

by AIR LIFT

Kit No. 57105

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.

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### Introduction

The purpose of this publication is to assist with the installation, maintenance and troubleshooting of the LoadLifter5000 air spring kit. LoadLifter5000 utilizes sturdy, reinforced, commercial grade single or double, depending on the kit, convolute air springs. The air springs are manufactured like a tire with layers of rubber and cords that control growth. LoadLifter5000 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 p.s.i. The kits are also used in motor home rear kits and some motor home 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. Contact Air Lift Company at (800) 248-0892 or visit us online at www.airliftcompany.com for the latest version of this manual.

#### **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.

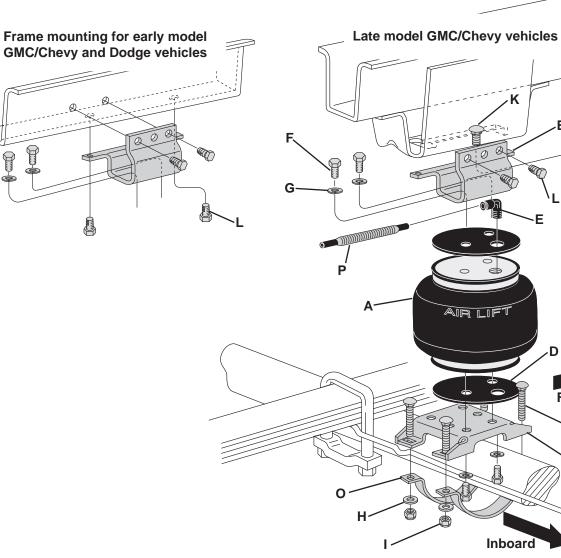
**Payload:** The combined, maximum allowable weight of cargo and passengers that the truck is designed to carry. Payload is GVWR minus the Base Curb Weight.

### 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.
<b>A</b> 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.





#### HARDWARE LIST

Item	Part #	DescriptionQty	ltem	Part #	DescriptionQty
Α	58736	Air spring2	Ν	18431	½" Hex nut2
В	07875	Upper bracket2	0	01815	Axle strap4
С	03230	Lower bracket2	Р	09484	Thermal sleeve1
D	10485	Backer plate4	Q	10613	Heat shield1
E	21837	Elbow fitting2	R	10741	Heat shield clamp2
F	17203	3/8"-24 x 7/8" Bolt8	S	10551	Hose clip4
G	18427	3/8" Lock Washer8	AA	20086	Air line assembly1
Н	18444	3/8" Flat washer8	BB	10466	Tie strap6
I I	18435	3/8" Nyloc nut8	CC	21230	Valve cap2
J	17141	3/8"-16 x 2/5" Carriage bolt	DD	18405	5/16" Flat washer2
K	17150	1/2"-13 x 1" Carriage bolt2	EE	21234	Rubber washer2
L	17129	3/8" x 1" Self tapping bolt8	FF	18411	Star washer2
М	18429	1/2" Lock washer2	GG	21233	5/16" Hex nut4



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

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fig. 1



### **TOOLS LIST**

DescriptionQty	DescriptionG	עלצ
Hoist or floor jacks 1	Ratchet with 9/16", metric, & 1/2" deep well	2
Safety stands2	sockets	1
Safety glasses 1	3/8" and 5/16" drill bits (very sharp)	2
Torque wrench1	Heavy duty drill	1
7/16" and 9/16" open-end or box wrench 1	Hose cutter, razor blade, or sharp knife	1
Crescent wrench 1	Air compressor or compressed air source	1
3/8" Nut driver 1	Spray bottle with dish soap/water solution	1

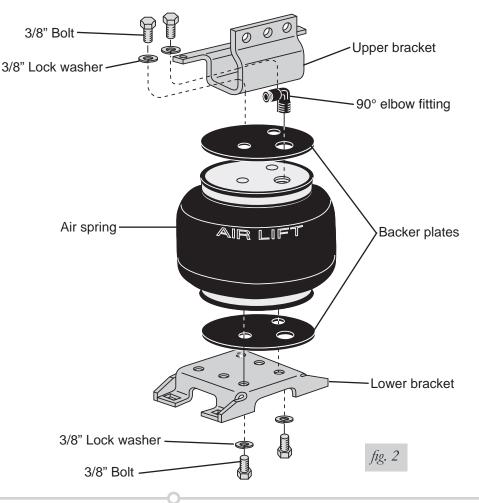
# Installing the LoadLifter5000 System

🛕 DANGER

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.

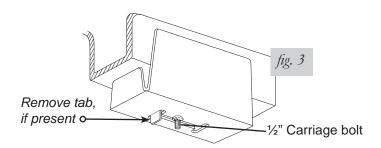
### **ASSEMBLING THE AIR SPRING**

- 1. Place the backer plate on the top of the air spring.
- 2. Install 90° elbow fitting to the top of the air spring. Tighten finger tight plus 1<sup>1</sup>/<sub>2</sub> turns. Be careful to only tighten on the metal hex nut. Do not over tighten.
- 3. Set the upper bracket onto the air spring. Make sure that the air fitting port is on the same side as the vertical leg. Attach the air spring bracket assembly using 3/8" bolts and 3/8" lock washers. Tighten to 20 ft/lbs (fig. 2).





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	4. Place the lower bracket onto the air spring assembly in an offset position (fig. 2).
NOTE	The air spring assembly will offset (over hang) the lower bracket. Make sure that the offset is on the air fitting side of the assembly.
	<ol> <li>Use the template provided on page 13 to determine the correct holes for mounting. Use the holes marked by an "A" for air spring mounting.</li> </ol>
	<ol> <li>Insert a 3/8" bolt and a 3/8" lock washer through the holes marked with an "A" to attach the lower bracket and backer plate to the assembly. Again, be sure that the air spring is offset to the fitting side. Tighten hardware to 20 ft/lbs (fig. 2).</li> </ol>
	REMOVING THE JOUNCE BUMPER
	1. Late Model GMC/Chevy
	a. Use a screwdriver to remove/pry the rubber jounce bumper from the metal bracket on the frame rail.
	b. Insert a <sup>1</sup> / <sub>2</sub> " carriage bolt into the jounce bumper track with the carriage head inside of the track (fig. 3).
	c. Some models may have a small tab at the end of the slot that will interfere with upper bracket mounting (fig. 3). This tab will need to be removed. Either bend it back with a hammer or grind it off.



#### 2. All Dodge and early model GMC/Chevy

- a. Some early GMC/Chevy models have the jounce bumper on the side of the frame rail. The entire jounce bumper and bracket assembly must be removed in order to mount the upper bracket. Unbolt, chisel, or grind off so that the bottom of the frame rail is smooth.
- b. On all Dodge vehicles, remove the two bolts holding the jounce bumper to the frame rail and remove the jounce bumper and bracket. Be sure that the bottom of the frame rail is smooth.

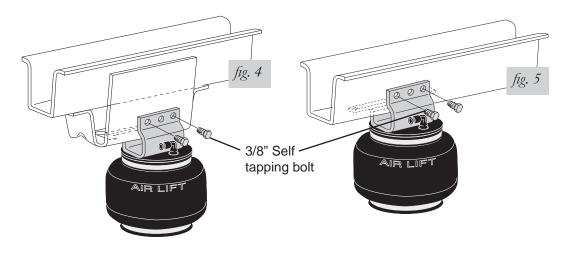
### ATTACHING THE UPPER BRACKET

#### 1. Late Model GMC/Chevy

- a. Set the air spring assembly on the axle housing and guide the carriage bolt through the large center hole in the upper bracket.
- b. Loosely attach with a <sup>1</sup>/<sub>2</sub>" lock washer and <sup>1</sup>/<sub>2</sub>" hex nut. See fig. 4. The mounting holes on the end of the extended tabs on the upper bracket are not used on the late model GM applications.
- c. Adjust the assembly in the slot of the upper bracket so that the top is aligned with the lower bracket. Tighten the 1/2° hex nut with an open end wrench.
- d. Using the upper bracket as a template, center punch and drill two of the three holes on the inside of the frame rail. Use a <sup>5</sup>/<sub>16</sub>" bit, no larger.
- e. Install two <sup>3</sup>/<sub>8</sub>" self tapping frame bolts and tighten to 15 ft/lbs (fig. 4). The upper bracket is now attached.

#### 2. All Dodge and Early Model GMC/Chevy

- a. Set the assembly on the axle housing and align the lower bracket to the upper bracket.
- b. Using the upper bracket as a template, center punch and drill two of the three holes on the inside of the frame rail. Use a 5/16" bit, no larger.
- c. Install two 3/8" self tapping frame bolts and tighten to 15 ft/lbs (fig. 5).



#### ATTACHING THE LOWER BRACKET

1. Insert four <sup>3</sup>/<sub>8</sub>" carriage bolts into the holes in the lower bracket (fig. 6).

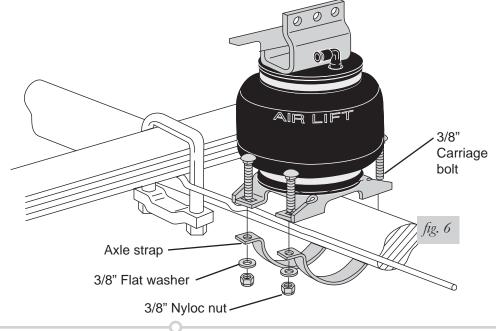
**NOTE** Late model Dodge will have a tapered axle. The outboard edge of the lower bracket will rest on the tapered end of the axle. The inboard edge will rest on the non-tapered part of the axle. This will put the lower bracket in a slightly tilted position, but will not effect the function of the kit.

2. Secure the lower bracket to the axle using the axle straps, flat washers, and lock nuts. Refer to fig. 6.

#### **CAUTION**

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DO NOT PINCH THE BRAKE LINE UNDER THE AXLE CLAMP. IN SOME CASES THE AXLE CLAMP WILL GO BEHIND THE BRAKE LINE. IT MAY BE NECESSARY TO TIGHTEN THE STRAP ON THE OPPOSITE SIDE OF THE AXLE FIRST SO THAT THE STRAP WILL BE BELOW THE BRAKE LINE.





- 3. Tighten lock nuts to 20 ft/lbs, being sure to cross tighten.
- 4. Repeat installation on the other side of the vehicle.

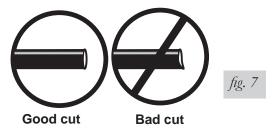
#### **INSTALLING THE AIR LINES**

- 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.

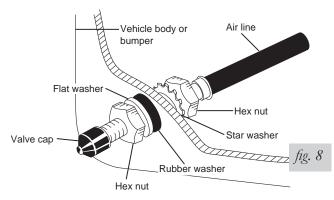
What ever the chosen location is, make sure there is enough clearance around the inflation valves for an air chuck.

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

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).



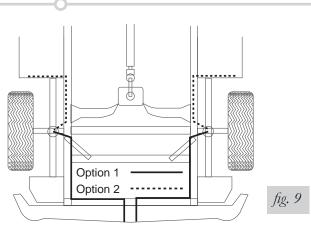
4. Place a 5/16" nut and a star washer on the air valve. Leave enough of the inflation valve in front of the nut to extend through the hole and have room for the rubber washer, flat washer, and 5/16" nut and cap. There should be enough valve exposed after installation - approximately ½" - to easily apply a pressure gauge or an air chuck (fig. 8).



- 5. Push the inflation valve through the hole and use the rubber washer, flat washer, and another 5/16" nut. Tighten the nuts to secure the assembly in place (fig. 8).
- 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.

#### NOTE

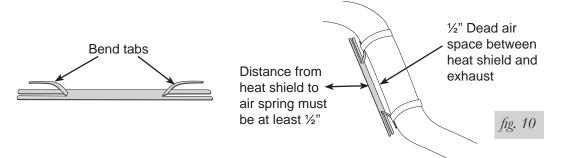
CAUTION



- 7. On the passenger side only, place the provided thermal sleeve on the air line near the exhaust.
- Cut off air line leaving approximately 12" of extra air line. A clean square cut will ensure against leaks (see fig. 7). 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).

### **INSTALLING THE HEAT SHIELD**

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



### CHECKING FOR LEAKS

- 1. Inflate the air spring to 30 p.s.i. and spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water to check for leaks. Spot leaks easily by looking for bubbles in the soapy water.
- 2. After the test, deflate the springs to the minimum pressure required to restore the normal ride height, no less than 5 p.s.i.
- 3. Check the air pressure again after 24 hours. A 2-4 p.s.i. 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

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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.

DO NOT CUT THE AIR LINE COMPLETELY OFF AS THIS WILL 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 for assistance.

## **Before Operating**

#### INSTALLATION CHECKLIST

- Clearance test Inflate the air springs to 60 p.s.i. 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 60 p.s.i. and check all connections for leaks. Refer to "Checking for Leaks" on page 9. 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.

3/8" Hex head bolts ...... 20 ft/lbs Carriage bolt lock nuts...... 20 ft/lbs Self tapping frame bolts...... 15 ft/lbs

- Road test The vehicle should be road tested after the preceding tests. Inflate the springs to 10 p.s.i. for a van, 40 p.s.i. for a motorhome or until the vehicle is level. 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 p.s.i., 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 and also that I must inflate the air springs until ride height has been restored. 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.

A CAUTION



# **Maintenance and Servicing**

Minimum Air Pressure	Maximum Air Pressure		
Motorhomes and Commercial Chassis			
40 p.s.i.	100 p.s.i.		
Passenger Vans			
5 p.s.i.	100 p.s.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.			

### MAINTENANCE GUIDELINES

NOTE

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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 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 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.

#### **A**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 P.S.I., 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 (5 p.s.i.) 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 9 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.



### **Warranty and Returns Policy**

Air Lift Company warrants its products, for the time periods listed below, to the original retail purchaser against manufacturing defects when used on catalog-listed applications on cars, vans, light trucks and motorhomes under normal operating conditions for as long as Air Lift manufactures the product. The warranty does not apply to products that have been improperly applied, improperly installed, used in racing or off-road applications, used for commercial purposes, or which have not been maintained in accordance with installation instructions furnished with all products. The consumer will be responsible for removing (labor charges) the defective product from the vehicle and returning it, transportation costs prepaid, to the dealer from which it was purchased or to Air Lift Company for verification.

Air Lift will repair or replace, at its option, defective products or components. A minimum \$10.00 shipping and handling charge will apply to all warranty claims. Before returning any defective product, you must call Air Lift at (800) 248-0892 in the U.S. and Canada (elsewhere, (517) 322-2144) for a Returned Materials Authorization (RMA) number. Returns to Air Lift can be sent to: Air Lift Company • 2727 Snow Road • Lansing, MI • 48917.

Product failures resulting from abnormal use or misuse are excluded from this warranty. The loss of use of the product, loss of time, inconvenience, commercial loss or consequential damages is not covered. The consumer is responsible for installation/reinstallation (labor charges) of the product. Air Lift Company reserves the right to change the design of any product without assuming any obligation to modify any product previously manufactured.

This warranty gives you specific legal rights and you may also have other rights that vary from state-to-state. Some states do not allow limitations on how long an implied warranty lasts or allow the exclusion or limitation of incidental or consequential damages. The above limitation or exclusion may not apply to you. There are no warranties, expressed or implied including any implied warranties of merchantability and fitness, which extend beyond this warranty period. There are no warranties that extend beyond the description on the face hereof. Seller disclaims the implied warranty of merchantability. (Dated proof of purchase required.)

Air Lift 1000Lifetime Limited	LoadController/Dual 2 Year Limited
RideControlLifetime Limited	Load Controller (I) 2 Year Limited
LoadLifter 5000*Lifetime Limited	Load Controller (II) 2 Year Limited
SlamAir Lifetime Limited	SmartAir2 Year Limited
AirCellLifetime Limited	Wireless AIR2 Year Limited
Air Lift Performance** 1 Year Limited	WirelessONE2 Year Limited
LoadController/Single 2 Year Limited	Other Accessories 2 Year Limited

\*formerly SuperDuty \*formerly LifeSTYLE & Performance and EasyStreet



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If you need replacement parts, 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**

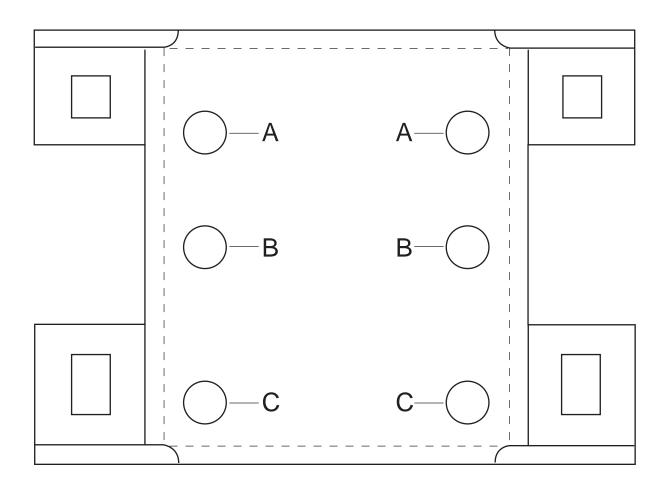
If you have any questions, comments or need technical assistance, contact our customer service department by calling (800) 248-0892, Monday through Friday, 8 a.m. to 8 p.m. Eastern Time. For calls from outside the USA or Canada, our local number is (517) 322-2144.

For inquiries by mail, our address is PO Box 80167, Lansing, MI 48908-0167. Our shipping address for returns is 2727 Snow Road, Lansing, MI 48917.

You may also contact us anytime by e-mail at sales@airliftcompany.com or on the web at www.airliftcompany.com.



# **Lower Bracket Template**



# **Need Help?**

Contact our customer service department by calling (800) 248-0892, Monday through Friday, 8 a.m. to 8 p.m. Eastern Time. For calls from outside the USA or Canada, our local number is (517) 322-2144.

Register your warranty online at www.airliftcompany.com/warranty



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

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