







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
Important Safety Notice
Notation Explanation
Installation Diagram
Hardware List
Tools List
Installing the SuperDuty System
5th Wheel Hitch
Getting Started
Special Application Instructions
Assembling the Air Spring Unit
Positioning the Brackets
Attaching the Lower Bracket
Attaching the Upper Bracket
Securing the Air Spring to the Brackets
Installing the Air Lines
Reinstalling the Fenderwell Liner (Late Model 4WD Dodge Only)10
Checking For Leaks
Product Use and Maintenance
Minimum and Maximum Air Pressure
Product Use
Tuning the Air Pressure
Maintenance Guidelines
Warranty and Return Policy 13
Replacement Information14
Contact Information14



The purpose of this publication is to assist with the installation, maintenance and troubleshooting of the SuperDuty air spring kit. SuperDuty 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. SuperDuty kits are recommended for most <sup>3</sup>/<sub>4</sub> 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 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. Contact Air Lift Company at (800) 248-0892 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 pasengers that the vehicle 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.

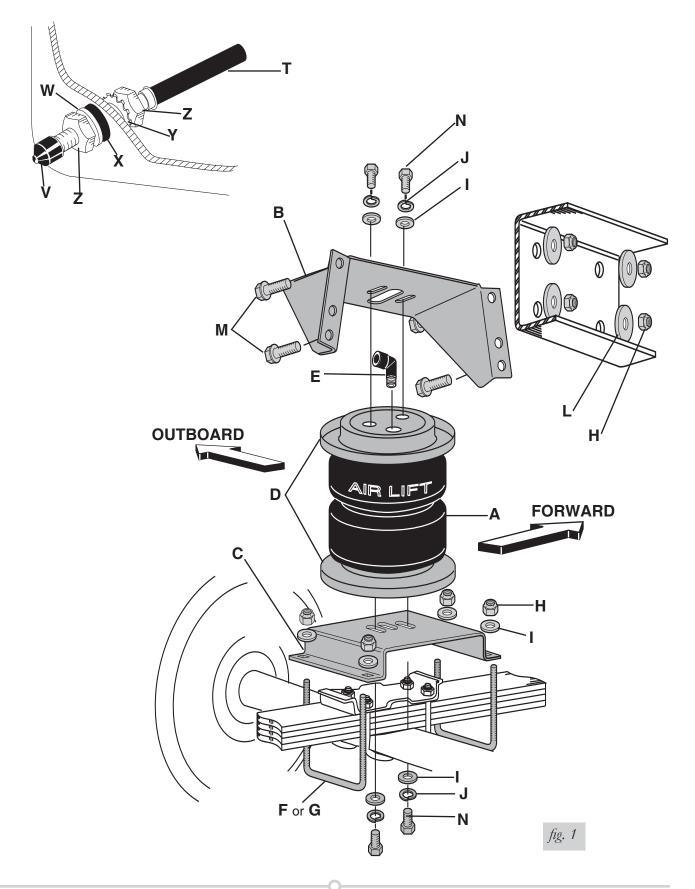
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NOTE

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



# **Installation Diagram**





#### HARDWARE LIST

Item	Part #	Description Qty	Doo	dge Fend	erwell Spacer Parts
A	58437	Bellow2	Р	17182	1/2" x 2" HHCS*2
В	07475	Upper Bracket2	Q	20947	Fenderwell Liner Spacer*2
С	03102	Lower Bracket2	R	18419	10/32" Flat Washer*6
D	11951	Roll Plate4	S	18425	1/4" Nyloc Nut*2
E	33606	Elbow Fitting2			
F	10594	2" U-Bolt4	Air	Line Ass	embly
G	10583	4.5" U-Bolt4	т	20086	Air Line Assembly*1
H	18435	Nyloc Nut16	Ŭ	10466	Tie Strap*6
I	18444	3/8" Flat Washer16	v	21230	Valve Caps2
J	18427	3/8" Lock Washer8	Ŵ	18405	5/16" Flat Washer2
K	13377	Upper Bracket Spacer*8	X	21234	Rubber Washer2
L	18447	3/8" Large Flat Washer8	Y	18411	Small Star Washer2
Μ	17159	3/8" x 1.5" Washer Head Frame Bolt8	z	21233	5/16" Hex Nut4
N	17203	3/8" x 7/8" Hex Head Cap Screw8			
0	01525	Spacer Bar*4	*Not sl	hown in figi	ure 1

If any parts are missing from the kit, contact Air Lift customer service at (800) 248-0892.

# **Installing the SuperDuty System**

#### **5TH WHEEL HITCH**

NOTE

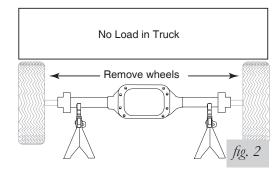
**FOR FORD TRUCKS ONLY**: If you have a Reese-style 5th wheel hitch kit installed and you have purchased kit #57215, you need to order kit #57342 or contact Air Lift customer service for the correct brackets at (800) 248-0892, ext. 1. Ask for bracket kit #26275.

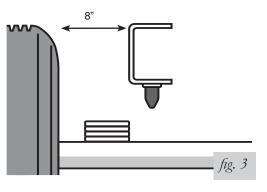
#### 🛕 DANGER

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.

#### **GETTING STARTED**

1. Support the axle with jack stands, remove the wheels, and raise or lower to obtain normal ride height (figs. 2 and 3).

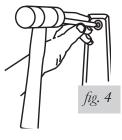






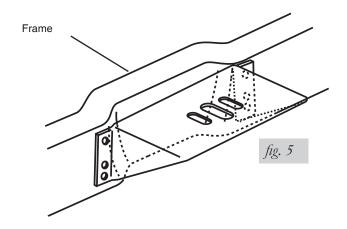
#### SPECIAL APPLICATION INSTRUCTIONS

- 1. 1994 model and newer Dodge 4WD pickups only:
  - It will be necessary to remove the inner fenderwell liner on late model 4WD Dodge trucks. This is done by carefully driving the pin through the fasteners with a center punch (fig. 4). These fasteners will be reused along with a special spacer to reattach the line and provide clearance for the air spring. (See page 10 for reinstallation instructions.)



#### 2. Ford trucks only:

When installing the upper bracket on an F-250 or F-350, the mounting bolt holes can line up directly over the indent in the frame. This is an acceptable situation and is an approved method of installation for the product (fig. 5). Torque the mounting hardware to specifications, as noted. Do not over torque.

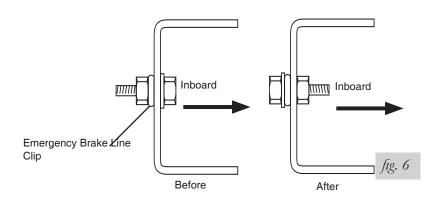


#### 3. For 1999 and later SuperDuty F-250 and F-350 trucks:

Remove the bolt which holds the emergency brake cable to the outside of the frame rail. Reinstall the bolt in the reverse order, with the nut on the inside of the frame rail, to prevent rubbing against the air spring (fig. 6).



FAILURE TO SWITCH THIS BOLT WILL CAUSE AIR SPRING TO RUPTURE.

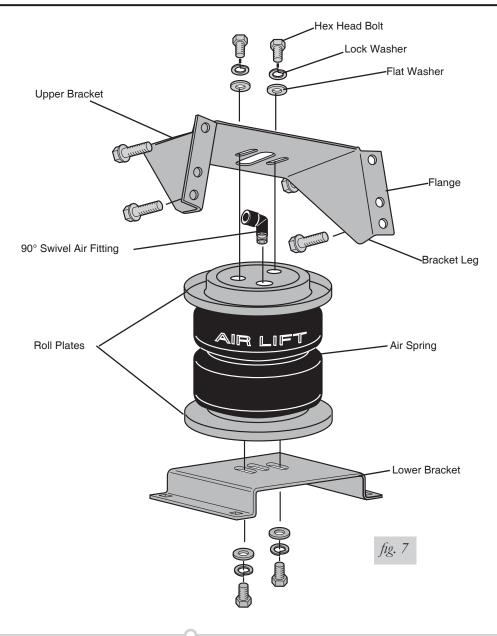


#### ASSEMBLING THE AIR SPRING UNIT

See fig. 7 below for assembly.

- 1. Set a roll plate on both ends of the air spring. 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.
- 2. Install a  $90^{\circ}$  swivel air fitting. It should only be finger tight plus  $1^{1}/_{2}$  turns. Do not overtighten.
- 3. Place the upper bracket onto the top of the airspring and roll plate with the legs facing down.
- 4. Set the air spring on the lower bracket aligning the two holes in the base of the air spring with the two outer slots in the top of the lower bracket.
- 5. Loosely attach the upper bracket to the assembly using flat washers, lock washers, and hex head bolts. Remember that the bracket legs face down.
- 6. Loosely attach the lower bracket to the assembly using flat washers, lock washers, and hex head bolts.

The flange on the bracket must face the outside (tire-side) of the vehicle.



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NOTE



#### **POSITIONING THE BRACKETS**

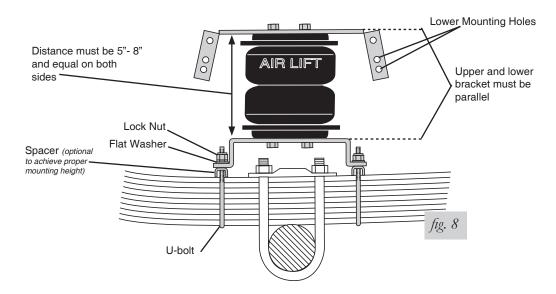
1. The air spring must be installed between 5" and 8" from both the upper bracket to the lower bracket (fig. 8). It is best to position the upper bracket as high as possible.

NOTE

Failure to mount the air spring at the recommened height can result in the air spring bottoming out.

The top rear mounting hole may be above the frame rail. If this condition exists, use the two lower mounting holes to mount the bracket (fig. 8).

- 2. Set the air spring assembly on the leaf spring over the axle (fig. 8).
- Position the upper bracket so that at least four bolt holes (two on each side) will be on the flat section of the frame rail. Keep the edge of drilled holes no closer than <sup>3</sup>/<sub>4</sub>" from the top or bottom radius of the frame rail.
- 4. In some cases, it may be necessary to use the optional spacers to achieve the 5"- 8" space (fig. 8). For example, if only the top two holes contact above the lower radius edge of the frame rail, it may be necessary to move up the spacers under the lower bracket to achieve mounting height.

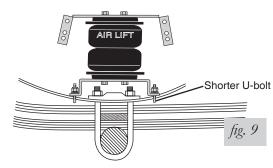


#### ATTACHING THE LOWER BRACKET

1. If the spacer is not used, attach the lower bracket securely using the provided U-bolts, flat washers, and lock nuts. Torque nuts to 16 ft/lbs. See figures 1 and 9.

Use shorter U-Bolts when attaching to frame contact overload springs.

 If the spacer is used, place the spacers legs down on the leaf spring and attach the lower bracket securely using the provided U-bolts, flat washers, and lock nuts. Torque nuts to 16 ft/lbs (fig. 9).



NOTE

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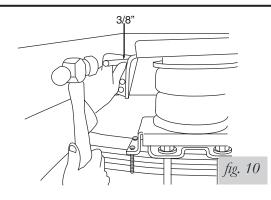
#### ATTACHING THE UPPER BRACKET

### A 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.

- 1. Position the upper bracket so that it is parallel with the lower bracket and align the assembly vertically and horizontally.
- 2. Using the upper bracket as a template, center punch and drill one <sup>3</sup>/<sub>8</sub>" locator hole through the frame at one of the top bolt holes (fig. 10).

After achieving the proper alignment, repeat for the opposite side of the bracket.

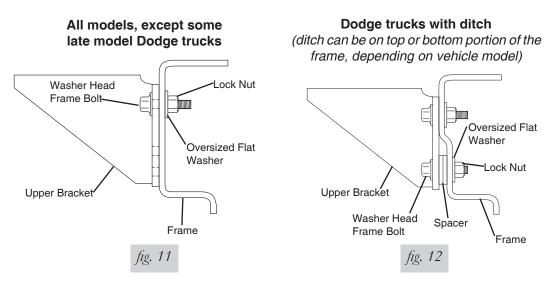


3. Except for Dodge vehicles, loosely install a washer head frame bolt, oversized flat washer), and lock nut (fig. 11).

**For Dodge trucks only**: The top two, or the bottom two, holes (depending on the model of the truck) wil fall into a horizontal indentation. Spacers are provided to compensate for the indentation. Loosely install a washer head frame bolt, two upper bracket spacers, an oversized flat washer, and a lock nut for such instances (fig. 12).

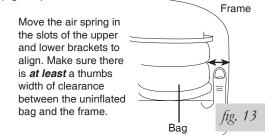
4. Install a washer head frame bolt, oversized flat washer, and lock nut.

For Dodge trucks only: It may be necessary to add two of the provided spacers (fig. 12).





- 5. Remove the clamps and drill the remaining two holes. Install the appropriate hardware and torque the nuts to 44 ft/lbs.
- 6. Align the air spring uniformly between the upper and lower brackets and check the air spring alignment (fig. 13).



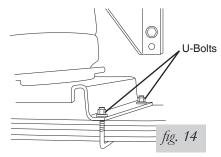
#### SECURING THE AIR SPRING TO THE BRACKETS

1. Secure the air spring to the upper and lower brackets using an open ended <sup>9</sup>/<sub>16</sub>" wrench by tightening the two bolts on the top and the two bolts on the bottom of the spring assembly.

A CAUTION

DUE TO THE THICKNESS OF THE LEAF SPRING STACK, TRIM ALL FOUR U-BOLTS ON EACH SIDE OF THE VEHICLE TO PREVENT BOTTOMING OUT ON THE UPPER BRACKET (FIG. 14).

2. Check bolts and connectors to ensure that all hardware is secure and repeat the process for the other side of the vehicle.



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

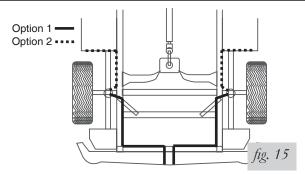
A CAUTION

WHEN INSTALLING THE AIR LINES, THERE MUST BE AT LEAST SIX INCHES OF CLEARANCE BETWEEN THE AIR LINES AND ANY HEAT SOURCES.

- 1. Choose a convenient location for mounting the inflation valves. Popular locations for the inflation valves are: The wheel well flanges; The license plate recess in bumper; Under the gas cap access door; or through the license plate (fig. 15).
- 2. Secure air lines with provided tie straps.

NOTE

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

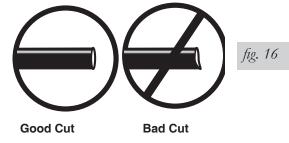


- 3. Drill a  $\frac{5}{16}$  " hole to install the inflation values.
- 4. Cut the air line assembly (AA) in two equal lengths.

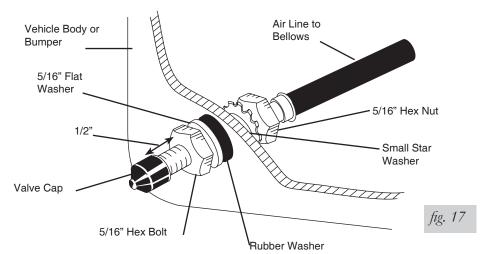
#### 🛕 CAUTION

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WHEN CUTTING OR TRIMMING THE AIR LINE, USE A HOSE CUTTER (AIR LIFT P/N 10530), 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 16).



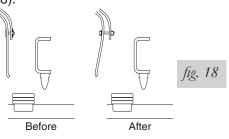
5. Install the inflation valves as shown in fig. 17.



- 6. 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. Leave at least 2" of slack when securing the air lines to allow for any movement that might pull on the air line (fig. 18).
- Cut off air line leaving approximately 12" of extra air line. Insert the air line into the air fitting. Simply push the air line into the 90° swivel fitting until it bottoms out (<sup>9</sup>/<sub>16</sub>" of air line should be in the fitting).

# REINSTALLING THE FENDERWELL LINER — LATE MODEL 4WD DODGE ONLY

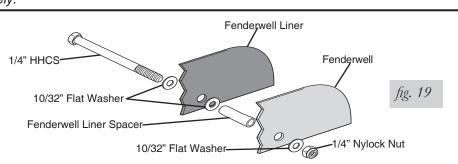
1. If this installation was on a late model 4WD Dodge truck, it is now necessary to reinstall the inner fenderwell liner using the original fasteners and provided spacers to allow for air spring clearance (fig. 18).



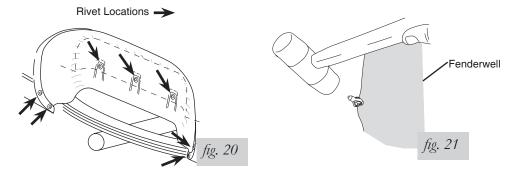


 Place the spacer between the fenderwell liner and the fenderwell at the center hole in the fenderwell liner (the hole nearest the air spring). Attach using the <sup>1</sup>/<sub>4</sub>" Hex Head Cap Screw (HHCS), the <sup>10</sup>/<sub>32</sub>" flat washers, and <sup>1</sup>/<sub>4</sub>" nylock nut provided (fig. 19).

**NOTE** Fasten the HHCS with the washer and nut behind the fenderwell (fig. 19). Tighten securely.



- 3. Replace the remaining fenderwell liner rivets carefully. Push the rivets through the fenderwell liner by hand. They should push through completely (fig. 20).
- 4. From the opposite side, use a rubber mallet and carefully tap the rivet posts back into the rivets in order to secure them properly (fig. 21). Repeat this process for all remaining rivets.



#### **CHECKING FOR LEAKS**

- 1. Inflate the air spring to 30 p.s.i.
- 2. Spray all connections and the inflation valves with a solution of 1/5 liquid dish soap and 4/5 water to check for leaks. You should be able to 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 normal ride height, but not less than 10 p.s.i.
- 4. 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.

# **Product Use & Maintenance**

Minimum Air Pressure	Maximum Air Pressure			
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.				

#### **PRODUCT USE**

The minimum pressure rating must be adhered to at all times, even when the vehicle is unloaded.

- 1. Add the load to the vehicle.
- Add air to the air bags until the vehicle is at level front to back. Adjust the pressure to level the vehicle left to right if necessary. Add more if a possible danger of the suspension bottoming out exists. DO NOT exceed the maximum pressure.
- 3. If the vehicle did not sag below level, add at least 25 p.s.i.

#### TUNING THE AIR PRESSURE

- 1. Minimum pressure will have to be increased for vehicle spring fatigue, unusual driving conditions, and other uses.
- 2. With the air bags adjusted according to the initial setup, test the ride and handling of the vehicle. If the minimum and maximum pressures are observed, the driver and passengers can determine the proper pressure. Pressure determination comes down to three things: level vehicle, ride comfort and stability.
- 3. Raise the pressure until the headlights are where they are supposed to be and the vehicle is not leaning to one side.
- 4. A harsh ride can be the result of either too much pressure or not enough pressure. Try different pressures to determine the best ride comfort.
- 5. 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. As much as a 50 p.s.i. difference is not uncommon.
- 6. When dealing with a pickup truck fitted with contact overload springs, the overload springs may be the source of a harsh ride when a bump is hit because of the overload's quickly building spring rate. Increasing pressure will make the vehicle ride more on air and less on the overloads, thus improving the ride quality.
- 7. If the vehicle is not equipped with overloads and the ride is still stiff, then it could have either too much air in the springs, or it could be the result of having flattened leaf springs.
- 8. Tuning out problems such as roll control, bounce, diving in a brake and sponginess usually requires an increase in pressure.
- 10. If the front of the vehicle dives while breaking, increase the pressure in the front air bags.
- 11. If the air bags are in danger of, or already have, bottomed out, increase the pressure.

12. If the vehicle rocks and rolls, increase the pressure.

### For detailed user information and troubleshooting, download the Air Lift Users Guide online at www.airliftcompay.com/downloads.html

#### MAINTENANCE GUIDELINES

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

- 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 (1 part dish soap, 4 parts water) to check all air line connections and the inflation valve core before deflating and removing the air spring.

NOTE

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4. When increasing load, always adjust the air pressure to maintain the 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 POSSIBLE DAMAGE TO YOUR VEHICLE, DO NOT EXCEED MAXIMUM GROSS VEHICLE WEIGHT RATING (GVWR), AS INDICATED BY THE VEHICLE MANUFACTURER.

- 5. Always add air to 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 minimum pressure (5 p.s.i.) to reduce the tension on the suspension/brake components. Use of onboard leveling systems do not require deflation or disconnection.

## **Warranty and Returns Policy**

Air Lift Company warrants its products for the time periods listed below, to the original retail purchaser against manufacturing defects 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, installed, used in racing applications or not maintained in accordance with installation instructions furnished with all Air Lift 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 LiftCompany for verification.

Air Lift will repair or replace, at its option, defective products or components. A \$10.00 shipping and handling charge will apply to all warranty claims. Before returning any defective product, you must call Air Lift (800) 248-0892 U.S. and Canada for an RMA (Returned Materials Authorization) 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 LiftCompany 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 may 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 1000*2 Year Limited	Ride Control Plus*2 Year Limited
SureSet*2 Year Limited	Load Controller (I)*2 Year Limited
Super Duty*2 Year Limited	SmartAir*2 Year Limited
Other Accessories2 Year Limited	Load Controller (II)*2 Year Limited
Ride Control*2 Year Limited	EasyStreet Systems1 Year Limited
SlamAir2 Year Limited	RoadTamer Systems2 Year Limited

\*The purchase of an Air Lift Load Controller II, SmartAir Automatic Leveling System or SureSet Load Controller System with a Super Duty, Ride Control, or AirLift 1000 extends the air springs' warranty from two years to a Limited Lifetime Warranty to the original purchaser of thecovered systems. All other above listed warranty requirements will apply. (PrimaryAir and EasyStreet air spring systems are excluded from this offer.)

# **Replacement Information**

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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 5 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.

# **Need Help?**

Contact our customer service department by calling (800) 248-0892, Monday through Friday, 8 a.m. to 5 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/warrantyreg.htm



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

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