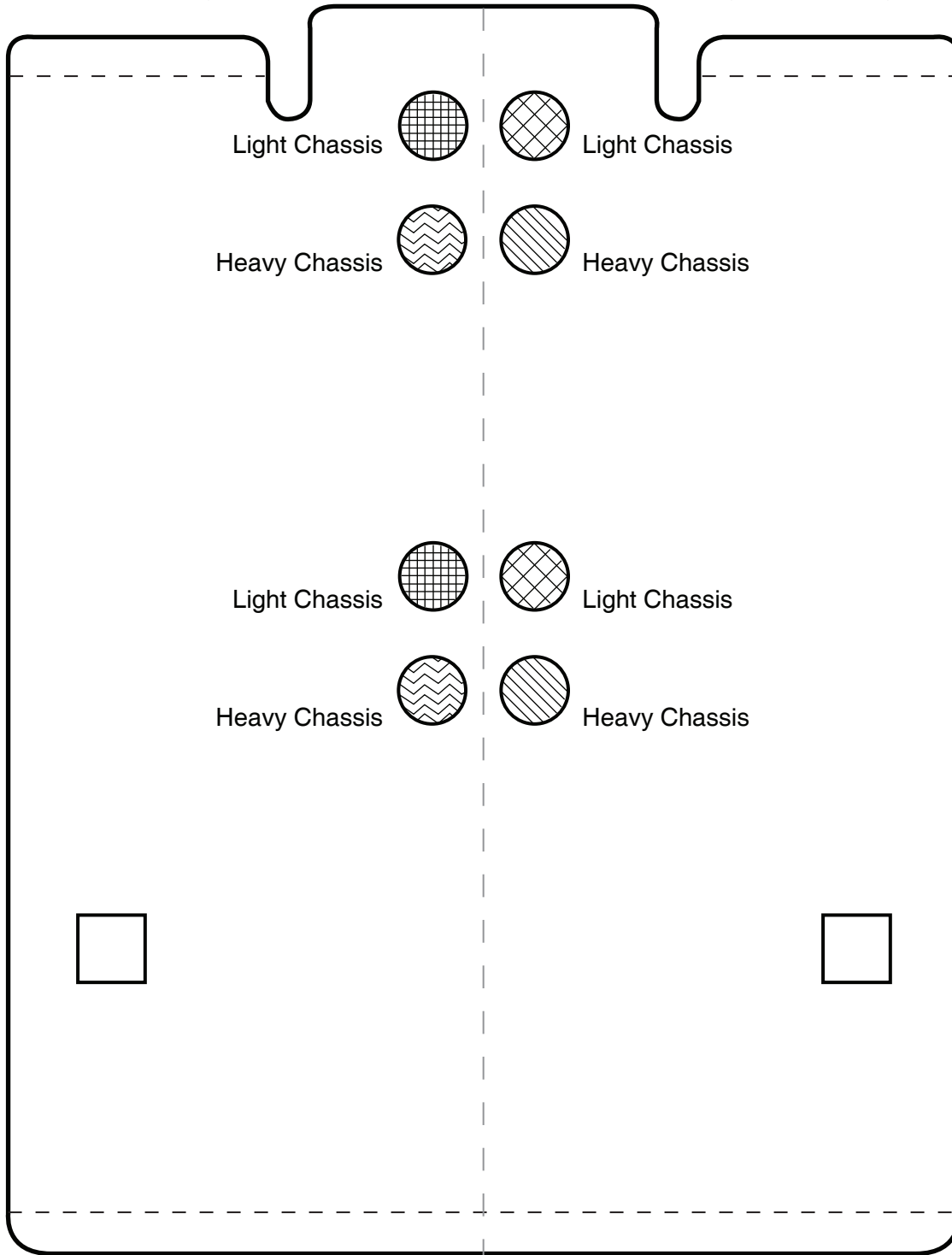


Level

fig. 14

Driver Mounting Side

Passenger Mounting Side

**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
(20,500/22,000 GVWR)Right/Passenger Side: For Heavy Chassis
(20,500/22,000 GVWR)