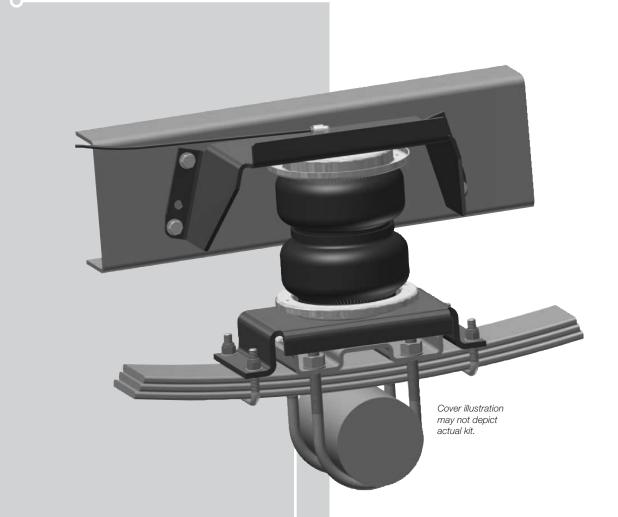


Kit 57345 Ford F-450, F-550





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.

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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 3/4- and 1-ton pickups and SUVs with leaf springs and provide up to 5,000 pounds of load leveling support with air adjustability from 5-100 PSI.

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 guidelines and operating tips.

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 **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.



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



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



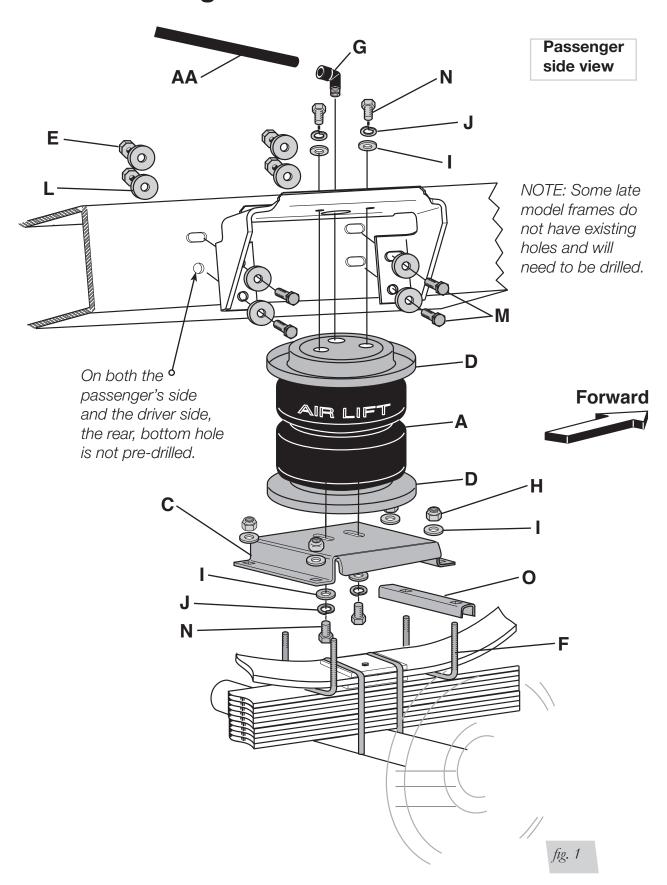
INDICATES HAZARDS OR UNSAFE PRACTICES WHICH COULD RESULT IN DAMAGE TO THE MACHINE OR MINOR PERSONAL INJURY.

NOTE

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



Installation Diagram





Hardware List and Tools List

HARDWARE LIST

Item	Part #	DescriptionQty	Item	Part #	DescriptionQty
Α	58115	Air spring2	Ν	17203	3/8"-24 x 7/8" Hex-head bolt8
В	07460	Upper bracket2	0	01426	3" Lower clamp bar2
С	03260	Lower bracket2	Р	34629	Heat shield kit1
D	11897	Roll plate4			
E	18467	7/16"-14 Nylon lock nut8	AA	20086sub	Air line assembly1
F	10594	3/8"-16 x 2" U-bolt4	BB	10466	Tie strap6
G	21830	1/4" x 1/4" 90° Swivel elbow2	CC	21230	Valve cap2
Н	18435	3/8"-16 Nylon insert nut8	DD	18501	M8 Flat washer2
1	18444	3/8" Flat washer16	EE	21234	Rubber washer2
J	18427	3/8" Lock washer8	FF	18411	Star washer2
L	18466	7/16" Flat washer16	GG	21233	5/16" Hex nut4
М	17255	7/16" -14 x 1.5" Hex-head bolt8			



Missing or damaged parts? Call Air Lift customer service at (800) 248-0892 for a replacement part.

TOOLS LIST

Torque wrench	3/8" Nut driver1 Heavy duty drill1
Crescent wrench	Spray bottle with dish soap/water solution

Installing the LoadLifter 5000 System

IMPORTANT: The air springs will last much longer if they are not limiting the suspension in either compression or extension. The air spring compresses to 3.3" and extends to 9.1". Regardless of load, the air pressure should always be adjusted so that the normal ride height is maintained at all times. The shock absorber is usually the limiter on extension. If this is not the case, the use of limiting straps should be considered, especially for those vehicles that are used off-road.

IMPORTANT: Your vehicle may be equipped with a rear brake proportioning valve. Any type of load assist 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 rear brake proportioning valve or is equipped with an anti-lock type brake system, installation of a load assist product will have NO EFFECT on brake system performance.



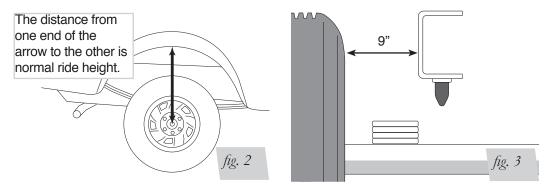
COMPRESSED AIR CAN CAUSE INJURY AND DAMAGE TO THE VEHICLE AND PARTS IF IT IS NOT HANDLED PROPERLY. FOR YOUR SAFETY, DO NOT TRY TO INFLATE THE AIR SPRINGS UNTIL THEY HAVE BEEN PROPERLY SECURED TO THE VEHICLE.

GETTING STARTED

 Determine the normal ride height. The normal ride height is the distance between the bottom edge of the wheel-well and the center of the hub with the vehicle in the "as delivered" condition. In some cases, normal ride height is not perfectly level.



- 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 "as delivered" ride height.
- 2. Measure the distance between the center of the hub and the bottom edge of the wheel well (Fig. 2). This is the normal ride height.



- 3. Measure the distance between the frame and the tire. This kit requires a minimum of 9" of clearance for a fully inflated air spring (Fig. 3).
- 4. If you have a late model with a V10 Triton engine, it will be necessary to remove the heat shield off the shock. The strap that holds the heat shield in place, on the outside of the frame will also need to be removed. Discard both. See instructions in the "Installing the Air Lines" section (p. 9 & 10) for the replacement shock heat shield (P).

RAISING THE VEHICLE

- 1. Raise the vehicle and remove the wheels.
- 2. Check the distance between the center of the hub and the bottom edge of the wheel to ensure that it is at the normal ride height previously recorded. If not, raise the frame or lower the axle as necessary to restore the original distance.
 - a. If the vehicle is raised with an axle contact hoist, then place axle stands under the frame and lower the axle as needed.
 - b. If the vehicle is raised with a frame contact hoist, then place axle stands under the axle and raise or lower the frame as needed.
 - c. If the vehicle is raise with a jack and supported with axle stands on the frame, then use a floor jack to lower the axle.

ASSEMBLING THE AIR SPRING

1. Set a roll plate (D) on both ends of the air spring (A).

NOTE

The radiused (rounded) edge of the roll plate will be towards the air spring, so that the air spring is seated in both roll plates (Fig. 4)

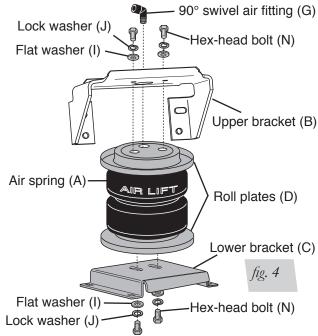
- Install a 90° swivel air fitting (G) finger tight plus 1 and 1/2 turns. Use a 9/16" open end wrench being careful to tighten on the metal hex nut only. DO NOT OVERTIGHTEN. This fitting is precoated with sealant.
- 3. Place the upper bracket (B) onto the top of the bellow and roll plate with the legs facing down. Guide the swivel fitting through the large slotted hole in the center (Fig. 4).
- 4. Place the lower bracket (C) on the air spring so that the flat edge of the lower bracket mounts toward the legs of the upper bracket (inboard) (Fig. 4).
- 5. Attach the upper bracket to the assembly using 3/8" flat washers (I), lock washers (J), and hex head bolts (N) (Fig. 4). Tighten securely.



NOTE

Remember that the legs face down.

 Loosely attach the lower bracket to the assembly using 3/8" flat washers (I), lock washers (J), and hex-head bolts (N) (Fig. 4).



POSITIONING THE BRACKETS

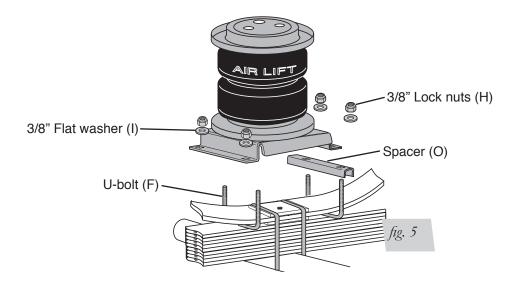
1. Set the air spring assembly on the leaf spring over the axle (Fig. 1)

NOTE

This kit can only be mounted with the upper bracket in a legs down position and with the upper bracket reinforcement lip up.

ATTACHING THE LOWER BRACKET

- 1. Place the short U-bolts (F) under the frame contact overload springs with the threads facing up (Fig. 5).
- 2. Place the spacer (O), legs down, on the front side of the lower bracket between the frame contact overload and the lower bracket (Fig. 5).
- 3. Attach the lower bracket to the frame contact overload using 3/8" flat washers (I) and 3/8" lock nuts (H) (Fig. 5).
- 4. Tighten securely.





INSTALLING THE UPPER BRACKET

NOTE

FOR DRIVER'S SIDE ONLY: It will be necessary to remove the bolt holding the emergency brake cable bracket.

CAUTION

BEFORE DRILLING, CHECK THE BACK SIDE OF THE FRAME FOR CLEARANCE ISSUES WITH THE BRAKE LINES, GAS LINES, AND ELECTRICAL LINES. ANY OBSTACLES WILL NEED TO BE TEMPORARILY RELOCATED TO CLEAR THE AREA.

NOTE

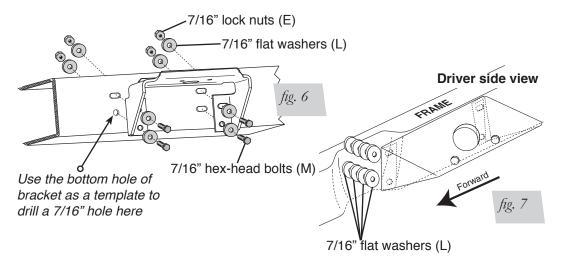
Most or all of the existing holes and slots in the frame do not exist on 2008 or later models. They must be drilled on these vehicles. It may be necessary to set the assembly on the spring to properly mark the holes to be drilled on the frame using the upper bracket as a template.

- 1. Align the assembly with the three slots in the frame. There must be sufficient clearance between the air spring, the frame, the tire, and the brake drum when the air spring is at the maximum inflated diameter of 8.0".
- 2. Using the bottom rear hole of the upper bracket as a template, center punch and drill one 7/16" hole through the frame (Fig. 6).
- 3. Drill out the remaining three slots to 7/16" on both the driver side and passenger side.
- 4. Attach the upper bracket using the 7/16" hex-head bolts (M), the 7/16" large flat washers (L), and the 7/16" lock nuts (E) (Fig. 6).

NOTE

FOR DRIVER'S SIDE ONLY: There is an indent in the frame for the shock bracket. When installing the upper bracket, it will be necessary to add four 7/16" flat washers (L) on the top and bottom bolts between the frame and the bracket to properly mount the upper bracket. Fastening hardware is the same as listed in the previous step with the addition of the flat washers (L) (Fig. 7).

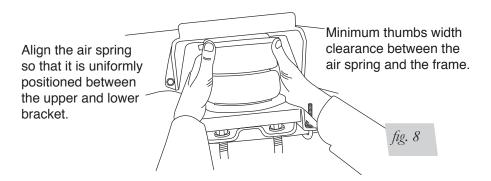
5. Tighten the installed nuts to 44 lb.-ft (60Nm).



CHECKING THE AIR SPRING ALIGNMENT

- 1. With the air spring still loose in the lower brackets, align the air spring, inboard and outboard, using the slotted holes in the bracket so that it is uniformly positioned between the brackets (Fig. 8).
- 2. Maintain at least a thumbs width of clearance between the air spring (uninflated) and the frame (Fig. 8).





SECURING THE AIR SPRING TO THE BRACKETS

NOTE

Push the roll plate outboard before tightening the lower bracket.

- 1. Secure the air spring to the lower brackets using an open-ended 9/16" wrench by tightening the two bolts on the bottom of the spring assembly.
- 2. When both sides are installed, check all hardware to ensure that all is secure.



Installing the Air Lines

This section explains how to set up the air spring kit to be controlled with Schrader valves and a separate compressed air source. An on-board air compressor system allows for hassle-free control of the air springs. Learn more about Air Lift control systems at www.airliftcompany.com/products/compressor-systems.

- Choose a convenient location for mounting the inflation valves (Fig. 9). Popular locations for the inflation valve are:
 - a. The wheel well flanges
 - b. The license plate recess in bumper
 - c. Under the gas cap access door
 - d. Through the license plate

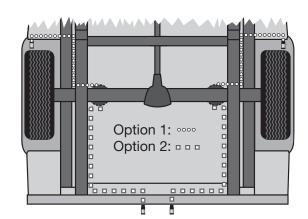
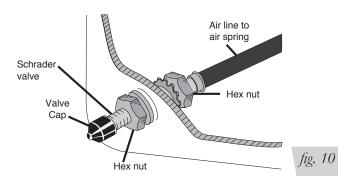


fig. 9

NOTE

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

- 2. Drill 5/16" holes to install the inflation valves.
- 3. Cut the air line assembly in two equal lengths.
- 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. 10).

- 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 fitting on the air spring. Keep AT LEAST 6" of clearance between the air line and the exhaust system. Avoid sharp bends and edges. Use zip ties to secure the air line to fixed 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.
- 7. Cut off the air line, leaving approximately 12" of extra air line. A clean square cut will prevent leaks. Insert the air line into the air fitting. This is a push-to-connect fitting.

TECH TIP

Wiggle the hose back and forth while inserting to make sure the hose bottoms out in the fitting to obtain a good seal.



TIPS FOR INSTALLING AIR LINES

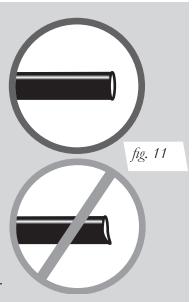
When cutting air lines, use a sharp knife or a hose cutter and make clean, square cuts (Fig. 11). Do not use scissors or wire cutters because these tools may deform the air line, causing it to leak around fittings. Do not cut the lines at an angle.

Do not bend the 1/4" hose at a radius of less than 1" or bend the 3/8" hose at a radius of less than 1 1/2". Do not put side load pressure on fitting. The hose should be straight beyond the fitting for 1" before bending.

Inspect hose for scratches that run lengthwise on hose prior to installation. Contact Air Lift customer service at **(800) 248-0892** if the air line is damaged.



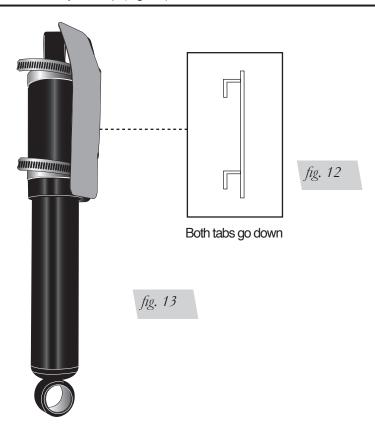
Go to air-lift.co/cuttingairline to watch a video demonstrating proper air line cutting.



INSTALLING THE HEAT SHIELD (ON V10 TRITON MODELS)

NOTE

V10 Triton models with shock heat shield: If the vehicle is a late model that has a V10 Triton engine with a shock heat shield which was removed in the "Getting Started" section, bend the tabs on the replacement shock heat shield (P) and attach to the shock using the clamps provided (Fig. 12). Fold the replacement shock heat shield (P) around the shock and bend the top tabs so they overlap (Fig. 13)





Before Operating

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 PSI.

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. 11). Reinsert the air line into the push-to-connect fitting.
 - b. Check the threaded connection by tightening the swivel fitting another half 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.



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

3. If the preceding steps have not resolved the problem, call Air Lift customer service at (800) 248-0892.



INSTALLATION CHECKLIST

	Clearance test — Inflate the air springs to 75-90 PSI and make sure there is at least 1/2" clearance from anything that might rub against each sleeve. Be sure to check the tire, brakes, frame, shock absorbers and brake cables.
	Leak test before road test — Inflate the air springs to 75-90 PSI and check all connections for leaks. All leaks must be eliminated before the vehicle is road tested.
	Heat test — Be sure there is sufficient clearance from heat sources, at least 6" for air springs and air lines. If a heat shield was included in the kit, install it. If there is no heat shield, but one is required, call Air Lift customer service at (800) 248-0892 .
	Fastener test — Recheck all bolts for proper torque.
	Road test — The vehicle should be road tested after the preceding tests. Inflate the springs to recommended driving pressures. 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.
F	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 — It is important to understand the air pressure requirements of the air spring system. Regardless of load, the air pressure should always be adjusted to maintain adequate ride height at all times while driving.
	Thirty-day or 500-mile test —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.



Product Use, Maintenance and Servicing

Minimum Recommended Pressure

5 PSI

Maximum Air Pressure

100 PSI

MAINTENANCE GUIDELINES

NOTE

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

- 1. Check air pressure weekly.
- 2. Always maintain normal ride height. Never inflate beyond 100 PSI.
- 3. If the system develops an air leak, use a soapy water solution (1/5 liquid dish soap and 4/5 water) to check all air line connections and the inflation valve core before deflating and removing the air spring.



FOR SAFETY AND TO PREVENT POSSIBLE DAMAGE TO THE VEHICLE, DO NOT EXCEED MAXIMUM GROSS VEHICLE WEIGHT RATING (GVWR), AS INDICATED BY THE VEHICLE MANUFACTURER. ALTHOUGH THE AIR SPRINGS ARE RATED AT A MAXIMUM INFLATION PRESSURE OF 100 PSI, THE AIR PRESSURE ACTUALLY NEEDED IS DEPENDENT ON LOAD AND GVWR.

- 4. Loaded vehicles require at least 25 PSI. A "loaded vehicle" refers to a vehicle with a heavy bed load, a trailer or both. Never exceed GVWR, regardless of air spring, air pressure or other load assist. The springs in this kit will support approximately 40 pounds of load (combined on both springs) for each 1 PSI of pressure. The required air pressure will vary depending on the state of the original suspension. Operating the vehicle below the minimum air spring pressure will void the Air Lift warranty.
- 5. When increasing load, always adjust 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.
- 6. Always add air to springs in small quantities, checking the pressure frequently.
- 7. Should it become necessary to raise the vehicle by the frame, make sure the system is at minimum pressure (5 PSI) to reduce the tension on the suspension/brake components. Use of on-board leveling systems do not require deflation or disconnection.
- 8. Periodically check the air spring system fasteners for tightness. Also, check the air springs for any signs of rubbing. Realign if necessary.
- 9. On occasion, give the air springs a hard spray with a garden hose to remove mud, sand, gravel or other debris.



TUNING THE AIR PRESSURE

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

1. Level vehicle

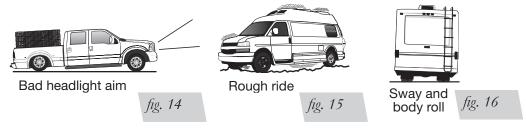
If the vehicle's headlights are shining into the trees or the vehicle is leaning to one side, then it is not level (Fig. 14). Raise the air pressure to correct either of these problems and level the vehicle.

2. Ride comfort

If the vehicle has a rough or harsh ride it may be due to either too much pressure or not enough (Fig. 15). Try different pressures to determine the best ride comfort.

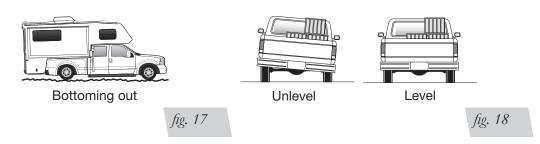
3. Stability

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. 16). 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. If the front of the vehicle dives while braking, increase the pressure in the front air bags, if equipped.
- 4. If it is ever suspected that the air bags have bottomed out, increase the pressure (Fig. 17).
- 5. Adjust the pressure up and down to find the best ride.
- 6. If the vehicle rocks and rolls, adjust the air pressure to reduce movement.
- 7. 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. 18). As much as a 50 PSI difference is not uncommon.





Troubleshooting Guide

PROBLEM	CAUSE	SOLUTION
System won't maintain pressure overnight.	Improperly installed air line, air line has holes or cracks.	Leak test the air line connections, the threaded connection into the air spring, and all fittings in the control system.
Air spring or air line leak.	Fitting seal or air line is compromised.	Check to make sure air lines are seated in connectors. Inspect fittings with soapy water. Trim hose or re-seal fitting. Ensure lines are cut straight.
Corner won't raise or air leak develops.	Look for a kink or fold in the air line.	Replace any air line that has been kinked.

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?

For LoadLifter 5000, the recommended minimum air pressure is 5 PSI, but it can safely be run at zero air pressure unladen (no load).

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.



Notes



Limited Warranty and Return Policy

Air Lift Company provides a limited lifetime warranty to the original purchaser of its Load Support products, that the products will be free from defects in workmanship and materials when used on cars and trucks as specified by Air Lift Company and under normal operating conditions, subject to the requirements and exclusions set forth in the full Limited Warranty and Return Policy that is available online at www.airliftcompany.com/warranty.

For additional warranty information contact Air Lift Company customer service.

Replacement Part Information

If replacement parts are needed, contact the local dealer or call Air Lift customer service at **(800) 248-0892**. Most parts are immediately available and can be shipped the same day.

Contact Air Lift Company customer service at (800) 248-0892 first if:

- Parts are missing from the kit.
- Need technical assistance on installation or operation.
- Broken or defective parts in the kit.
- Wrong parts in the kit.
- Have a warranty claim or question.

Contact the retailer where the kit was purchased:

- If it is necessary to return or exchange the kit for any reason.
- If there is a problem with shipping if shipped from the retailer.
- If there is a problem with the price.

Contact Information

Phone

Mailing address P.O. Box 80167

Lansing, MI 48908-0167

Shipping address 2727 Snow Road for returns Lansing, MI 48917

Carloing, Wil 10017

International: (517) 322-2144

Toll free: (800) 248-0892

Email service@airliftcompany.com

Web address www.airliftcompany.com

Need Help?

Contact Air Lift Company customer service department by calling (800) 248-0892. For calls from outside the USA or Canada, dial (517) 322-2144.



Thank you for purchasing Air Lift products — the professional installer's choice!